

**GENERAL MEETING OF THE BOARD OF DIRECTORS
OF THE
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

RESOLUTION NO. 20-071

**APPROVING WORK AUTHORIZATION NO. 1 UNDER THE AMENDED AND
RESTATED MAINTENANCE SERVICES CONTRACT WITH KAPSCH TRAFFICCOM
USA, INC. FOR THE RENEWAL, REPLACEMENT AND UPGRADE OF EQUIPMENT
ON THE MOBILITY AUTHORITY'S TOLL COLLECTION SYSTEM**

WHEREAS, by Resolution No. 19-072 dated November 20, 2019, the Central Texas Regional Mobility Authority (Mobility Authority) approved an Amended and Restated Maintenance Services Contract (Maintenance Services Contract) with Kapsch TrafficCom USA, Inc.; and

WHEREAS, the Executive Director and Kapsch TrafficCom USA, Inc. have negotiated proposed Work Authorization No. 1 under the Maintenance Services Contract for the renewal, replacement and upgrade of various equipment on the Mobility Authority's Toll Collection System which is attached hereto as Exhibit A; and

WHEREAS, the Executive Director recommends that the Board approve proposed Work Authorization No. 1 in an amount not to exceed \$1,318,005.27 and in the form or substantially the same form attached hereto as Exhibit A.

NOW THEREFORE, BE IT RESOLVED, that the Board hereby approves Work authorization No. 1 under the Amended and Restated Maintenance Services Contract with Kapsch TrafficCom USA, Inc.; and

BE IT FURTHER RESOLVED that the Executive Director is authorized to finalize and execute Work Authorization No. 1 with Kapsch TrafficCom USA, Inc. on behalf of the Mobility Authority in an amount not to exceed \$1,318,005.27 and in the form or substantially the same form attached hereto as Exhibit A; and

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 28th day of October 2020.

Submitted and reviewed by:



Geoffrey Petrov, General Counsel

Approved:



Robert W. Jenkins, Jr.
Chairman, Board of Directors

Exhibit A

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

**WORK AUTHORIZATION WORK AUTHORIZATION NO. 1
TOLL SYSTEM MAINTENANCE**

THIS WORK AUTHORIZATION (“WA No. 1”) is made pursuant to the terms and conditions of the Article 2 of the First Amended and Restated Maintenance Services Contract dated November (the Contract) entered into by and between the Central Texas Regional Mobility Authority (the “Authority” or “CTRMA”), and Kapsch TrafficCom USA, Inc. (the “Contractor,” also referred to in attachments to this WA No. 1 as the “System Integrator” or “SI”).

PART I. The Contractor will perform toll system maintenance services generally described in the Kapsch Work Orders attached hereto as **Attachment A**.

PART II. The maximum amount payable under this WA No. 1 is \$1,318,005.27. This amount is based upon the pricing obtained, and is documented by the fee schedule set forth in **Attachment A**.

PART III. Payment to the Contractor for the services established under this WA No. 1 shall be made in accordance with the Contract.

PART IV. This WA No. 1 shall become effective on the date both parties have signed this WA No. 1. This WA No. 1 will terminate when all work orders are complete and accepted by the Mobility Authority, or upon payment of the maximum amount payable in **Part II**, whichever date is first, unless extended as provided by the Contract.

PART V. This WA No. 1 does not waive any of the parties’ responsibilities and obligations provided under the Contract, and except as specifically modified by this WA No. 1, as such responsibilities and obligations under the Contract remain in full force and effect.

KAPSCH TRAFFICCOM, USA:

Signature

Date

Typed/Printed Name and Title

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

Executed for and approved by the Central Texas Regional Mobility Authority for the purpose and effect of activating and/or carrying out the orders, established policies or work programs heretofore approved and authorized by the Texas Transportation Commission.

Signature

Date

Mike Heiligenstein, Executive Director

LIST OF ATTACHMENTS

Attachment A Kapsch Work Orders for Toll System Maintenance

ATTACHMENT A

**KAPSCH WORK ORDERS
FOR TOLL SYSTEM MAINTENANCE**



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

System Integration Agreement

CTRMA Toll Systems Integration



CTRMA 45SW WO 3 – TapCo WWD Firewall

October 16th, 2020

Change Request Description

Request ID	CTRMA 45SW WO 3
Request Date	10/07/2020
System Module	TapCo Wrong Way Detection
Change Type	Hardware/equipment

Description

45SW TapCo Wrong Way Detection is on the TapCo cellular network & needs to be integrated into the CTRMA fiber network.

Affected Project

- 183
- 290
- Mopac
- SH71
- 45SW
- 183S

Affected Requirements

N/A

Affected System Processes:

N/A

Description of the Solution

The Tapco Wrong Way Detection solution at 45SW is on the TapCo cellular network. TapCo has requested this network to be integrated into the CTRMA fiber field network via the internet.

Work order scope:

- The fiber laterals to support this request have already been installed.
- TapCo has provided a quote to install switches locally.
- Kapsch will install patch boards & firewall.
- The revised field network and high level network topology are available for review.

Traffic control: CTRMA will pay for any MOT needed for install. We are estimating the traffic control to not exceed \$20,000. After the install is completed, Kapsch will detail the MOT/traffic control as a pass-through line item with the standard 10% markup and will adjust the invoice to match.

Traffic control costs: \$3500/closure, plus \$1,000 per officer = \$4,500 x 6 closures needed. TapCo will attempt to perform all tasks in 3 nights (\$13,500), but may need 4 nights (\$18,000). This deployment and these closures will be used for both annual TapCo recertification and TapCo switch installation.

Pricing valid for 30 days from submission.

Impact	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Total	\$84,901.04 (not to exceed)		
Quantity	Outlined below		



System Integration

CTRMA 45SW WO 3 – TapCo WWD Firewall



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

	Materials / Equipment	Quantity	Price	10% Markup	Extended Price
1	2180-SYSTEM - *Panel assemblies to upgrade field	3	\$24,226.89	\$2,422.69	\$26,649.58
2	2180-CUSTOM - Add the 12-24 VDC converter to 400279	1	\$0.00	\$0.00	\$0.00
3	RS10114 - panel swap to be done by TAPCO	1	\$6,500.00	\$650.00	\$7,150.00
4	Axiom Memory Solutions - Part#: GLC-LH-SM-AX	8	\$416.00	\$41.60	\$457.60
5	Altnet - Part#: S9DLCUSTUV2Y-03	10	\$130.00	\$13.00	\$143.00
6	Cisco Systems - Part#: ASA5506-K9	1	\$472.00	\$47.20	\$519.20
7	Cisco Systems - Part#: CON-SNT-ASA5506K	1	\$97.00	\$9.70	\$106.70
Total Hardware					\$35,026.08

	Labor	No. of Hours	Hr. Contract Rate	Total
1	Software Engineer	0.00	\$157.59	\$0.00
2	System/Hardware Engineer	100.00	\$172.52	\$17,252.00
3	Technician - Ordering & receiving equipment/invoices	12.00	\$120.90	\$1,450.80
4	Business Analyst	0.00	\$157.59	\$0.00
5	Database Administrator	0.00	\$224.14	\$0.00
6	Documentation Clerk	8.00	\$161.66	\$1,293.28
7	Testing Engineer	0.00	\$171.17	\$0.00
8	Network Engineer/Administrator	16.00	\$156.22	\$2,499.52
9	Project Manager	24.00	\$224.14	\$5,379.36
Total Hours:		160.00	Total Labor:	\$27,874.96

	Subcontractor	Quantity	Cost	10% Markup	Extended Price
	Road Closures - will be adjusted to match MOT invoices + Markup	1	\$20,000.00	\$2,000.00	\$22,000.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
Total Subcontractor					\$22,000.00

	ODCs / Travel	Quantity	Cost	10% Markup	Extended Price
1	Air Fare	0	\$0.00	\$0.00	\$0.00
2	Mileage	0	\$0.00	\$0.00	\$0.00
3	Lodging	0	\$0.00	\$0.00	\$0.00
4	Per Diem	0	\$0.00	\$0.00	\$0.00
5	Car Rental	0	\$0.00	\$0.00	\$0.00
6	PM - Other/Misc.	0	\$0.00	\$0.00	\$0.00
7	Warr/Maint - Other/Misc.	0	\$0.00	\$0.00	\$0.00
Total ODCs / Travel					\$0.00

TOTAL PRICE \$84,901.04

Client Acceptance:	
Client name	
Date	
Signature	
Kapsch Acceptance	
Name	
Date	
Signature	

1 Reference Documents:

N/A

2 Document Version History

Version	Created	Created by	Comments
1.0	11/08/2019	Lisa Gauger	Initial Submission
1.1	09/08/2020	Lisa Gauger	Revised scope of change order & updated pricing.
1.2	10/07/2020	Lisa Gauger	Define MOT costs and edit description of tasks.
1.3	10/16/2020	Lisa Gauger	Updated doc to be 'Work Order', rather than 'Change Order'



Pricing Proposal
Quotation #: 19183044
Created On: 7/23/2020
Valid Until: 7/31/2020

Kapsch TrafficCom USA, Inc.

**Inside Sales Account
Manager**

Sean Staehli

7701 Metropolis Drive
Bldg 14, Suite 100
Austin, TX 78744
United States
Phone: (512) 596-7238
Fax:
Email: Sean.Staehli@kapsch.net

Paul Perez

1501 South Mo-Pac Expressway
Suite 400
Austin, TX 78746
Phone: 512-814-4102
Fax: 512-814-4103
Email: Paul_Perez@shi.com

All Prices are in US Dollar (USD)

Product	Qty	Your Price	Total
1 Cisco ASA 5506-X with FirePOWER Services - Security appliance - 8 ports - GigE - desktop Cisco Systems - Part#: ASA5506-K9	1	\$472.00	\$472.00
2 SNTC-8X5XNBD ASA 5506-X with FirePOWER services, 8GE, Cisco Systems - Part#: CON-SNT-ASA5506K	1	\$97.00	\$97.00
		Subtotal	\$569.00
		Shipping	\$12.00
		Total	\$581.00

Additional Comments

Due to industry-wide constraints and fluctuations, SHI reserves the right to change price at any time

The Products offered under this proposal are resold in accordance with the [SHI Online Customer Resale Terms and Conditions](#), unless a separate resale agreement exists between SHI and the Customer.



Pricing Proposal
Quotation #: 19188024
Created On: 7/24/2020
Valid Until: 7/30/2020

Kapsch TrafficCom USA, Inc.

**Inside Sales Account
Manager**

Sean Staehli

211 East 7th St
Suite 800
Austin, TX 78701
United States
Phone: 713.494.6329
Fax:
Email: Sean.Staehli@kapsch.net

Paul Perez

1501 South Mo-Pac Expressway
Suite 400
Austin, TX 78748
Phone: 512-814-4102
Fax: 512-814-4103
Email: Paul_Perez@shi.com

All Prices are in US Dollar (USD)

Product	Qty	Your Price	Total
1 Axiom Cisco GLC-LH-SM= Compatible - SFP (mini-GBIC) transceiver module (equivalent to: Cisco GLC-LH-SM=) - GigE - 1000Base-LX, 1000Base-LH - LC - up to 10 km - 1300 nm - for Cisco 38XX; ASA 55XX; Catalyst Compact 2960; Integrated Services Router 11XX Axiom Memory Solutions - Part#: GLC-LH-SM-AX	8	\$52.00	\$416.00
2 Altnet-USA Fiber Jumper Duplex Single Mode 9/125 (OS1/OS2) LC/UPC to ST/UPC PVC 2mm Yel 3 Met Altnet - Part#: S9DLCUSTUV2Y-03	10	\$13.00	\$130.00
		Subtotal	\$546.00
		Shipping	\$12.00
		*Tax	\$46.04
		Total	\$604.04

*Tax is estimated. Invoice will include the full and final tax due.

The Products offered under this proposal are resold in accordance with the [SHI Online Customer Resale Terms and Conditions](#), unless a separate resale agreement exists between SHI and the Customer.



Safe travels:

Traffic and Parking Control Co., Inc.
5100 West Brown Deer Road
Brown Deer, Wisconsin 53223
Phone (800) 236-0112 • TAPCOnet.com • Fax (800) 444-0331

SALES QUOTE

Customer Copy

Table with 2 columns: Field (Number, Date, Page) and Value (Q20000534, 1/31/2020, 1)

Table with 4 columns: Sell To Cust., Ship To Cust., and two columns for company details (Kapsch TrafficCom NA, Inc.)

Table with 6 columns: Customer PO #, Expires, Slsp, Terms, Freight, Ship Via

Table with 6 columns: Item, Description, Quantity, UM, Price, Extension

Main item list table with columns: Item, Description, Quantity, UM, Price, Extension

Lead 8-10 Weeks
Direct Phone # (262) 649-5239
Email: alex.perry@tapconet.com
Thanks! - Alex Perry from TAPCO

Shipment within
Acceptance By
Date
By

Summary table with 4 columns: Merchandise, Freight, Tax, Total

All prices are listed in US Dollars (USD)
For terms and conditions, please visit: http://www.tapconet.com/terms-and-conditions



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

System Integration Agreement

CTRMA Toll Systems Integration



CTRMA WO-153, Spare Parts Needed FY 2021

October 15, 2020

Change Request Description

Request ID	CTRMA-WO-153
Request Date	10/16/2020
System Module	Spare Parts
Change Type	Equipment

Description			
Spare Parts Needed			
Affected Project			
<input checked="" type="checkbox"/> 183 <input checked="" type="checkbox"/> 290 <input checked="" type="checkbox"/> Mopac <input checked="" type="checkbox"/> SH71			
Affected Requirements			
N/A			
Affected System Processes:			
All Processes			
Description of the Solution			
<input type="radio"/> Spare Parts needed for the FY 2021			
Impact	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Total	\$139,907.67		
	Pricing good for 60 Days		
Quantity	Spare Parts, See the Excel Document for items and quantity.		



System Integration

CTRMA WO-153 Spare Parts Needed FY2021



CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

	Materials / Equipment	Quantity	Price	0% Markup	Extended Price
1	Spares for 2021	1	\$139,907.67	\$0.00	\$139,907.67
2	0	0	\$0.00	\$0.00	\$0.00
3	0	0	\$0.00	\$0.00	\$0.00
4	0	0	\$0.00	\$0.00	\$0.00
5	0	0	\$0.00	\$0.00	\$0.00
6	0	0	\$0.00	\$0.00	\$0.00
7	0	0	\$0.00	\$0.00	\$0.00
Total Hardware					\$139,907.67

	Labor	No. of Hours	Hr. Contract Rate	Total
1	Software Engineer	0.00	\$157.59	\$0.00
2	System/Hardware Engineer	0.00	\$172.52	\$0.00
3	Technician	0.00	\$120.90	\$0.00
4	Business Analyst	0.00	\$157.59	\$0.00
5	Database Administrator	0.00	\$224.14	\$0.00
6	Documentation Clerk	0.00	\$161.66	\$0.00
7	Testing Engineer	0.00	\$171.17	\$0.00
8	Network Engineer/Administrator	0.00	\$156.22	\$0.00
9	Project Manager	0.00	\$224.14	\$0.00
Total Hours:		0.00	Total Labor:	\$0.00

	Subcontractor	Quantity	Cost	10% Markup	Extended Price
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
Total Subcontractor					\$0.00

	ODCs / Travel	Quantity	Cost	10% Markup	Extended Price
1	Air Fare	0	\$0.00	\$0.00	\$0.00
2	Mileage	0	\$0.00	\$0.00	\$0.00
3	Lodging	0	\$0.00	\$0.00	\$0.00
4	Per Diem	0	\$0.00	\$0.00	\$0.00
5	Car Rental	0	\$0.00	\$0.00	\$0.00
6	PM - Other/Misc.	0	\$0.00	\$0.00	\$0.00
7	Warr/Maint - Other/Misc.	0	\$0.00	\$0.00	\$0.00
Total ODCs / Travel					\$0.00

TOTAL PRICE \$139,907.67

Client Acceptance:	
Client name	
Date	
Signature	
Kapsch Acceptance	
Name	
Date	
Signature	

1 Reference Documents

CTRMA_Spares_ FY_2021 - updated Sept 2020 - revised v1.2.xlsx

2 Document Version History

Version	Created	Created by	Comments
1.0	4/22/2020	Timothy Duke	Initial Submission based on e-mail.
2.0	09/03/2020	Timothy Duke	Updated Pricing
2.1	10/02/2020	Timothy Duke	Updated Format and CTRMA logo
2.2	10/06/2020	Timothy Duke	Updated Pricing
2.3	10/13/2020	Lisa Gauger	Updated pricing & name of reference docs
2.4	10/15/2020	Lisa Gauger	Updated pricing & name of reference docs
2.5	10/16/2020	Lisa Gauger	Updated doc naming details from CO to WO

VEHICLE IDENTIFICATION - GANTRY - AVI ANTENNAS & CABLING				Spare	Total	Inventory	GT	UNIT COST	TOTAL COST		
1	b	Identity 6204 Reader, 4 Port, FCC frequency, incl. 24 Volt DC power supply and 1 year limited hardware warranty w/6B & 6C	Neology	75-0302-3853-1	ea	2	2	2	15,000.00	30,000.00	Neology
	d	Extended Warranty pricing on ID 6200 Reader System, 2 Year	Neology	WA-5000-002	ea	2	2	2	1,125.00	2,250.00	Neology
LPICS - GANTRY - CAMERAS / STROBES / HOUSINGS & CABLING				Spare	Total	Inventory	GT	UNIT COST	TOTAL COST		
	a	VISCAM 1000 AIO Camera System, B&W	JAI Pulnix	31016592	ea	10	10	-6	4,650.00	25,800.00	JAI
	e	I/O Board (Camera) - EIO 302 Assembly (Spare)	JAI Pulnix	20007948	ea	20	20		700.00	14,000.00	JAI
DVAS - CAMERA-HOUSING/POE Injector/IR/Brackets				Spare	Total	Inventory	GT	UNIT COST	TOTAL COST		
	a	3430HD - IP67 Fixed/H.264/POE or 12VDC/1080P/30x/Day/Night/Defog/Auto Focus	COHU	3432-3000	ea	10	10		1,470.00	14,700.00	COHU
	d	4 port POE Injector-Panel Mnt-Supports 802.3af - 44V-58V - 48V to all ports (60W shared supply)	PoE Texas	AT-4-48V60W	ea	5	5		76.10	380.51	PoE Texas
ZC/ICS Server				Spare	Total	Inventory	GT	UNIT COST	TOTAL COST		
	a	PowerEdge R340	Dell	PER320	ea	2	2		2,447.00	4,894.00	SHI
DVR SERVER				Spare	Total	Inventory	GT	UNIT COST	TOTAL COST		
	a	PowerEdge R540	Dell	PER540	ea	1	1		4,798.00	4,798.00	SHI
VEHICLE DETECTION / CLASSIFICATION				Spare	Total	Inventory	GT	UNIT COST	TOTAL COST		
	d	Loop Detector, 4 Channel (up to 2k feet lead-in) - 3M AVC Enabled	Northstar Controls	N224-I-12V	ea	20	20		305.00	6,100.00	Northstar
	e	Power Supply for Northstar Rack (Modified for 240VAC)	Northstar Controls	NPS-4	ea	2	2		125.00	250.00	Northstar
	h	Port Expander - Serial Hub 16 Port - 1U Rack Mount	DeviceMaster	99460-2	ea	2	2		804.00	1,608.00	CDW
	k	DB9 RS-232 "Y" Cable (DB9 Male to Dual DB9 Female, 8 inch)(28 AWG)	CableWholesale	30D1-27208	ea	4	4		5.00	20.00	CableWholesale
	l	6ft Serial Extension Cable, UL, DB9 Male to Female	CableWholesale	10D1-03206	ea	8	8		4.00	32.00	CableWholesale
Note: IDRIS does not work with RocketPort PCI Card - Changed Baseline to DeviceMaster AVI Readers that can be mounted in the cabinet will need a shelf for mounting (l) will be used for DeviceMaster 8 Port and AVI Readers											
UPS				Spare	Total	Inventory	GT	UNIT COST	TOTAL COST		
	a	Smart-UPS - 6000VA - 200V to 240V OUTPUT / 1 INPUT - 3 RU	Eaton	9PX6K	ea	1	1		3,357.65	3,357.65	Eaton
	a	Extended Battery - 3 RU	Eaton	9PXEBM180RT	ea	3	3		883.67	2,651.01	Eaton
CORRIDOR MVD				Spare	Total	Inventory	GT	UNIT COST	TOTAL COST		
	a	Smartsensor HD	Wavetronix	HS-126	EA	4	4		5,480.00	21,920.00	Wavetronix
	b	Sensor Pigtails (40')	"		EA	2	2		265.00	530.00	"
	l	Click 301 Terminal Server (Equivalent)	MOXA	NPORT 5130-T	EA	10	10		187.00	1,870.00	MOXA
CORRIDOR FIELD NETWORK				Spare	Total	Inventory	GT	UNIT COST	TOTAL COST		
	a	6 port Managed Ethernet Switch/router	MOXA	EDR-810-2GSFP-T	EA	2	2		902.00	1,804.00	MOXA
	b	SFP (SM-GB-LX) TRANSCEIVERS	"	SFP-1GLXLC-T	EA	2	2		263.00	526.00	"
	c	SFP (MM-GB-SX) TRANSCEIVERS	"	SFP-1GLSXL-C-T	EA	2	2		302.00	604.00	"
	d	100Base FX Switch (SM - 15 km - ST Connectors) - 4 Copper Ports	NTRON	106FXE2-ST-15-MDR	EA	2	2		561.32	1,122.64	NTRON
	e	Media Converter - SM - 15km - ST Connectors (100Base)	NTRON	102MCE-ST-15-MDR	EA	2	2		319.39	638.78	NTRON
	f	5M Duplex ST to ST - 1m	Quicktron	810-227-003	ea	2	2		15.00	30.00	GreyBar
	g	5M Duplex LC to ST - 3m	Quicktron	810-L25-009	ea	2	2		8.76	17.52	Zones
	h	MM Duplex LC to ST - 2m (62.5/125u)	Quicktron	810-L12-006	ea	2	2		1.78	3.56	Zones

NEED DB9 EXTENSION

Quotation

August 20, 2020

Your quote has been posted online, please review below.

Salesperson Notes: CTRMA RFQ: NTRON quote is ready. My apologies for the delay in getting that back to you.

Quote Number: [10159866](#)

[View Quote](#)

Quote Information

Valid Until: 10/4/2020
 Prepared On: 8/20/2020
 Prepared By:
 Patrick Quarles
patrick.quarles@alliedelec.com
 (512) 219-7171

Billing Information

PO Number: CTRMA RFQ: NTRON
 Account Number: 0010193580

Billing Address

Kapsch Trafficcom

 2855 Premiere Pkwy STE F
 Duluth, GA 30097-5201
 US

Contact Information

Requested By: Sean Staehli
 Phone Number: (512) 596-7238
 Email: sean.staehli@kapsch.net

Shipping Information

Ship Method: Pending
 Order Type: Quote

Shipping Address

Kapsch Trafficcom Usa, Inc.
 7701 Metropolis Dr STE 100
 Austin, TX 78744-3126
 US

Special Instructions:

Line #		Qty.	Price Per Unit (USD)	Total (USD)
10	Red Lion Controls 6 port (4 10/100BaseTX; 2 100Base FiberUplinks) Industrial Ethernet Switch Mfr. Part #: 106FXE2-ST-15-MDR Allied Stock #: 71122946 Customer Part #: None In-Stock*: 0 Unit: Each <i>Non Cancelable Non Returnable (NCNR) part. Please see Terms of NCNR.</i>	2	\$561.320	\$1,122.64
20	Red Lion Controls 10/100BaseTX to 100BaseFX Media Converter (Singlemode; ST style connector; 15km) Mfr. Part #: 102MCE-ST-15-MDR Allied Stock #: 71122900 Customer Part #: None In-Stock*: 0 Unit: Each <i>Non Cancelable Non Returnable (NCNR) part. Please see Terms of NCNR.</i>	2	\$319.390	\$638.78

Subtotal†: \$1,761.42

*In Stock quantities reflect available inventory at the time this quote was issued and may change.

†Subtotal is in specified currency and does not include shipping, tax, other handling fees or insurance charges. © Allied Electronics, Inc. 2020 All rights reserved.

[Terms and Conditions](#)



[Information](#) > [Payment](#)

Contact	sean.staehli@kapsch.net	Change
Ship to	Kapsch TrafficCom USA Inc. Austin, Customer Required order, 7701 Metropolis Drive, Building B, Suite 100, Austin TX 78744, United States	Change
Method	FedEx Ground® · \$11.56	



AT-4-48V60W \$339.95

Subtotal	\$339.95
Shipping	\$11.56
Taxes	\$29.00
Total	USD \$380.51

From: [Xing_Zeng](#)
To: [Staepli Sean](#)
Cc: [MBX KTC Tolling Solution Center Commodity Team](#)
Subject: RE: CTTMA RFQ: Neology
Date: Friday, August 14, 2020 1:28:52 PM
Attachments: [image001.png](#)

Sean,

Thanks for the enquiry. Please see the quote below.

75-0302-3854-9	6204 4-pt ISO C B 10374 ASTMV6 PS111 T21	4 Port Reader with ISO 6C, 6B, 10374, ASTMV6 AND PS111, Title 21	\$15,000	Each
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for the 2nd year warranty

75-0302-5387-8	TOLLING 2ND YEAR EXT. WARRANTY BILL ONLY	Extended warranty for the 2nd year	7.5% of ASP	Each
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Or \$1125 per device.

Sincerely,

Xing (Sean) Zeng
 VP - Business Development
 Neology Corporation
 Mobile: 512-378-0156
xzeng@neology.net

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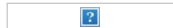
From: Staepli Sean <Sean.Staepli@kapsch.net>
Sent: Friday, August 14, 2020 12:27 PM
To: Xing Zeng <xzeng@neology.net>
Cc: MBX KTC Tolling Solution Center Commodity Team <KTC-Tolling_Solution_Center_Commodity_Team@kapsch.net>
Subject: CTTMA RFQ: Neology

Please quote the below noting this is for a BID, thanks.

IDentity 6204 Reader, 4 Port, FCC frequency, incl. 24 Volt DC power supply and 1 year limited hardware warranty w/6B & 6C	Neology	75-0302-3853-1	ea	2
Extended Warranty pricing on ID 6200 Reader System, 2 Year	Neology	WA-5000-002	ea	2

Sean Staepli
 Sr. Buyer | Supply Chain Management NA
 M +1 512.596.7238
sean.staepli@kapsch.net
 Kapsch TrafficCom USA, Inc. | 7701 Metropolis Dr. / BLDG 14 Suite 100 | Austin, TX 78744

www.kapsch.net / [Privacy Statement](#)



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QUOTE CONFIRMATION



DEAR SEAN STAEHLI,

Thank you for considering CDW for your computing needs. The details of your quote are below. [Click here](#) to convert your quote to an order.

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
LPGQ772	8/14/2020	CTRMA EATON	11538577	\$6,504.38

QUOTE DETAILS				
ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
Eaton 9PX 9PX6K - UPS - 5.4 kW - 6000 VA Mfg. Part#: 9PX6K UNSPSC: 39121011 Contract: Standard Pricing	1	2872396	\$3,357.65	\$3,357.65
Eaton Extended Battery Module - battery enclosure - lead acid Mfg. Part#: 9PXEBM180RT UNSPSC: 43201601 Contract: Standard Pricing	3	2875772	\$883.67	\$2,651.01

PURCHASER BILLING INFO		SUBTOTAL	\$6,008.66
Billing Address: KAPSCH TRAFFICOM US CORP ACCOUNTS PAYABLE 2855 PREMIERE PKWY DULUTH, GA 30097-5017 Phone: (703) 885-1976 Payment Terms: NET 30 Days		SHIPPING	\$0.00
		SALES TAX	\$495.72
		GRAND TOTAL	\$6,504.38
	DELIVER TO	Please remit payments to:	
Shipping Address: KAPSCH TRAFFICOM US CORP SEAN STAEHLI 211 E 7TH ST STE 800 AUSTIN, TX 78701-3366 Shipping Method:	CDW Direct P.O. Box 75723 Chicago, IL 60675-5723		

Need Assistance? CDW SALES CONTACT INFORMATION



Lesley Asewicz

(855) 480-6591

leslase@cdw.com

This quote is subject to CDW's Terms and Conditions of Sales and Service Projects at <http://www.cdw.com/content/terms-conditions/product-sales.aspx>
For more information, contact a CDW account manager

© 2020 CDW LLC, 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 | 800.800.4239

Northstar Controls, LLC6167 Clark Center Ave
Sarasota, FL 34238**QUOTATION**

Quote Number: 217

Quote Date: Aug 14, 2020

Page: 1

Voice: 941-926-2454

Quoted To:Kapsch TrafficCom Transportation - USA
2855 Premier Pkwy Suite F
Duluth, GA 30097
USA

Customer ID	Good Thru	Payment Terms	Sales Rep
Kapsch 01	9/13/20	Net 30 Days	

Quantity	Item	Description	Unit Price	Amount
20.00	N 224I	N224-I - Quad Channel Rack Detector Idris Enabled	305.00	6,100.00
2.00	NPS-4 240/12V	NPS4S - 60W Power Supply Unit 240VAC	125.00	250.00
Subtotal				6,350.00
Freight				
Sales Tax				
TOTAL				6,350.00



Pricing Proposal
Quotation #: 19283893
Created On: 8/14/2020
Valid Until: 8/31/2020

Kapsch TrafficCom USA, Inc.

Sean Staehli

7701 Metropolis Drive
Bldg 14, Suite 100
Austin, TX 78744
United States
Phone: (512) 596-7238
Fax:
Email: Sean.Staehli@kapsch.net

Inside Sales Account Manager

Paul Perez

1501 South Mo-Pac Expressway
Suite 400
Austin, TX 78746
Phone: 512-814-4102
Fax: 512-814-4103
Email: Paul_Perez@shi.com

All Prices are in US Dollar (USD)

Product	Qty	Your Price	Total
1 1-port RS-422/485 device server Moxa Technologies - Part#: NPORT 5130	10	\$187.00	\$1,870.00
2 MOXA Industrial Secure Router Switch with 8 10/100BaseT(X) ports 2 1000BaseSFP slots Firewall/NAT -40 to 75C. Moxa Technologies - Part#: EDR-810-2GSFP-T	1	\$902.00	\$902.00
3 Moxa SFP-1GLXLC-T - SFP (mini-GBIC) transceiver module - GigE - 1000Base-LX - LC - up to 10 km - 1310 nm Moxa Technologies - Part#: SFP-1GLXLC-T	2	\$263.00	\$526.00
4 Moxa SFP-1GLSXLXLC-T - SFP (mini-GBIC) transceiver module - GigE - 1000Base-SLX - LC - up to 2 km Moxa Technologies - Part#: SFP-1GLSXLXLC-T	2	\$302.00	\$604.00
		Subtotal	\$3,902.00
		Shipping	\$50.00
		Total	\$3,952.00

Additional Comments

Due to industry-wide constraints and fluctuations, SHI reserves the right to change price at any time

The Products offered under this proposal are resold in accordance with the [SHI Online Customer Resale Terms and Conditions](#), unless a separate resale agreement exists between SHI and the Customer.



Pricing Proposal
Quotation #: 19288977
Created On: 8/17/2020
Valid Until: 8/31/2020

Kapsch TrafficCom USA, Inc.

Sean Staehli

7701 Metropolis Drive
Bldg 14, Suite 100
Austin, TX 78744
United States
Phone: (512) 598-7238
Fax:
Email: Sean.Staehli@kapsch.net

**Inside Sales Account
Manager**

Paul Perez

1501 South Mo-Pac Expressway
Suite 400
Austin, TX 78748
Phone: 512-814-4102
Fax: 512-814-4103
Email: Paul_Perez@shi.com

All Prices are in US Dollar (USD)

Product	Qty	Your Price	Total
1 Control DeviceMaster Serial Hub - Terminal server - 16 ports - 100Mb LAN, RS-232 - 1U - panel-mountable 024Z - Part#: 99460-2	2	\$804.00	\$1,608.00
2 DB9 Serial Y adapter, DB9 Female to Dual DB9 Male, 8 inch CableWholesale.com - Part#: 30D1-27308	4	\$5.00	\$20.00
3 StarTech.com 2m Black Straight Through DB9 RS232 Serial Cable - DB9 RS232 Serial Extension Cable - Male to Female Cable (MXT1002MBK) - Serial extension cable - DB-9 (M) to DB-9 (F) - 2 m - black - for P/N: IC232TTL, ICUSB2321F, ICUSB2324, ICUSB2324I, ICU StarTech.com - Part#: MXT1002MBK	8	\$4.00	\$32.00
		Subtotal	\$1,660.00
		Shipping	\$20.00
		Total	\$1,680.00

Additional Comments

Due to industry-wide constraints and fluctuations, SHI reserves the right to change price at any time

The Products offered under this proposal are resold in accordance with the [SHI Online Customer Resale Terms and Conditions](#), unless a separate resale agreement exists between SHI and the Customer.



To: Kapsch
 Sean Staehli
 7701 Metropolis Dr., Bldg 14, Suite 100
 Austin, TX 78744
 512.596.7238
 sean.staehli@kapsch.net

DATE: Sean Staehli
Re: HD
Delivery: 45-60 days ARO
Terms: Net 30 WAC
Shipping: FOB Destination
Quote #: 5205-ks

Item	Qty	Description	Unit	TOTAL
1	4	Wavetronix SS126 HD Sensor	5,480	21,920
2	2	Sensor Pigtail, 40'	265	530
		Notes: Contractor to verify all quantities Price is for material only Failure to utilize factory certified cable/components will void support/ warranty		
			TOTAL	\$ 22,450

This quotation is good for 30 days. If you have any questions, please call 817-539-2200.

THANK YOU FOR YOUR BUSINESS!



Send any resulting purchase order to - orders@cohuhd.com

To: Kapsch TrafficCom Transportation
 Address: 211 East 7th Street

 City: Austin
 State: TX Zip Code: 78701
 Attn: Sean Staehli
 EMAIL: Sean.Staehli@kapsch.net
 Phone: (512)596-7238 Fax:
 Ref: MBX KTC Tolling

Revision Date: 8/14/2020
 Quotation Date: 08/14/20
 Sales Manager: Frank Sneed 817 467 3749
 Quotation Validity: 60 DAYS
 Ship Via: BEST WAY
 F.O.B.: FACTORY/ORIGIN
 Payment Terms: NET 30/APPROVED CREDIT
 *Estimated Lead Time: 6-8 WEEKS ARO
 Price List Rev.: Version 2019.3
 Quote #: CEDQ27817
 Application Code:
 Quoted By: Frank Sneed 817 467 3749

** Actual delivery schedule will be confirmed upon receipt of order.*

Item	Qty	Model	Description	Unit Price	Extended Price
1	10	3432-3000	COHUHD 3430HD SERIES IP67 H.264 FIXED CAMERA SYSTEM,, POE INPUT POWER, 1080P 30X DAY/NIGHT, DEFOG, AUTO FOCUS, EIS AND DIGITAL ZOOM	\$1,250.00	\$12,500.00
2	10	7610203-002	RJ45 IP67 COUPLER, 6MM OR 8.2MM CABLE DIAMETER	\$30.00	\$300.00
3	10	7412007-003	POE++ INJECTOR, 70 WATT, UNIVERSAL AC INPUT, TS2 RATED, AC PLUG	\$105.00	\$1,050.00
4	10	8196402-005	UNSHIELDED CAT5E, MS TO RJ45, 5 FT	\$85.00	\$850.00
Total Quotation Value					\$14,700.00

If you have any questions regarding this quotation, please contact Frank Sneed with TechOne Sales LLC by phone at 817-467-3749 or by email at frank@techonesales.com.

- NOTES:
1. All cables are custom made to order for length.
 2. If customer intends to make their own cables, the multi-pin mating connector that is required to connect customer made cable to the camera is not

Any purchase order or contract as a result of this quotation is subject to CohuHD's Terms & Conditions. Purchase Orders resulting from this quotation can be sent to orders@cohuhd.com or mail to CohuHD Costar, LLC, 7330 Trade St., San Diego, CA 92121. This quotation contains Proprietary & Confidential information and remains the property of the disclosing parties.

Signed for CohuHD Costar, LLC by: Frank Sneed
 Frank Sneed, Sales Representative - Office: (817)467-3749 - e-mail: frank@techonesales.com



TERMS AND CONDITIONS

1 - ACCEPTANCE: Each order is subject to acceptance by CohuHD™. No order shall be binding until accepted in writing by an authorized CohuHD employee. The terms and conditions stated herein form the entire terms and conditions between Buyer and CohuHD, Inc., except for written agreements signed by both parties amending these terms and conditions. 2 - CANCELLATION OR CHANGE TO CONTRACT: Upon written notice by Buyer of intention to cancel an order, CohuHD will stop work promptly. Cancellation of an accepted order requires CohuHD written consent thereto, including terms that will satisfy all costs incurred and proportionate profit earned by CohuHD. Change orders will take effect upon Buyer's and CohuHD's written agreement on all changes. However, if Buyer requests to delay shipping an order beyond the stated lead time, CohuHD reserves the right to refuse the delay or adjust pricing to then current levels. 3 - DELIVERY: Delivery date is the ship date from the factory provided in the order acknowledgement, and is CohuHD's best estimate at time of order placement. CohuHD shall not be liable for any nonperformance, loss, damage, or delay due to war, acts of terrorism, riots, fire, flood, strikes or other labor difficulty, governmental actions, including without limit delivery requirements of a US Government agency rated order, acts of God, acts of the Buyer or its customer, transportation delays, inability to obtain necessary labor or materials from usual sources, or other causes beyond the reasonable control of CohuHD. In such event, CohuHD's performance shall be excused for a commercially reasonable time that is at least the length of time lost due to such delay. 4 - LIMITED WARRANTY: CohuHD warrants that, at time of delivery, the equipment covered by these terms and conditions will be free from defects in materials and workmanship, provided the equipment or system is installed, operated and maintained in accordance with the Operation and Maintenance manual or such other CohuHD documentation as may be applicable, for any such defect reported to CohuHD as follows: CohuHD RISE 42xxHD series products for three years from date of shipment from CohuHD's factory. CohuHD 34xxHD series products for three years from date of shipment from CohuHD's factory. All other CohuHD manufactured products are warranted for two years from date of shipment from CohuHD factory. Resale items not manufactured by CohuHD are warranted as specified by the original manufacturer. IP67/IP68 enclosures include a lifetime warranty against moisture ingress. CohuHD will clean/repair and re-pressurize returned enclosures. CohuHD will take reasonable action to repair or replace such equipment. Any claim of defect shall be submitted promptly in writing to CohuHD, Attention: Customer Service Department. A Return Material Authorization (RMA) is required for all items returned to CohuHD for repair, and must be provided by CohuHD prior to delivery at the factory. No items will be accepted without an RMA. Information necessary to process an RMA include Buyer contact details, a full product identification (serial number, model number), and description of the claimed defect as well as an explanation of the circumstances and operational conditions and reading at the time of defect. Purchaser shall prepay transportation charges to CohuHD. CohuHD's total liability under this warranty program is limited to the repair or replacement of items purchased pursuant to these terms and conditions which are found to be defective in material and/or workmanship. CohuHD retains the option, in its sole discretion, to make such repair or replacement at Buyer's site, at the CohuHD factory, or via an authorized service center. CohuHD supplied subsystems from OEM manufacturers carry only their manufacturer's warranty, which is passed on to the Buyer. CohuHD will, at the request of the Buyer, assert warranty claims to the manufacturer of such devices, but by so doing does not assume any liability. This warranty shall be void in the event of damage caused by misuse; disassembly; unauthorized repairs; intentional damage; failure to maintain the product in accordance with CohuHD operating manuals; operation of the product beyond its specified operating environment; or damage caused by accidents, lightning, power surges, acts of God, or other natural disasters; or Buyer's failure to timely pay amounts due to CohuHD. Expendable items such as bulbs, fuses, etc., are excluded from coverage under this warranty program.

Buyer shall be responsible for all costs of returning claimed defective products to CohuHD, and CohuHD will be responsible for returning the repaired products or replacements. THIS CONSTITUTES THE SOLE WARRANTY MADE BY COHUHD EITHER EXPRESSED OR IMPLIED. THERE ARE NO OTHER WARRANTIES EXPRESSED OR IMPLIED WHICH EXTEND BEYOND THE FACE HEREOF, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL COHUHD BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES AND BUYER'S REMEDIES SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF NONCONFORMING PRODUCTS. 5 - SHIPMENT: Unless expressly prohibited by Buyer, partial shipments shall be accepted. All shipments are made Ex-works (Incoterms 2010)- CohuHD factory unless expressly agreed upon otherwise. Costs of boxing and crating for domestic shipment are included in the quoted price or quoted as a separate line item. When special export or domestic packing is specified, a charge will be made to cover this extra expense. Special packing requirements and method of shipment must be stated in the purchase order. CohuHD takes reasonable care in packing for shipment and selection of carrier. CohuHD assumes no responsibility for delay, breakage, or damage after having made delivery in good order to the carrier. Insurance is the responsibility of the Buyer. Claims for damage are to be made by the Buyer on the carrier; CohuHD will assist in such claims, as requested by the Buyer. Charges & Freight quotations are available. 6 - U.S. TAXES: Unless specifically stated, the prices quoted are exclusive of any federal, state, municipal, or other government tax that may be imposed upon the production, storage, sale, transportation, or use of the products described herein. The Buyer shall pay such taxes applied directly to the sale and levied prior to shipment from CohuHD, or in lieu thereof the Buyer shall provide a tax exemption certificate acceptable to the taxing authorities. Unless a state issued tax exempt certificate is presented at the time of order placement, sales tax will be applied when shipping product to the following states: CA, NY, TX and, WA. Training is not taxable in any state. The U.S. Government is not taxable in any state. If taxable, Buyer shall include the appropriate amount and percentage on the Order for the Goods. 7 - DUTIES: All duties, import or export fees, customs fees, and brokerage charges are the responsibility of the Buyer. Pricing in CohuHD's quotation does not include these charges unless explicitly stated. 8 - RISK OF LOSS: Title to the goods shall pass to Buyer upon shipment from CohuHD's factory. Risk of loss of the goods shall pass to Buyer as soon as the goods are deposited with the carrier. It is specifically agreed that the risk of loss shall not be altered due to a default or breach of these terms and conditions by either party. 9 - ASSIGNMENT - DELEGATION: No right or interest in an accepted order shall be assigned by either Buyer or CohuHD without the written consent of the other party. No delegation or the performance of any obligation owed by either party shall be effective without the written consent of the other party. 10 - APPLICABLE LAW: The law which shall be applied hereto shall be the Uniform Commercial Code as adopted by the State of California, and as effective and in force on the date of acceptance of Buyer's order by CohuHD. 11 - EXPORT LAWS: The Goods may be subject to U.S. Government export laws and regulations. Buyer shall not export, re-export, or transfer the Goods or Confidential Information received from CohuHD without first obtaining the appropriate US Government approvals, if any. CohuHD will cooperate with Buyer to obtain any export licenses Buyer seeks, but obtaining such licensing shall be the exclusive responsibility of Buyer and CohuHD makes no representation or warranty regarding the issuance of export licenses for the Goods. 12 - CASUALTY TO IDENTIFIED GOODS: If the goods ordered by Buyer are destroyed for reasons beyond CohuHD's control prior to the time the risk of loss passes to Buyer, the date of delivery shall be adjusted to accommodate remanufacture of the affected goods. If the loss is partial, Buyer shall have the right to take delivery of that portion of the goods which conform to the contract. NOTES: Quote valid for 60 days unless otherwise noted.

Signed for CohuHD Costar, LLC by: ***Frank Sneed***

Frank Sneed, Sales Representative - Office: (817)467-3749 - e-mail: frank@techonesales.com



1922 WAUKESHA DR
 PFLUGERVILLE TX 78660-2033
 Phone: 512-421-2300
 Fax: 512-323-5722

To: KAPSCH TRAFFICOM TRANSPORTATION NA INC
 211 EAST 7TH STREET, STE 800
 AUSTIN TX 78701-3366
 Attn: Sean Staehli
 Phone: 000-000-0000
 Fax:
 Email: justin.halliburton@graybar.com

Date: 08/14/2020
Proj Name:
GB Quote #: 0236014293
 Release Nbr:
 Purchase Order Nbr: CTRMA
 Additional Ref#
 Valid From: 08/14/2020
 Valid To: 09/13/2020
 Contact: JUSTIN HALLIBURTON
 Email: justin.halliburton@graybar.com

Proposal

We Appreciate Your Request and Take Pleasure in Responding As Follows

Notes:
**** Plus Freight**

Item	Item/Type	Quantity	Supplier	Catalog Nbr	Description	Price	Unit	Ext.Price
100		2 EA	ORTRONICS	OR-810-227-003	1M ST-ST DPLX 9/125 FIBER CBL	\$15.00	1	\$30.00
GB Part #: 22085522 UPC #: 88481576027								
200		2 EA	ORTRONICS	NOF QUIKTRON INC		\$8.76	1	\$17.52
Item Note: 810-L27-009 VS 3M LC ST SM DPX PVC								
300		2 EA	ORTRONICS	OR-810-L12-006	2M LC-ST DPLX 62.5 FIBERCBL	\$13.78	1	\$27.56
GB Part #: 22085479 UPC #: 88481576092								

Total in USD (Tax not included): \$75.08

This equipment and associated installation charges may be financed for a low monthly payment through Graybar Financial Services (subject to credit approval). For more information call 1-800-241-7408 to speak with a leasing specialist.

To learn more about Graybar, visit our website at www.graybar.com 24-Hour Emergency Phone#: 1-800-GRAYBAR

Subject to the standard terms and conditions set forth in this document. Unless otherwise noted, freight terms are F.O.B. shipping point prepaid and bill. Unless noted the estimated ship date will be determined at the time of order placement.

To: KAPSCH TRAFFICOM TRANSPORTATION NA INC.
211 EAST 7TH STREET, STE 800
AUSTIN TX 78701-3366
Attn: Sean Staehli

Date: 08/14/2020
Proj Name:
GB Quote #: 0236014293

Proposal

We Appreciate Your Request and Take Pleasure in Responding As Follows

GRAYBAR ELECTRIC COMPANY, INC. TERMS AND CONDITIONS OF SALE

1. **ACCEPTANCE OF ORDER; TERMINATION** - Acceptance of any order is subject to credit approval and acceptance of order by Graybar Electric Company, Inc. ("Graybar") and, when applicable, Graybar's suppliers. If credit of the buyer of the goods or services ("Buyer") becomes unsatisfactory to Graybar, Graybar reserves the right to terminate upon notice to Buyer and without liability to Graybar.
2. **PRICES AND SHIPMENTS** - Unless otherwise quoted, prices for goods shall be those in effect at time of shipment, which shall be made F.O.B. shipping point, prepaid and bill. Unless otherwise indicated in the applicable quotation or statement of work, prices for services shall be those in effect at the time of completion. The contract price for goods and/or services shall be increased by the amount of any applicable tariff, excise, fee, assessment, levy, charge or duty of any kind whatsoever, imposed, assessed or collected by any governmental body, whether or not reflected in the costs charged to Graybar, and Graybar may increase its cost for goods and/or services appropriately to take into account such increases in Graybar's costs.
3. **RETURN OF GOODS** - Credit may be allowed for goods returned with prior approval. A deduction may be made from credits issued to cover cost of handling. Returns will not be accepted for services or any material which has been modified at the request of or by Buyer. In addition, no custom orders may be returned.
4. **TAXES** - Prices shown do not include sales or other taxes imposed on the sale of goods or services. Taxes now or hereafter imposed upon sales, shipments or services will be added to the purchase price. Buyer agrees to reimburse Graybar for any such tax or provide Graybar with acceptable tax exemption certificate.
5. **DELAY IN DELIVERY** - Graybar is not to be accountable for delays in delivery of goods or services occasioned by acts of God, failure of its suppliers to ship or deliver on time, or other circumstances beyond Graybar's reasonable control, including, but not limited to, sourcing, shipment or delivery issues caused by, related to or resulting from COVID-19 or other similar national or global health situations. Factory shipment or delivery dates are best estimates, and in no case shall Graybar be liable for any consequential or special damages arising from any delay in provision of services, shipment or delivery.
6. **LIMITED WARRANTIES** - Graybar warrants that all goods sold are free of any security interest and will make available to Buyer all transferable warranties (including without limitation warranties with respect to intellectual property infringement) made to Graybar by the manufacturer of the goods. Buyer acknowledges that the performance of any service which alters the manufacturer provided goods as indicated in the statement of work may void the manufacturer's warranty. Graybar shall use the same care and skill a similarly situated provider of like services would exercise following commonly accepted industry practices in the performance of its duties under this agreement. **GRAYBAR MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES, AND SPECIFICALLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE, UNLESS OTHERWISE AGREED IN WRITING BY AN AUTHORIZED REPRESENTATIVE OF GRAYBAR.**
7. **PRODUCTS SOLD HEREUNDER ARE NOT INTENDED FOR USE IN OR IN CONNECTION WITH (1) ANY SAFETY APPLICATION OR THE CONTAINMENT AREA OF A NUCLEAR FACILITY, OR (2) IN A HEALTHCARE APPLICATION, WHERE THE GOODS HAVE POTENTIAL FOR DIRECT PATIENT CONTACT OR WHERE A SIX (6) FOOT CLEARANCE FROM A PATIENT CANNOT BE MAINTAINED AT ALL TIMES.**
8. **LIMITATION OF LIABILITY** - Buyer's remedies under this agreement are subject to any limitations contained in manufacturer's terms and conditions to Graybar, a copy of which will be furnished upon written request. Furthermore, Graybar's liability shall be limited to either repair or replacement of the goods, re-performance of the services, or refund of the purchase price, all at Graybar's option, and IN NO CASE SHALL GRAYBAR BE LIABLE FOR INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES. In addition, claims for shortages, other than loss in transit, must be made in writing not more than five (5) days after receipt of shipment. Unless otherwise agreed in the applicable statement of work, acceptance of services will occur not more than five (5) days after completion of performance.
9. **WAIVER** - The failure of Graybar to insist upon the performance of any of the terms or conditions of this agreement or to exercise any right hereunder shall not be deemed to be a waiver of such terms, conditions, or rights in the future, nor shall it be deemed to be a waiver of any other term, condition, or right under this agreement.
10. **MODIFICATION OF TERMS AND CONDITIONS** - These terms and conditions, and any associated statement of work, supersede all other communications, negotiations, and prior oral or written statements regarding the subject matter of these terms and conditions. No change, modification, rescission, discharge, abandonment, or waiver of these terms and conditions shall be binding upon Graybar unless made in writing and signed on its behalf by a duly authorized representative of Graybar. No conditions, usage of trade, course of dealing or performance, understanding or agreement, purporting to modify, vary, explain, or supplement these terms and conditions shall be binding unless hereafter made in writing and signed by the party to be bound. Any proposed modifications or additional terms are specifically rejected and deemed a material alteration hereof. If this document shall be deemed an acceptance of a prior offer by Buyer, such acceptance is expressly conditional upon Buyer's assent to any additional or different terms set forth herein.
11. **REELS** - When Graybar ships returnable reels, a reel deposit may be included in the invoice. The Buyer should contact the nearest Graybar service location to return reels.
12. **CERTIFICATION** - Graybar hereby certifies that these goods were produced in compliance with all applicable requirements of Sections 6, 7, and 12 of the Fair Labor Standards Act, as amended, and of regulations and orders of the United States Department of Labor issued under Section 14 thereof. This agreement is subject to Executive Order 11246, as amended, the Rehabilitation Act of 1973, as amended, the Vietnam Veterans' Readjustment Assistance Act of 1974, as amended, E.O. 13496, 29 CFR Part 471, Appendix A to Subpart A, and the corresponding regulations, to the extent required by law. 41 CFR 60-1.4, 60-741.5, and 60-250.5 are incorporated herein by reference, to the extent legally required.
13. **FOREIGN CORRUPT PRACTICES ACT** - Buyer shall comply with applicable laws and regulations relating to anti-corruption, including, without limitation, (i) the United States Foreign Corrupt Practices Act (FCPA) (15 U.S.C. §§78dd-1, et. seq.) irrespective of the place of performance, and (ii) laws and regulations implementing the Organization for Economic Cooperation and Development's Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, the U.N. Convention Against Corruption, and the Inter-American Convention Against Corruption in Buyer's country or any country where performance of this agreement or delivery of goods will occur.
14. **ASSIGNMENT** - Buyer shall not assign its rights or delegate its duties hereunder or any interest herein without the prior written consent of Graybar, and any such assignment, without such consent, shall be void.
15. **GENERAL PROVISIONS** - All typographical or clerical errors made by Graybar in any quotation, acknowledgment or publication are subject to correction. This agreement shall be governed by the laws of the State of Missouri applicable to contracts to be formed and fully performed within the State of Missouri, without giving effect to the choice or conflicts of law provisions thereof. All suits arising from or concerning this agreement shall be filed in the Circuit Court of St. Louis County, Missouri, or the United States District Court for the Eastern District of Missouri, and no other place unless otherwise determined in Graybar's sole discretion. Buyer hereby irrevocably consents to the jurisdiction of such court or courts and agrees to appear in any such action upon written notice thereof.
16. **PAYMENT TERMS** - Payment terms shall be as stated on Graybar's invoice or as otherwise mutually agreed. As a condition of the sales agreement, a monthly service charge of the lesser of 1-1/2% or the maximum permitted by law may be added to all accounts not paid by net due date. Visa, MasterCard, American Express, and Discover credit cards are accepted at point of purchase only.
17. **EXPORTING** - Buyer acknowledges that this order and the performance thereof are subject to compliance with any and all applicable United States laws, regulations, or orders. Buyer agrees to comply with all such laws, regulations, and orders, including, if applicable, all requirements of the International Traffic in Arms Regulations and/or the Export Administration Act, as may be amended. Buyer further agrees that if the export laws are applicable, it will not disclose or re-export any technical data received under this order to any countries for which the United States government requires an export license or other supporting documentation at the time of export or transfer, unless Buyer has obtained prior written authorization from the United States Office of Export Control or other authority responsible for such matters.
18. **CANCELLATION; CHANGES FOR SERVICES** - Buyer may cancel or make changes to a statement of work up to five (5) business days prior to commencement of the work. All changes and cancellations after such date are subject to Graybar's prior written approval in Graybar's sole and absolute discretion. Buyer shall pay to Graybar amounts necessary to cover cancellation, restocking fees and other charges applicable to the cancelled goods or services including those incurred or committed to by Graybar.

Signed: _____

This equipment and associated installation charges may be financed for a low monthly payment through Graybar Financial Services (subject to credit approval). For more information call 1-800-241-7408 to speak with a leasing specialist.

To learn more about Graybar, visit our website at www.graybar.com

24-Hour Emergency Phone#: 1-800-GRAYBAR

Subject to the standard terms and conditions set forth in this document. Unless otherwise noted, freight terms are F.O.B. shipping point prepaid and bill.

Unless noted the estimated ship date will be determined at the time of order placement.

18 August 2020

In Reply Refer To: QUS200137

Attention: Sean Staehli
Roger Prichard



See the possibilities

Kapsch TrafficCom North America
7701 Metropolis Dr. Building 14
Austin, TX 78744

Subject: Fixed Price Quotation for JAI Traffic Solutions
products in support of your SH290 project.

Reference: Your request

Gentlemen,

In response to your request, JAI Traffic Solutions is pleased to submit
this fixed price quotation in support of your on-going SH290 project.

The pricing outlined herein shall remain valid until 09/18/20. This
Quotation consists of this cover letter along with the enclosed Pricing
Summaries and [Terms of Sale and Delivery].

Thank you for your continued support and consideration. Should you
have any questions, please feel free to contact Frank Long at (630) 293-
9377.

Thank You and Best Regards,

Frank Long
Traffic Solutions Manager, USA
JAI Traffic Solutions
(630) 293-9377

JAI Inc.
6800 Santa Teresa Blvd
Suite 175
San Jose, CA 95119
USA

Toll-free phone
+1 800 445-5444
Phone
+1 408 383-0300
Fax
+1 408 383-0301

www.jai.com

ISO 9001:2000 certified

JAI Proprietary Information

The Information contained herein is Proprietary to JAI and shall not be Disclosed to Third Parties Without the
Written Permission of JAI, Inc.

SH290 VES System - Pricing Summary:
Table 1 - Spare Lane Hardware equipment:

Item	Qty	Model	Description	Unit Price (US \$)	Total Price (US \$)
01	4	VIS-CAM-1000-AIO	JAI SAP P/N: 31016592 Vehicle Imaging Subsystem, Including: Vehicle Imaging Subsystem, Including: TS-5000EN High Resolution Progressive scan Monochrome Camera in an AIO Housing w/ Filter, BLUE LEDs, 14-50mm Motorized Zoom & Focus, Vari-focal Lens and control, 24VDC/50W heaters and Pan/tilt/Roll mount.	\$6,450	\$25,800
02	20	EIO-303	JAI P/N: 20009593 IO board for the VISCAM 1000 camera(s).	\$700	\$14,000
			Total Hardware Fixed Price		\$39,800

Notes:

1. Above prices are for SH290 only and apply to your VES retrofit project ONLY!
2. The above pricing shall remain valid for a period of thirty (30) days from the date of this submittal and is conditioned upon the Conditions of Sale outlined below.

JAI Proprietary Information

The Information contained herein is Proprietary to JAI and shall not be Disclosed to Third Parties Without the Written Permission of JAI, Inc.

TERMS OF SALE AND DELIVERY OF JAI INC.,
(“JAI”), 625 RIVER OAKS PARKWAY, SAN JOSE, CA 95134, USA

These Terms of Sale and Delivery (the “Standard Delivery Terms”) is part of the Agreement and shall apply to any Product sold and any Support provided by JAI to a purchaser (the “Purchaser”). In case of any differences between these Standard Delivery Terms and the general terms of the Purchase Order, these Standard Delivery Terms and any other of JAI’s standard terms referred to in the Agreement shall prevail unless otherwise expressly agreed in writing.

1. Definitions:

The following expressions shall have the following meanings:

“**Agreement**” means JAI’s quotation to the Purchaser, the Purchaser’s order, JAI’s confirmation of the Purchaser’s order and any of JAI’s standard terms referred to by JAI in its quotation and/or order confirmation.

“**Hardware**” means all goods acquired by the Purchaser under the Agreement, save for the Software.

“**Product**” means any Hardware and any Software.

“**Software**” means any software acquired by the Purchaser under the Agreement.

“**Standard Test Procedures**” are the latest released test procedures used by JAI production department.

“**Support**” means any support provided by JAI to the Purchaser according to the Agreement.

2. Product Information and Prices:

Data in product information are binding only to the extent that they are by reference expressly included in the Agreement. Technical documents, quotation or other price information concerning the Product may not be used by Purchaser for any other purpose than for which they were submitted and may not be communicated to a third party.

3. Validity of offers, etc.:

Where no specific term or acceptance of an order is indicated, the term of acceptance shall be 30 days from the date of JAI’s quotation to the Purchaser.

The Agreement shall be deemed legally entered into with binding effect between JAI and the Purchaser as per the date of JAI’s confirmation of the Purchaser’s order (date of the Agreement).

4. Test:

Prior to delivery of Hardware JAI will conduct a test of the Hardware at JAI’s facilities in accordance with JAI’s Standard Test Procedures and specifications applicable. Upon mutual agreement between JAI and Purchaser the test may derogate from the Standard Test Procedures, provided that Purchaser defrays all additional costs in relation to the test.

5. Delivery:

The Product is delivered in accordance with the following terms:

–“**FOB**” (California Commercial Code), JAI (with respect to deliveries to Purchasers domiciled within the United States),

–“**Ex Works**” (Incoterms 2000), JAI (with respect to deliveries to Purchasers domiciled outside the United States). Delivery date shall be the date set out in the Purchase Agreement and shall be considered punctual where effected either on or within 30 days after the date of delivery set out in the Agreement. If no delivery date is stated in the order from the Purchaser, then the delivery date set out in JAI’s confirmation of the Purchaser’s order shall apply.

In the event that a delivery from JAI is delayed, the Customer will without undue delay be informed in writing about a new expected delivery date. Where JAI fails to deliver in time on the expected delivery date, the Purchaser may request in writing that delivery be effected and stipulate a last, reasonable time limit of not less than 14 days. If JAI fails to deliver within the stipulated time limit, and this is not due to circumstances, for which the Purchaser can be held liable, the Purchaser shall be entitled to rescind the Agreement by written notification to JAI with respect to such part of the Product that cannot be put to the intended use.

JAI shall not be liable for any direct or indirect damages that the Purchaser may encounter or suffer as a result of late delivery of the Products and the Purchaser shall in no event be entitled to claim compensation for any default on the part of JAI, irrespective of whether such a default is attributable to JAI.

JAI shall not be liable for defects caused by occurrences after the risk in the Hardware has passed to the Purchaser.

6. Payment Terms:

All prices quoted by JAI are in US Dollars, exclusive of VAT and any other direct or indirect taxes, duties or levies chargeable on the Product. The agreed purchase price shall be payable in cash upon delivery.

In the event of delayed payments an interest of the lesser of (i) two (2) % per commenced month or (ii) the highest rate permitted by applicable law is accrued and JAI is entitled to withhold any other orders placed and/or part deliveries not yet effected until the Purchaser has settled all outstanding amounts with JAI (including interest). If outstanding amounts are not fully settled by Purchaser three months after the due date, JAI may rescind the Agreement immediately and without prior notice.

7. Retention of Title:

The Product shall remain JAI’s property until the full purchase price, including interest and costs, as well as all claims with respect to transportation, and any amounts to which JAI is entitled pursuant to the parties’ contractual relationship, have been settled in full.

8. Support:

JAI provides support to the Purchaser for all Hardware sold. The support will be provided subject to availability of the support engineer and consists of the following:

- a) Data sheet, product manuals, installation manuals and interface manuals are available from the JAI WEB.
- b) Telephone support within normal office hours regarding technical matters related to operation and maintenance of the Hardware.
- c) Email support is provided based on receipt of a detailed description of the question/problem. A reply can normally be expected within 72 hours.
- d) Unless covered by separate agreement between the Purchaser and JAI (e.g. JAI’s Standard Terms of Camera Interface Software Development Support), assistance regarding interface software used in connection with the Hardware is provided on an hourly basis calculated on actual hours used at US \$ 225 per hour subject to availability of our software engineer.
- e) The hourly rate for support engineers is US \$ 175 per hour subject to availability of support engineer.
- f) Any travel expenses will be charged at cost plus 15%

JAI reserves the right to change, at any time, all prices in this clause 8 without prior notice to the Purchaser and the prices set forth in this clause 8 are subject to such subsequent changes.

9. LIMITED WARRANTY:

THE LIMITED WARRANTY UNDERTAKEN BY JAI IN THIS CLAUSE 9 IS ONLY MADE IN RESPECT OF THE HARDWARE. JAI’S LIABILITY IN RESPECT OF SOFTWARE IS INCLUDED IN THE LICENSE TERMS. JAI WARRANTS THAT THE DELIVERED HARDWARE SHALL BE MANUFACTURED IN ACCORDANCE WITH GOOD WORKMANSHIP AND THAT

IT HAS PASSED THE TEST IN ACCORDANCE WITH THE APPLICABLE STANDARD TEST PROCEDURES. THIS WARRANTY IS EXPRESSLY MADE IN LIEU OF ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SAVE AS EXPRESSLY WARRANTED ABOVE IN THIS CLAUSE 9, THE ENTIRE RISK OF THE QUALITY AND PERFORMANCE OF THE HARDWARE IS WITH THE PURCHASER. JAI SHALL IN NO EVENT BE ACCOUNTABLE FOR DEFECTS OR OTHER MATTERS RELATING TO THE PURCHASER’S OWN IT PLATFORM OR THE INTEGRATION OR INTERACTION BETWEEN THE HARDWARE AND THE PURCHASER’S OWN IT PLATFORM.

THE PURCHASER SHALL EXAMINE THE HARDWARE UPON RECEIPT AND ANY ALLEGED BREACH OF WARRANTY SHALL BE NOTIFIED TO JAI WITHIN 14 DAYS THEREAFTER. THE NOTICE SHALL CONTAIN A DESCRIPTION OF HOW THE ALLEGED BREACH MANIFESTS ITSELF. IF THE PURCHASER FAILS TO NOTIFY JAI IN WRITING WITHIN THE TIME LIMIT SET FORTH ABOVE, HE SHALL FORFEIT HIS RIGHT TO MAKE ANY CLAIM UNDER THIS WARRANTY. REMEDY OF THE DEFECT SHALL TAKE PLACE WITHOUT ANY UNDUE DELAY AT JAI’S PREMISES. TRANSPORT FROM PURCHASER TO JAI SHALL BE AT PURCHASER’S ACCOUNT AND RISK, WHILE TRANSPORTATION FROM JAI TO PURCHASER SHALL BE AT JAI ACCOUNT AND PURCHASER’S RISK.

IF JAI FAILS TO TAKE CORRECTIVE MEASURES WITHIN A REASONABLE PERIOD OF TIME AFTER HAVING RECEIVED THE DEFECT PARTS, THE PURCHASER MAY BY WRITTEN NOTICE REQUIRE JAI TO DO SO WITHIN A REASONABLE TIME NOT LESS THAN 14 DAYS.

THE SOLE LIABILITY OF JAI FOR BREACH OF THIS WARRANTY SHALL BE THE REPLACEMENT OF NON-PERFORMING PARTS OF THE HARDWARE WITHIN A REASONABLE TIME. JAI IS ONLY LIABLE FOR DEFECTS, WHICH APPEARS UNDER THE CONDITIONS OF OPERATION SET OUT IN DOCUMENTATION PROVIDED BY JAI TO PURCHASER AND UNDER PROPER USE OF THE HARDWARE.

JAI’S LIABILITY DOES NOT COVER ORDINARY WEAR AND TEAR OR DETERIORATION. THE WARRANTY IN THIS CLAUSE 9 EXPIRES 12 MONTHS AFTER THE DELIVERY OF THE HARDWARE.

10. GENERAL LIMITATIONS:

OF LIABILITY JAI SHALL IN NO EVENT BE LIABLE FOR ANY LOSS OR DAMAGE ARISING, DIRECTLY OR INDIRECTLY, FROM THE USE OF THE PRODUCT, INCLUDING ANY PRODUCT LIABILITY, AND/OR FOR ANY INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY NATURE WHATSOEVER, INCLUDING WITHOUT LIMITATION LOSS OF DATA OR DATA BEING RENDERED INACCURATE (INCLUDING WITHOUT LIMITATION IN THE EVENT OF (I) FOUL WEATHER CONDITIONS (E.G. FOG, RAIN OR SNOW), (II) POWER CUT AND (III) FAILURE TO COMMUNICATE WITH GPS SATELLITE), LOSS OF PROFITS, LOSS OF INTEREST OR OTHER LOSSES SUSTAINED BY THE PURCHASER OR THIRD PARTIES ARISING OUT OF THE USE OR INABILITY TO USE THE PRODUCT.

THE RESTRICTIONS IN JAI’S LIABILITY PROVIDED FOR IN THIS CLAUSE 10 SHALL NOT APPLY IN THE EVENT OF GROSS NEGLIGENCE ON JAI’S PART. HOWEVER, JAI AGGREGATE LIABILITY WHETHER IN CONTRACT, WARRANTY, TORT OR OTHERWISE SHALL IN NO EVENT EXCEED THE AMOUNT PAID BY THE PURCHASER TO JAI PURSUANT TO THE AGREEMENT DURING THE 12 MONTHS PRIOR TO THE PURCHASER BECOMING AWARE OF THE BASIS FOR A CLAIM AGAINST JAI.

11. Indemnification:

The Purchaser shall indemnify and hold harmless JAI and its affiliates, officers, directors, employees and shareholders against and from all claims, demands, suits, costs (including reasonable attorneys’ fees), and actions in each case with respect to damages to property or injuries to persons that may be sustained by any third party and that are asserted against such an indemnified party on the basis of a defect in the manufacture or supply of the Products.

12. Force Majeure:

JAI shall not be liable for the following causes or events where such causes or events hinder the performance of the Agreement or make the performance thereof unreasonably onerous to JAI: Industrial disputes and any other cause or event beyond JAI’s control, including, but not limited to, fire, war, mobilizations or calling up for military service to a similar extent, riots, commotions, requisitions, confiscation, exchange control restrictions, transport hindrances, power restrictions, embargoes on imports or exports and defects or delays in deliveries on the part of subcontractors caused and labour disputes.

Notwithstanding the above, either party shall be entitled to terminate the Agreement by notice in writing to the other party if performance of the Agreement is delayed more than four (4) months by reasons of the force majeure as described in this clause 12.

13. Export Control:

Purchaser acknowledges that the Products are subject to regulation by agencies of the U.S. Government, which prohibits export or diversion of certain products and technology to certain countries. Any and all obligations of JAI to provide the Products or technical assistance related to the Products is subject in all respects to such United States laws and regulations as shall from time to time govern the sale and delivery of products abroad by persons subject to the jurisdiction of the United States. Purchaser will comply with the Export Administration Regulations and other United States laws and regulations governing exports in effect from time to time and, without limiting the above, Purchaser shall not export or re-export, or otherwise provide, the Products or any technical data related thereto to any country, or to a national of any country, as to which the U.S. Government has placed an embargo against the shipment of Products.

14. General:

Entire Agreement: These Standard Delivery Terms and the documents referred to herein, including without limitation the Agreement (together the “Transaction Documents”) constitute the entire agreement and understanding between JAI and Purchaser with respect to the subject matter of the Transaction Documents and supersedes all prior agreements and understandings, whether oral or written.

Amendment: Unless otherwise expressly stated herein, these Standard Delivery Terms may not be amended without the written consent of both parties.

Waiver: The waiver or failure of either party to exercise any right provided for in these Standard Delivery Terms shall not be deemed a waiver of any further right hereunder.

Assignment: Neither party may assign its rights or obligations under these Standard Delivery Terms except in the context of a merger, sale of substantially all assets or like transaction.

15. Applicable Law and Venue:

The Agreement (including for the avoidance of doubt these Standard Delivery Terms between JAI and the Purchaser) shall be governed by the laws of the State of California, without regard to its conflicts of laws principles. Any disputes or claims arising out of or in connection with the Agreement shall be heard exclusively in the federal and state courts located in Santa Clara County, California. The losing party in a dispute shall pay the prevailing party’s reasonable legal fees.



See the possibilities



Pricing Proposal
 Quotation #: 19332748
 Created On: 8/26/2020
 Valid Until: 8/31/2020

Kapsch TrafficCom USA, Inc.

Inside Sales Account Manager

Sean Staehli
 7701 Metropolis Drive
 Bldg 14, Suite 100
 Austin, TX 78744
 United States
 Phone: (512) 596-7238
 Fax:
 Email: Sean.Staehli@kapsch.net

Paul Perez
 1501 South Mo-Pac Expressway
 Suite 400
 Austin, TX 78746
 Phone: 512-814-4102
 Fax: 512-814-4103
 Email: Paul_Perez@shi.com

All Prices are in US Dollar (USD)

Product	Qty	Your Price	Total
1 PowerEdge R540 Server - Silver 4214 x 2 - 64GB - 1.8TB 10K x 4 - 3 Year ProSupport Dell - Part#: 210-ALZH	1	\$4,798.00	\$4,798.00
		Subtotal	\$4,798.00
		Shipping	\$125.00
		Total	\$4,923.00

Additional Comments

Due to industry-wide constraints and fluctuations, SHI reserves the right to change price at any time

- PowerEdge R540 Server 210-ALZH - 1 -
- PowerEdge R540 MLK Motherboard, V2 329-BFBK - 1 -
- No Trusted Platform Module 461-AADZ - 1 -
- 3.5 Chassis with up to 8 Hot Plug Hard Drives 321-BCWW - 1 -
- Internal PERC 405-AAOM - 1 -
- PowerEdge R540 Shipping 340-BSID - 1 -
- PowerEdge R540 Shipping Material, V2 340-COSN - 1 -
- PowerEdge R540 CE, CCC, BIS Marking 389-DSX1 - 1 -
- Intel Xeon Silver 4214 2.2G, 12C/24T, 9.6GT/s, 16.5M Cache, Turbo, HT (85W) DDR4-2400 338-BSDL - 1 -
- Intel Xeon Silver 4214 2.2G, 12C/24T, 9.6GT/s, 16.5M Cache, Turbo, HT (85W) DDR4-2400 338-BSDL - 1 -
- Additional Processor Selected 379-BDCO - 1 -
- Thank you for Choosing Dell 555-BBNG - 1 -
- 2666MT/s RDIMMs 370-ADNU - 1 -
- Performance Optimized 370-AAIP - 1 -
- RAID 10 780-BCDQ - 1 -
- PERC H740P RAID Controller, LP Adapter 405-AAML - 1 -
- No Operating System 619-ABVR - 1 -
- iDRAC9,Enterprise 385-BBKT - 1 -
- iDRAC Group Manager, Enabled 379-BCQV - 1 -
- iDRAC,Factory Generated Password 379-BCSF - 1 -
- 3xLP_2 CPU No Riser Configuration 330-BBIT - 1 -
- On-Board LOM 542-BBBP - 1 -

No Optical Drive Internal for 8 HD Chassis 429-AAQN - 1 -
Dual, Hot-Plug, Redundant Power Supply (1+1), 750W 450-AJRO - 1 -
PowerEdge 2U Standard Bezel 325-BCHU - 1 -
Dell EMC Luggage Tag 350-BBLI - 1 -
No Quick Sync 350-BBKU - 1 -
Performance BIOS Settings 384-BBBL - 1 -
UEFI BIOS Boot Mode with GPT Partition 800-BBDM - 1 -
ReadyRails Sliding Rails With Cable Management Arm 770-BBBR - 1 -
No Systems Documentation, No OpenManage DVD Kit 631-AACK - 1 -
US Order 332-1286 - 1 -
Basic Next Business Day 36 Months 709-BBFM - 1 -
On-Site Installation Declined 900-9997 - 1 -
32GB RDIMM 2666MT/s Dual Rank 370-ADNF - 2 -
1.8TB 10K RPM SAS 12Gbps 512e 2.5in Hot-plug Hard Drive, 3.5in HYB CARR 400-ASHM - 4 -
No Media Required 421-5736 - 1 -
C13 to C14, PDU Style, 12 AMP, 6.5 Feet (2m) Power Cord, North America 492-BBDI - 2

The Products offered under this proposal are resold in accordance with the [SHI Online Customer Resale Terms and Conditions](#), unless a separate resale agreement exists between SHI and the Customer.



Pricing Proposal
Quotation #: 19332909
Created On: 8/26/2020
Valid Until: 8/30/2020

Kapsch TrafficCom USA, Inc.

Sean Staehli
7701 Metropolis Drive
Bldg 14, Suite 100
Austin, TX 78744
United States
Phone: (512) 508-7238
Fax:
Email: Sean.Staehli@kapsch.net

Inside Sales Account Manager

Paul Perez
1501 South Mo-Pac Expressway
Suite 400
Austin, TX 78746
Phone: 512-814-4102
Fax: 512-814-4103
Email: Paul_Perez@shi.com

All Prices are in US Dollar (USD)

Product	Qty	Your Price	Total
1 PowerEdge R340 Server - Xeon E-2244G - 16GB - 4TB 7.2K x 2 - 3 Year ProSupport Dell - Part#: 210-ALZH Note: Intel Xeon E-2144G is no longer available I quoted the E-2244	1	\$2,447.00	\$2,447.00
		Subtotal	\$2,447.00
		Shipping	\$125.00
		Total	\$2,572.00

Additional Comments

Due to industry-wide constraints and fluctuations, SHI reserves the right to change price at any time

PowerEdge R540 Server 210-ALZH - 1 -
PowerEdge R540 MLK Motherboard, V2 329-BFBK - 1 -
No Trusted Platform Module 461-AADZ - 1 -
3.5 Chassis with up to 8 Hot Plug Hard Drives 321-BCWW - 1 -
Internal PERC 405-AAOM - 1 -
PowerEdge R540 Shipping 340-BSID - 1 -
PowerEdge R540 Shipping Material, V2 340-COSN - 1 -
PowerEdge R540 CE, CCC, BIS Marking 389-DSXI - 1 -
Intel Xeon Silver 4214 2.2G, 12C/24T, 9.6GT/s, 16.5M Cache, Turbo, HT (85W) DDR4-2400 338-BSDL - 1 -
Intel Xeon Silver 4214 2.2G, 12C/24T, 9.6GT/s, 16.5M Cache, Turbo, HT (85W) DDR4-2400 338-BSDL - 1 -
Additional Processor Selected 379-BDCO - 1 -
Thank you for Choosing Dell 555-BBNG - 1 -
2666MT/s RDIMMs 370-ADNU - 1 -
Performance Optimized 370-AAIP - 1 -
RAID 10 780-BCDQ - 1 -
PERC H740P RAID Controller, LP Adapter 405-AAML - 1 -
No Operating System 619-ABVR - 1 -
iDRAC9,Enterprise 385-BBKT - 1 -
iDRAC Group Manager, Enabled 379-BCQV - 1 -
iDRAC,Factory Generated Password 379-BCSF - 1 -
3xLP,2 CPU No Riser Configuration 330-BBIT - 1 -
On-Board LOM 542-BBBP - 1 -

No Optical Drive Internal for 8 HD Chassis 429-AAQN - 1 -
Dual, Hot-Plug, Redundant Power Supply (1+1), 750W 450-AJRO - 1 -
PowerEdge 2U Standard Bezel 325-BCHU - 1 -
Dell EMC Luggage Tag 350-BBLI - 1 -
No Quick Sync 350-BBKU - 1 -
Performance BIOS Settings 384-BBBL - 1 -
UEFI BIOS Boot Mode with GPT Partition 800-BBDM - 1 -
ReadyRails Sliding Rails With Cable Management Arm 770-BBBR - 1 -
No Systems Documentation, No OpenManage DVD Kit 631-AACK - 1 -
US Order 332-1286 - 1 -
Basic Next Business Day 36 Months 709-BBFM - 1 -
On-Site Installation Declined 900-9997 - 1 -
32GB RDIMM 2666MT/s Dual Rank 370-ADNF - 2 -
1.8TB 10K RPM SAS 12Gbps 512e 2.5in Hot-plug Hard Drive, 3.5in HYB CARR 400-ASHM - 4 -
No Media Required 421-5736 - 1 -
C13 to C14, PDU Style, 12 AMP, 6.5 Feet (2m) Power Cord, North America 492-BBDI - 2

The Products offered under this proposal are resold in accordance with the [SHI Online Customer Resale Terms and Conditions](#), unless a separate resale agreement exists between SHI and the Customer.



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

System Integration Agreement

CTRMA Toll Systems Integration



CTRMA WO-155, 183A DVAS Camera Upgrade

October 16, 2020

Change Request Description

Request ID	CTRMA-WO-155		
Request Date	10/16/2020		
System Module	183A DVAS Camera		
Change Type	Equipment		
Description			
Replace Aging DVAS cameras			
Affected Project			
<input checked="" type="checkbox"/> 183 <input type="checkbox"/> 290 <input type="checkbox"/> Mopac <input type="checkbox"/> SH71			
Affected Requirements			
N/A			
Affected System Processes:			
DVAS System			
Description of the Solution			
<ul style="list-style-type: none"> ○ Upgrade aging DVAS cameras on 183A ○ MOT for the DVAS Camera replacement is to be included during normal Preventive Maintenance Closure. ○ Kapsch will provide a Project Schedule. Must be completed before June 2021 			
Impact	<input type="checkbox"/> High	<input type="checkbox"/> Medium	<input checked="" type="checkbox"/> Low
Total	\$82,224.98		
Quantity	Pricing good for 60 Days		
Quantity	Mounting hardware, see the Excel document for items and quantity.		



System Integration

WO-CTRMA-155-183A DVAS Camera Upgrade_V2.4.docx



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

	Materials / Equipment	Quantity	Price	10% Markup	Extended Price
1	COHUHD 3430HD	44	\$55,000.00	\$5,500.00	\$60,500.00
2	RJ45 IP67 COUPLER	44	\$1,320.00	\$132.00	\$1,452.00
3	UNSHIELDED CAT5E, MS TO RJ45, 5 FT	44	\$3,740.00	\$374.00	\$4,114.00
4	3430HD WALL MOUNT BRACKET	44	\$1,100.00	\$110.00	\$1,210.00
5	CAMERA BRACKET	44	\$2,181.08	\$218.11	\$2,399.19
6	4 port POE Injector-Panel	10	\$588.00	\$58.80	\$646.80
7	Mounting Hardware	1	\$501.74	\$50.17	\$551.91
Total Hardware					\$70,873.90

	Labor	No. of Hours	Hr. Contract Rate	Total
1	Software Engineer	0.00	\$157.59	\$0.00
2	System/Hardware Engineer	10.00	\$172.52	\$1,725.20
3	Technician	44.00	\$120.90	\$5,319.60
4	Business Analyst	0.00	\$157.59	\$0.00
5	Database Administrator	0.00	\$224.14	\$0.00
6	Documentation Clerk	10.00	\$161.66	\$1,616.60
7	Testing Engineer	0.00	\$171.17	\$0.00
8	Network Engineer/Administrator	0.00	\$156.22	\$0.00
9	Project Manager	12.00	\$224.14	\$2,689.68
Total Hours:		76.00	Total Labor:	\$11,351.08

	Subcontractor	Quantity	Cost	10% Markup	Extended Price
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
Total Subcontractor					\$0.00

	ODCs / Travel	Quantity	Cost	10% Markup	Extended Price
1	Air Fare	0	\$0.00	\$0.00	\$0.00
2	Mileage	0	\$0.00	\$0.00	\$0.00
3	Lodging	0	\$0.00	\$0.00	\$0.00
4	Per Diem	0	\$0.00	\$0.00	\$0.00
5	Car Rental	0	\$0.00	\$0.00	\$0.00
6	PM - Other/Misc.	0	\$0.00	\$0.00	\$0.00
7	Warr/Maint - Other/Misc.	0	\$0.00	\$0.00	\$0.00
Total ODCs / Travel					\$0.00

TOTAL PRICE **\$82,224.98**

Client Acceptance:	
Client name	
Date	
Signature	
Kapsch Acceptance	
Name	
Date	
Signature	

1 Reference Documents

WO 155 183A DVAS Mounting Hardware.xlsx

2 Document Version History

Version	Created	Created by	Comments
1.0	04/23/2020	Timothy Duke	Initial Submission based on e-mail.
2.0	09/09/2020	Timothy Duke	Updated Pricing
2.1	10/02/2020	Timothy Duke	Updated CTRMA logo
2.2	10/06/2020	Timothy Duke	Update to define MOT
2.3	10/09/2020	Lisa Gauger	Updated 4-port POE pricing and overall pricing to match.
2.4	10/16/2020	Lisa Gauger	Updated doc naming details from CO to WO



AmteX Precision Fabrication
 3920 Bahler Avenue
 Manvel, TX 77578-2823
 United States of America

Ph: 281.489.7042

Fax: 281.489.1992

Quote

ID: 25344 Date: 08-Sep-20

To

Kapsch TrafficCom Transportation NA, Inc.
 7701 Metropolis Dr.
 Bldg. 14 Suite 100
 Austin, TX 78744
 United States of America

Quote To

Tim Duke
 Kapsch TrafficCom Transportation NA, Inc.
 7701 Metropolis Dr.
 Bldg. 14 Suite 100
 Austin, TX 78744
 United States of America

Ph: 713-920-6838

Ph: 713-920-6838

Terms		Ship Via		Salesperson
Net 45		Best Way		AS
Quantity	Description	Unit Price	Amount	
	*** EMAIL ALL PURCHASE ORDERS TO amtxpo@amtxprecision.com ***			
	Line: 001 Part: CAMERA BRACKET CAMERA BRACKET FAB PER DRAWING RECIEVED 9/4/20 MATERIAL = .1875" 316 SS NO FINISH TOLERANCE +/- .03 CROSS PATTERN SLOTS			
44	ea	\$49.57		\$2,181.08
	LEAD TIME 2-3 WEEKS		Total:	\$2,181.08
	THANK YOU FOR THE INQUIRY! WE APPRECIATE THE OPPORTUNITY TO QUOTE!			



AT-4-48V60W

 (-\$135.98)

~~\$679.90~~

\$543.92

Subtotal **\$543.92**

Shipping  Calculated at next step

Taxes (estimated) **\$44.88**

Total USD **\$588.80**



Send any resulting purchase order to - orders@cohud.com

To: Kapsch TrafficCom
Address: 6020 Ambler Drive

City: Mississauga
State: ON Zip Code: L4W 2P1
Attn: Rolando Sevilla
EMAIL: rolando.sevilla@kapsch.net
Phone: (905)624-3020 Fax:
Ref: CTMRA

Revision Date: 9/8/2020
Quotation Date: 09/08/20
Sales Manager: Frank Sneed 817 467 3749
Quotation Validity: 60 DAYS
Ship Via: BEST WAY
F.O.B.: FACTORY/ORIGIN
Payment Terms: NET 30/APPROVED CREDIT
***Estimated Lead Time: 6-8 WEEKS ARO**
Price List Rev.: Version 2019.3
Quote #: CEDQ27895
Application Code:
Quoted By: Frank Sneed 817 467 3749

** Actual delivery schedule will be confirmed upon receipt of order.*

Item	Qty	Model	Description	Unit Price	Extended Price
1	44	3432-3000	COHUHD 3430HD SERIES IP67 H.264 FIXED CAMERA SYSTEM,, POE INPUT POWER, 1080P 30X DAY/NIGHT, DEFOG, AUTO FOCUS, EIS AND DIGITAL ZOOM	\$1,250.00	\$55,000.00
2	44	7610203-002	RJ45 IP67 COUPLER, 6MM OR 8.2MM CABLE DIAMETER	\$30.00	\$1,320.00
3	44	8196402-005	UNSHIELDED CAT5E, MS TO RJ45, 5 FT	\$85.00	\$3,740.00
4	44	7412011-002	3430HD WALL MOUNT BRACKET	\$25.00	\$1,100.00
Total Quotation Value					\$61,160.00

If you have any questions regarding this quotation, please contact Frank Sneed with TechOne Sales LLC by phone at 817-467-3749 or by email at frank@techonesales.com.

- NOTES:
1. All cables are custom made to order for length.
 2. If customer intends to make their own cables, the multi-pin mating connector that is required to connect customer made cable to the camera is not

Any purchase order or contract as a result of this quotation is subject to CohuHD's Terms & Conditions. Purchase Orders resulting from this quotation can be sent to orders@cohud.com or mail to CohuHD Costar, LLC, 7330 Trade St., San Diego, CA 92121. This quotation contains Proprietary & Confidential information and remains the property of the disclosing parties.

Signed for CohuHD Costar, LLC by: Frank Sneed
Frank Sneed, Sales Representative - Office: (817)467-3749 - e-mail: frank@techonesales.com



TERMS AND CONDITIONS

1 - ACCEPTANCE: Each order is subject to acceptance by CohuHD™. No order shall be binding until accepted in writing by an authorized CohuHD employee. The terms and conditions stated herein form the entire terms and conditions between Buyer and CohuHD, Inc., except for written agreements signed by both parties amending these terms and conditions. 2 - CANCELLATION OR CHANGE TO CONTRACT: Upon written notice by Buyer of intention to cancel an order, CohuHD will stop work promptly. Cancellation of an accepted order requires CohuHD written consent thereto, including terms that will satisfy all costs incurred and proportionate profit earned by CohuHD. Change orders will take effect upon Buyer's and CohuHD's written agreement on all changes. However, if Buyer requests to delay shipping an order beyond the stated lead time, CohuHD reserves the right to refuse the delay or adjust pricing to then current levels. 3 - DELIVERY: Delivery date is the ship date from the factory provided in the order acknowledgement, and is CohuHD's best estimate at time of order placement. CohuHD shall not be liable for any nonperformance, loss, damage, or delay due to war, acts of terrorism, riots, fire, flood, strikes or other labor difficulty, governmental actions, including without limit delivery requirements of a US Government agency rated order, acts of God, acts of the Buyer or its customer, transportation delays, inability to obtain necessary labor or materials from usual sources, or other causes beyond the reasonable control of CohuHD. In such event, CohuHD's performance shall be excused for a commercially reasonable time that is at least the length of time lost due to such delay. 4 - LIMITED WARRANTY: CohuHD warrants that, at time of delivery, the equipment covered by these terms and conditions will be free from defects in materials and workmanship, provided the equipment or system is installed, operated and maintained in accordance with the Operation and Maintenance manual or such other CohuHD documentation as may be applicable, for any such defect reported to CohuHD as follows: CohuHD RISE 42xxHD series products for three years from date of shipment from CohuHD's factory. CohuHD 34xxHD series products for three years from date of shipment from CohuHD's factory. All other CohuHD manufactured products are warranted for two years from date of shipment from CohuHD factory. Resale items not manufactured by CohuHD are warranted as specified by the original manufacturer. IP67/IP68 enclosures include a lifetime warranty against moisture ingress. CohuHD will clean/repair and re-pressurize returned enclosures. CohuHD will take reasonable action to repair or replace such equipment. Any claim of defect shall be submitted promptly in writing to CohuHD, Attention: Customer Service Department. A Return Material Authorization (RMA) is required for all items returned to CohuHD for repair, and must be provided by CohuHD prior to delivery at the factory. No items will be accepted without an RMA. Information necessary to process an RMA include Buyer contact details, a full product identification (serial number, model number), and description of the claimed defect as well as an explanation of the circumstances and operational conditions and reading at the time of defect. Purchaser shall prepay transportation charges to CohuHD. CohuHD's total liability under this warranty program is limited to the repair or replacement of items purchased pursuant to these terms and conditions which are found to be defective in material and/or workmanship. CohuHD retains the option, in its sole discretion, to make such repair or replacement at Buyer's site, at the CohuHD factory, or via an authorized service center. CohuHD supplied subsystems from OEM manufacturers carry only their manufacturer's warranty, which is passed on to the Buyer. CohuHD will, at the request of the Buyer, assert warranty claims to the manufacturer of such devices, but by so doing does not assume any liability. This warranty shall be void in the event of damage caused by misuse; disassembly; unauthorized repairs; intentional damage; failure to maintain the product in accordance with CohuHD operating manuals; operation of the product beyond its specified operating environment; or damage caused by accidents, lightning, power surges, acts of God, or other natural disasters; or Buyer's failure to timely pay amounts due to CohuHD. Expendable items such as bulbs, fuses, etc., are excluded from coverage under this warranty program.

Buyer shall be responsible for all costs of returning claimed defective products to CohuHD, and CohuHD will be responsible for returning the repaired products or replacements. THIS CONSTITUTES THE SOLE WARRANTY MADE BY COHUHD EITHER EXPRESSED OR IMPLIED. THERE ARE NO OTHER WARRANTIES EXPRESSED OR IMPLIED WHICH EXTEND BEYOND THE FACE HEREOF, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL COHUHD BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES AND BUYER'S REMEDIES SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF NONCONFORMING PRODUCTS. 5 - SHIPMENT: Unless expressly prohibited by Buyer, partial shipments shall be accepted. All shipments are made Ex-works (Incoterms 2010)- CohuHD factory unless expressly agreed upon otherwise. Costs of boxing and crating for domestic shipment are included in the quoted price or quoted as a separate line item. When special export or domestic packing is specified, a charge will be made to cover this extra expense. Special packing requirements and method of shipment must be stated in the purchase order. CohuHD takes reasonable care in packing for shipment and selection of carrier. CohuHD assumes no responsibility for delay, breakage, or damage after having made delivery in good order to the carrier. Insurance is the responsibility of the Buyer. Claims for damage are to be made by the Buyer on the carrier; CohuHD will assist in such claims, as requested by the Buyer. Charges & Freight quotations are available. 6 - U.S. TAXES: Unless specifically stated, the prices quoted are exclusive of any federal, state, municipal, or other government tax that may be imposed upon the production, storage, sale, transportation, or use of the products described herein. The Buyer shall pay such taxes applied directly to the sale and levied prior to shipment from CohuHD, or in lieu thereof the Buyer shall provide a tax exemption certificate acceptable to the taxing authorities. Unless a state issued tax exempt certificate is presented at the time of order placement, sales tax will be applied when shipping product to the following states: CA, NY, TX and, WA. Training is not taxable in any state. The U.S. Government is not taxable in any state. If taxable, Buyer shall include the appropriate amount and percentage on the Order for the Goods. 7 - DUTIES: All duties, import or export fees, customs fees, and brokerage charges are the responsibility of the Buyer. Pricing in CohuHD's quotation does not include these charges unless explicitly stated. 8 - RISK OF LOSS: Title to the goods shall pass to Buyer upon shipment from CohuHD's factory. Risk of loss of the goods shall pass to Buyer as soon as the goods are deposited with the carrier. It is specifically agreed that the risk of loss shall not be altered due to a default or breach of these terms and conditions by either party. 9 - ASSIGNMENT - DELEGATION: No right or interest in an accepted order shall be assigned by either Buyer or CohuHD without the written consent of the other party. No delegation or the performance of any obligation owed by either party shall be effective without the written consent of the other party. 10 - APPLICABLE LAW: The law which shall be applied hereto shall be the Uniform Commercial Code as adopted by the State of California, and as effective and in force on the date of acceptance of Buyer's order by CohuHD. 11 - EXPORT LAWS: The Goods may be subject to U.S. Government export laws and regulations. Buyer shall not export, re-export, or transfer the Goods or Confidential Information received from CohuHD without first obtaining the appropriate US Government approvals, if any. CohuHD will cooperate with Buyer to obtain any export licenses Buyer seeks, but obtaining such licensing shall be the exclusive responsibility of Buyer and CohuHD makes no representation or warranty regarding the issuance of export licenses for the Goods. 12 - CASUALTY TO IDENTIFIED GOODS: If the goods ordered by Buyer are destroyed for reasons beyond CohuHD's control prior to the time the risk of loss passes to Buyer, the date of delivery shall be adjusted to accommodate remanufacture of the affected goods. If the loss is partial, Buyer shall have the right to take delivery of that portion of the goods which conform to the contract. NOTES: Quote valid for 60 days unless otherwise noted.

Signed for CohuHD Costar, LLC by: ***Frank Sneed***

Frank Sneed, Sales Representative - Office: (817)467-3749 - e-mail: frank@techonesales.com

404-346-7000
 404-349-9091 (fax)
 atl.sales@mcmaster.com

Kapsch Trafficom U S A Inc
 7701 Metropolis Dr Bldg 14
 Austin TX 78744

Quote
 16285

Date
 8/14/20

Line	Product	Quantity	Available	Price	Total
1	8862T29 Galvanized Steel U-Bolt, 3/8"-16 Thread Size, 2-7/16" ID, packs of 1	100 packs	today	3.01 per pack	301.00
2	98970A131 Hot-Dipped Galvanized Steel Washer, USS, 3/8" Screw Size, 0.438" ID, 1" OD, packs of 100	2 packs	today	6.97 per pack	13.94
3	95160A220 Hot-Dipped Galvanized Steel Split Lock Washer for 3/8" Screw Size, 0.385" ID, 0.705" OD, packs of 100	2 packs	today	10.96 per pack	21.92
4	90371A031 Low-Strength Steel Hex Nut, Grade 2, Hot-Dipped Galvanized, 3/8"-16 Thread Size, packs of 100	4 packs	today	10.81 per pack	43.24
5	93190A546 Super-Corrosion-Resistant 316 Stainless Steel Hex Head Screw, 1/4"-20 Thread Size, 1-1/2" Long, Fully Threaded, packs of 10	20 packs	today	4.23 per pack	84.60
6	98970A129 Hot-Dipped Galvanized Steel Washer, USS, 1/4" Screw Size, 0.312" ID, 0.75" OD, packs of 100	2 packs	today	3.05 per pack	6.10
7	95160A210 Hot-Dipped Galvanized Steel Split Lock Washer for 1/4" Screw Size, 0.26" ID, 0.487" OD, packs of 100	2 packs	today	4.67 per pack	9.34
8	90371A029 Low-Strength Steel Hex Nut, Grade 2, Hot-Dipped Galvanized, 1/4"-20 Thread Size, packs of 100	4 packs	today	5.40 per pack	21.60
				Merchandise	\$501.74

Notes

Applicable shipping charges and tax will be added.

Prices good through 9/13/20.

Your order is subject only to our terms and conditions, available at www.mcmaster.com or from our Sales Department.



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

System Integration Agreement

CTRMA Toll Systems Integration



CTRMA WO-156, 290E DVAS Camera Upgrade

October 16, 2020

Change Request Description

Request ID	CTRMA-WO-156
Request Date	10/16/2020
System Module	290E DVAS Camera
Change Type	Equipment

Description

Replace aging DVAS Cameras

Affected Project

- 183
- 290
- Mopac
- SH71

Affected Requirements

N/A

Affected System Processes:

DVAS System

Description of the Solution

- Upgrade aging DVAS cameras on 290E
- MOT for the DVAS Camera replacement is to be included during normal Preventive Maintenance Closure.
- Kapsch will provide a Project Schedule. Must be completed before June 2021

Impact	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
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Total	\$95,965.64
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Pricing good for 60 Days

Quantity	Mounting hardware, see the Excel document for items and quantity.
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System Integration

WO-CTRMA-156-290E DVAS Camera Upgrade_v2.4.docx



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

	Materials / Equipment	Quantity	Price	10% Markup	Extended Price
1	COHUHD 3430HD	52	\$65,000.00	\$6,500.00	\$71,500.00
2	RJ45 IP67 COUPLER	52	\$1,560.00	\$156.00	\$1,716.00
3	UNSHIELDED CAT5E, MS TO RJ45, 5 FT	52	\$4,420.00	\$442.00	\$4,862.00
4	3430HD WALL MOUNT BRACKET	52	\$1,300.00	\$130.00	\$1,430.00
5	CAMERA BRACKET	52	\$2,554.76	\$255.48	\$2,810.24
6	4 port POE Injector-Panel	12	\$706.55	\$70.66	\$777.21
7	Mounting Hardware	1	\$501.74	\$50.17	\$551.91
Total Hardware					\$83,647.36

	Labor	No. of Hours	Hr. Contract Rate	Total
1	Software Engineer	0.00	\$157.59	\$0.00
2	System/Hardware Engineer	10.00	\$172.52	\$1,725.20
3	Technician	52.00	\$120.90	\$6,286.80
4	Business Analyst	0.00	\$157.59	\$0.00
5	Database Administrator	0.00	\$224.14	\$0.00
6	Documentation Clerk	10.00	\$161.66	\$1,616.60
7	Testing Engineer	0.00	\$171.17	\$0.00
8	Network Engineer/Administrator	0.00	\$156.22	\$0.00
9	Project Manager	12.00	\$224.14	\$2,689.68
Total Hours:		84.00	Total Labor:	\$12,318.28

	Subcontractor	Quantity	Cost	10% Markup	Extended Price
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
Total Subcontractor					\$0.00

	ODCs / Travel	Quantity	Cost	10% Markup	Extended Price
1	Air Fare	0	\$0.00	\$0.00	\$0.00
2	Mileage	0	\$0.00	\$0.00	\$0.00
3	Lodging	0	\$0.00	\$0.00	\$0.00
4	Per Diem	0	\$0.00	\$0.00	\$0.00
5	Car Rental	0	\$0.00	\$0.00	\$0.00
6	PM - Other/Misc.	0	\$0.00	\$0.00	\$0.00
7	Warr/Maint - Other/Misc.	0	\$0.00	\$0.00	\$0.00
Total ODCs / Travel					\$0.00

TOTAL PRICE \$95,965.64

Client Acceptance:	
Client name	
Date	
Signature	
Kapsch Acceptance	
Name	
Date	
Signature	

1 Reference Documents

WO 156 290E DVAS Mounting Hardware.xlsx

2 Document Version History

Version	Created	Created by	Comments
1.0	04/23/2020	Timothy Duke	Initial Submission based on e-mail.
2.0	09/09/2020	Timothy Duke	Pricing Update
2.1	10/02/2020	Timothy Duke	Update CTRMA Logo
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2.4	10/16/2020	Lisa Gauger	Updated don naming details from CO to WO



AT-4-48V60W

 (-\$163.17)

~~\$815.88~~

\$652.71

Subtotal **\$652.71**

Shipping  Calculated at next step

Taxes (estimated) **\$53.84**

Total **USD \$706.55**



AmteX Precision Fabrication
 3920 Bahler Avenue
 Manvel, TX 77578-2823
 United States of America

Ph: 281.489.7042

Fax: 281.489.1992

Quote

ID: 25336 Date: 04-Sep-20

To

Kapsch TrafficCom Transportation NA, Inc.
 7701 Metropolis Dr.
 Bldg. 14 Suite 100
 Austin, TX 78744
 United States of America

Quote To

Tim Duke
 Kapsch TrafficCom Transportation NA, Inc.
 7701 Metropolis Dr.
 Bldg. 14 Suite 100
 Austin, TX 78744
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Ph: 713-920-6838

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Terms		Ship Via		Salesperson
Net 45		Best Way		AS
Quantity	Description	Unit Price	Amount	
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	Line: 001 Part: CAMERA BRACKET CAMERA BRACKET FAB PER DRAWING RECIEVED 9/4/20 MATERIAL = .1875" 316 SS NO FINISH TOLERANCE +/- .03 CROSS PATTERN SLOTS			
52	ea	\$49.13		\$2,554.76
	LEAD TIME 2-3 WEEKS		Total:	\$2,554.76
	THANK YOU FOR THE INQUIRY! WE APPRECIATE THE OPPORTUNITY TO QUOTE!			



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To: Kapsch TrafficCom
Address: 6020 Ambler Drive

City: Mississauga
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Attn: Rolando Sevilla
EMAIL: rolando.sevilla@kapsch.net
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Price List Rev.: Version 2019.3
Quote #: CEDQ27896
Application Code:
Quoted By: Frank Sneed 817 467 3749

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2	52	7610203-002	RJ45 IP67 COUPLER, 6MM OR 8.2MM CABLE DIAMETER	\$30.00	\$1,560.00
3	52	8196402-005	UNSHIELDED CAT5E, MS TO RJ45, 5 FT	\$85.00	\$4,420.00
4	52	7412011-002	3430HD WALL MOUNT BRACKET	\$25.00	\$1,300.00
Total Quotation Value					\$72,280.00

If you have any questions regarding this quotation, please contact Frank Sneed with TechOne Sales LLC by phone at 817-467-3749 or by email at frank@techonesales.com.

- NOTES:
1. All cables are custom made to order for length.
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Signed for CohuHD Costar, LLC by: **Frank Sneed**
Frank Sneed, Sales Representative - Office: (817)467-3749 - e-mail: frank@techonesales.com



TERMS AND CONDITIONS

1 - ACCEPTANCE: Each order is subject to acceptance by CohuHD™. No order shall be binding until accepted in writing by an authorized CohuHD employee. The terms and conditions stated herein form the entire terms and conditions between Buyer and CohuHD, Inc., except for written agreements signed by both parties amending these terms and conditions. 2 - CANCELLATION OR CHANGE TO CONTRACT: Upon written notice by Buyer of intention to cancel an order, CohuHD will stop work promptly. Cancellation of an accepted order requires CohuHD written consent thereto, including terms that will satisfy all costs incurred and proportionate profit earned by CohuHD. Change orders will take effect upon Buyer's and CohuHD's written agreement on all changes. However, if Buyer requests to delay shipping an order beyond the stated lead time, CohuHD reserves the right to refuse the delay or adjust pricing to then current levels. 3 - DELIVERY: Delivery date is the ship date from the factory provided in the order acknowledgement, and is CohuHD's best estimate at time of order placement. CohuHD shall not be liable for any nonperformance, loss, damage, or delay due to war, acts of terrorism, riots, fire, flood, strikes or other labor difficulty, governmental actions, including without limit delivery requirements of a US Government agency rated order, acts of God, acts of the Buyer or its customer, transportation delays, inability to obtain necessary labor or materials from usual sources, or other causes beyond the reasonable control of CohuHD. In such event, CohuHD's performance shall be excused for a commercially reasonable time that is at least the length of time lost due to such delay. 4 - LIMITED WARRANTY: CohuHD warrants that, at time of delivery, the equipment covered by these terms and conditions will be free from defects in materials and workmanship, provided the equipment or system is installed, operated and maintained in accordance with the Operation and Maintenance manual or such other CohuHD documentation as may be applicable, for any such defect reported to CohuHD as follows: CohuHD RISE 42xxHD series products for three years from date of shipment from CohuHD's factory. CohuHD 34xxHD series products for three years from date of shipment from CohuHD's factory. All other CohuHD manufactured products are warranted for two years from date of shipment from CohuHD factory. Resale items not manufactured by CohuHD are warranted as specified by the original manufacturer. IP67/IP68 enclosures include a lifetime warranty against moisture ingress. CohuHD will clean/repair and re-pressurize returned enclosures. CohuHD will take reasonable action to repair or replace such equipment. Any claim of defect shall be submitted promptly in writing to CohuHD, Attention: Customer Service Department. A Return Material Authorization (RMA) is required for all items returned to CohuHD for repair, and must be provided by CohuHD prior to delivery at the factory. No items will be accepted without an RMA. Information necessary to process an RMA include Buyer contact details, a full product identification (serial number, model number), and description of the claimed defect as well as an explanation of the circumstances and operational conditions and reading at the time of defect. Purchaser shall prepay transportation charges to CohuHD. CohuHD's total liability under this warranty program is limited to the repair or replacement of items purchased pursuant to these terms and conditions which are found to be defective in material and/or workmanship. CohuHD retains the option, in its sole discretion, to make such repair or replacement at Buyer's site, at the CohuHD factory, or via an authorized service center. CohuHD supplied subsystems from OEM manufacturers carry only their manufacturer's warranty, which is passed on to the Buyer. CohuHD will, at the request of the Buyer, assert warranty claims to the manufacturer of such devices, but by so doing does not assume any liability. This warranty shall be void in the event of damage caused by misuse; disassembly; unauthorized repairs; intentional damage; failure to maintain the product in accordance with CohuHD operating manuals; operation of the product beyond its specified operating environment; or damage caused by accidents, lightning, power surges, acts of God, or other natural disasters; or Buyer's failure to timely pay amounts due to CohuHD. Expendable items such as bulbs, fuses, etc., are excluded from coverage under this warranty program.

Buyer shall be responsible for all costs of returning claimed defective products to CohuHD, and CohuHD will be responsible for returning the repaired products or replacements. THIS CONSTITUTES THE SOLE WARRANTY MADE BY COHUHD EITHER EXPRESSED OR IMPLIED. THERE ARE NO OTHER WARRANTIES EXPRESSED OR IMPLIED WHICH EXTEND BEYOND THE FACE HEREOF, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL COHUHD BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES AND BUYER'S REMEDIES SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF NONCONFORMING PRODUCTS. 5 - SHIPMENT: Unless expressly prohibited by Buyer, partial shipments shall be accepted. All shipments are made Ex-works (Incoterms 2010)- CohuHD factory unless expressly agreed upon otherwise. Costs of boxing and crating for domestic shipment are included in the quoted price or quoted as a separate line item. When special export or domestic packing is specified, a charge will be made to cover this extra expense. Special packing requirements and method of shipment must be stated in the purchase order. CohuHD takes reasonable care in packing for shipment and selection of carrier. CohuHD assumes no responsibility for delay, breakage, or damage after having made delivery in good order to the carrier. Insurance is the responsibility of the Buyer. Claims for damage are to be made by the Buyer on the carrier; CohuHD will assist in such claims, as requested by the Buyer. Charges & Freight quotations are available. 6 - U.S. TAXES: Unless specifically stated, the prices quoted are exclusive of any federal, state, municipal, or other government tax that may be imposed upon the production, storage, sale, transportation, or use of the products described herein. The Buyer shall pay such taxes applied directly to the sale and levied prior to shipment from CohuHD, or in lieu thereof the Buyer shall provide a tax exemption certificate acceptable to the taxing authorities. Unless a state issued tax exempt certificate is presented at the time of order placement, sales tax will be applied when shipping product to the following states: CA, NY, TX and, WA. Training is not taxable in any state. The U.S. Government is not taxable in any state. If taxable, Buyer shall include the appropriate amount and percentage on the Order for the Goods. 7 - DUTIES: All duties, import or export fees, customs fees, and brokerage charges are the responsibility of the Buyer. Pricing in CohuHD's quotation does not include these charges unless explicitly stated. 8 - RISK OF LOSS: Title to the goods shall pass to Buyer upon shipment from CohuHD's factory. Risk of loss of the goods shall pass to Buyer as soon as the goods are deposited with the carrier. It is specifically agreed that the risk of loss shall not be altered due to a default or breach of these terms and conditions by either party. 9 - ASSIGNMENT - DELEGATION: No right or interest in an accepted order shall be assigned by either Buyer or CohuHD without the written consent of the other party. No delegation or the performance of any obligation owed by either party shall be effective without the written consent of the other party. 10 - APPLICABLE LAW: The law which shall be applied hereto shall be the Uniform Commercial Code as adopted by the State of California, and as effective and in force on the date of acceptance of Buyer's order by CohuHD. 11 - EXPORT LAWS: The Goods may be subject to U.S. Government export laws and regulations. Buyer shall not export, re-export, or transfer the Goods or Confidential Information received from CohuHD without first obtaining the appropriate US Government approvals, if any. CohuHD will cooperate with Buyer to obtain any export licenses Buyer seeks, but obtaining such licensing shall be the exclusive responsibility of Buyer and CohuHD makes no representation or warranty regarding the issuance of export licenses for the Goods. 12 - CASUALTY TO IDENTIFIED GOODS: If the goods ordered by Buyer are destroyed for reasons beyond CohuHD's control prior to the time the risk of loss passes to Buyer, the date of delivery shall be adjusted to accommodate remanufacture of the affected goods. If the loss is partial, Buyer shall have the right to take delivery of that portion of the goods which conform to the contract. NOTES: Quote valid for 60 days unless otherwise noted.

Signed for CohuHD Costar, LLC by: ***Frank Sneed***

Frank Sneed, Sales Representative - Office: (817)467-3749 - e-mail: frank@techonesales.com

404-346-7000
 404-349-9091 (fax)
 atl.sales@mcmaster.com

Kapsch Trafficom U S A Inc
 7701 Metropolis Dr Bldg 14
 Austin TX 78744

Quote
 16285

Date
 8/14/20

Line	Product	Quantity	Available	Price	Total
1	8862T29 Galvanized Steel U-Bolt, 3/8"-16 Thread Size, 2-7/16" ID, packs of 1	100 packs	today	3.01 per pack	301.00
2	98970A131 Hot-Dipped Galvanized Steel Washer, USS, 3/8" Screw Size, 0.438" ID, 1" OD, packs of 100	2 packs	today	6.97 per pack	13.94
3	95160A220 Hot-Dipped Galvanized Steel Split Lock Washer for 3/8" Screw Size, 0.385" ID, 0.705" OD, packs of 100	2 packs	today	10.96 per pack	21.92
4	90371A031 Low-Strength Steel Hex Nut, Grade 2, Hot-Dipped Galvanized, 3/8"-16 Thread Size, packs of 100	4 packs	today	10.81 per pack	43.24
5	93190A546 Super-Corrosion-Resistant 316 Stainless Steel Hex Head Screw, 1/4"-20 Thread Size, 1-1/2" Long, Fully Threaded, packs of 10	20 packs	today	4.23 per pack	84.60
6	98970A129 Hot-Dipped Galvanized Steel Washer, USS, 1/4" Screw Size, 0.312" ID, 0.75" OD, packs of 100	2 packs	today	3.05 per pack	6.10
7	95160A210 Hot-Dipped Galvanized Steel Split Lock Washer for 1/4" Screw Size, 0.26" ID, 0.487" OD, packs of 100	2 packs	today	4.67 per pack	9.34
8	90371A029 Low-Strength Steel Hex Nut, Grade 2, Hot-Dipped Galvanized, 1/4"-20 Thread Size, packs of 100	4 packs	today	5.40 per pack	21.60
				Merchandise	\$501.74

Notes

Applicable shipping charges and tax will be added.

Prices good through 9/13/20.

Your order is subject only to our terms and conditions, available at www.mcmaster.com or from our Sales Department.



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

System Integration Agreement

CTRMA Toll Systems Integration



CTRMA WO#158 – 183A ZIC Upgrade

October 16, 2020

Change Request Description

Request ID	CTRMA WO#158		
Request Date	10/16/2020		
System Module	183A ZICS Upgrade		
Change Type	Hardware/equipment		
Description			
183A ZIC Upgrade			
Affected Project			
<input checked="" type="checkbox"/> 183 <input type="checkbox"/> 290 <input type="checkbox"/> Mopac <input type="checkbox"/> SH71 <input type="checkbox"/> 45SW <input type="checkbox"/> 183S			
Affected Requirements			
N/A			
Affected System Processes:			
183A Toll Systems			
Description of the Solution			
Zone Controllers <ul style="list-style-type: none"> The Toll Zone Controller work scope is to upgrade the existing 183A toll locations to the most current Zone Controller Configuration, consistent with the Dell Power Edge 340 servers, the Idris rack, and the serial server. Confirming there are eleven (11) toll location sites, requiring a total of twenty-two (22) Toll Zone Controllers (TZC). Kapsch to develop and provide the Dell Zone Controllers that will interface with the existing lanes that are controlled by Adek Zone Controllers. Kapsch pricing includes two (2) spare Dell R340 server, Serial Hub, Idris Power Supply, Idris Detector Card and the interface cable. 			
MOT/ Closure for Testing <ul style="list-style-type: none"> Double lane closures at night, per location and direction, for a total of 11 closures. MOT will be a pass-through expense (plus mark-up), and is not to exceed \$42,350. 			
Key Notes and Assumptions: Testing for this change order includes testing similar to Commissioning Testing. Kapsch to provide a test plan for CTRMA's review and approval. Kapsch assumes all pricing is in U.S. Dollars, and pricing is detailed below Kapsch will provide a Project Schedule. Must be completed before June 2021 Pricing valid for 60 days from Initial Submission.			
Impact	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Total	\$328,634.52 (not to exceed)		
Quantity	Outlined below.		



System Integration

CTRMA WO#158 – 183A ZIC Upgrade



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

	Materials / Equipment	Quantity	Price	10% Markup	Extended Price
1	Dell PowerEdge R340	24	\$82,111.44	\$8,211.14	\$90,322.58
2	Vehicle Detection / Classification Equipment	1	\$61,553.60	\$6,155.36	\$67,708.96
3	0	0	\$0.00	\$0.00	\$0.00
4	0	0	\$0.00	\$0.00	\$0.00
5	0	0	\$0.00	\$0.00	\$0.00
6	0	0	\$0.00	\$0.00	\$0.00
7	0	0	\$0.00	\$0.00	\$0.00
Total Hardware					\$158,031.54

	Labor	No. of Hours	Hr. Contract Rate	Total
1	Software Engineer	120.00	\$157.59	\$18,910.80
2	System/Hardware Engineer	320.00	\$172.52	\$55,206.40
3	Technician	120.00	\$120.90	\$14,508.00
4	Business Analyst	0.00	\$157.59	\$0.00
5	Database Administrator	0.00	\$224.14	\$0.00
6	Documentation Clerk	8.00	\$161.66	\$1,293.28
7	Testing Engineer	170.00	\$171.17	\$29,098.90
8	Network Engineer/Administrator	0.00	\$156.22	\$0.00
9	Project Manager	40.00	\$224.14	\$8,965.60
Total Hours:		778.00	Total Labor:	\$127,982.98

	Subcontractor	Quantity	Cost	10% Markup	Extended Price
	MOT For Testing	11	\$38,500.00	\$3,850.00	\$42,350.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
Total Subcontractor					\$42,350.00

	ODCs / Travel	Quantity	Cost	10% Markup	Extended Price
1	Air Fare	0	\$0.00	\$0.00	\$0.00
2	Mileage	0	\$0.00	\$0.00	\$0.00
3	Lodging	0	\$0.00	\$0.00	\$0.00
4	Per Diem	0	\$0.00	\$0.00	\$0.00
5	Car Rental	0	\$0.00	\$0.00	\$0.00
6	PM - Other/Misc.	0	\$0.00	\$0.00	\$0.00
7	Warr/Maint - Other/Misc.	0	\$0.00	\$0.00	\$0.00
Total ODCs / Travel					\$0.00

TOTAL PRICE \$328,364.52

Client Acceptance:	
Client name	
Date	
Signature	
Kapsch Acceptance	
Kapsch Name	
Date	
Signature	

1 Reference Documents:

183A ZIC Replacement Bid BOM.xlsx

2 Document Version History

Version	Created	Created by	Comments
1.0	04/27/2020	Lisa Gauger	Initial Submission
2.0	10/02/2020	Tim Duke	Pricing Update.
2.1	10/06/2020	Tim Duke	Update language for commissioning testing
2.2	10/09/2020	Lisa Gauger	Updated MOT description as not to exceed and updated language under "Key Notes and Assumptions:"
2.3	10/16/2020	Lisa Gauger	Updating doc naming details from CO to WO

ZC/ICS Server		MFR	UOM	HOST	ZONE	LakeLine NB	LakeLine SB	Brushy Creek NB	Brushy Creek SB	Park Street ML NB	Park Street ML SB	Scottsdale NB	Crystal Falls ML NB	Crystal Falls ML SB	CFP NB	CFP SB	Spare	GT	Quote	Unit Price	Line Price
a	PowerEdge R340	Dell	ea			2	2	2	2	2	2	2	2	2	2	2	2	24		\$ 3,421.31	\$ 82,111.44
b	3.5" Chassis with up to 4 Hot Plug Hard Drives	Dell	incl																		
c	Intel Xeon E-2144G 3.6GHz, 8M cache, 4C/8T, turbo (71W)	Dell	incl																		
d	Heatsink for 80W or less CPU	Dell	incl																		
e	2666MT/s UDIMMs	Dell	incl																		
f	Performance Optimized	Dell	incl																		
g	RAID 1	Dell	incl																		
h	PERC H730P Adapter RAID Controller, 2GB	Dell	incl																		
i	On-Board LOM	Dell	incl																		
j	iDRAC9 Enterprise	Dell	incl																		
k	DVD ROM, SATA, Internal for Hot Plug Chassis	Dell	incl																		
l	ReadyRails Sliding Rails With Cable Management Arm	Dell	incl																		
m	Standard Bezel	Dell	incl																		
n	Dell EMC Luggage Tag	Dell	incl																		
o	Performance BIOS Settings	Dell	incl																		
p	Dual Hot Plug Power Supplies 350W	Dell	incl																		
q	No Systems Documentation, No OpenManage DVD Kit	Dell	incl																		
r	No Operating System	Dell	incl																		
s	No Media Required	Dell	incl																		
t	UEFI BIOS Boot Mode with GPT Partition	Dell	incl																		
u	iDRAC Group Manager, Disabled	Dell	incl																		
v	iDRAC, Legacy Password	Dell	incl																		
w	PCIe Riser, 1x FH x8 PCIe Gen3 slot, 1x LP x4 PCIe Gen3 slot, R240/R340	Dell	incl																		
x	Standard Fan	Dell	incl																		
y	Dell Hardware Limited Warranty Plus On Site Service	Dell	incl																		
z	ProSupport: Next Business Day Onsite Service After Problem Diagnosis, 3 Years	Dell	incl																		
aa	ProSupport: 7x24 HW/SW Tech Support and Assistance, 3 Years	Dell	incl																		
ab	16GB 2666MT/s DDR4 ECC UDIMM	Dell	incl																		
ac	4TB 7.2K RPM NLSAS 12Gbps 512n 3.5in Hot-plug Hard Drive	Dell	incl																		
ad	C13 to C14 PDU Style, 12 AMP, 6.5 Feet (2m) Power Cord, North America	Dell	incl																		
VEHICLE DETECTION / CLASSIFICATION																					
a	Detector Rack - 16 position (14 detector slots)(No Rack Adaptor Needed)	Northstar Controls	ea			1	1	0	0	1	1	1	1	1	1	1	1	10	Northstar 226	\$ 845.00	\$ 8,450.00
d	Loop Detector, 4 Channel (up to 2k feet lead-in) - 3M AVC Enabled	Northstar Controls	ea			8	8	0	0	8	8	3	8	8	3	3	7	64	Northstar 226	\$ 305.00	\$ 19,520.00
e	Power Supply for Northstar Rack (Modified for 240VAC)	Northstar Controls	ea			1	1	0	0	1	1	1	1	1	1	1	2	11	Northstar 226	\$ 125.00	\$ 1,375.00
g	Port Expander - Serial Hub 8-Port - Panel Mount	DeviceMaster	ea			0	0	0	0	0	2	2			2	2	3	11	BG-Tech 216605	\$ 600.00	\$ 6,600.00
h	Port Expander - Serial Hub 16 Port - 1U Rack Mount	DeviceMaster	ea			2	2	0	0	2	2	2	2	2	2	2	2	20	BG-Tech 216605	\$ 855.00	\$ 17,100.00
i	1U Rack Mount Shelf for Device Master	DeviceMaster	ea			2	2	0	0	2	2	2	2	2	2	2		18	BG-Tech 216605	\$ 77.00	\$ 1,386.00
	1U Rack Mount Shelf for AVI			99160-1			0	0	0	0	0	0	0	0	0	0	0		0		
j	PCI - RS-232 Port Expander (8-Port Serial Card with DB9M Fanout Cable	Comtrol	ea			2	2	0	0	2	2	2	2	2	2	2		18	BG-Tech 216605	\$ 374.00	\$ 6,732.00
k	DB9 RS-232 "Y" Cable (DB9 Male to Dual DB9 Female, 8 inch)(28 AWG)	CableWholesale	ea			8	8	0	0	8	8	3	8	8	3	3	6	63	BG-Tech 216605	\$ 6.20	\$ 390.60
																					\$ 61,553.60

Northstar Controls, LLC6167 Clark Center Ave
Sarasota, FL 34238**QUOTATION**

Quote Number: 226

Quote Date: Sep 29, 2020

Page: 1

Voice: 941-926-2454

Quoted To:Kapsch TrafficCom Transportation - USA
2855 Premier Pkwy Suite F
Duluth, GA 30097
USA

Customer ID	Good Thru	Payment Terms	Sales Rep
Kapsch 01	10/29/20	Net 30 Days	

Quantity	Item	Description	Unit Price	Amount
12.00	NR119 Rack	19 Inch Idris Rack	845.00	10,140.00
80.00	N 224I	N224-I - Quad Channel Rack Detector Idris Enabled	305.00	24,400.00
13.00	NPS-4 240/12V	NPS4S - 60W Power Supply Unit 240VAC	125.00	1,625.00
			Subtotal	36,165.00
			Freight	
			Sales Tax	
			TOTAL	36,165.00



2301 Denton Drive
 Suite A
 Austin, TX 78758
 Phone - 512-336-2299
 Fax - 512-336-3811
 Email - alex@bg-technologies.com

QUOTATION

Account # 001497
 Quote # 216605
 Date 09/30/20
 Page 1

Kapsch TrafficCom USA, Inc
 2855 Premiere Parkway
 Suite F
 Duluth, GA 30097

Terms Net 30 Days
 Ship Via UPS Ground
 FOB Shipping Point
 Reference #
 Contact Jojo

Salesperson Alex Giles

Ln #	Item # / Customer Item # Description	Mfg / DC	Ship Date Request Date	Quantity	Unit Price	Ext Price
1	99465-7 4860LI00950005 DEVICEMASTER,SERIAL HUB 8,DB9 : ROHS 1-2 weeks ARO	COMTRL		11	600.00000	6,600.00
2	99460-2 4860LI03461 Device Master Serial Hub 16-Port Ethernet device server	COMTRL		24	855.00000	20,520.00
3	99160-1 4860LI02967011 Control Rack Mount	COMTRL		22	77.00000	1,694.00
4	30128-8 PCI Express 8-Port serial card with DB9M fanout cable	COMTRL		22	374.00000	8,228.00
5	30D1-27208 DB9 Serial Y adapter DB9 Male to Dual DB9 Female, 8in 1-2 weeks ARO	GEN		79	6.20000	489.80

Subtotal: 37,531.80
 Order Total: 37,531.80

QUOTE VALID FOR 30 DAY(S)

Authorized Signature



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

System Integration Agreement

CTRMA Toll Systems Integration



CTRMA WO-160, TIM Center UPS Replacement

October 16, 2020

Change Request Description

Request ID	CTRMA-WO-160
Request Date	10/16/2020
System Module	TIM Center UPS Replacement
Change Type	Hardware & Software

Description

Replace the UPS at the TIM Center

Affected Project

- 183
- 290
- Mopac
- SH71
- 45SW
- 183S

Affected Requirements

N/A

Affected System Processes:

All Processes toll systems

Description of the Solution



Upgrade the UPS at the TIM Center

1 – UPS Turnkey Installation:

- Provide new conduit and conductors to extend existing 480 volt 150 Amp circuit as necessary
- Separate UPS and battery cabinet from existing bypass cabinet for removal
- Dispose Existing UPS
- Relocate spare fuse box as required
- Receive New UPS at offsite location
- Transport new UPS to site
- Remove existing UPS, bypass and battery cabinet
- Install new UPS on existing concrete slab
- Intercept and extend existing feed from UPS to low voltage panel
- Provide new conduit and conductors to extend existing 208 volt 225 Amp circuit as necessary
- Provide permitting as required
- Plan review excluded
- UPS to be received and moved by 3rd party and will include provisions to install UPS through double doors and traverse grass area
- Approximately 3 Day Total outage for demo, installation, wire, startup new UPS
- Uncrating of Packing Material Included
- Lugs Included

2 – Load Bank Testing

- 100kVA Load Bank
- 50 FT Load Bank Cable with lugs

	System Integration	 <small>CENTRAL TEXAS REGIONAL</small> MOBILITY AUTHORITY
	WO-CTRMA-160 TIM Center UPS Replacement	

<ul style="list-style-type: none"> • UPS Field Technician for UPS Operation during test • IR Scanning with report • 2 Hour Burn In, Step Loads, 100% Load Battery Discharge Test with report 	
<u>3 – Extended Warranty Service Contract</u>	
<ul style="list-style-type: none"> • 5 Years total coverage(UPS Only) • Includes Parts, Labor and Travel for repairs • Annual UPS Preventative Maintenance(Years 2-5) 	
<ul style="list-style-type: none"> • Semi-Annual Battery Maintenance(Years 2-5) 	
Impact	<input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
Total	\$118,339.65
Quantity	Pricing good for 60 Days
Quantity	1



System Integration

WO-CTRMA-160 TIM Center UPS Replacement



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

	Materials / Equipment	Quantity	Price	10% Markup	Extended Price
1	UPS Replacement	1	\$107,581.50	\$10,758.15	\$118,339.65
2	0	0	\$0.00	\$0.00	\$0.00
3	0	0	\$0.00	\$0.00	\$0.00
4	0	0	\$0.00	\$0.00	\$0.00
5	0	0	\$0.00	\$0.00	\$0.00
6	0	0	\$0.00	\$0.00	\$0.00
7	0	0	\$0.00	\$0.00	\$0.00

Total Hardware \$118,339.65

	Labor	No. of Hours	Hr. Contract Rate	Total
1	Software Engineer	0.00	\$157.59	\$0.00
2	System/Hardware Engineer	0.00	\$172.52	\$0.00
3	Technician	0.00	\$120.90	\$0.00
4	Business Analyst	0.00	\$157.59	\$0.00
5	Database Administrator	0.00	\$224.14	\$0.00
6	Documentation Clerk	0.00	\$161.66	\$0.00
7	Testing Engineer	0.00	\$171.17	\$0.00
8	Network Engineer/Administrator	0.00	\$156.22	\$0.00
9	Project Manager	0.00	\$224.14	\$0.00

Total Hours: 0.00 Total Labor: \$0.00

	Subcontractor	Quantity	Cost	10% Markup	Extended Price
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00

Total Subcontractor \$0.00

	ODCs / Travel	Quantity	Cost	10% Markup	Extended Price
1	Air Fare	0	\$0.00	\$0.00	\$0.00
2	Mileage	0	\$0.00	\$0.00	\$0.00
3	Lodging	0	\$0.00	\$0.00	\$0.00
4	Per Diem	0	\$0.00	\$0.00	\$0.00
5	Car Rental	0	\$0.00	\$0.00	\$0.00
6	PM - Other/Misc.	0	\$0.00	\$0.00	\$0.00
7	Warr/Maint - Other/Misc.	0	\$0.00	\$0.00	\$0.00

Total ODCs / Travel \$0.00

TOTAL PRICE \$118,339.65

Client Acceptance:	
Client name	
Date	
Signature	
Kapsch Acceptance	
Kapsch Name	
Date	
Signature	

1 Reference Documents:

n/a.

2 Document Version History

Version	Created	Created by	Comments
1.0	05/07/2020	Timothy Duke	Initial Submission
2.0	09/09/2020	Timothy Duke	Updated Pricing
2.1	10/02/2020	Timothy Duke	Updated to TIM Center
2.2	10/06/2020	Timothy Duke	Updated description
2.3	10/16/2020	Lisa Gauger	Updated doc naming details from CO to WO

APC/Schneider Electric - Manufacturer of Critical Power and Cooling Systems specializing in:

- UPS Systems 400VA to 4.0MW
- Power Distribution
- Cooling Solutions – Perimeter and InRow Designs
- Monitoring and Management Solutions
- Rack Systems and Accessories
- Components or Turnkey Designs

Project Name	Kapsch TrafficCom	Project ID #	N/A
Proposal Date	09/08/2020	Prepared By	Conner Fisher
UPS System Proposed	Schneider Electric Galaxy VS	Expiry Date	10/31/2020



Galaxy VS System Overview:

- **Highly efficient EConversion mode**
- **Flexible battery solutions**
- **Large color touch screen display**
- **Industry-leading footprint**
- **Full front access**
- **Compact footprint**
- **Back-to-the-wall installation**
- **Operates at 40 C without derating**
- **Low audible noise levels**
- **Replaceable dust filter for harsh environments**
- **Configurable input/output relays**



Integration

- Schneider Electric StruxureWare™ software applications and suites
- Electrical network earthing systems
- Facilities infrastructure
- Seismic certified
- Monitoring systems — BMS, Modbus, etc.

Energy and cost savings

- High efficiency double conversion mode
- ECO mode
- ECOConversion mode

Energy storage flexibility

- Traditional (VRLA) and modular battery offer
- Short and long backup times
 - Selectable charging modes

Ease of installation

- System designed for ease of cabling in confined installation spaces
- Single cabinet top and bottom cable entry
 - Integrated casters for ease of mobility on UPS and modular battery cabinets
- Casters allow UPS configurations to be moved easily and installed up against the wall
- Separate cabinet for input and output cabling ensures quick and easy installation
- Top and bottom entry standard provides great flexibility to the installer

Monitoring

- Touch screen color display
- Integrated network management capability for easy access to the network
- Modbus & Network SNMP capability
 - Customizable dry contacts and relays

Double conversion mode

- Up to 96.5% efficiency in double conversion online mode even at low load levels
- Less energy losses = cost savings
- Less heat dissipation = lower cooling costs

ECOConversion mode

- Ultra high efficiency up to 99%
- Keeps excellent load protection
- Continuously charged batteries
- Compliant with IEC 62040-3 class 1 output definition of UPS standard

ECO mode

- Up to 99% efficiency
- Compliant with IEC 62040-3 class 3 output definition of UPS standard • Harmonics and input power factor correction

Energy storage option quoted:

- Lithium-Ion Battery Storage

Startup and 1 year Service

Limited supervision of Schneider Electric equipment installation, Full start-up and standard testing by a Schneider Electric Field Service engineer. Start-up services include facility inspection, system test and complete paperwork inspection including customer satisfaction card. Start-up serviced is based on work performed at the convenience of the customer.

Includes basic operational training, maintenance bypass procedure, basics of SE equipment, component location identification, and alarm conditions or as specified in base bid.

The start-up will initialize the full parts and labor warranty, which includes 12 months of remedial service: parts, labor and expenses on a 5x8 Normal Business Hours basis or as specified in base bid.



Warranty:

- UPS - One full year warranty after equipment start-up or 18 months after shipment of UPS
 - Provides all parts, labor, travel and any freight cost to get parts to the job-site.
 - Next Business Day Response
- Batteries – Three year full warranty + 7 year pro-rated warranty

Bill of Materials:

Quantity		
1	UPS SYSTEM	80KVA / 80KW UPS
	Input	480 VAC 3 wire + ground, 60Hz
	Output	208 VAC 3 wire + neutral + ground, 60Hz
	Dimensions	20.5"W x 33.5"D x 58.5"H per system 6" Rear Clearance required for Airflow
1	Lithium-Ion Battery Cabinet	Adjacent – Line Up and Match 22 Minutes at Full Load of 80kW
	Dimensions	25.6" W x 23.6" D x 80.9" H
1	External Maintenance Bypass	Included – Line Up and Match
	Dimensions	23.75"W x 33"D x 58.5"H
1	Accessories	SNMP Communications Card
1	Services	5x8 Startup

Base Bid	\$56,328.00
Freight Estimate	Prepay and ADD – Estimated \$2,000
Proposals are valid for 30 days	Subject to approved submittals

OPTIONS:

1 – UPS Turnkey Installation: \$27,160.00

- Provide new conduit and conductors to extend existing 480 volt 150 Amp circuit as necessary
- Separate UPS and battery cabinet from existing bypass cabinet for removal
- Dispose Existing UPS
- Relocate spare fuse box as required
- Receive New UPS at offsite location
- Transport new UPS to site
- Remove existing UPS, bypass and battery cabinet
- Install new UPS on existing concrete slab
- Intercept and extend existing feed from UPS to low voltage panel
- Provide new conduit and conductors to extend existing 208 volt 225 Amp circuit as necessary
- Provide permitting as required
- Plan review excluded



- UPS to be received and moved by 3rd party and will include provisions to install UPS through double doors and traverse grass area
- Approximately 3 Day Total outage for demo, installation, wire, startup new UPS
- Uncrating of Packing Material Included
- Lugs Included

2 – Load Bank Testing \$6,285.00

- 100kVA Load Bank
- 50 FT Load Bank Cable with lugs
- UPS Field Technician for UPS Operation during test
- IR Scanning with report
- 2 Hour Burn In, Step Loads, 100% Load Battery Discharge Test with report

3 – Extended Warranty Service Contract \$15,808.50

- 5 Years total coverage(UPS Only)
- Includes Parts, Labor and Travel for repairs
- Annual UPS Preventative Maintenance(Years 2-5)
- Semi-Annual Battery Maintenance(Years 2-5)

Project Grand Total:	\$107,581.50
Freight:	Included!

Item's NOT included in our BASE BID quotation:

1. Movement of equipment from customers dock location to placement of equipment
2. Any room modifications
3. Installation of quoted equipment
4. Any cables, control cables or communication cables
5. Installation of seismic zone 4 – anchor kits or bolt hardware.
6. Uncrating and disposal of crating material from customers job site.
7. Any cable lugs to connect input to UPS, MBS or output to gear.
8. Load Bank cable hook up or run of cables if applicable
9. Load Bank Rental, load bank testing or commissioning unless noted in quotation
10. Factory Witness Testing and Travel beyond factory test report unless noted in quotation
11. Extended Training beyond operator training unless noted in quotation
12. State or Local Taxes

Exclusions/Clarifications:

.

Freight Estimate Details:

- Prepaid & Add – FOB, Factory – Dock to Dock
- Dock to Dock
- Includes freight shipped via Air Ride Padded Van
- Unloading and equipment move-in by others.
- Requires load dock for delivery or lift gate as required.



Estimated Leadtime of the Solution:

6-7 Weeks ARO

Provided By:



Conner T. Fisher

www.swmco.com

Mobile: 512-809-4275

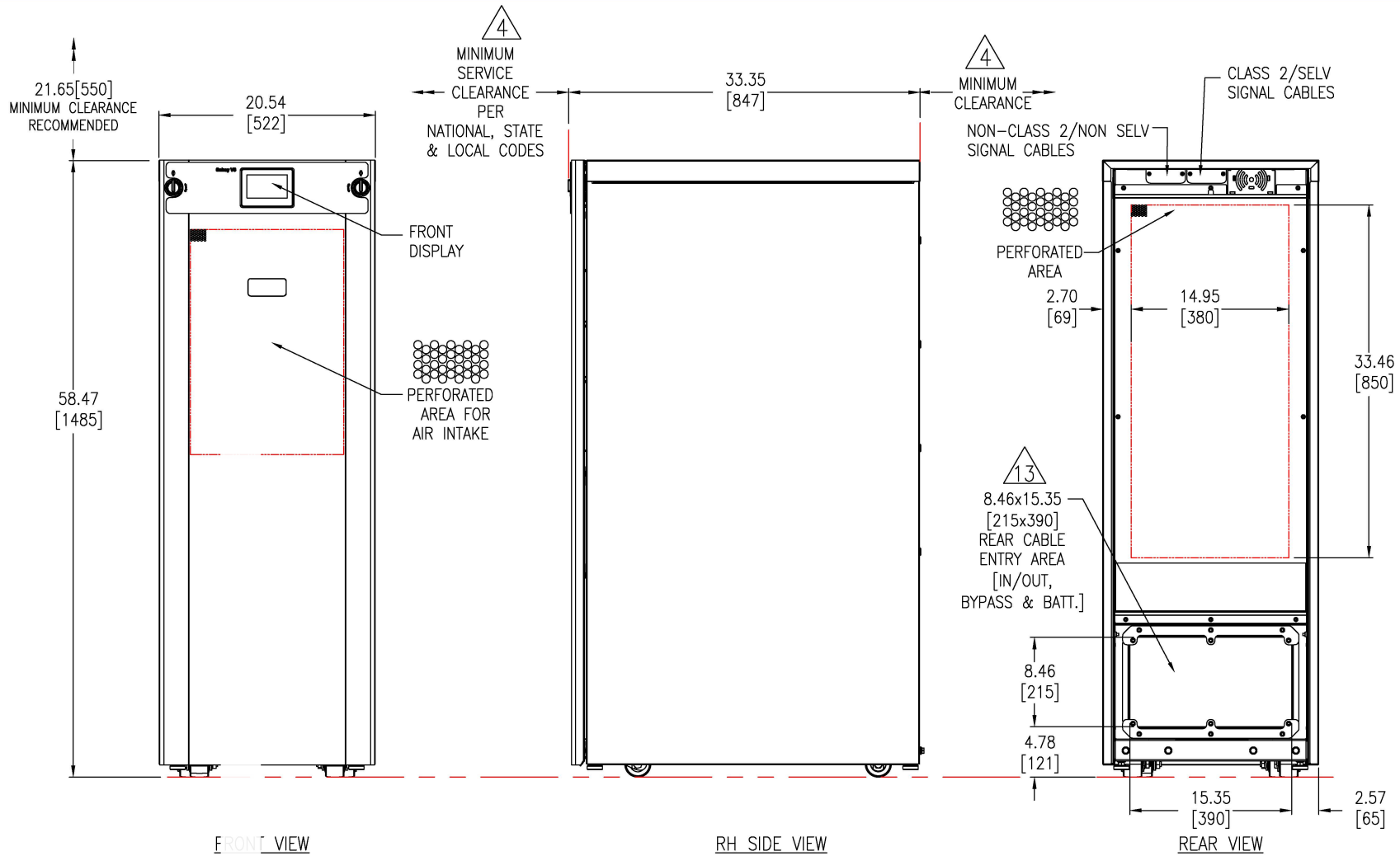
Email : conner@swmco.com

Galaxy VS UPS SYSTEM

80 kW

480V Input - 208V Output

Lithium-Ion Battery Solution



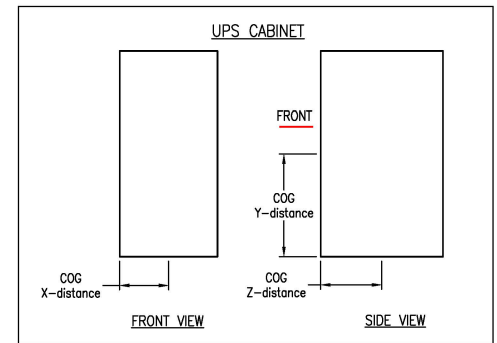
NOTES:

- INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
- REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
- ALL DIMENSIONS ARE IN INCHES [MILLIMETERS].
- FRONT ACCESS REQUIRED FOR SERVICE.
MINIMUM REQUIRED FRONT CLEARANCE IS 38.58[980]. REAR CLEARANCE REQUIRED IS 5.91[150].
- ALL DIMENSIONS EXCLUDES SCREW PROJECTIONS OUTSIDE THE ENCLOSURE.
- CABLE ENTRY IS FROM BOTTOM OR REAR OF THE UNIT.
- REFER TO TABLE FOR THE WEIGHT OF THE UNIT.
- OPERATING TEMPERATURE: 32°F TO 104°F [0°C TO 40°C].
- PROTECTION CLASS: IP20 (IP32 OPTIONAL).
- COLOR: RAL 9003 WHITE.
- THIS INFORMATION PROVIDES APPROXIMATE CENTER OF GRAVITY CALCULATION.
- DOOR IS BOTTOM HINGED WITH HOOKS. CAN BE COMPLETELY REMOVABLE.
- DRILL/PUNCH HOLES IN PLATE. REMOVE PLATE FROM CABINET BEFORE DRILLING/PUNCHING.
- MAINTENANCE BYPASS UNIT SHOULD BE MOUNTED ONLY ON RIGHT SIDE OF UPS CABINET. FOR INSTALLATION PROCEDURE REFER TO THE INSTALLATION MANUAL.



CENTER OF GRAVITY AND WEIGHT DETAILS

RATING	Center of Gravity in Inches [mm]			Weight lbs [kg]
	X-Distance	Y-Distance	Z-Distance	
20-50kW	10.2 [260]	32.50 [825]	15.9 [405]	463 [210]
60-100kW	10.2 [260]	35.0 [888]	15.8 [401]	551 [250]

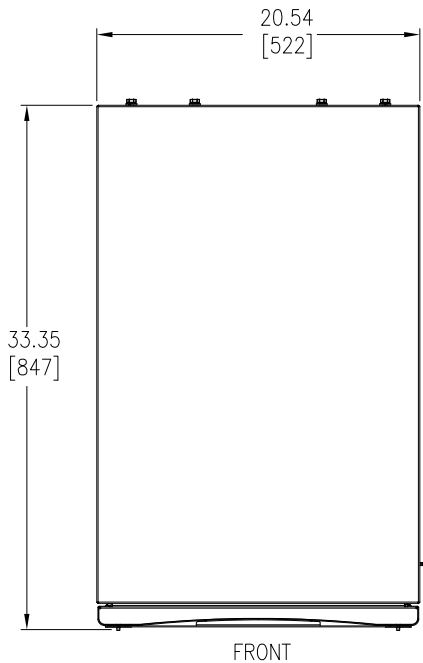


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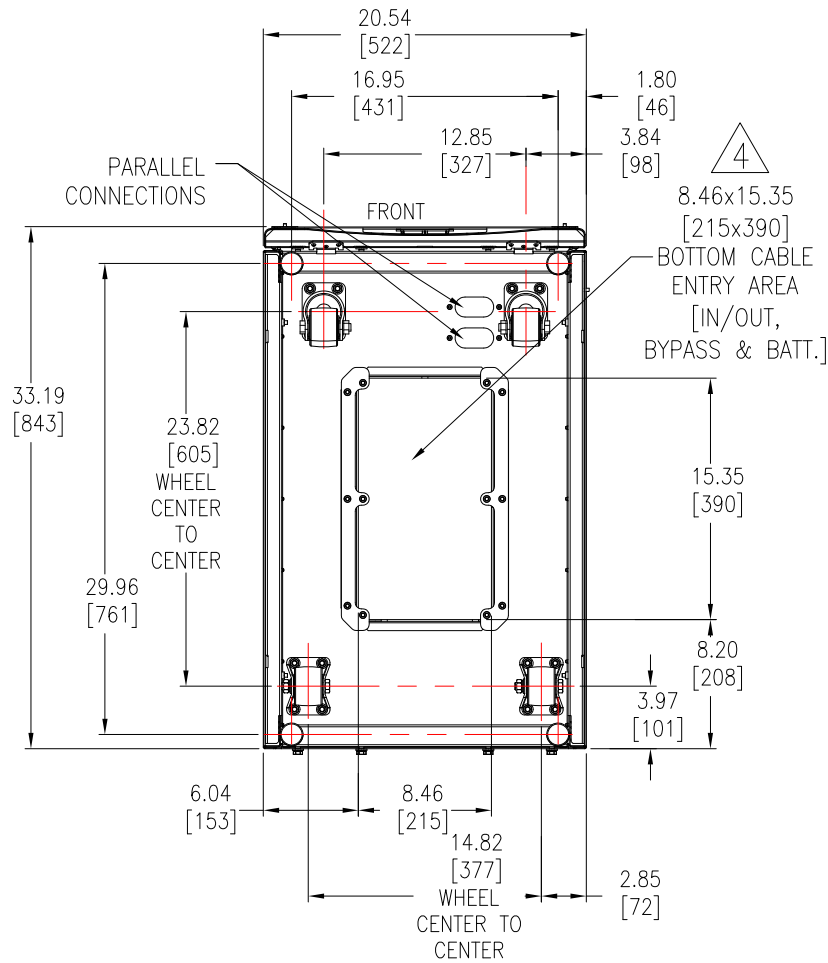


TITLE: Galaxy VS
UPS 20-100kW
Input: 480V, 3PH, 60Hz
Output: 480V, 3PH OR 3PH+N, 60Hz
GENERAL ARRANGEMENT

DWG NO: GVSUPS20K100GS	REV: 0
DRAWN BY: K.NAGENDRA	07-JAN-19
ENGINEER: H NICOLAISEN/P BONDE	07-JAN-19
APPROVED BY: HENRIK NICOLAISEN	07-JAN-19
PROJECT: SUBMITTAL DRAWINGS	SHEET: 1 OF 4
ANGLE: FIRST	PROJECTION: ANGLE

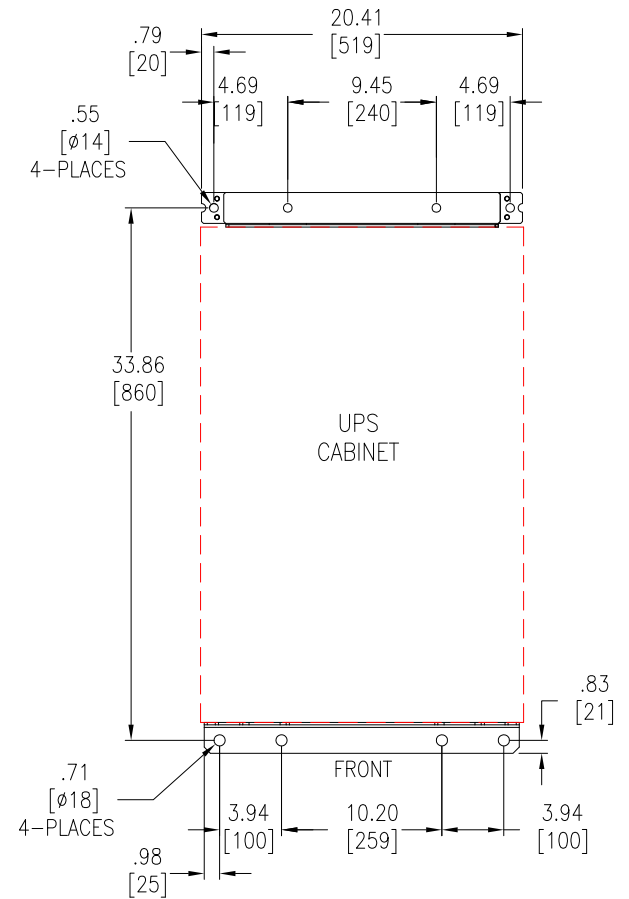


TOP VIEW



BOTTOM VIEW

5 OPTIONAL SEISMIC KIT (GVSOPT002)



ANCHORING DETAILS (BOTTOM VIEW-LOOKING FROM TOP)

- NOTES:
1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
 2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
 3. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS].
 - △ 4. DRILL/PUNCH HOLES IN PLATE. REMOVE PLATE FROM CABINET BEFORE DRILLING/PUNCHING.
 - △ 5. FIXATION OF ANCHORING BRACKETS IS OPTIONAL IN NON-SEISMIC LOCATIONS.

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TITLE: Galaxy VS
UPS 20-100kW
Input: 480V, 3PH, 60Hz
Output: 480V, 3PH OR 3PH+N, 60Hz
TOP-BOTTOM VIEWS & ANCHORING

DWG NO: GVSUPS20K100GS REV. 0

DRAWN BY: K.NAGENDRA 07-JAN-19 FIRST

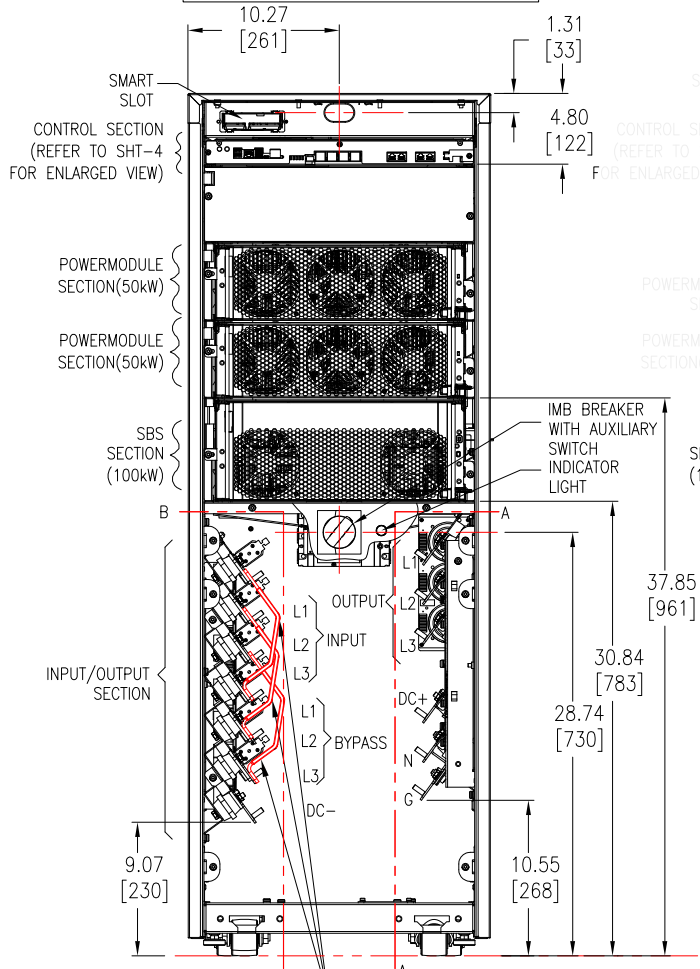
ENGINEER: H.NICOLAISEN/P.BONDE 07-JAN-19 ANGLE

PROJECT: SUBMITTAL DRAWINGS SHEET 2 OF 4

APPROVED BY: HENRIK NICOLAISEN 07-JAN-19

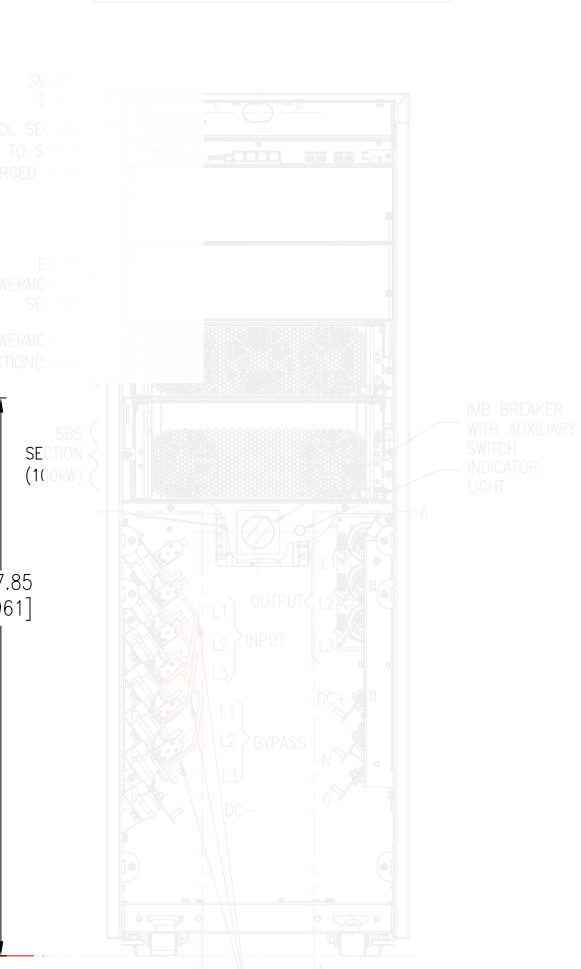
PROJECTION

60-100kW UPS CONFIGURATION

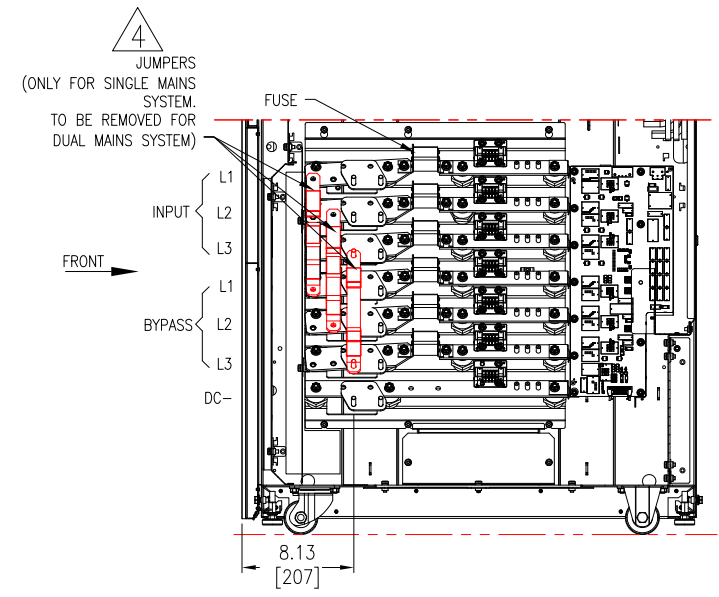


INTERNAL FRONT VIEW

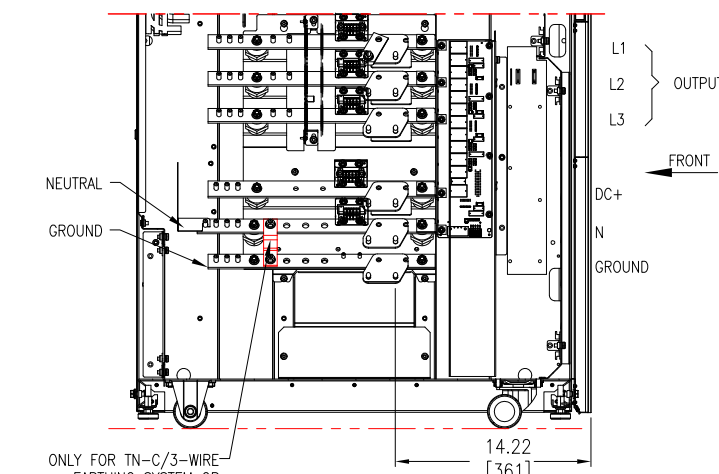
20-50kW UPS CONFIGURATION



INTERNAL FRONT VIEW



BB-SECTIONAL VIEW



AA-SECTIONAL VIEW

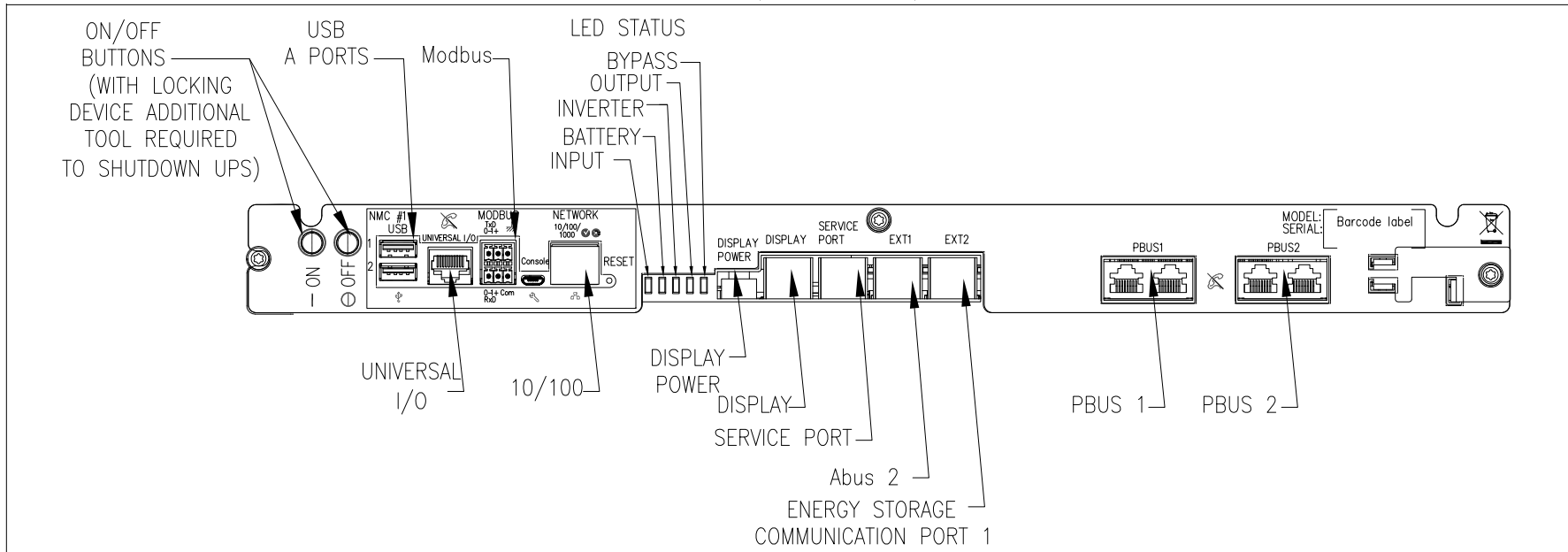
- NOTES:**
1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
 2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
 3. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS].
 - △4. BUSBAR LINKS ARE APPLICABLE FOR SINGLE MAINS SYSTEM ONLY. (REMOVE FOR DUAL MAINS)
 5. SOME STRUCTURAL DETAILS HAVE BEEN OMITTED FOR THE PURPOSE OF CLARITY.
 6. ALL TERMINALS SHOWN WITH NEMA KIT GVSOPT005 MOUNTED.

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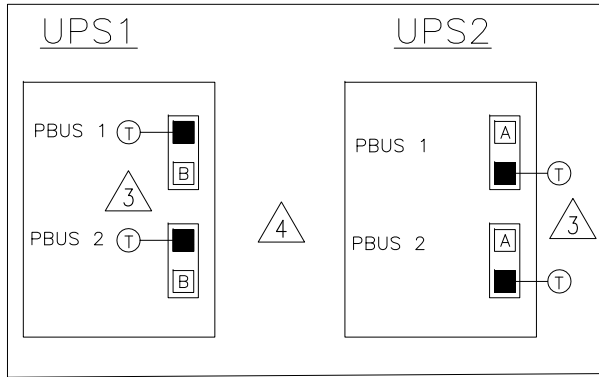


TITLE: Galaxy VS UPS 20-100kW Input: 480V, 3PH, 60Hz Output: 480V, 3PH OR 3PH+N, 60Hz INTERNAL VIEWS-1		DWG NO: GVSUPS20K100GS		REV. 0
PROJECT: SUBMITTAL DRAWINGS		DRAWN BY: K.NAGENDRA	07-JAN-19	FIRST ANGLE PROJECTION
SHEET 3 OF 4		ENGINEER: H NICOLAISEN/P BONDE	07-JAN-19	
		APPROVED BY: HENRIK NICOLAISEN	07-JAN-19	

**CONTROL SECTION DETAILS
(ENLARGED VIEW)**



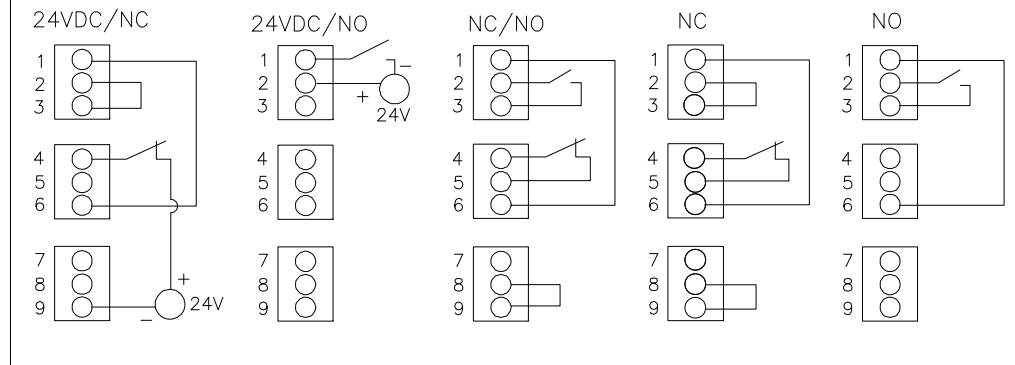
PBUS CONNECTIONS (GVSOPT006)



**EMERGENCY POWER OFF (EPO)
CONFIGURATIONS (IN UPS)**



(J6600 ON 640-4864)
(CONNECT CLASS-2/SELV SIGNAL CABLES FROM THE
BUILDING EPO TO J6600)



- NOTES:**
1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
 2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
 3. TERMINATORS MUST BE INSTALLED & POSITIONED AS ADDRESSED IN INSTALLATION MANUAL.
 4. OPTIONAL CAT5 PBUS CABLES 82 FEET [25 METERS](SKU# GVSOPT006) SHALL BE INSTALLED IN SEPARATE CONDUITS.
 5. DO NOT CONNECT ANY CIRCUIT TO THE EPO TERMINAL BLOCK UNLESS IT CAN BE CONFIRMED THAT THE CIRCUIT IS CLASS 2/SELV. ALL CIRCUITS CONNECTED MUST HAVE THE SAME OV REFERENCE.

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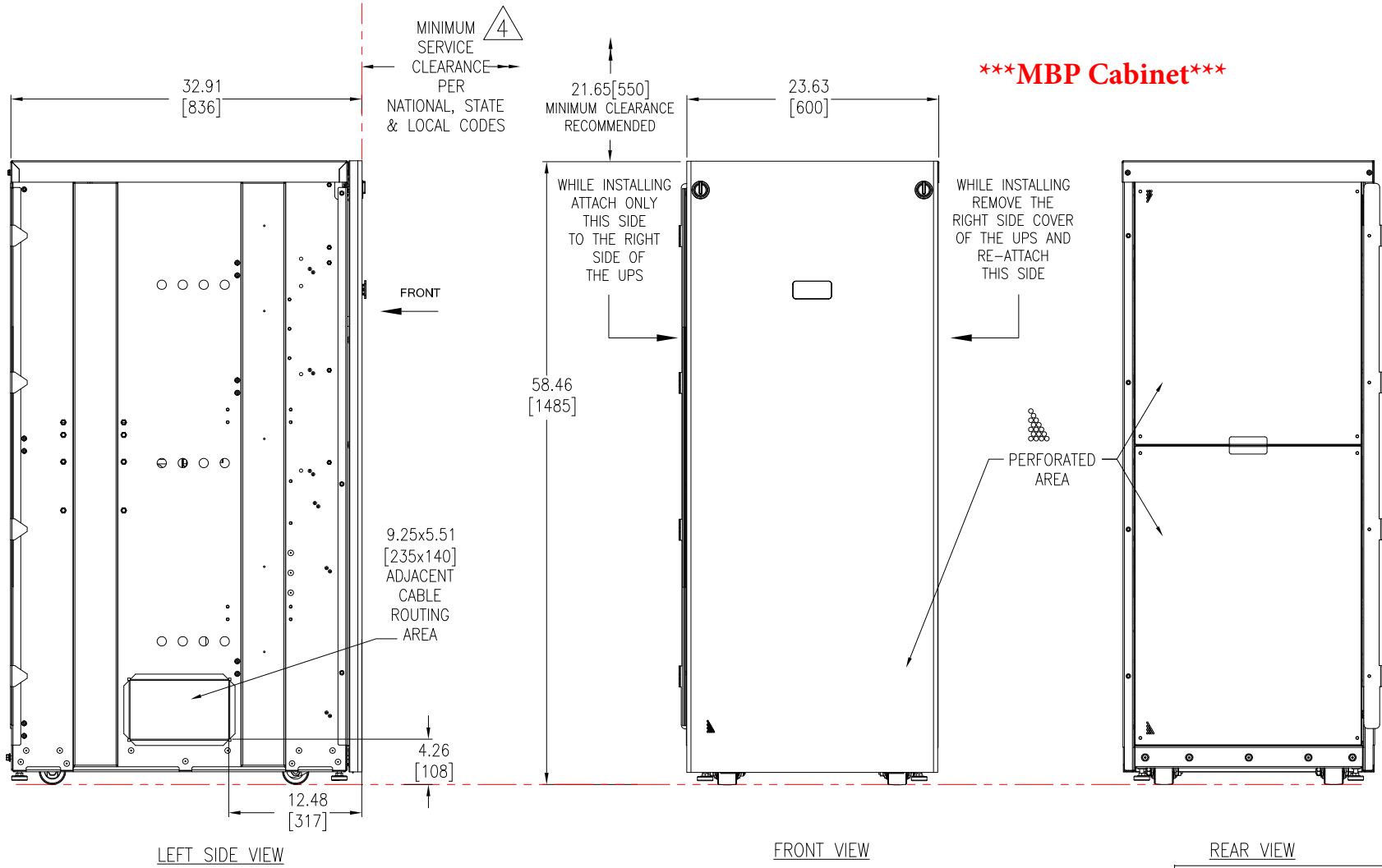


TITLE: Galaxy VS
UPS 20-100kW
Input: 480V, 3PH, 60Hz
Output: 480V, 3PH OR 3PH+N, 60Hz
CONNECTIONS & CONTROL PANEL DETAILS
PROJECT: SUBMITTAL DRAWINGS **SHEET 4 OF 4**

DWG NO: GVSUPS20K100GS	REV. 0
DRAWN BY: K.NAGENDRA	07-JAN-19
ENGINEER: H.NICOLAISEN/P.BONDE	07-JAN-19
APPROVED BY: HENRIK NICOLAISEN	07-JAN-19
FIRST	ANGLE
PROJECTION	

Maintenance Bypass Cabinet

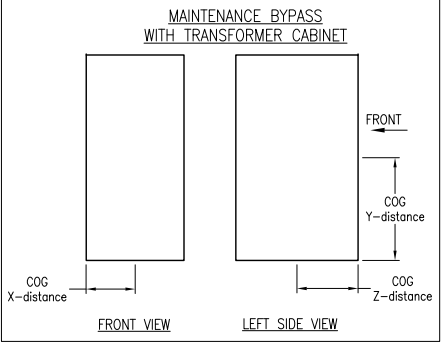
*****MBP Cabinet*****



- NOTES:**
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 2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
 3. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS].
 4. FRONT ACCESS REQUIRED FOR SERVICE.
MINIMUM REQUIRED FRONT CLEARANCE IS 36.0[914.4]. REAR CLEARANCE REQUIRED FOR VENTILATION IS 5.91[150].
 5. ALL DIMENSIONS ARE TO THE OUTSIDE EDGE OF THE CABINET, EXCLUDING LATCHES AND HARDWARE.
 6. CABLE ENTRY IS FROM TOP OR BOTTOM OF THE UNIT.
 7. POWER CABLES SHALL BE IN SEPARATE CONDUITS FROM CONTROL AND COMMUNICATION CABLES.
 8. OPERATING TEMPERATURE: 32°F TO 104°F [0°C TO 40°C].
 9. PROTECTION CLASS: IP20.
 10. COLOR: RAL 9003, GLOSS LEVEL 85%.
 11. THE TABLE PROVIDES WEIGHT AND CENTER OF GRAVITY DATA.
 12. WHILE INSTALLING WITH UPS, REMOVE RIGHT SIDE COVER OF THE UPS UNIT AND ATTACH THE MBP WITH TRANSFORMER UNIT TO THE RIGHT SIDE OF THE UPS UNIT. RE-ATTACH RIGHT SIDE COVER OF THE UPS TO THE RIGHT SIDE OF THE MBP WITH TRANSFORMER UNIT.

⚠

WEIGHT AND CENTER OF GRAVITY DETAILS						
SKU	RATING kW	WEIGHT lbs (kg)	Center of Gravity inches [mm]			
			X-Distance	Y-Distance	Z-Distance	
GVSBPOT50	20-50	1166 [530]	11.7 [298]	19.4 [492]	18.4 [468]	
GVSBPOT100	60-100	1419 [645]	11.7 [298]	19.7 [501]	18.5 [470]	

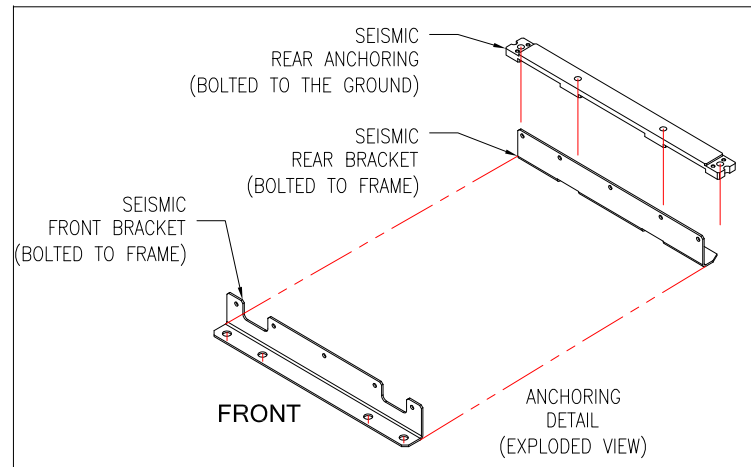
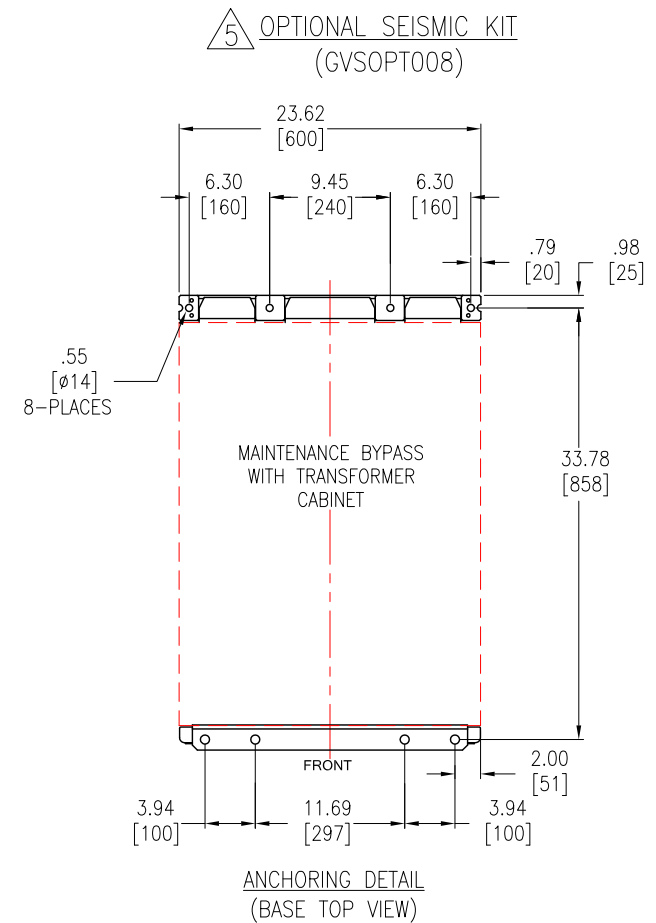
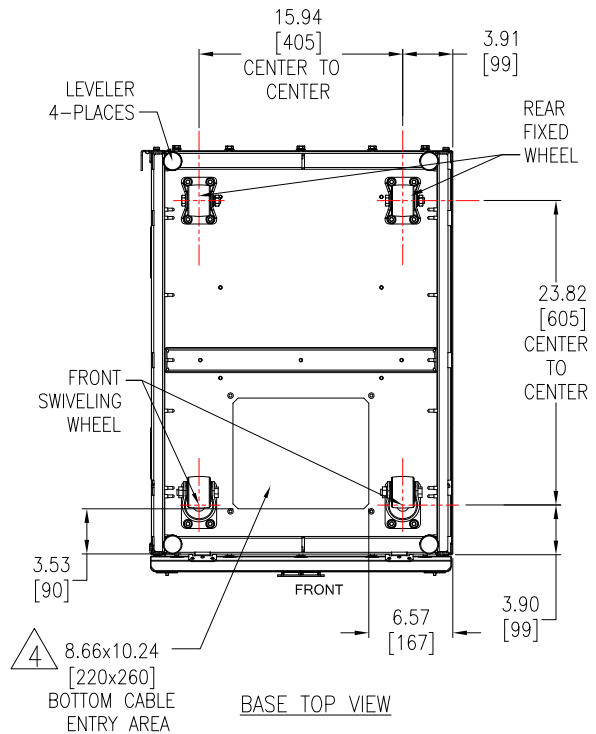
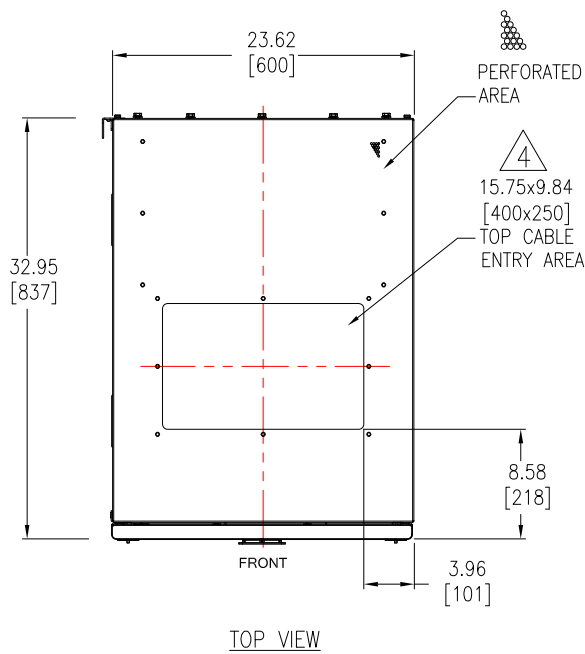


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TITLE: Galaxy VS MBP WITH OUTPUT TRANSFORMER-50kW/100kW
 Input: 480V, 3PH, 60Hz
 Output: 208V, 3PH+N, 60Hz
 GENERAL ARRANGEMENT

DWG NO:	GVSBPOT50K100		REV.	2
DRAWN BY:	K.NAGENDRA	01-FEB-19	FIRST ANGLE	
ENGINEER:	L GO/P JANSEN	01-FEB-19	PROJECTION	
APPROVED BY:	IRENE KENNEDY	01-FEB-19		



- NOTES:**
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 2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
 3. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS].
 - △ 4. DRILL/PUNCH HOLES IN PLATE. REMOVE PLATE FROM CABINET BEFORE DRILLING/PUNCHING.
 - △ 5. FIXATION OF ANCHORING BRACKETS IS OPTIONAL IN NON-SEISMIC LOCATIONS.

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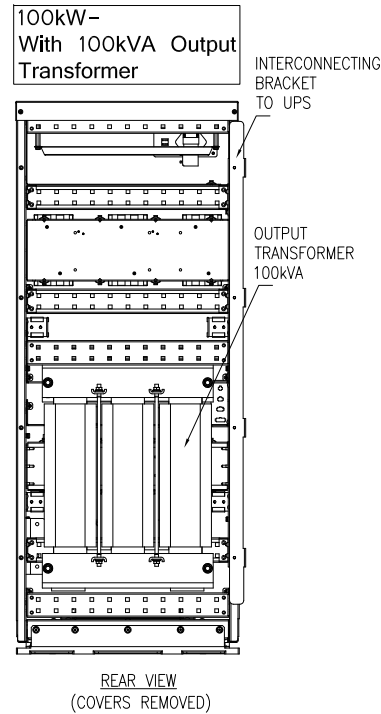
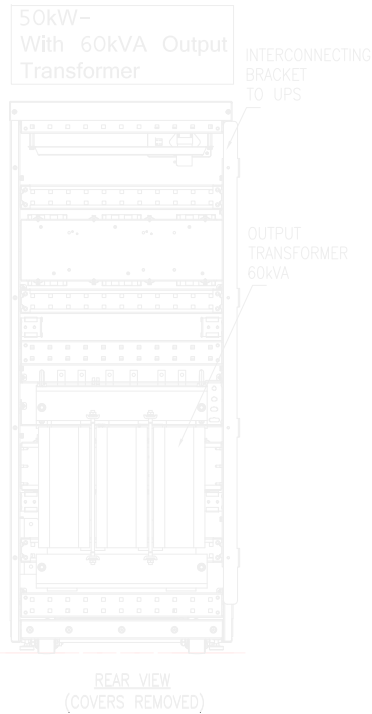
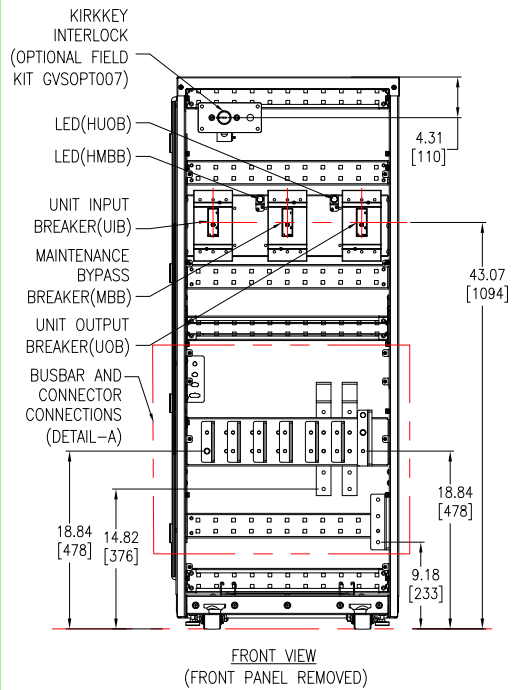


TITLE: Galaxy VS
MBP WITH OUTPUT TRANSFORMER-50kW/100kW
Input: 480V, 3PH, 60Hz
Output: 208V, 3PH+N, 60Hz
TOP-BOTTOM VIEWS & ANCHORING

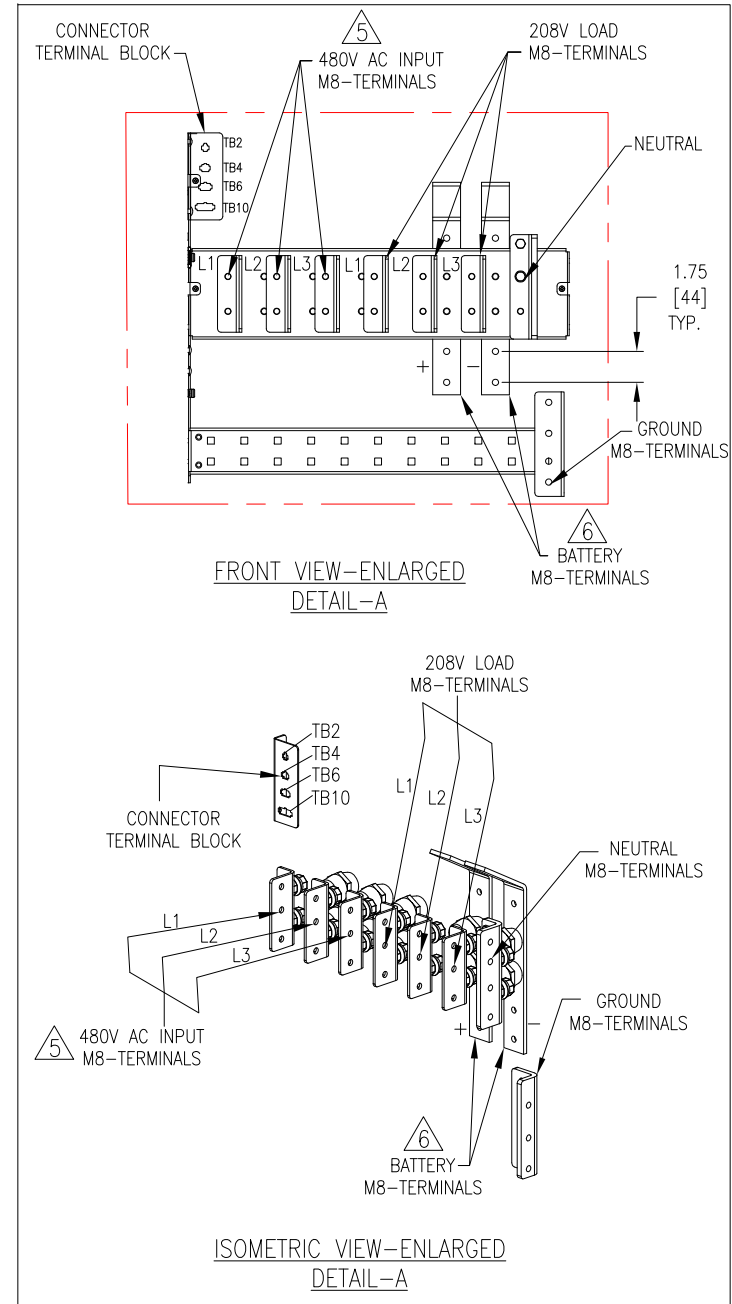
PROJECT: SUBMITTAL DRAWINGS

SHEET 2 OF 4

DWG NO: GVSBPOT50K100	REV. 0
DRAWN BY: K.NAGENDRA	04-DEC-18
ENGINEER: L GO/P JANSEN	04-DEC-18
APPROVED BY: IRENE KENNEDY	04-DEC-18
	ANGLE PROJECTION



CIRCUIT BREAKER AND TRANSFORMER DETAILS					
kVA	CB RATINGS			CB PART NUMBER	OUTPUT TRANSFORMER ⁹
	UIB	MBB	UOB		
20-50kW	150A	150A	150A	HJF36150CU31X	60kVA, 480-208V, D-Y, K1, %IZ:2.5-3.5%
60-100kW	250A	--	--	JJF36250CU31X	100kVA, 480-208V, D-Y, K1, %IZ:2.5-3.5%.
	--	150A	150A	HJF36150CU31X	



- NOTES:**
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 - REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
 - ALL DIMENSIONS ARE IN INCHES [MILLIMETERS].
 - SOME STRUCTURAL DETAILS HAVE BEEN OMITTED FOR THE PURPOSE OF CLARITY.
 - INPUT IS 480V ONLY.
 - BATTERY CONNECTION IS FOR TOP ENTRY ONLY.
 - REFER TO MANUAL FOR BREAKER SETTINGS.
 - REFER TO SINGLE LINE AND WIRING DIAGRAM FOR INTERFACE DETAILS.
 - MAXIMUM INRUSH 10X NOMINAL INPUT CURRENT.

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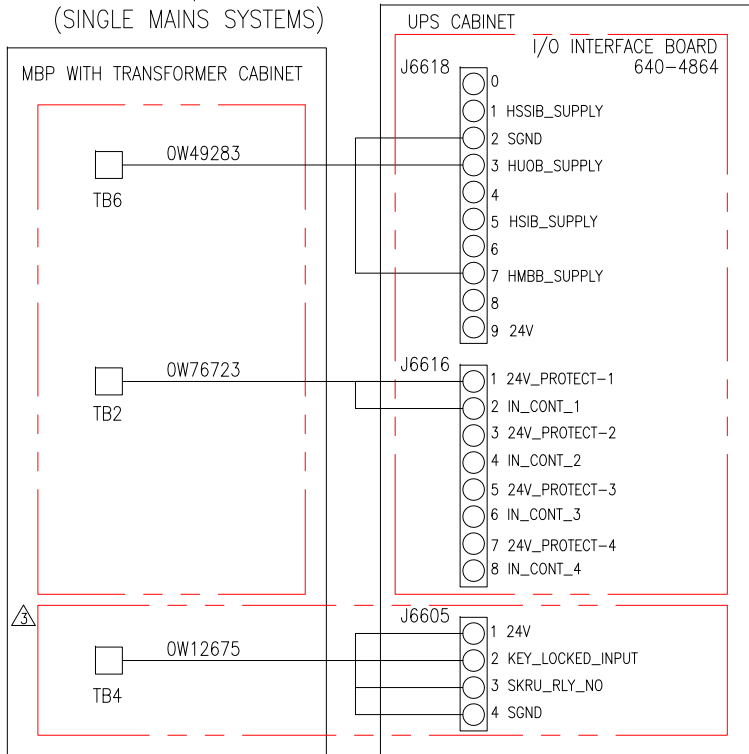
TITLE: Galaxy VS MBP WITH OUTPUT TRANSFORMER-50kW/100kW
 Input: 480V, 3PH, 60Hz
 Output: 208V, 3PH+N, 60Hz
 INTERNAL VIEWS-1

DWG NO: GVSBPOT50K100 **REV.** 1
DRAWN BY: K.NAGENDRA 11-JAN-19 **FIRST**
ENGINEER: L GO/P JANSEN 11-JAN-19 **ANGLE**
APPROVED BY: IRENE KENNEDY 11-JAN-19 **PROJECTION**

PROJECT: SUBMITTAL DRAWINGS **SHEET** 3 OF 4

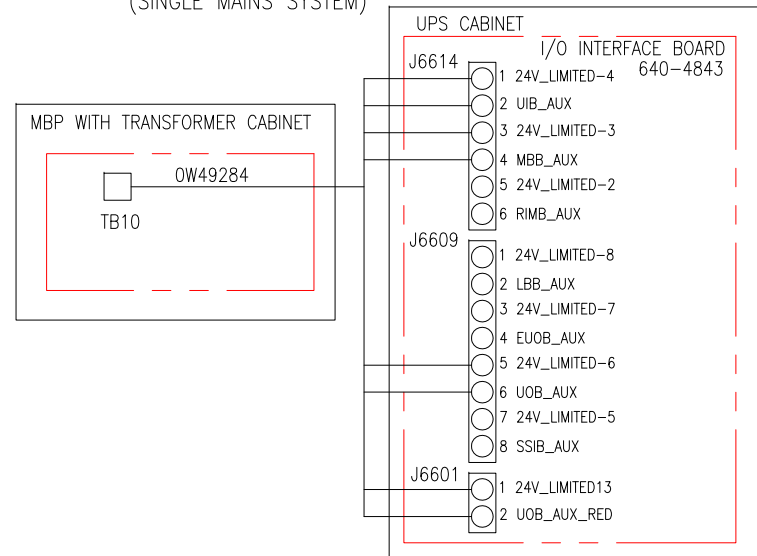
CONNECTION CLASS 2/SELV SIGNAL CABLE

(SINGLE MAINS SYSTEMS)

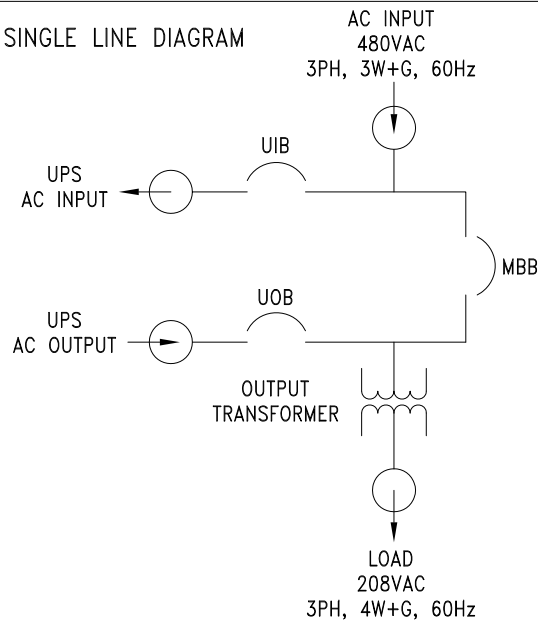


CONNECTION NON-CLASS 2/NON-SELV SIGNAL CABLE

(SINGLE MAINS SYSTEM)



SINGLE LINE DIAGRAM



NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.

△3. APPLICABLE WHILE USING KIRKKEY INTERLOCK OPTION(GVS0PT007)

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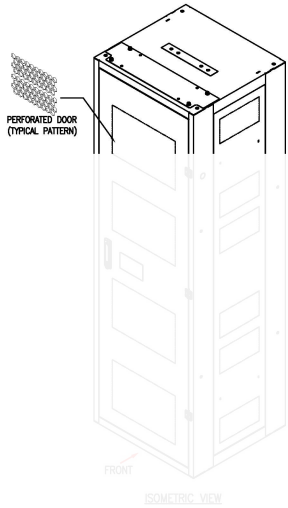


TITLE: Galaxy VS
 MBP WITH OUTPUT TRANSFORMER-50kW/100kW
 Input: 480V, 3PH, 60Hz
 Output: 208V, 3PH+N, 60Hz
 CONNECTION AND CONTROL PANEL DETAILS
 PROJECT: SUBMITTAL DRAWINGS SHEET 4 OF 4

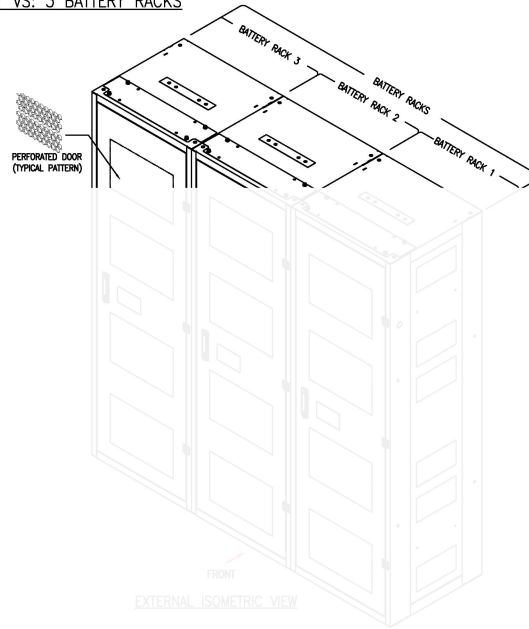
DWG NO:	GVSBPOT50K100	REV.	1
DRAWN BY:	K.NAGENDRA	DATE:	11-JAN-19
ENGINEER:	L GO/P JANSEN	DATE:	11-JAN-19
APPROVED BY:	IRENE KENNEDY	DATE:	11-JAN-19
			PROJECTION

Lithium-Ion Battery Cabinet

GALAXY VS: 1 BATTERY RACK



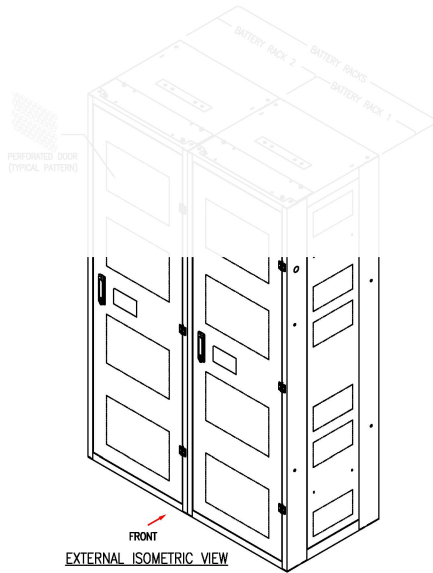
GALAXY VS: 3 BATTERY RACKS



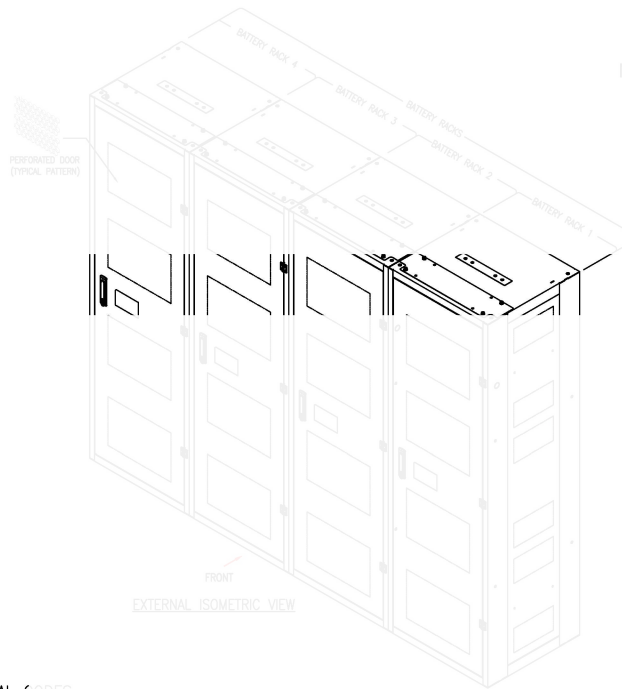
The Lithium Ion Battery solution applies to
480V AC/480V AC output UPS 20-100kW
and 208V AC/208V AC output UPS 10-50kW

Type of installation	Maximum number of Strings	Recommended Cable Size
Ladder tray	4	300kcmil/1
Conduit dual mains	2	
Conduit single mains	3	
Combination of conduit in UPS for DC and conduit in MBC for AC	4	

GALAXY VS: 2 BATTERY RACKS



GALAXY VS: 4 BATTERY RACKS



Note: 4/0 AWG (211kcmil/1) is OK only if there are 2 or more strings active

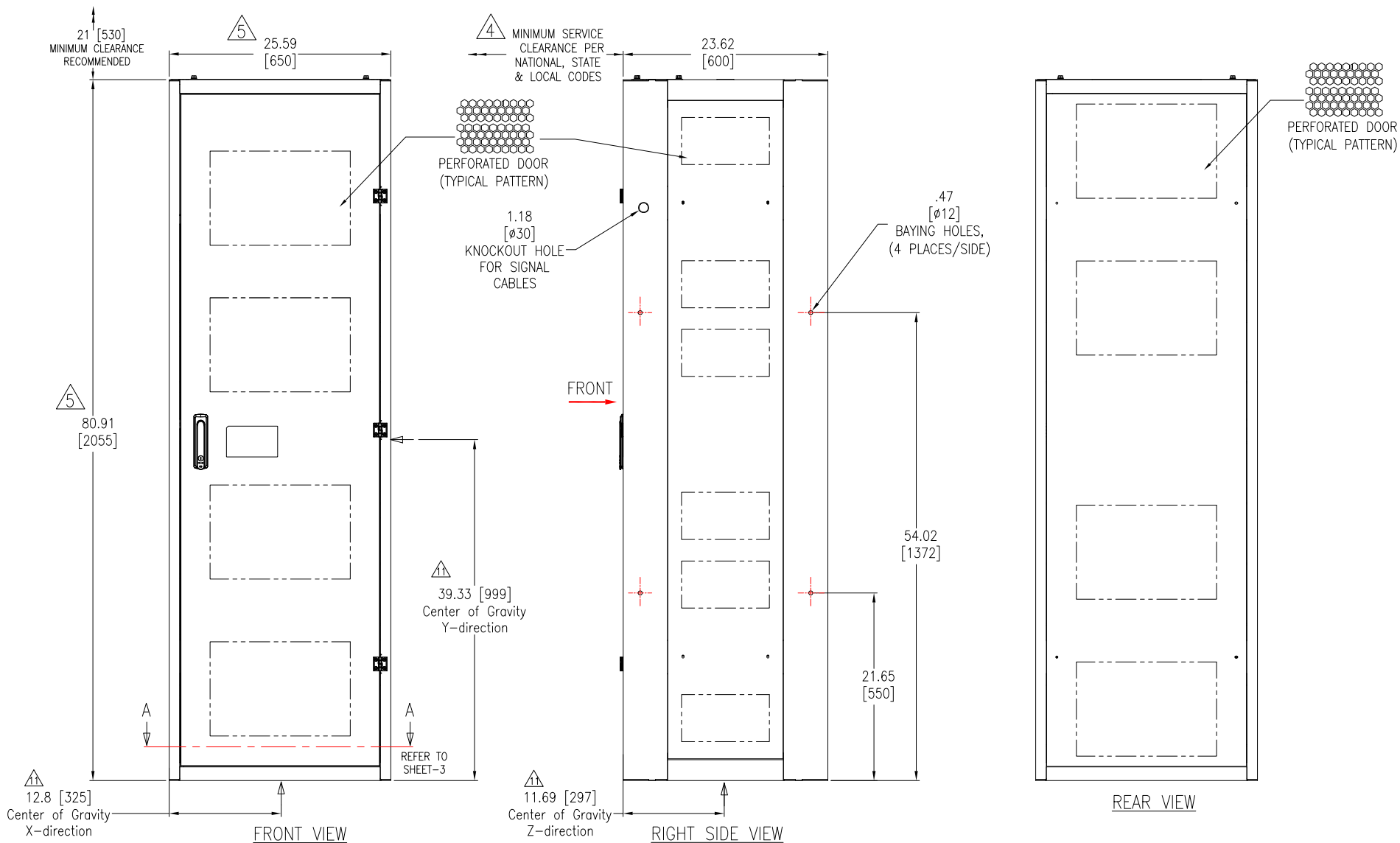
NOTES:

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2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.

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TITLE: i-lon Battery Rack Type E-GVS UL ISOMETRIC VIEWS		DWG NO: LIBATTSMGEGVSUL	REV. 1
PROJECT: SUBMITTAL DRAWINGS	SHEET 1 OF 21	DRAWN BY: JAYAPRAKASH	02-MAY-19
		ENGINEER: DENIS MATHIEU	02-MAY-19
		APPROVED BY: KARSTEN AABERG	02-MAY-19
			THIRD ANGLE PROJECTION



NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
3. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS].
- △ 4. A MINIMUM OF 39 Inches [1000mm] FRONT ACCESS FOR SERVICE IS REQUIRED.
- △ 5. ALL DIMENSIONS EXCLUDES SCREW PROJECTION OUTSIDE THE ENCLOSURE.
6. CABLE ENTRY IS FROM TOP OF THE UNIT.
7. THE WEIGHT OF THE UNIT (WITHOUT BATTERIES) IS 463 lb [210 kg].
WEIGHT OF ONE BATTERY MODULE IS 37.5 lb [17 kg], WEIGHT OF THE FULLY LOADED RACK IS 1175 lb [533 kg].
8. COLOR: WHITE:KCC-EX8816(S)-N.9.5.
9. PROTECTION CLASS: IP20.
10. RECOMMENDED OPERATING TEMPERATURE: 77°F±37.4 [25±3°C].
TO OPTIMIZE THE LIFE OF BATTERY, IT IS RECOMMENDED TO MAINTAIN 77°F [25°C].
- △ 11. THIS INFORMATION PROVIDES APPROXIMATE CENTER OF GRAVITY CALCULATION.
12. BATTERY RACKS CAN BE BAYED SIDE BY SIDE OR BACK TO BACK. REFER TO INSTALLATION MANUAL [LIB System for UPS Installation Manual (128S)].

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TITLE:
Li-Ion Battery Rack Type E-GVS UL
GENERAL ARRANGEMENT

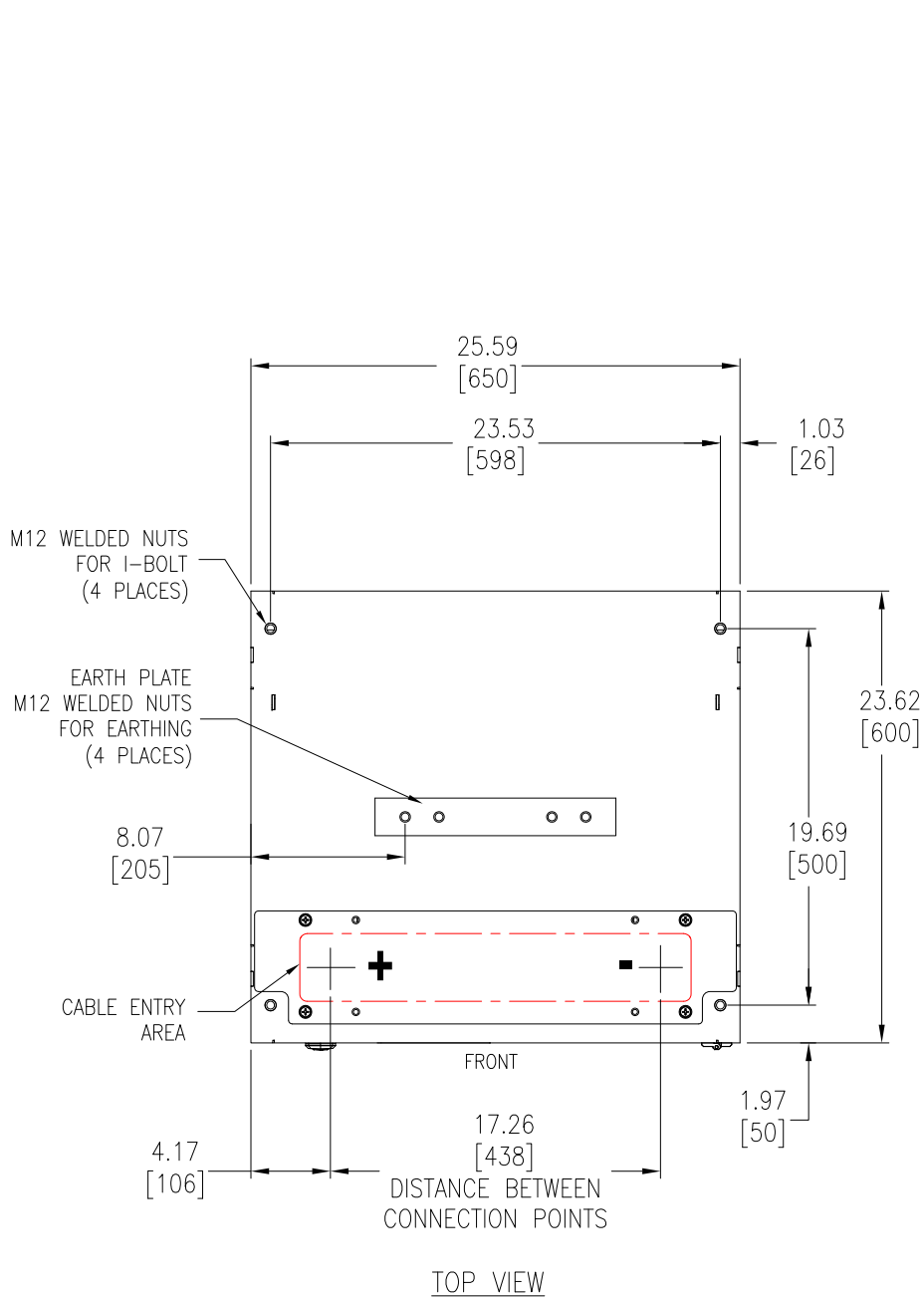
PROJECT: SUBMITTAL DRAWINGS | **SHEET** 2 OF 21

DWG NO: LIBATTSMGEGVSUL

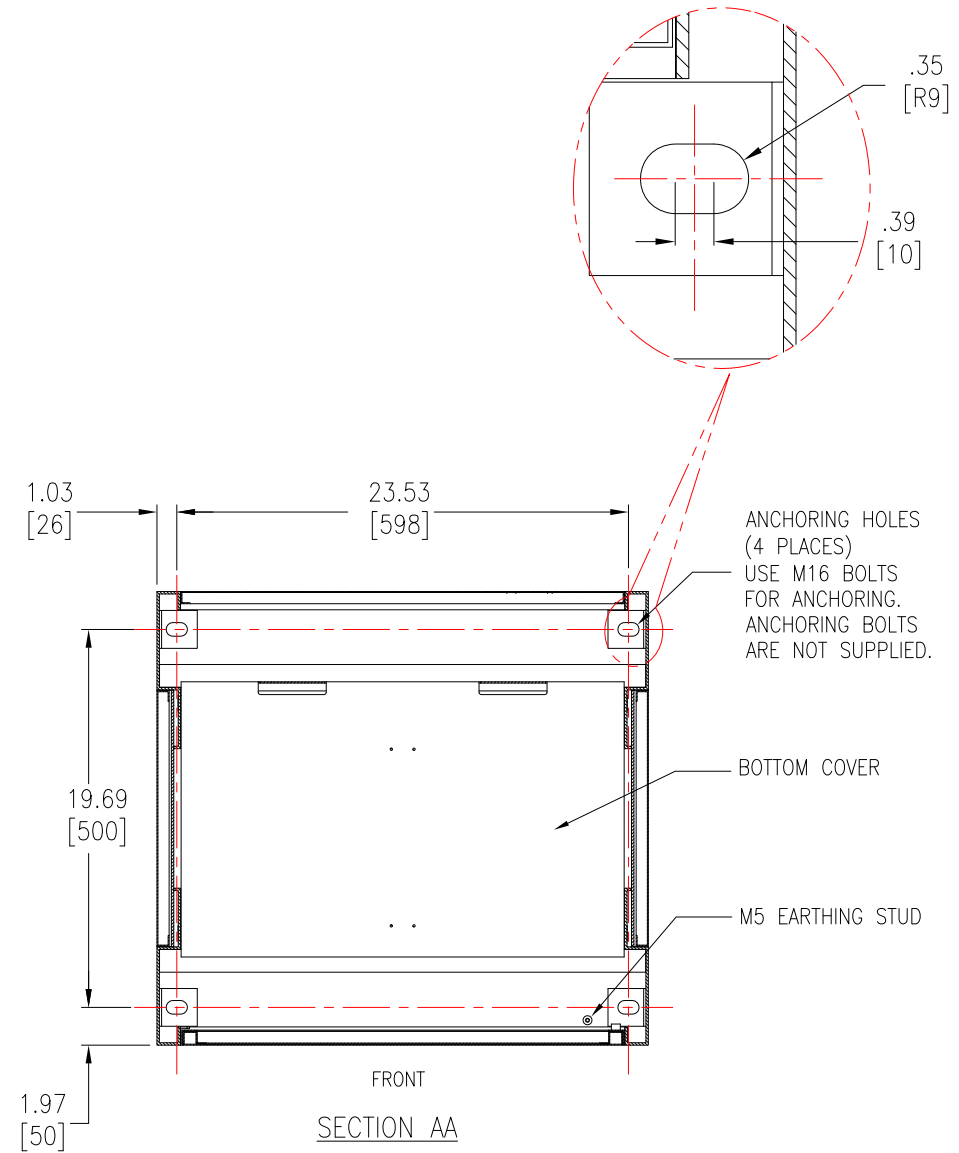
DRAWN BY: JAYAPRAKASH	06-MAR-19
ENGINEER: DENIS MATHIEU	08-MAR-19
APPROVED BY: KARSTEN AABERG	08-MAR-19

REV. 1

THIRD ANGLE PROJECTION



TOP VIEW



SECTION AA

NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
3. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS].
4. ALL THE EARTH PLATES SHOULD BE CONNECTED.

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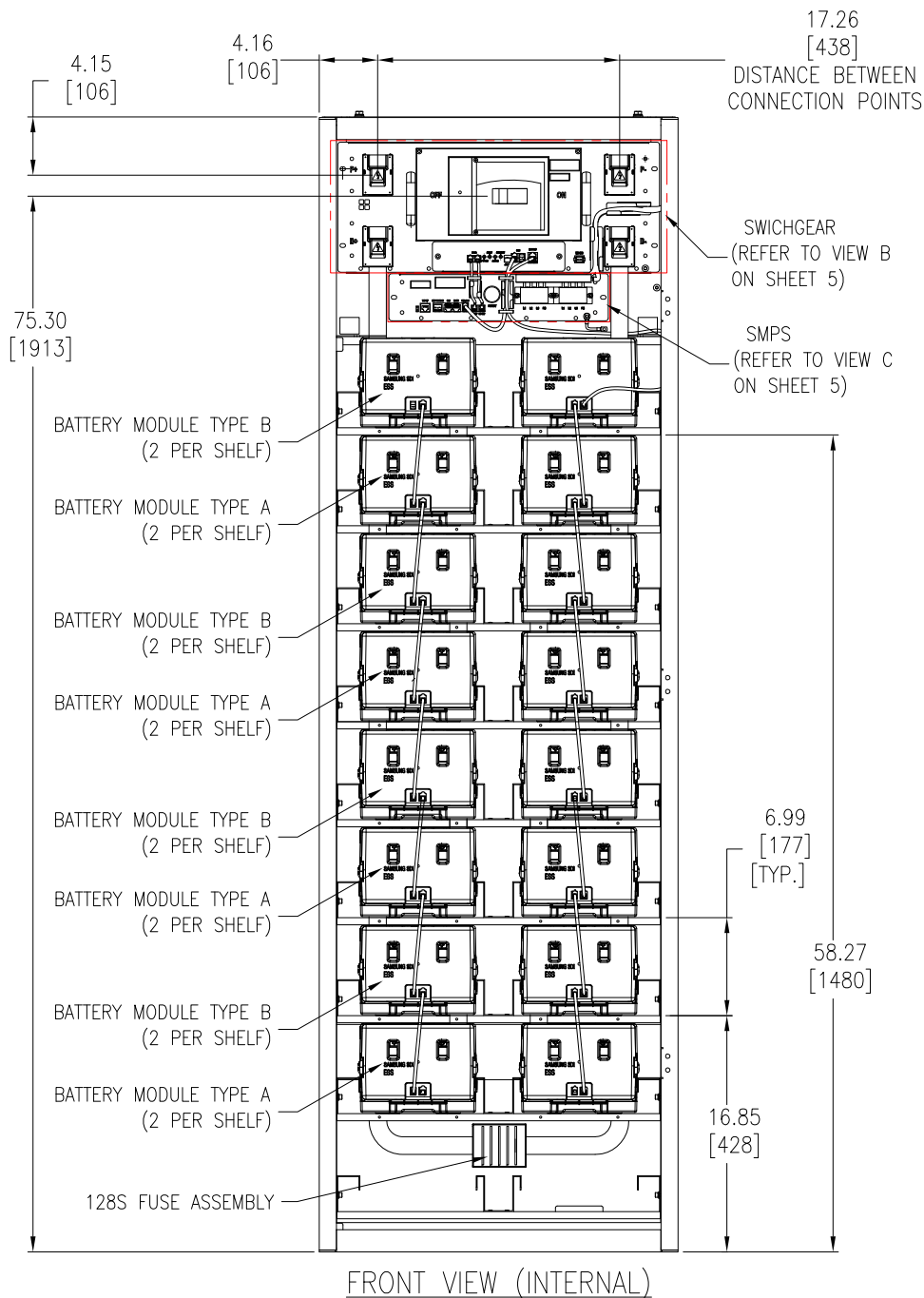
TITLE:

Li-Ion Battery Rack Type E-GVS UL
TOP VIEW & ANCHORING DETAILS

PROJECT: SUBMITTAL DRAWINGS SHEET 30F 21

DWG NO: LIBATTSMGEVSUL REV. 0

DRAWN BY:	JAYAPRAKASH	19-NOV-18	THIRD
ENGINEER:	DENIS MATHIEU	10-DEC-18	ANGLE
APPROVED BY:	KARSTEN AABERG	10-DEC-18	PROJECTION



FRONT VIEW (INTERNAL)

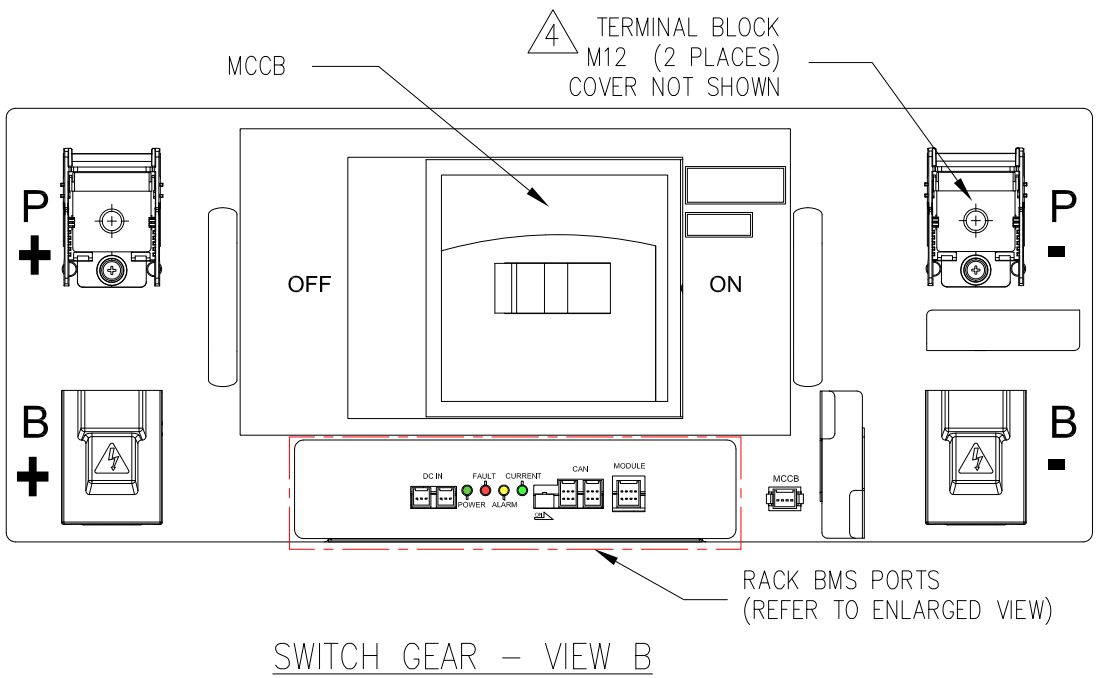
NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
3. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS].
4. USE M10 SCREWS FOR MOUNTING MULTIPLE RACKS SIDE BY SIDE.
5. SOME STRUCTURAL DETAILS HAVE BEEN OMITTED FOR THE PURPOSE OF CLARITY.

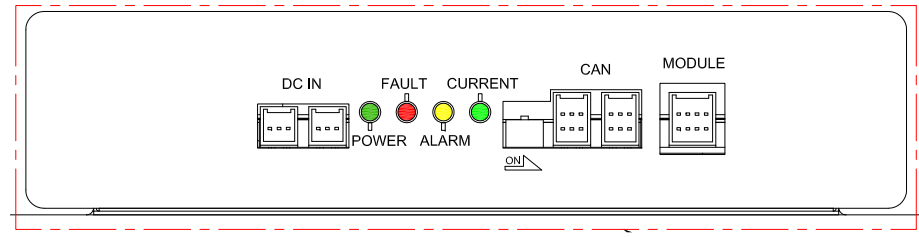
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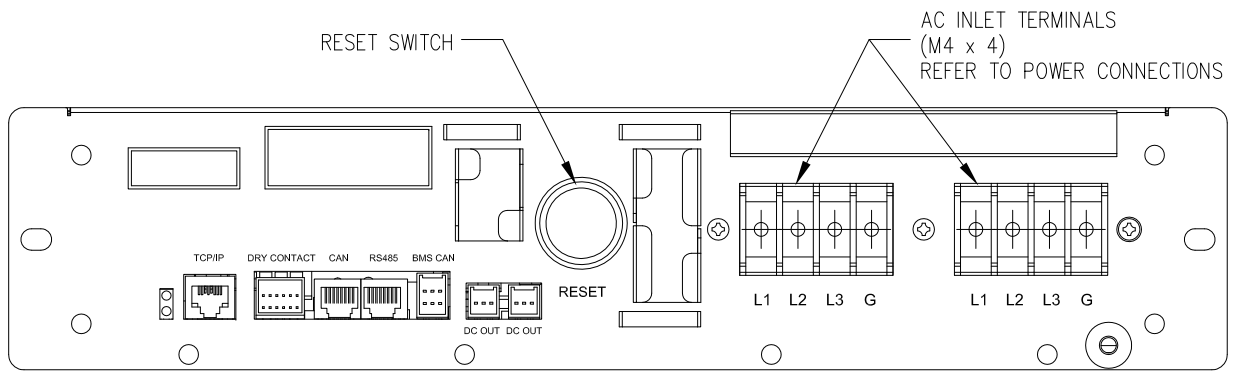
TITLE:		DWG NO:	LIBATTSMGEVSUL	REV.	0
Li-Ion Battery Rack Type E-GVS UL INTERNAL VIEWS		DRAWN BY:	JAYAPRAKASH	19-NOV-18	THIRD
PROJECT: SUBMITTAL DRAWINGS		ENGINEER:	DENIS MATHIEU	10-DEC-18	ANGLE
SHEET 40F 21	APPROVED BY:	KARSTEN AABERG	10-DEC-18	PROJECTION	



SWITCH GEAR – VIEW B



RACK BMS PORTS
ENLARGED VIEW



SMPS WITH SYSTEM BMS – VIEW C

CABLING NOTES:

- CANBUS COMMUNICATIONS BETWEEN RACKS IS SUPPLIED AND INSTALLED BY SCHNEIDER ELECTRIC.
- THE ELECTRICAL 480V POWER BETWEEN CABINETS IS SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR.

MCCB SETTING: $I_m = 1500$.
APPLY TO ALL CONFIGURATIONS.

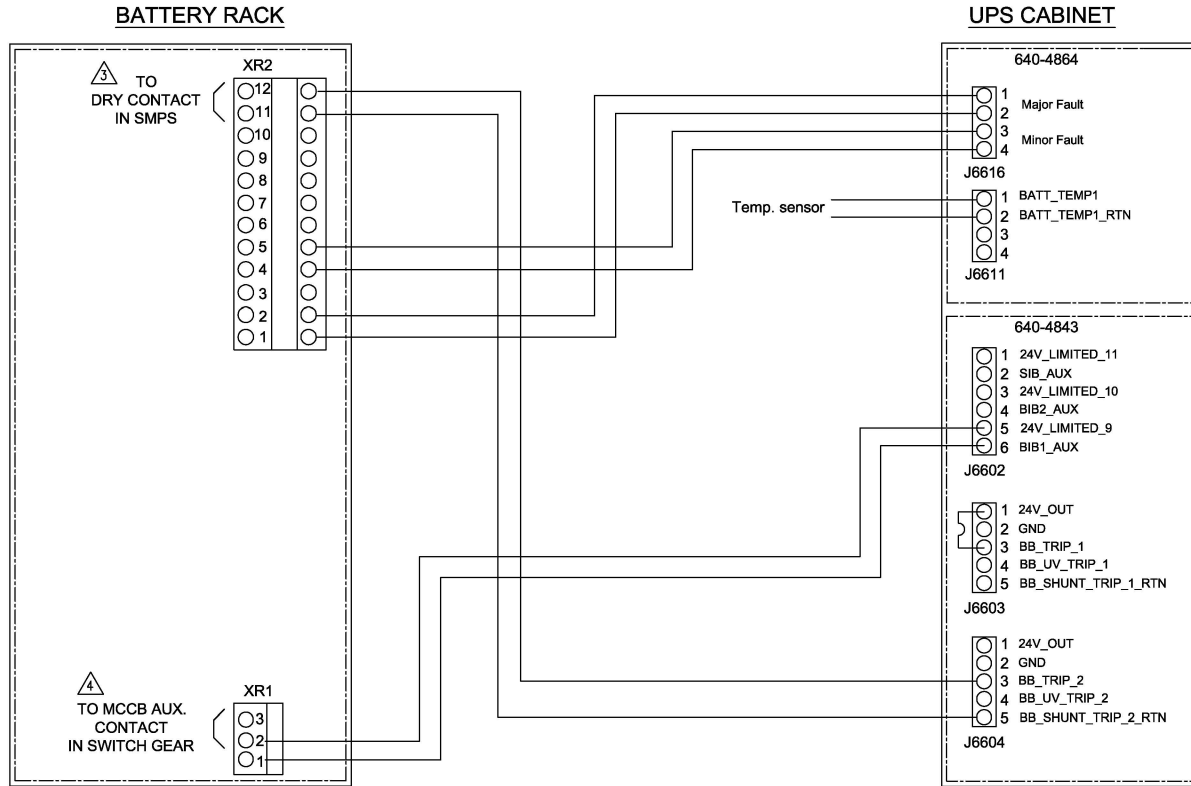
- NOTES:**
- INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
 - REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
 - THE SYSTEM BMS IS LOCATED IN BATTERY RACK 1 ONLY.
 - △ 4. TERMINALS P+ AND P- CONNECT TO THE DC LINK OF UPS. THE CLEARANCE FROM TERMINAL TO COVER IS 0.55 Inch [14mm].

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TITLE:		DWG NO: 03-MAY-19		REV. 2
Li-Ion Battery Rack Type E-GVS UL DETAIL VIEWS		DRAWN BY: JAYAPRAKASH	03-MAY-19	THIRD
PROJECT: SUBMITTAL DRAWINGS		ENGINEER: DENIS MATHIEU	03-MAY-19	ANGLE
SHEET 50F 21		APPROVED BY: KARSTEN AABERG	03-MAY-19	PROJECTION

CONTROL WIRING DETAILS WITH 1 BATTERY RACK



RECOMMENDED CABLE SIZE: 18 TO 12 AWG

The Lithium Ion Battery solution applies to
480V AC/480V AC output UPS 20-100kW
and 208V AC/208V AC output UPS 10-50kW

NOTES:

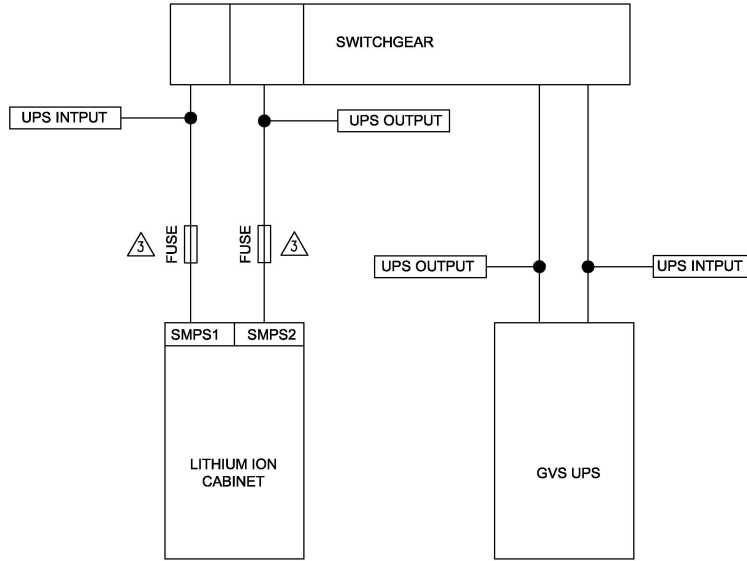
1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
- △ 3. USE THE PROVIDED 0W99108 TO CONNECT SMPS DRY CONTACT.
- △ 4. USE THE PROVIDED 0W99109 TO CONNECT MCCB AUX CONTACT.
5. INSTALL THE TEMPERATURE SENSOR 0M-1160 PROVIDED WITH THE UPS IN THE BATTERY ROOM.
6. SOME STRUCTURAL DETAILS HAVE BEEN OMITTED FOR THE PURPOSE OF CLARITY.

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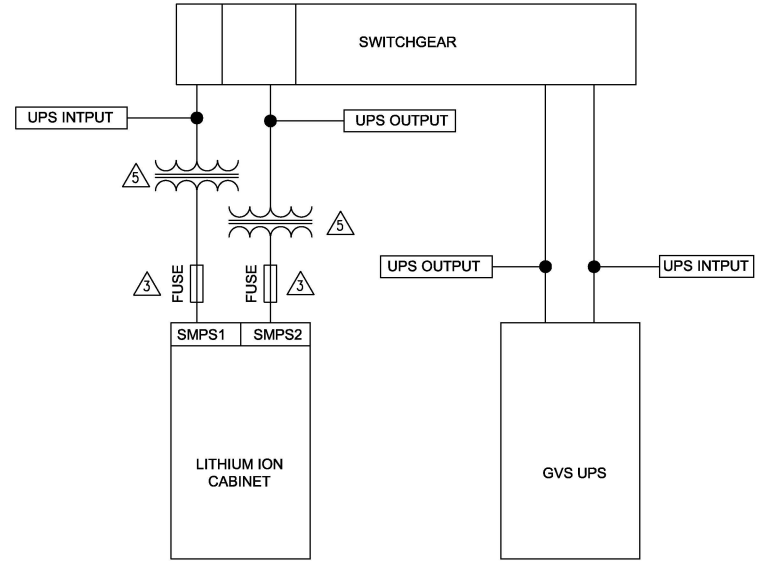


TITLE:		DWG NO: LIBATTSMGEGVSUL		REV. 2
Li-Ion Battery Rack Type E-GVS UL INTERFACE DETAILS		DRAWN BY: JAYAPRAKASH	15-APR-19	THIRD
PROJECT: SUBMITTAL DRAWINGS		ENGINEER: KARSTEN AABERG	15-APR-19	ANGLE
SHEET 6 OF 21		APPROVED BY: KARSTEN AABERG	15-APR-19	PROJECTION

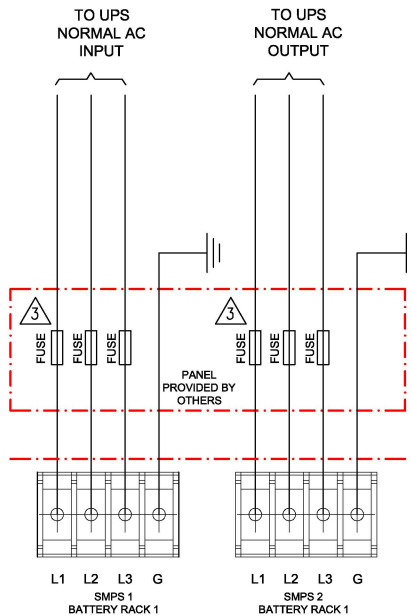
CONFIGURATION OVERVIEW FOR 480V SYSTEM



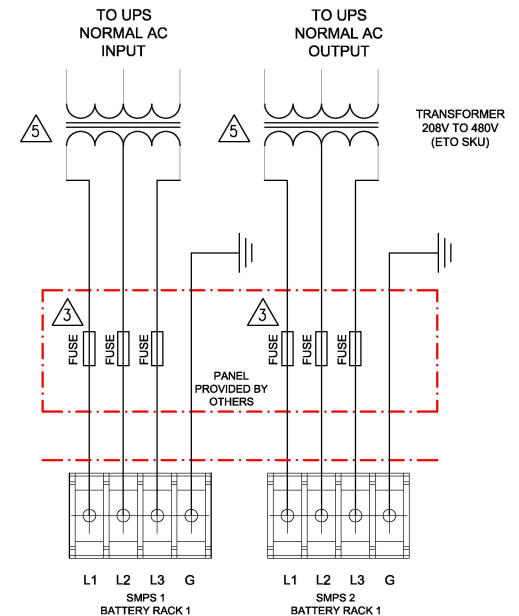
CONFIGURATION OVERVIEW FOR 208V SYSTEM



SMPS INPUT/OUTPUT (CONTROL POWER CONNECTIONS) 480V



SMPS INPUT/OUTPUT (CONTROL POWER CONNECTIONS) 208V



RECOMMENDED CABLE SIZE: 18 TO 12 AWG

The Lithium Ion Battery solution applies to 480V AC/480V AC output UPS 20-100kW and 208V AC/208V AC output UPS 10-50kW

NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
- △ 3. FUSE TYPE: MERSEN, REF. ATQR6 OR EQUIVALENT 6A 600V 200kA kAIC. ALTERNATE SOLUTION: SCHNEIDER ELECTRIC MOTOR CIRCUIT BREAKER-TeSys GV2P10.
4. SOME STRUCTURAL DETAILS HAVE BEEN OMITTED FOR THE PURPOSE OF CLARITY.
- △ 5. FOR 208V SYSTEM, A STEP UP TRANSFORMER IS REQUIRED TO CONVERT FROM 208V TO 480V FOR SMPS 1 AND 2 (ETO SKU).

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TITLE:

Li-Ion Battery Rack Type E-GVS UL INTERFACE DETAILS

PROJECT: SUBMITTAL DRAWINGS SHEET 7 OF 21

DWG NO:

LIBATTSMGEVSUL

DRAWN BY: JAYAPRAKASH

ENGINEER: KARSTEN ABERG

APPROVED BY: KARSTEN ABERG

REV.

0

15-APR-19

15-APR-19

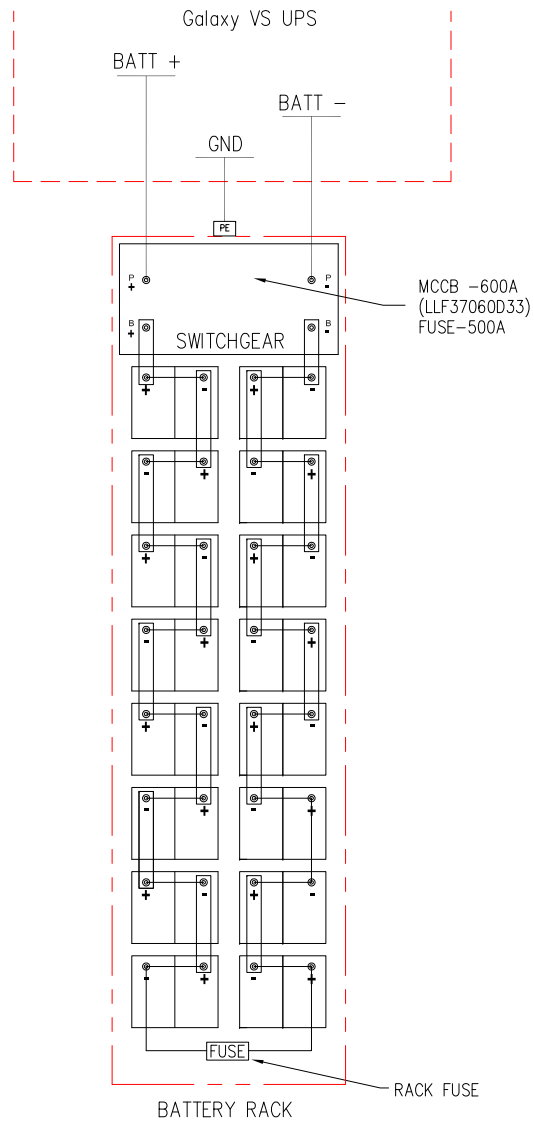
15-APR-19

THIRD

ANGLE

PROJECTION

SCHEMATIC DIAGRAM - POWER FOR GALAXY VS WHEN 1 BATTERY RACK BAYED WITH LADDER TRAY TO UPS



NOTES:

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Schneider
Electric

TITLE:

Li-Ion Battery Rack Type E-GVS UL
SCHEMATIC DIAGRAM - POWER

PROJECT: SUBMITTAL DRAWINGS SHEET 14 OF 21

DWG NO:

LIBATTSMGEGVSUL

DRAWN BY:

JAYAPRAKASH

ENGINEER:

KARSTEN AABERG

APPROVED BY: KARSTEN AABERG

REV.

2

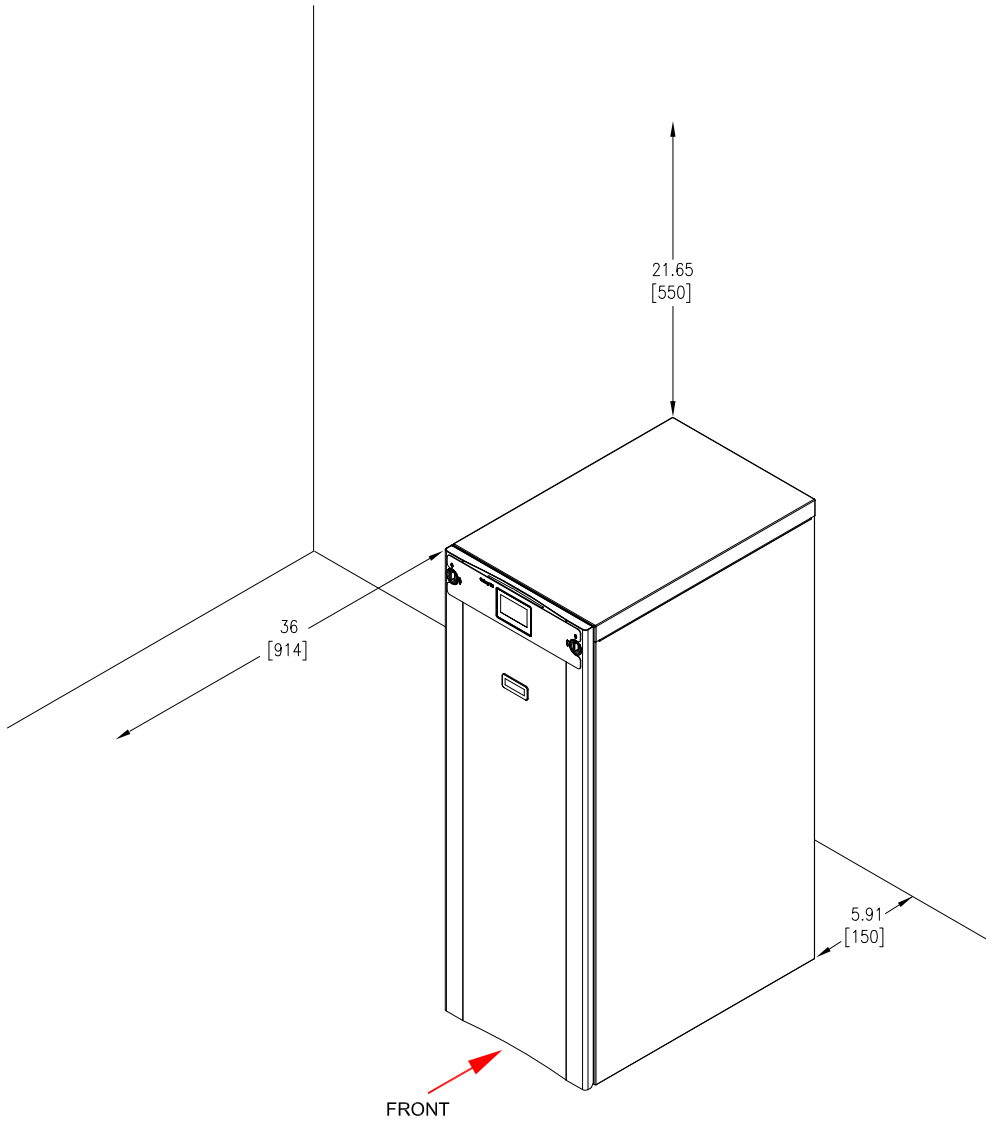
ANGLE

PROJECTION

N.A.

TYPICAL Galaxy VS UPS DETAILS

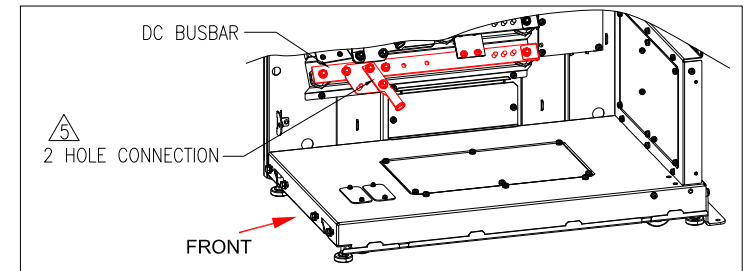
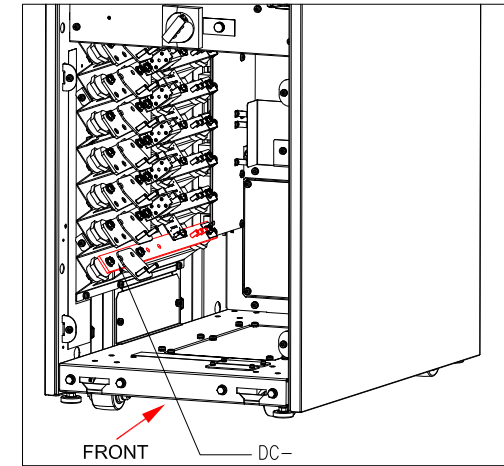
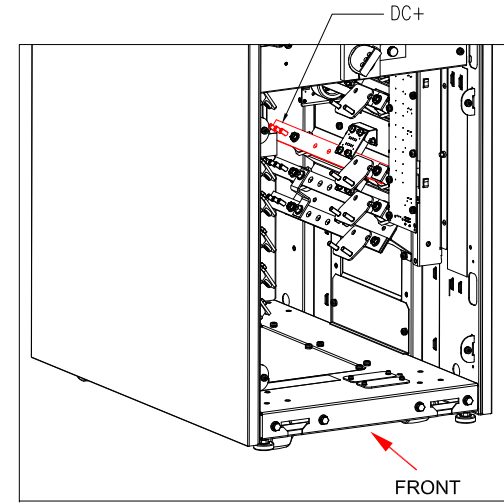
4 CLEARANCE:



NOTES:

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2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
3. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS].
4. CLEARANCE DIMENSIONS ARE PUBLISHED FOR AIRFLOW AND SERVICE ACCESS ONLY.
5. FOR 2 HOLES CONNECTION USE NEMA 2 HOLES KIT GVSOPT005 TO INSTALL DC CABLE ON DC BUSBAR.
6. REFER TO Galaxy VS UPS DRAWING FOR FURTHER DETAILS.

BUSBAR LOCATIONS (DC+ AND DC-)



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Schneider Electric

TITLE:

Li-Ion Battery Rack Type E-GVS UL
TYPICAL Galaxy VS UPS DETAILS

PROJECT: SUBMITTAL DRAWINGS SHEET 210F 21

DWG NO: LIBATTSMGEVVSUL

DRAWN BY: JAYAPRAKASH 15-APR-19

ENGINEER: KARSTEN AABERG 15-APR-19

APPROVED BY: KARSTEN AABERG 15-APR-19

REV.

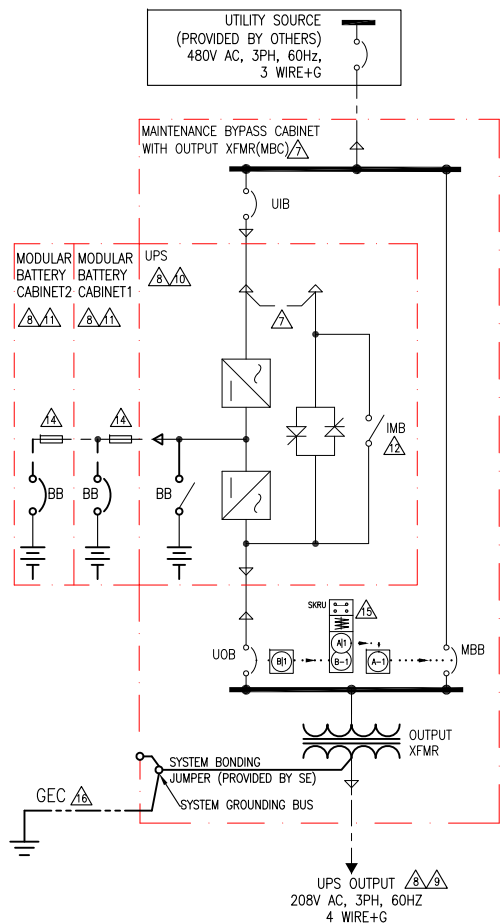
THIRD

ANGLE

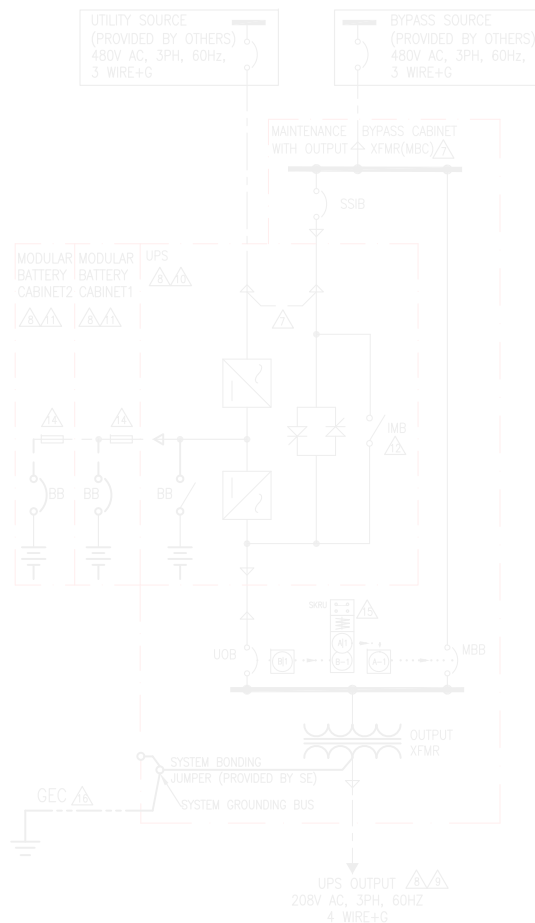
PROJECTION

One-line Diagram

1 MODULE UPS WITH BATTERIES & MAINTENANCE BYPASS CABINET
(WITH OUTPUT XFMR – SINGLE MAINS)

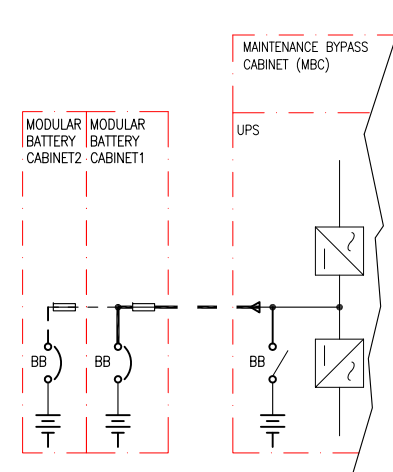


1 MODULE UPS WITH BATTERIES & MAINTENANCE BYPASS CABINET
(WITH OUTPUT XFMR – DUAL MAINS)



REMOTE BATTERY-TYPICAL

(REST OF CONNECTIONS
SIMILAR TO ADJACENT BATTERY
EXCEPT BELOW)



NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
2. REFER TO PRODUCT INSTALLATION DOCUMENTATION FOR SITE PREPARATIONS.
3. DRAWING DEPICTS POWER SYSTEM CONNECTIONS AND IS NOT REPRESENTATIVE OF PHYSICAL LAYOUT. REFER TO MECHANICAL DRAWINGS FOR EQUIPMENT LAYOUT.
4. FINAL SELECTIONS ARE RESPONSIBILITY OF ENGINEER OF RECORDS BASED ON INSTALLED CONDITIONS AND SCC/SELECTIVE CO-ORDINATION/ARC-FLASH ANALYSIS.
- △5. IN SINGLE MAINS SYSTEMS: SUPPLY THE UPS FROM A GROUNDED 4-WIRE WYE SERVICE.
SCHNEIDER ELECTRIC ALSO SUPPORTS 3 WIRE SINGLE MAINS INSTALLATIONS IF THE MAINS XFMR IS A GROUNDED WYE XFMR, LOCATED IN THE SAME BUILDING.
IN THIS INSTALLATION, THE UPS SYSTEM MUST BE INSTALLED AS A SEPARATELY DERIVED SYSTEM. LEAKAGE CURRENTS WILL OCCUR IN THE BONDING JUMPER AND TECHNICAL/SYSTEM EARTH.
- △6. IN DUAL MAINS SYSTEMS: USE A 4-WIRE SUPPLY FOR THE BYPASS AND A 3-WIRE SUPPLY FOR THE INPUT. BOTH MUST BE WYE SOURCES.
DELTA INPUT SUPPLY FOR EITHER INPUT OR BYPASS IS NOT PERMITTED. TN AND TT POWER DISTRIBUTION SYSTEMS ARE SUPPORTED.
- △7. BUS LINK APPLICABLE FOR SINGLE MAINS ONLY, TO BE REMOVED FOR DUAL MAINS INSTALLATION.
- △8. FOR TECHNICAL SPECIFICATIONS, RECOMMENDATIONS AND SKU NUMBERS REFER TO SHEET-7.
- △9. OUTPUT OVER-CURRENT PROTECTION MUST BE PROVIDED BY OTHERS.
- △10. MAXIMUM INPUT SHORT-CIRCUIT WITHSTAND: $I_{cw}=65kA$ RMS SYMMETRICAL. UPS IS PRE-CONFIGURED FOR TNS EARTHING SYSTEM.
FOR TN-C/3 WIRE EARTHING SYSTEM CONNECT THE N BUSBAR TO PE BUSBAR AS PER INSTALLATION MANUAL.
- △11. TWO CABINETS SHOWN. MAXIMUM OF FOUR BATTERY CABINETS CAN BE BAYED WITH THE UPS. FOR RUNTIME DETAILS REFER TO PRODUCT TECHNICAL SPECIFICATION OR CONTACT SCHNEIDER ELECTRIC.
- △12. THE INTERNAL MAINTENANCE BREAKER (IMB) CAN ONLY BE USED IN SINGLE SYSTEMS WITH NO EXTERNAL MAINTENANCE BYPASS BREAKER.
13. CABLE LUGS ARE PROVIDED BY OTHERS EXCEPT FOR ADJACENT BATTERY CABINET INSTALLATION.
- △14. REFER TO GVSMODBC9 DRAWING FOR ADDITIONAL DETAILS.
- △15. KIRK KEY INTERLOCK IS OPTIONAL (SKU#GVSOPT007).
- △16. THE GROUNDING ELECTRODE CONDUCTOR (GEC) SHALL BE PROVIDED BY OTHERS.

LEGEND:	
— — — — —	AC CABLE (PROVIDED BY OTHERS)
- - - - -	600V DC CABLE (PART OF MODULAR BATTERY CABINET)
— — — — —	600V DC CABLE (PROVIDED BY OTHERS)

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TITLE: GALAXY VS
Input: 480V AC 3PH 60Hz SINGLE/DUAL FEED
Output: 480V OR 208V AC 3PH 60Hz 60-100kW
UPS w 3 INT BATT+ EXT. BATT FLOORMOUNT MBC w XFMR
SYSTEM ONE LINE DIAGRAM

PROJECT: DRAWINGS **SHEET** 5 OF 7

DWG NO: GVS60KB100GFSTAI0-SD

DRAWN BY: BALA	28-JAN-20	REV. 0
ENGINEER: P J/M D/S.P/C.B	18-FEB-20	ANGLE
APPROVED BY: C C / S V	18-FEB-20	PROJECTION

ANGLE
PROJECTION
N. A.

Site Planning

GALAXY VS 10-50KW 480V OR 600V AC IN/208V AC OUT UPS SYSTEM SITE PLANNING DATA (MBC WITH INPUT XFMR)

MAINS INPUT : 480/600V AC, 60HZ 3PH 3 WIRE+G OUTPUT: 208V AC, 60HZ, 4WIRE+G
 NOMINAL DC VOLTAGE: FOR 32 BLOCKS: 384V DC, 40 BLOCKS: 480V DC, 48 BLOCKS: +/-288V DC (WHEN USING 48 BLOCKS SPLIT STRING IS MANDATORY)

UPS RATING (kW)	UPS SKU NUMBER	APPLICABLE MBC SKU NUMBER	TRANSFORMER SPECIFICATION	APPLICABLE BATTERY CABINET SKU NUMBERS	NOMINAL MAINS INPUT CURRENT (NO CHARGING) (A) 480V/600V AC	NOMINAL MAINS INPUT CURRENT (FULL CHARGING) (A) 480V/600V AC	OUTPUT NEUTRAL CURRENT (A)	UPS/SYSTEM OUTPUT NEUTRAL CURRENT (A)	BATTERY CURRENT (A DC)				RECOMMENDED UPSTREAM PROTECTION (MAKE: SCHNEIDER ELECTRIC)					
									32 BATTERIES		40 BATTERIES		@480V INPUT	@600V INPUT				
									FULL LOAD CURRENT @NOMINAL VOLTAGE (384V DC)	FULL LOAD CURRENT @EOD VOLTAGE (307V DC)	FULL LOAD CURRENT @NOMINAL VOLTAGE (480V DC)	FULL LOAD CURRENT @EOD VOLTAGE (384V DC)						
10	GVSUPS10KFS	GVSBPIT25	30KVA 600/480V AC IN, 208V AC OUT DY1	GVSCBT1/ GVSCBT11ST (32 BLOCKS)	13/10	15/12	48	28	27	34	22	27	HJL36060U31X	HJL36060U31X				
15	GVSUPS15KFS								19/15	23/16	72	42			41	51	33	41
20	GVSUPS20KFS								26/20	31/25	96	56			54	68	43	54
25	GVSUPS25KFS								32/26	38/31	120	69			68	85	54	68
30	GVSUPS30KFS	GVSBPIT50	60KVA 600/480V AC IN, 208V AC OUT D	GVSCBT2ST/ GVSCBT3ST/ GVSCBT4ST/ GVSCBT5ST (40 BLOCKS)	38/31	46/37	144	83	81	102	65	81	HJL36100U31X	HJL36100U31X				
40	GVSUPS40KFS								51/41	61/49	192	111			109	136	87	109
50	GVSUPS50KFS								N/A	64/51	77/61	240			139	N/A	N/A	109

BATTERY CABINET		
SKU NUMBER	CIRCUIT BREAKER (SCHNEIDER ELECTRIC)	
	RATING	MFG. P/N
GVSUBT1	150AT/ 250AF	JGL37150D81AAUO
GVSUBT1ST		
GVSUBT2		
GVSUBT2ST		
GVSUBT3		
GVSUBT3ST	250AT/ 250AF	JGL37250D82AAUO+ AL175JD
GVSUBT4		
GVSUBT4ST		
GVSUBT5	250AT/ 250AF	JGL37250D82AAUO+ AL175JD
GVSUBT5ST		

MAINTENANCE BYPASS CABINET (MBC) SWITCHGEAR DETAIL (MAKE: SCHNEIDER ELECTRIC)		
DEVICE ID	MBC SKU NUMBER	
	GVSBPIT25	GVSBPIT50
UIB	MCCB 150A 3P H FRAME (HJF36150CU31X)	MCCB 250A 3P J FRAME (JUF36250CU31X)
MBB / UOB		

GALAXY VS 20-100KW 480V AC IN/208V AC OUT UPS SYSTEM SITE PLANNING DATA (MBC WITH OUTPUT XFMR)

MAINS INPUT: 480V AC, 60HZ 3PH 3 WIRE+G OUTPUT: 208V AC, 60HZ, 4WIRE+G
 DC VOLTAGE: FOR 32 BLOCKS: 384V DC, 40 BLOCKS: 480V DC, 48 BLOCKS: +/-288V DC (WHEN USING 48 BLOCKS, SPLIT STRING IS MANDATORY)

UPS RATING (kW)	UPS SKU NUMBER	APPLICABLE MBC SKU NUMBER	TRANSFORMER SPECIFICATION	APPLICABLE BATTERY CABINET SKU NUMBERS	NOMINAL MAINS INPUT CURRENT (NO CHARGING) (A)	NOMINAL MAINS INPUT CURRENT (FULL CHARGING) (A)	NOMINAL BYPASS INPUT CURRENT		OUTPUT NEUTRAL CURRENT (A)	UPS/SYSTEM OUTPUT CURRENT (A)	BATTERY CURRENT (A DC)				RECOMMENDED UPSTREAM PROTECTION (MAKE: SCHNEIDER ELECTRIC)						
							PHASE CURRENT (A)	NEUTRAL CURRENT (A)			32 BATTERIES		40 BATTERIES								
											FULL LOAD CURRENT @NOMINAL VOLTAGE (384V DC)	FULL LOAD CURRENT @EOD VOLTAGE (307V DC)	FULL LOAD CURRENT @NOMINAL VOLTAGE (480V DC)	FULL LOAD CURRENT @EOD VOLTAGE (384V DC)							
20	GVSUPS20KGS	GVSBPOT50	60KVA 600/480V AC IN, 208V AC OUT DY1	GVSCBT1/ GVSCBT11ST (32 BLOCKS)	25	30	24	42	96	56	54	68	43	54	HJL36150U31X						
30	GVSUPS30KGS										37	45	36	62		144	83	81	102	65	81
40	GVSUPS40KGS										50	60	49	83		192	111	109	136	87	109
50	GVSUPS50KGS										62	74	61	104		240	139	N/A	N/A	109	136
60	GVSUPS60KGS	GVSBPOT100	100KVA 480V AC IN, 208V AC OUT DY1	N/A	74	89	73	125	288	167	N/A	N/A	130	163	JL36250U31X						
80	GVSUPS80KGS										99	119	97	166		384	222	N/A	N/A	174	217
100	GVSUPS100KGS										124	149	121	208		480	278	N/A	N/A	217	271

BATTERY CABINET		
SKU NUMBER	CIRCUIT BREAKER (SCHNEIDER ELECTRIC)	
	RATING	MFG. P/N
GVSUBT1	150AT/ 250AF	JGL37150D81AAUO
GVSUBT1ST		
GVSUBT2		
GVSUBT2ST		
GVSUBT3		
GVSUBT3ST	250AT/ 250AF	JGL37250D82AAUO+ AL175JD
GVSUBT4		
GVSUBT4ST		
GVSUBT5	250AT/ 250AF	JGL37250D82AAUO+ AL175JD
GVSUBT5ST		

MAINTENANCE BYPASS CABINET (MBC) SWITCHGEAR DETAIL (MAKE: SCHNEIDER ELECTRIC)		
DEVICE ID	MBC SKU NUMBER	
	GVSBPOT50	GVSBPOT100
UIB	MCCB 150A 3P H FRAME (HJF36150CU31X)	MCCB 250A 3P J FRAME (JUF36250CU31X)
MBB / UOB		MCCB 150A 3P H FRAME (HJF36150CU31X)

- NOTES:
 1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
 2. REFER TO PRODUCT INSTALLATION DOCUMENTATION FOR SITE PREPARATIONS.
 3. TWO CABINETS MUST BE PRESENT TO SUPPORT LOADS ABOVE 60kW, DUE TO CABINET CB RATING.

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TITLE: GALAXY VS
 Input: 480V/600V AC 3PH, 60Hz, SINGLE/DUAL FEED
 Output: 480V/208V AC 3PH 60Hz, 10-100kW
 BATTERY SOLUTION AND SITE PLANNING

DWG NO:	GVSUPS10K100LGF5-SD		REV:	5
DRAWN BY:	BALA	11-NOV-19	ANGLE	
ENGINEER:	H N	21-NOV-19	PROJECTION	
APPROVED BY:	S V	21-NOV-19		N. A.

PROJECT: DRAWINGS SHEET 10 OF 10



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

System Integration Agreement

CTRMA Toll Systems Integration



CTRMA WO 161 - Networking upgrades

October 16, 2020

Change Request Description

Request ID	CTRMA-WO-161
Request Date	10/16/2020
System Module	Networking upgrades
Change Type	Hardware/equipment
Description	
Networking upgrades for the CTRMA maintenance program.	
Affected Project	
<input checked="" type="checkbox"/> 183A <input checked="" type="checkbox"/> 290 <input checked="" type="checkbox"/> Mopac <input checked="" type="checkbox"/> SH71 <input type="checkbox"/> 45SW <input type="checkbox"/> 183S	
Affected Requirements	
Networking	
Affected System Processes:	
Networking	
Description of the Solution	
<p>Networking upgrades for the CTRMA maintenance program. Upgrades by location is outlined in the referenced doc. "CTRMA - WO 161 Networking inventory - upgrade by location - 072420.xlsx"</p> <p>As part of this upgrade, Kapsch will provide a test plan to validate the networking functionality, this will mirror the MoPac network failover test plan.</p> <p>Kapsch will also provide a project schedule. Upgrade to be completed by June 2021.</p> <p>Pricing valid for 30 days from submission.</p>	
Impact	<input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low
Total	\$444,476,42
Quantity	Quantity is in the referenced doc "CTRMA - WO 161 Networking inventory - upgrade by location - 072420.xlsx"



System Integration

CTRMA WO 161 - Networking upgrades



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

	Materials / Equipment	Quantity	Price	10% Markup	Extended Price
1	SHI	1	\$372,413.00	\$37,241.30	\$409,654.30
2	0	0	\$0.00	\$0.00	\$0.00
3	0	0	\$0.00	\$0.00	\$0.00
4	0	0	\$0.00	\$0.00	\$0.00
5	0	0	\$0.00	\$0.00	\$0.00
6	0	0	\$0.00	\$0.00	\$0.00
7	0	0	\$0.00	\$0.00	\$0.00

Total Hardware \$409,654.30

	Labor	No. of Hours	Hr. Contract Rate	Total
1	Software Engineer	0.00	\$157.59	\$0.00
2	System/Hardware Engineer	32.00	\$172.52	\$5,520.64
3	Technician	0.00	\$120.90	\$0.00
4	Business Analyst	0.00	\$157.59	\$0.00
5	Database Administrator	0.00	\$224.14	\$0.00
6	Documentation Clerk	10.00	\$161.66	\$1,616.60
7	Testing Engineer	0.00	\$171.17	\$0.00
8	Network Engineer/Administrator	160.00	\$156.22	\$24,995.20
9	Project Manager	12.00	\$224.14	\$2,689.68

Total Hours: 214.00 Total Labor: \$34,822.12

	Subcontractor	Quantity	Cost	10% Markup	Extended Price
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00
0		0	\$0.00	\$0.00	\$0.00

Total Subcontractor \$0.00

	ODCs / Travel	Quantity	Cost	10% Markup	Extended Price
1	Air Fare	0	\$0.00	\$0.00	\$0.00
2	Mileage	0	\$0.00	\$0.00	\$0.00
3	Lodging	0	\$0.00	\$0.00	\$0.00
4	Per Diem	0	\$0.00	\$0.00	\$0.00
5	Car Rental	0	\$0.00	\$0.00	\$0.00
6	PM - Other/Misc.	0	\$0.00	\$0.00	\$0.00
7	Warr/Maint - Other/Misc.	0	\$0.00	\$0.00	\$0.00

Total ODCs / Travel \$0.00

TOTAL PRICE \$444,476.42

Client Acceptance:	
Client name	
Date	
Signature	
Kapsch Acceptance	
Name	
Date	
Signature	

1 Reference Documents:

CTRMA - WO 161 Networking inventory - upgrade by location - 072420.xlsx

2 Document Version History

Version	Created	Created by	Comments
1.0	09/08/2020	Lisa Gauger	Initial Submission
1.1	10/07/2020	Lisa Gauger	Edited description of the solution to include a failover test plan. Also edited the hours and pricing.
1.2	10/16/2020	Lisa Gauger	Updated Request ID to include WO-161

MISC/SPARES (LINES 60 - 90)

Line	Product	Cost ea	Total	Markup	Total for location
	Cisco DNA Automation Quick Start Impleme				
60	Cisco Systems - Part#: ASF-EN1-G-AUTO-IMP	\$37,527.00	\$37,527.00	\$ 3,752.70	\$ 41,279.70
	DNA CENTER APPL GEN 2				
61	Cisco Systems - Part#: DN2-HW-APL	\$29,855.00	\$29,855.00	\$ 2,985.50	\$ 32,840.50
	SOLN SUP 24X7X4 DNA CENTER APPL GEN 2				
62	Cisco Systems - Part#: CON-SSSNP-DN2HWPL	\$7,889.00	\$23,667.00	\$ 2,366.70	\$ 26,033.70
	ISE VIRTUAL MACHINE SMALL				
63	Cisco Systems - Part#: R-ISE-VMS-K9=	\$2,188.00	\$2,188.00	\$ 218.80	\$ 2,406.80
	SOLN SUP SWSS ISE VIRTUAL MACHINE SMALL				
64	Cisco Systems - Part#: CON-ECMUS-RISEV9SM	\$1,267.00	\$3,801.00	\$ 380.10	\$ 4,181.10
	CATALYST 9200 24PT POE+ NTWK ADVANTAGE				
65	Cisco Systems - Part#: C9200-24P-A	\$1,006.00	\$2,012.00	\$ 201.20	\$ 2,213.20
	CATALYST 9200 4 X 1G NTWK MOD				
66	Cisco Systems - Part#: C9200-NM-4G	\$222.00	\$444.00	\$ 44.40	\$ 488.40
	CATALYST 9200 AND 9200L STACK MOD				
67	Cisco Systems - Part#: C9200-STACK-KIT	\$572.00	\$1,144.00	\$ 114.40	\$ 1,258.40
	600W AC Config 6 Power Supply - Secondar				
68	Cisco Systems - Part#: PWR-C6-600WAC/2	\$543.00	\$1,086.00	\$ 108.60	\$ 1,194.60
	C9200 DNA Premier, 24-Port, 3 Year Term				
69	Cisco Systems - Part#: C9200-DNA-P-24-3Y	\$934.00	\$1,868.00	\$ 186.80	\$ 2,054.80
	Axiom Cisco SFP-10G-LR= Compatible - SFP+ transceiver module (equivalent to: Cisco SFP-10G-LR=) - 10GBase-LR - TAA Compliant - for Cisco Nexus 93180YC-FX, 9336C-FX2, 9372PX-E Axiom Memory Solutions -				
70	Part#: SFP-10G-LR-AX	\$299.00	\$2,990.00	\$ 299.00	\$ 3,289.00

	Axiom Cisco SFP-10G-ER= Compatible - SFP+ transceiver module (equivalent to: Cisco SFP-10G-ER=) - 10 GigE - 10GBase-ER - TAA Compliant - for Cisco Nexus 93180YC-FX, 9336C-FX2, 9372PX-E					
71	Axiom Memory Solutions - Part#: SFP-10G-ER-AX CATALYST 9200 24PT POE+ NTWK ESSENTIALS Cisco Systems - Part#: C9200-	\$1,249.00	\$4,996.00	\$	499.60	\$ 5,495.60
72	24P-E CATALYST 9200 4 X 10G NTWK MOD Cisco Systems - Part#: C9200-	\$1,341.00	\$4,023.00	\$	402.30	\$ 4,425.30
73	NM-4X CATALYST 9200 AND 9200L STACK MOD Cisco Systems - Part#: C9200-	\$871.00	\$2,613.00	\$	261.30	\$ 2,874.30
74	STACK-KIT C9200 DNA ESSENTIALS 24PT 3YR TERM LIC Cisco Systems - Part#: C9200-	\$572.00	\$1,716.00	\$	171.60	\$ 1,887.60
75	DNA-E-24-3Y 600W AC Config 6 Power Supply - Secondar Cisco Systems - Part#: PWR-	\$266.00	\$798.00	\$	79.80	\$ 877.80
76	C6-600WAC/2 CATALYST 9300 24PT POE+ NTWK ADVANTAGE Cisco Systems - Part#: C9300-	\$543.00	\$1,629.00	\$	162.90	\$ 1,791.90
77	24P-A CATALYST 3750X AND 3850 STACK PWR CBL 30 Cisco Systems - Part#: CAB-	\$2,577.00	\$2,577.00	\$	257.70	\$ 2,834.70
78	SPWR-30CM C9300 DNA Premier, 24-Port, 3 Year Term Cisco Systems - Part#: C9300-	\$42.00	\$42.00	\$	4.20	\$ 46.20
79	DNA-P-24-3Y 50CM TYPE 1 STACKING CBL Cisco Systems - Part#: STACK-	\$1,245.00	\$1,245.00	\$	124.50	\$ 1,369.50
80	T1-50CM	\$44.00	\$44.00	\$	4.40	\$ 48.40
81	PLUGGABLE USB3 SSD STOR Cisco Systems - Part#: SSD-120G 715W AC 80+ PLATINUM CONFIG 1 SECONDARY Cisco Systems - Part#: PWR-	\$653.00	\$653.00	\$	65.30	\$ 718.30
82	C1-715WAC-P/2 CATALYST 9300 8 X 10GE NTWK MOD Cisco Systems - Part#: C9300-	\$545.00	\$545.00	\$	54.50	\$ 599.50
83	NM-8X	\$1,110.00	\$1,110.00	\$	111.00	\$ 1,221.00

84	CATALYST 9300 24PT POE+ NTWK ADVANTAGE Cisco Systems - Part#: C9300- 24P-A	\$2,577.00	\$2,577.00	\$	257.70	\$	2,834.70
85	CATALYST 3750X AND 3850 STACK PWR CBL 30 Cisco Systems - Part#: CAB- SPWR-30CM	\$42.00	\$42.00	\$	4.20	\$	46.20
86	C9300 DNA Premier, 24-Port, 3 Year Term Cisco Systems - Part#: C9300- DNA-P-24-3Y	\$1,245.00	\$1,245.00	\$	124.50	\$	1,369.50
87	50CM TYPE 1 STACKING CBL Cisco Systems - Part#: STACK- T1-50CM	\$44.00	\$44.00	\$	4.40	\$	48.40
88	PLUGGABLE USB3 SSD STOR Cisco Systems - Part#: SSD- 120G	\$653.00	\$653.00	\$	65.30	\$	718.30
89	CATALYST 9300 4 X 1GE NTWK MOD Cisco Systems - Part#: C9300- NM-4G	\$222.00	\$222.00	\$	22.20	\$	244.20
90	715W AC 80+ PLATINUM CONFIG 1 SECONDARY Cisco Systems - Part#: PWR- C1-715WAC-P/2	\$545.00	\$545.00	\$	54.50	\$	599.50
	Shipping		\$1,060.00	\$	106.00	\$	1,166.00

Grand Total	Total Markup	Total for all locations
\$ 372,413.00	\$ 37,241.30	\$ 409,654.30



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

System Integration Agreement

CTRMA Toll Systems Integration





CTRMA WO-162, MOPAC DP10 and DP11 Damage

October 16, 2020

Change Request Description

Request ID	CTRMA-WO-162
Request Date	10/16/2020
System Module	DP Cabinets 10&11
Change Type	Equipment

Description	
Replacement to Damaged Cabinets	
Affected Project	
<input type="checkbox"/> 183 <input type="checkbox"/> 290 <input checked="" type="checkbox"/> Mopac <input type="checkbox"/> SH71	
Affected Requirements	
ELCC/ Rates	
Affected System Processes:	
MOPAC Rates	
Description of the Solution	
<ul style="list-style-type: none"> Replace damaged cabinets and equipment from vandalism. Terminate Fiber in Cabinet. MOT for Traffic control will be invoiced as a pass-through (plus mark-up) and is not to exceed \$5,500. Kapsch to provide as-built to include the updated cabinet redesign. 	
Impact	<input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
Total	\$23,555.35
Quantity	Pricing good for 60 Days from requested date 2 cabinets and equipment

	System Integration	 CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY
	WO-CTRMA-162- DP10 and DP11 Damage_v1.4.docx	

Client Acceptance:	
Client name	
Date	
Signature	
Kapsch Acceptance	
Name	
Date	
Signature	

1 Reference Documents

n/a

2 Document Version History

Version	Created	Created by	Comments
1.0	09/29/2020	Timothy Duke	Initial Submission based on e-mail.
1.1	10/06/2020	Timothy Duke	Update to include as-built of cabinet redesign
1.2	10/09/2020	Lisa Gauger	Updated logo, formatting, and clarified the MOT cost description.
1.3	10/13/2020	Lisa Gauger	Update logo in header, Surge Protector cost, and overall total to match.
1.4	10/16/2020	Lisa Gauger	Updated doc naming details from CO to WO

CTRMA BASELINE BOM BUILD

DATE:	August 2, 2020		
Revision #	F-1		
REVISED BY:	M. S. deSouza		

BOM LEGEND

Material Cost	Material Cost of System Components
Subcontractor	Engineering Estimate (Based on either Project Specific Fee Proposals or Past Fee Proposals for related work)
Estimate	Proofed Quantities to Design - Request Quotes
Procurement	TEM PROCURED (Note whether PH 1 or PH 2 or Both PH 1 & PH 2 procurement)

					SYS	DP-10	DP-11	Total	Spare	GT	UNIT COST	TOTAL COST
1	ROADSIDE CABINET(S)											
a	Mini-Fort Cabinet (9U) - Aluminum Powder Coated - Beige	American Products	AM-202422-9RU-F	EA		1	1	2		2	722.27	1,444.54
	20" Height x 24" Width x 22" Depth - 19" Rack Rails w/Fan Provision	American Products		Incl							0.00	0.00
	Quad 115V 20A outlets (No Load Center)	American Products		incl							0.00	0.00
	DO NOT INCLUDE a - 5 position isolated copper ground bar	American Products		Exclude							0.00	0.00
	Configured to Accept Kapsch Installed 200cfm Fan	American Products		incl							0.00	0.00
	Includes Door Latch Tool	American Products		incl							0.00	0.00
b	Mini-Fort Cabinet (16U) - Aluminum Powder Coated Beige	American Products	AM-322822-16RU-F	EA				0		0	875.00	0.00
	32" Height x 28" Width x 22" Depth - 19" Rack Rails w/Fan Provision	American Products		incl							0.00	0.00
	Quad 115V 20A outlets (No Load Center)	American Products		incl							0.00	0.00
	DO NOT INCLUDE a - 5 position isolated copper ground bar	American Products		incl							0.00	0.00
	Configured to Accept Kapsch Installed 200cfm Fan	American Products		incl							0.00	0.00
	Includes Door Latch Tool	American Products		incl							0.00	0.00
c	Pole Mount Bracket for Mini-Fort (Field Drill 2 - 1 1/2" Hole into 4 1/2" MVD Pole)	American Products	AM-2418-PM	ea		1	1	2		2	57.21	114.42
d	Wall Mount Bracket for Mini-Fort (Truss Mount to Unistrut)	American Products	AM-2418-WM	ea		1	1	2		2	26.30	52.60
e	Fiberglass Cabinet	Hoffman		EA				0		0	0.00	0.00
	32" Height x 28" Width x 22" Depth - 19" Rack Rails w/Fan Provision	Hoffman		incl							0.00	0.00
	5 position isolated copper ground bar - for each bay	Hoffman		incl							0.00	0.00
f	Mini-Fort Cabinet (24U) - Aluminum Powder Coated Beige	American Products	AM-462418-24RU	EA				0		0	845.00	0.00
	46" Height x 24" Width x 18" Depth - 19" Rack Rails w/Fan Provision	American Products		incl							0.00	0.00
	Quad 115V 20A outlets (No Load Center)	American Products		incl							0.00	0.00
	5 position isolated copper ground bar - for each bay	American Products		incl							0.00	0.00
	Configured to Accept Kapsch Installed 200cfm Fan	American Products		incl							0.00	0.00
	Includes Door Latch Tool	American Products		incl							0.00	0.00
	Additional 19" Rail	American Products	AM-322418-RR	EA				0		0	150.00	0.00
	Mounting Base (6" Plinth)	American Products	AM-62418-GM	EA				0		0	101.00	0.00
g	L-Com Cabinet	L-com	NB121005-000DR	EA				0		0	176.00	0.00
h	Enclosure Pole Mounting Kit- Pole Diameters 4" to 7"	L-com	HGX-PMT28	EA				0		0	63.00	0.00
i	Cable Grip Bushing (CGB), 0.375 to 0.5" dia, Plated Steel & Neoprene (Coax)	Cooper-Crouse-Hinds	CGB194	EA				0		0	10.06	0.00
<p>Note: The 24RU Minifort will serve as the Fiber interconnect cabinet for 1835/290E - Options being reviewed with CTRMA for location - may get approval to use Existing TxDOT Hub Building - If approved then NO Cabinet will be</p>												
2A	EQUIPMENT PANEL ACCESSORIES (CABINET & PANEL COMPONENTS)											
a	Equipment Panels (7U)	Brooks Industrial Coatings	7U - Fabricate/Powder Coat	ea		1	1	2		2	70.00	140.00
b	Equipment Panels (11U)	AMTEX	11U - Fabricate	ea				0		0	158.17	0.00
c	Din rail - 2m	Industrial Controls	351525	ea	1			1		1	100.00	100.00
d	120VAC SPST DIN Rail Breaker	Square D	QOU115	ea		1		1		1	30.35	30.35
e	Power Distribution Block (600V-115A)	Square D	9080LBA361101	ea				0		0	19.10	0.00
f	Load Center Equipment Ground Bar	Square D	PK5GTA	ea				0		0	7.51	0.00
g	CITEL 120VAC Surge Suppressors	CITEL	DS2405-120/G	ea				0	1	1	56.00	56.00
h	ORION Industrial Equipment Fans	Orion	OD1238-24HB-XC	ea	1	1		2		2	18.51	37.02
i	Thermostat (Normally Open) closes on temp rise	Stego	KTS 011 (01141.0-00)	ea	1	1		2		2	15.51	31.02
j	DIN Rail Duplex Outlet (120V/15A) - NEMA 5-15R	Weidmuller	6720005430	ea				0	1	1	27.70	27.70
<p>Note: Equipment Panels for both cabinets will be provided by 1835 project, we inherited 22 11U spares. Two 3 1/2U Panels will be provided per cabinet</p>												
2B	EQUIPMENT PANEL ACCESSORIES (TERMINAL BLOCKS/WIRE/MISCELLANEOUS)											
a	Connectors, Modular Plugs, RJ45 / 8P8C	CommScope	6-554720-3	ea				0		0	0.00	0.00
b	Feedthrough Terminal Block, ER4 (600V/30A), 26-10AWG, Black (100/box)	Industrial Controls	ER4Black	box				0		0	1.00	0.00
c	Feedthrough Terminal Block, ER4 (600V/30A), 26-10AWG, White	Industrial Controls	ER4White	box				0		0	1.00	0.00
d	Feedthrough Terminal Block, ER4 (600V/30A), 26-10AWG, Green	Industrial Controls	ER4Green	box				0		0	1.00	0.00
e	Feedthrough Terminal Block, ER4 (600V/30A), 26-10AWG, Yellow	Industrial Controls	ER4Yellow	box				0		0	11.00	0.00
f	Feedthrough Terminal Block, ER4 (600V/30A), 26-10AWG, Grey	Industrial Controls	ER4Grey	box				0		0	1.00	0.00
g	Feedthrough Terminal Block, ER4 (600V/30A), 26-10AWG, Orange	Industrial Controls	ER4Orange	box				0		0	1.00	0.00
h	Feedthrough Terminal Block, ER4 (600V/30A), 26-10AWG, Blue	Industrial Controls	ER4Blue	box				0		0	1.00	0.00
i	Feedthrough Terminal Block, ER4 (600V/30A), 26-10AWG, Brown	Industrial Controls	ER4Brown	box				0		0	1.00	0.00
j	Feedthrough Terminal Block, ER4 (600V/30A), 26-10AWG, Beige	Industrial Controls	ER4Beige	box				0		0	1.00	0.00
k	Partition Terminal Block, for ER2.5, ER4, ER6, ER10	Industrial Controls	SP2.5-10Beige	box				0		0	1.00	0.00
l	Cross Connector Terminal Block, 10 point Jumper Bar fits ER4	Industrial Controls	CCA/10	box				0		0	1.00	0.00
m	Wire, Hookup, 18 AWG, Strand, 1000V/300V, 80C, Black	Alpha / Belden	1555/Black / 9981-010100	If				0		0	1.00	0.00
n	Wire, Hookup, 18 AWG, Strand, 1000V/300V, 80C, White	Alpha / Belden	1555/White / 9981-009100	If				0		0	1.00	0.00
o	Wire, Hookup, 18 AWG, Strand, 1000V/300V, 80C, Green	Alpha / Belden	1555/Green / 9981-005100	If				0		0	1.00	0.00
p	Wire, Hookup, 18 AWG, Strand, 1000V/300V, 80C, Yellow	Alpha / Belden	1555/Yellow / 9981-004100	If				0		0	1.00	0.00
q	Wire, Hookup, 18 AWG, Strand, 1000V/300V, 80C, Orange	Alpha / Belden	1555/Orange / 9981-003100	If				0		0	1.00	0.00

	VENDOR/QUOTE#	UNIT COST	EXTENDED COST
Corridor Cabinets	AMPROD E15882	\$ 821.99	\$ 1,643.98
	AMPROD E15882	\$ 26.82	\$ 53.64
1,611.56	AMPROD E15882	\$ 58.36	\$ 116.72
1,611.56			
EP Build	Brooks Industrial Coatings Email Quote	\$ 78.19	\$ 156.38
	BG Tech 216259	\$ 10.00	\$ 10.00
	Graybar 235980703	\$ 30.49	\$ 30.49
	BG Tech 216259	\$ 100.00	\$ 100.00
	BG Tech 216259	\$ 22.00	\$ 44.00
	BG Tech 216259	\$ 21.00	\$ 42.00
422.09	BG Tech 216259	\$ 37.00	\$ 37.00
EP Build			

r	Wire, Hookup, 18 AWG, Strand, 1000V/300V, 80C, Brown	Alpha / Belden	1555/Brown / 9981-001100	If				0	0	1.00	0.00	Allied
s	Wire, Hookup, 18 AWG, Strand, 1000V/300V, 80C, Blue	Alpha / Belden	1555/Blue / 9981-006100	If				0	0	1.00	0.00	Allied
t	Wire, Hookup, 16 AWG, Strand, 1000V/300V, 80C, Green	Alpha / Belden	1557/Green / 9980-005100	If				0	0	1.00	0.00	Allied
u	Wire, Hookup, 16 AWG, Strand, 1000V/300V, 80C, White	Alpha / Belden	1557/White / 9980-009100	If				0	0	1.00	0.00	Allied
v	Wire, Hookup, 16 AWG, Strand, 1000V/300V, 80C, Black	Alpha / Belden	1557/Black / 9980-010100	If				0	0	1.00	0.00	Allied
w	Polyurethane foam sealant, 12 oz cans	DAP		ea				0	0	1.00	0.00	BG Tech
x	12 in. Heavy-Duty Cable Ties - BLACK	Gardner Bender		ea				0	0	1.00	0.00	BG Tech
y	17 in. Heavy-Duty Cable Ties - BLACK	Gardner Bender		ea				0	0	1.00	0.00	BG Tech
z	73B Orange wire nuts	Ideal	30-1073J	ea				0	0	1.00	0.00	BG Tech
aa	Silicone II 9.8-ounce window and door caulk clear	GE		ea				0	0	1.00	0.00	BG Tech
ab	Duct Seal Compound Plugs (10-Pack)	Gardner Bender	DS-110	ea				0	0	3.75	0.00	BG Tech
ac	Safe-Flo 8 oz. Lead-Free Silver Solder	Oatey	290242	ea				0	0	25.36	0.00	BG Tech
ad	8 oz. No. 5 Lead-Free Paste Flux	Oatey	300142	ea				0	0	7.00	0.00	BG Tech
ae	Green 12 Solid THHN Wire	Southwire	11591580	If				0	0	0.21	0.00	BG Tech
af	12 - 10 AWG, #8 - 10 Stud Size Yellow Spade Terminals	Gardner Bender	15-116	ea				0	0	2.50	0.00	BG Tech
ag	12 - 10 AWG Yellow Butt Splice	Gardner Bender	15-126	ea				0	0	3.30	0.00	BG Tech

Note: The existing terminal blocks at DP 10 should not be damaged, however Install Team has enough spares on-hand to fill the minimum needed for DP-10 to match color standard

					SYS	DP-10	DP-11	Total	Spare	GT	UNIT COST	TOTAL COST	
3 CORRIDOR CCTV													
a	COHU HD 4260 RISE, H.264.1080P, 30X DAY/NIGHT, DEFOG, AUTO-FOCUS	COHU	4261-00	ea				0	0	0	3,352.00	0.00	COHU
b	RJ45 IP67 COUPLER	COHU	7610203-001	ea				0	0	0	30.00	0.00	COHU
c	POE++ INJECTOR, 70 W, UNIVERSAL 120VAC INPUT, TS2 RATED	COHU	7412007-003	ea				0	0	0	105.00	0.00	COHU
d	Pelco Pedestal Mount (10")	Pelco	PM2010	ea				0	0	0	78.93	0.00	GreyBar
e	Shielded Cat 6 (SSTP), Bural Rated	Superior Essex	04-001-64	If				0	0	0	1.20	0.00	GreyBar
f	VI Software License	VI	License Fee	ea				0	0	0	155.00	0.00	SHI

Notes:

					SYS	DP-10	DP-11	Total	Spare	GT	UNIT COST	TOTAL COST	
4 CORRIDOR DMS													
a	Dynamic Sign Assembly (Front Access - Ready for Install)	Daktronics	VM-2420-27-110-66-A	EA				0	0	0	53,850.00	0.00	Daktronics
b	VFC Controller	"		incl				0	0	0			Daktronics
c	Two Beacons w/Brackets for attachment	"		incl				0	0	0			Daktronics
e	Two Spare LED Modules	"		incl				0	0	0			Daktronics

					SYS	DP-10	DP-11	Total	Spare	GT	UNIT COST	TOTAL COST	
5 CORRIDOR MVD													
a	Smartsensor HD	Wavetronix	HS-126	EA				0	0	0	5,480.00	0.00	TwinCrest
b	Sensor Pigtaills (40')	"		EA				0	0	0	265.00	0.00	TwinCrest
c	Sensor Home-Run Cable	"		LF				0	0	0	1.00	0.00	TwinCrest
d	MVD Pole Mount Brackets	"	WX-SS-611	EA				0	0	0	190.00	0.00	TwinCrest
e	Truss/Column Assembly (Bracket Kit)	"	SPECIAL	EA				0	0	0	75.00	0.00	TwinCrest
f	4" Pipe with Tee	"		incl									TwinCrest
g	RVSD Mount (Special CH)	"		incl									TwinCrest
h	C-Clamp (SS) (2 each)	Gibson	1150	EA				0	0	0	32.00	0.00	BG Tech
i	Weather Resistant Lightning Surge Protector for RS-485 & 24VDC Power Lines	LCOM	AL-D15P24DW	EA				0	2	2	58.00	116.00	SHI
j	Click 200 Module (Equivalent)	Cooper Crouse-Hinds M	ZB91654	EA				0	0	0	136.27	0.00	AWC
k	Click 200 Module (Equivalent) Long Haul Surge suppressor w/bracket	LCOM	ALS-D25P24DW/HGX-PMT24	EA				0	0	0	128.00	0.00	SHI
l	DIN mount adaptor	NTRON	NPMODRMO	EA				0	0	0	12.00	0.00	SHI
m	Click 301 Terminal Server (Equivalent)	MOXA	NPORT 5130A-T	EA				0	0	0	194.00	0.00	SHI
n	Industrial Ethernet to Serial Server/Converter	Serial Comm	ETH-SER-EE9	EA		1	1	2	1	3	89.95	269.85	Serial Comm
o	DB9 Breakout Board With Spring Connection Terminals	WINFORD	BRK9P-R-N	EA		2	2	4	4	4	80.00	320.00	Graybar
p	30 cm Power Cable	"	CBL-P121NOPEN-BK-30	EA				0	0	0	9.00	0.00	SHI
q	35mm DIN Mounting Kit (Use to mount MOXA Media Converter	"	DK35A	EA				0	0	0	5.00	0.00	SHI
r	Mini DB9F-to-TB	"	501155	EA				0	0	0	112.00	0.00	SHI

Notes: The Moxa at DP 11 will become the Spare Terminal Server.

					SYS	DP-10	DP-11	Total	Spare	GT	UNIT COST	TOTAL COST	
6 CORRIDOR FIELD NETWORK													
a	4 port Managed Ethernet Switch/Layer II	CISCO	3000-4tc	EA				0	0	0	845.48	0.00	CDW
a	Cisco Solution Support - extended service agreement	CISCO	CON-SSSNT-IE34TC	EA				0	0	0	94.55	0.00	CDW
b	1000BASE (LC/1310nm/10km)	Axiom	GLC-LH-SM-AX	EA				0	0	0	42.00	0.00	SHI
c	1000BASE (LC/1310nm/40km)	Axiom	GLC-LX-SMD-AX	EA				0	0	0	153.00	0.00	SHI
d	100Base FX Switch (SM - 15 km - ST Connectors) - 4 Copper Ports	NTRON/Red Lion	106FXE2-ST-15-MDR	EA		1		1		1	646.00	646.00	SHI
e	Media Converter - SM - 15km - ST Connectors (100Base)	NTRON	102MCE-ST-15-MDR	EA				0	0	0	367.00	0.00	SHI
f	SM Duplex ST to ST - 3m	Quicktron	810-227-003	ea		2	2	4	2	6	9.00	54.00	SHI
g	SM Duplex LC to ST - 3m	Quicktron	810-L27-009	ea				0	0	0	5.00	0.00	SHI
h	SM Duplex LC to LC - 3m	Quicktron		ea				0	0	0	0.00	0.00	SHI
i	CAT5e Patch Cable (1m) (Not Plenum)	Any	Any	ea		1	1	2	2	4	0.00	0.00	SHI
j	AC-DC PS, 120W, 24DC, 5A - DIN Rail Mnt.	PULS	CP5.241	ea		1		1		1	0.00	0.00	BG Tech
k	24VDC Power Supply (4.2A) (100W)	Lamda	DSP100-24	ea				0	0	0			SHI

0.00

CCTV
0.00

Corridor DMS
0.00

Corridor MVD
705.85

Corridor Fiber Network
700.00

Graybar 235980703	\$	51.78	\$	103.56
Serial Comm QUOTE	\$	86.95	\$	269.85
Graybar 235980703	\$	24.50	\$	98.00



QUOTATION

E000015882

American Products LLC
 597 Evergreen Road
 Strafford MO 65757
 United States
 417-736-2135

Email : mspringer@amprod.us

Customer / Prospect: 1587

JOJO SEVILLA
 KAPSCH TRAFFICOM USA, INC. (1587)
 ATTN: ACCOUNTS PAYABLE
 2855 PREMIERE PARKWAY
 SUITE F
 DULUTH GA 30097

Phone:

Estimate	Terms	Quote Date	Expiration Date	Salesperson	Estimator	Customer	Currency	
E000015882	NET 30	8/12/2020	10/11/2020	Springer, Michael	KC	USD	US Dollar	
Line	Quantity	UM	Item		Unit Price		Extended Price	
1	2.000	EA	AM-202822-9RU-F		821.99000		1,643.98	
			AP MINIFORT® 20"X28"X22" 9RU W/VENTS					
			AP MINIFORT® enclosure 20" tall x 28" wide x 22" deep 9 RU of equipment rack space. Enclosure finish is compliant to GR-487 paint specifications. Standard powder coating is light texture beige. Enclosure has screened and filtered vents with splash guards and is set up to accept fan option. Enclosure includes factory installed items below: - Designed to NEMA 3R standards - .090 (high strength to weight ratio) aluminum - Access door has S/S wind guard stops and ground cables - UL 94 compliant bulb gasket - Adjustable 19" rack rails (1 set) - 20 amp quad convenience receptacle - 5-position aluminum grounding terminal - (1) S/S ¼ turn latch that is pad lockable - Base has (4) 1.0" dia knockouts for cable entrance - Enclosure utilizes all S/S hardware - Includes door latch tool					
2	2.000	EA	AM-2418-WM		26.82000		53.64	
			WALL MOUNT BRACKET FOR MINI-FORT					
3	2.000	EA	AM-2418-PM		58.36000		116.72	
			POLE MOUNT BRACKET FOR MINI-FORT					



QUOTATION

E000015882

American Products LLC
 597 Evergreen Road
 Strafford MO 65757
 United States
 417-736-2135

Email : mspringer@amprod.us

Customer / Prospect: 1587

JOJO SEVILLA
 KAPSCH TRAFFICOM USA, INC. (1587)
 ATTN: ACCOUNTS PAYABLE
 2855 PREMIERE PARKWAY
 SUITE F
 DULUTH GA 30097

Phone:

Estimate	Terms	Quote Date	Expiration Date	Salesperson	Estimator	Customer Currency
E000015882	NET 30	8/12/2020	10/11/2020	Springer, Michael	KC	USD US Dollar

LEAD TIME TBD AT RECEIPT OF ORDER
 FREIGHT FOB STRAFFORD MO.
 CUSTOMER RESPONSIBLE FOR FREIGHT CHARGES

BY ACCEPTING THIS OFFER AND PURCHASING PRODUCTS FROM AMERICAN PRODUCTS L.L.C., THE BUYER AGREES TO THE TERMS AND CONDITIONS FOUND HERE --- (<https://www.amprod.us/sales-terms>) ---

Sale Amount: 1,814.34
Surcharge: N/A
Sales Tax: 0.00

Misc Charges: 0.00
Total Amount: 1,814.34

Thank you for the opportunity to submit a quotation. Our quotation is based upon assumed full disclosure of required specifications and is subject to change if your specifications change. *Lead times listed are based on current business levels. Actual ship dates will be acknowledged at receipt of order. Custom Products are not returnable or refundable. – Thank you



2301 Denton Drive
 Suite A
 Austin, TX 78758
 Phone - 512-336-2299
 Fax - 512-336-3811
 Email - alex@bg-technologies.com

QUOTATION

Account # 001497
 Quote # 216259
 Date 08/07/20
 Page 1

Kapsch TrafficCom USA, Inc
 2855 Premiere Parkway
 Suite F
 Duluth, GA 30097

Terms Net 30 Days
 Ship Via UPS Ground
 FOB Shipping Point
 Reference #
 Contact Jojo Sevilla

Salesperson Alex Giles

Ln #	Item # / Customer Item # Description	Mfg / DC	Ship Date Request Date	Quantity	Unit Price	Ext Price
1	35152S 4860LI03679 35MMX15MMX2M DINRAIL BG Stock	ICD		1	10.00000	10.00
3	DS240S-120/G 4860LI03226037 AC 1-phase Type 2 Surge Protector, 120VAC 1 week ARO	CITEL		1	100.00000	100.00
4	OD1238-24HB-XC 4860LI03424018 ORION 120 X 120 X 38MM HIGH FLOW FAN 1 week ARO	ORION		2	22.00000	44.00
5	01141.0-00 4860LI02211006 01141.0-00 - Thermostat, KTS 011 Series, 0°C to +60°C 1 week ARO	STEGO		2	21.00000	42.00
6	6720005430 4860LI03279015 PWR ENT RCPT NEMA5-15 DIN SCREW 1 week ARO	WEIDMU		1	37.00000	37.00
7	106FXE2-ST-15-MDR RED 106FXE2-ST-15-MDR 106FXE2-ST-15-MDR;MDR OPT 3 weeks ARO	REDLIO		1	477.00000	477.00
8	CP5.241 4860LI03295070 120W, 1PH, 24-28VDC, 5.0-4.3A stock	PULS		1	115.53000	115.53

QUOTE VALID FOR 30 DAY(S)

 Authorized Signature



2301 Denton Drive
Suite A
Austin, TX 78758
Phone - 512-336-2299
Fax - 512-336-3811
Email - alex@bg-technologies.com

QUOTATION

Account # 001497
Quote # 216259
Date 08/07/20
Page 2

Kapsch TrafficCom USA, Inc
2855 Premiere Parkway
Suite F
Duluth, GA 30097

Terms Net 30 Days
Ship Via UPS Ground
FOB Shipping Point
Reference #
Contact Jojo Sevilla

Salesperson Alex Giles

Ln #	Item # / Customer Item # Description	Mfg / DC	Ship Date Request Date	Quantity	Unit Price	Ext Price
					Subtotal:	825.53
					Order Total:	825.53

QUOTE VALID FOR 30 DAY(S)

Authorized Signature

From: [Hernandez Marc](#)
To: [MBX KTC Tolling Solution Center Commodity Team](#)
Cc: [DeSouza Marcelo](#); [Alicea Marion](#); [Webb Michael](#)
Subject: FW: RFQ - 183S Equipment Panels
Date: Monday, August 10, 2020 1:29:25 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)

Team

In the email below are the quotes and lead times provided by vendor here in Austin for powder coating. They provided quotes for new 7U panels as well but if there is another vendor that can beat them then we go with that vendor.

Brooks Industrial Coatings already have the 11U panels on hand (delivered by the Webb) and are just waiting for a PO to powder coat these panels.

Here are the quotes I requested last week.

Quote 1 PROJECT: 183S PHII-B (BOM)

Qty. 2 7U Equipment Panel - (New Panel) Fabricate and Powder Coat Gray ANSI 61- see attached drawing for dimensions

Quote 2 PROJECT: 290E PHIII – no bom yet

Qty.2 11U Equipment Panel (Existing Panel) Powder coat Gray ANSI 61 – see attached drawing for dimensions

Quote 3 PROJECT: MOPAC – (BOM)

Qty.2 7U Equipment Panel (New Panel) Fabricate and Powder Coat Gray ANSI 61– see attached drawing for dimensions

Quote 4 PROJECT: 183A-Retrofit

Qty.4 11U Equipment Panel (Existing Panel) Powder Coat Gray ANSI 61 – see attached drawing for dimensions

I CC'd Marion so that he is aware of what's happening with the existing panels in inventory.

Marc Hernandez, E.I.T.

Systems Engineer I | SC Tolling System Engineering

Phone +1 737 204 7020 | Mobile +1 512 468 7470

marc.hernandez@kapsch.net

Kapsch TrafficCom North America | 7701 Metropolis Dr, Building 14 | Suite 100 | Austin, TX 78744 | USA

www.kapsch.net



From: James Brooks <jbbrooks@bic-texas.com>
Sent: Thursday, August 6, 2020 3:13 PM
To: Hernandez Marc <Marc.Hernandez@kapsch.net>
Subject: RE: RFQ - 183S Equipment Panels

Hello Marc, fabrication lead time is 2 weeks, and the powder coating is 2-4 production days.

Thanks

James B. Brooks
Brooks Industrial Coatings

www.bic-texas.com

512-990-5333 ex 3

***Drop-Off and Pick-up Orders:
Mon – Thurs 7:30am – 4:30pm
Friday 7:30am – 12:00 Noon
While the main office is open
on Friday, we are not in production.***

From: Hernandez Marc <Marc.Hernandez@kapsch.net>
Sent: Thursday, August 6, 2020 9:56 AM
To: James Brooks <jbbrooks@bic-texas.com>
Subject: RE: RFQ - 183S Equipment Panels

James what is the lead times?

Marc Hernandez, E.I.T.
Systems Engineer I | SC Tolling System Engineering
Phone +1 737 204 7020 | **Mobile** +1 512 468 7470
marc.hernandez@kapsch.net

Kapsch TrafficCom North America | 7701 Metropolis Dr, Building 14 | Suite 100 | Austin, TX 78744 | USA
www.kapsch.net



From: James Brooks <jbbrooks@bic-texas.com>
Sent: Wednesday, August 5, 2020 4:33 PM
To: Hernandez Marc <Marc.Hernandez@kapsch.net>
Subject: RE: RFQ - 183S Equipment Panels

Hello Marc, I have pricing below. If you have any questions please give me a call.

Qty. 2 7U Equipment Panel - (New Panel) Fabricate and Powder Coat Gray ANSI 61- see attached drawing for dimensions Fabrication: \$60.22, Powder Coat: \$17.97 each

Qty.2 11U Equipment Panel (Existing Panel) Powder coat Gray ANSI 61 – see attached drawing for dimensions: \$20.16 each

Qty.2 7U Equipment Panel (New Panel) Fabricate and Powder Coat Gray ANSI 61– see attached drawing for dimensions: Fabrication: \$60.22 each, Paint: \$17.97 each.

Qty.4 11U Equipment Panel (Existing Panel) Powder Coat Gray ANSI 61 – see attached drawing for dimensions : \$20.16 each

Minimum lot charge for Fabrication \$150. Minimum lot charge for Powder Coat is \$150.

Thanks

James B. Brooks
Brooks Industrial Coatings

www.bic-texas.com

512-990-5333 ex 3

***Drop-Off and Pick-up Orders:
Mon – Thurs 7:30am – 4:30pm
Friday 7:30am – 12:00 Noon
While the main office is open
on Friday, we are not in production.***

From: Hernandez Marc <Marc.Hernandez@kapsch.net>
Sent: Tuesday, August 4, 2020 4:34 PM
To: jbbrooks@bic-texas.com

Subject: RE: RFQ - 183S Equipment Panels

James,

I need three separate quotes:

Quote 1 PROJECT: 183S PHII-B

Qty. 2 7U Equipment Panel - (New Panel) Fabricate and Powder Coat Gray ANSI 61- see attached drawing for dimensions

Quote 2 PROJECT: 290E PHIII

Qty.2 11U Equipment Panel (Existing Panel) Powder coat Gray ANSI 61 – see attached drawing for dimensions

Quote 3 PROJECT: MOPAC

Qty.2 7U Equipment Panel (New Panel) Fabricate and Powder Coat Gray ANSI 61– see attached drawing for dimensions

Quote 4 PROJECT: 183A-Retrofit

Qty.4 11U Equipment Panel (Existing Panel) Powder Coat Gray ANSI 61 – see attached drawing for dimensions

Marc Hernandez, E.I.T.

Systems Engineer I | SC Tolling System Engineering

Phone +1 737 204 7020 | **Mobile** +1 512 468 7470

marc.hernandez@kapsch.net

Kapsch TrafficCom North America | 7701 Metropolis Dr, Building 14 | Suite 100 | Austin, TX 78744 | USA

www.kapsch.net



From: jbbrooks@bic-texas.com <jbbrooks@bic-texas.com>

Sent: Wednesday, July 22, 2020 11:15 AM

To: Hernandez Marc <Marc.Hernandez@kapsch.net>

Subject: RE: RFQ - 183S Equipment Panels

Hello Marc, it was great talking to you about this project. Down below I have the pricing.

\$20.16 each

Minimum lot charge \$150

The lead time is 4-5 production days

Thanks

James B. Brooks

Brooks Industrial Coatings

www.bic-texas.com

512-990-5333 ex 3

Drop-Off and Pick-up Orders:

Mon – Thurs 7:30am – 4:30pm

Friday 7:30am – 12:00 Noon

While the main office is open

on Friday, we are *not* in production.

From: Hernandez Marc <Marc.Hernandez@kapsch.net>

Sent: Wednesday, July 22, 2020 10:53 AM

To: jbrooks@bic-texas.com

Subject: RFQ - 1835 Equipment Panels

Morning,

I have qty. 6 equipment panels that need power coating (Gray - ANSI 61). I have a drawing I can provide as well. Basically these equipment Panels are made out of 16GA sheet metal (19"X 19.20"X 10"). I would like to know a price and lead time. I can have my guys drop off/ pick up these panels.

Marc Hernandez, E.I.T.

Systems Engineer | SC Tolling System Engineering

Phone +1 737 204 7020 | Mobile +1 512 468 7470

marc.hernandez@kapsch.net

Kapsch TrafficCom North America | 7701 Metropolis Dr, Building 14 | Suite 100 | Austin, TX 78744 | USA
www.kapsch.net



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1922 WAUKESHA DR
 PFLUGERVILLE TX 78660-2033
 Phone: 512-421-2300
 Fax: 512-323-5722

To: KAPSCH TRAFFICOM TRANSPORTATION NA INC
 211 EAST 7TH STREET, STE 800
 AUSTIN TX 78701-3366
 Attn: Alex Godfrey
 Phone: 000-000-0000
 Fax:
 Email: justin.halliburton@graybar.com

Date: 08/12/2020
Proj Name:
GB Quote #: 0235980703
 Release Nbr:
 Purchase Order Nbr: QUICKTRON
 Additional Ref#
 Valid From: 08/11/2020
 Valid To: 09/10/2020
 Contact: JUSTIN HALLIBURTON
 Email: justin.halliburton@graybar.com

Proposal

We Appreciate Your Request and Take Pleasure in Responding As Follows

Item	Item/Type	Quantity	Supplier	Catalog Nbr	Description	Price	Unit	Ext.Price
100	6 EA	ORTRONICS	OR-810-227-003	1M ST-ST DPLX 9/125 FIBER CBL	\$15.00	1	\$90.00	
GB Part #: 22085522 UPC #: 88481576027 ***Item Note:*** ** 800 in stock at the factory - Plus Freight								
200	1 EA	SQUARE D CO.	QOU115	MINIATURE CIRCUIT BREAKER 120/240V 15A	\$30.49	1	\$30.49	
GB Part #: 88243324 UPC #: 78590141850 ***Item Note:*** ** There could be a 2 week leadtime on this item. The factory was shut down durning COVID. Seeing delays Nation wide. Plus Freight								
300	4 EA	ALLEN TEL	AT1503EV-BU	CAT 5E VIP 3FT BLU	\$1.86	1	\$7.44	
GB Part #: 99506148 UPC #: 79915861671								
400	4 EA	WINFORD ENGINEERING	NOF WINFORD ENGINEERING		\$24.50	1	\$98.00	
Item Note: BRKG9F-R-N ** Stock at factory in Michigan, Plus Frieght								
500	2 EA	L-COM	NOF L-COM INC		\$51.78	1	\$103.56	
Item Note: AL-D15P24DW Weather Resistant Lightning Surge Protector for RS-485 & 24VDC Power Lines LCOM								

This equipment and associated installation charges may be financed for a low monthly payment through Graybar Financial Services (subject to credit approval). For more information call 1-800-241-7408 to speak with a leasing specialist.

To learn more about Graybar, visit our website at www.graybar.com

24-Hour Emergency Phone#: 1-800-GRAYBAR

Subject to the standard terms and conditions set forth in this document. Unless otherwise noted, freight terms are F.O.B. shipping point prepaid and bill. Unless noted the estimated ship date will be determined at the time of order placement.

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Attn: Alex Godfrey

Date: 08/12/2020
Proj Name:
GB Quote #: 0235980703

Proposal

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**** Stock at Factory, Plus freight**

Total in USD (Tax not included): \$329.49

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GRAYBAR ELECTRIC COMPANY, INC. TERMS AND CONDITIONS OF SALE

1. **ACCEPTANCE OF ORDER; TERMINATION** - Acceptance of any order is subject to credit approval and acceptance of order by Graybar Electric Company, Inc. ("Graybar") and, when applicable, Graybar's suppliers. If credit of the buyer of the goods or services ("Buyer") becomes unsatisfactory to Graybar, Graybar reserves the right to terminate upon notice to Buyer and without liability to Graybar.
2. **PRICES AND SHIPMENTS** - Unless otherwise quoted, prices for goods shall be those in effect at time of shipment, which shall be made F.O.B. shipping point, prepaid and bill. Unless otherwise indicated in the applicable quotation or statement of work, prices for services shall be those in effect at the time of completion. The contract price for goods and/or services shall be increased by the amount of any applicable tariff, excise, fee, assessment, levy, charge or duty of any kind whatsoever, imposed, assessed or collected by any governmental body, whether or not reflected in the costs charged to Graybar, and Graybar may increase its cost for goods and/or services appropriately to take into account such increases in Graybar's costs.
3. **RETURN OF GOODS** - Credit may be allowed for goods returned with prior approval. A deduction may be made from credits issued to cover cost of handling. Returns will not be accepted for services or any material which has been modified at the request of or by Buyer. In addition, no custom orders may be returned.
4. **TAXES** - Prices shown do not include sales or other taxes imposed on the sale of goods or services. Taxes now or hereafter imposed upon sales, shipments or services will be added to the purchase price. Buyer agrees to reimburse Graybar for any such tax or provide Graybar with acceptable tax exemption certificate.
5. **DELAY IN DELIVERY** - Graybar is not to be accountable for delays in delivery of goods or services occasioned by acts of God, failure of its suppliers to ship or deliver on time, or other circumstances beyond Graybar's reasonable control, including, but not limited to, sourcing, shipment or delivery issues caused by, related to or resulting from COVID-19 or other similar national or global health situations. Factory shipment or delivery dates are best estimates, and in no case shall Graybar be liable for any consequential or special damages arising from any delay in provision of services, shipment or delivery.
6. **LIMITED WARRANTIES** - Graybar warrants that all goods sold are free of any security interest and will make available to Buyer all transferable warranties (including without limitation warranties with respect to intellectual property infringement) made to Graybar by the manufacturer of the goods. Buyer acknowledges that the performance of any service which alters the manufacturer provided goods as indicated in the statement of work may void the manufacturer's warranty. Graybar shall use the same care and skill a similarly situated provider of like services would exercise following commonly accepted industry practices in the performance of its duties under this agreement. **GRAYBAR MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES, AND SPECIFICALLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE, UNLESS OTHERWISE AGREED IN WRITING BY AN AUTHORIZED REPRESENTATIVE OF GRAYBAR.**
7. **PRODUCTS SOLD HEREUNDER ARE NOT INTENDED FOR USE IN OR IN CONNECTION WITH (1) ANY SAFETY APPLICATION OR THE CONTAINMENT AREA OF A NUCLEAR FACILITY, OR (2) IN A HEALTHCARE APPLICATION, WHERE THE GOODS HAVE POTENTIAL FOR DIRECT PATIENT CONTACT OR WHERE A SIX (6) FOOT CLEARANCE FROM A PATIENT CANNOT BE MAINTAINED AT ALL TIMES.**
8. **LIMITATION OF LIABILITY** - Buyer's remedies under this agreement are subject to any limitations contained in manufacturer's terms and conditions to Graybar, a copy of which will be furnished upon written request. Furthermore, Graybar's liability shall be limited to either repair or replacement of the goods, re-performance of the services, or refund of the purchase price, all at Graybar's option, and IN NO CASE SHALL GRAYBAR BE LIABLE FOR INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES. In addition, claims for shortages, other than loss in transit, must be made in writing not more than five (5) days after receipt of shipment. Unless otherwise agreed in the applicable statement of work, acceptance of services will occur not more than five (5) days after completion of performance.
9. **WAIVER** - The failure of Graybar to insist upon the performance of any of the terms or conditions of this agreement or to exercise any right hereunder shall not be deemed to be a waiver of such terms, conditions, or rights in the future, nor shall it be deemed to be a waiver of any other term, condition, or right under this agreement.
10. **MODIFICATION OF TERMS AND CONDITIONS** - These terms and conditions, and any associated statement of work, supersede all other communications, negotiations, and prior oral or written statements regarding the subject matter of these terms and conditions. No change, modification, rescission, discharge, abandonment, or waiver of these terms and conditions shall be binding upon Graybar unless made in writing and signed on its behalf by a duly authorized representative of Graybar. No conditions, usage of trade, course of dealing or performance, understanding or agreement, purporting to modify, vary, explain, or supplement these terms and conditions shall be binding unless hereafter made in writing and signed by the party to be bound. Any proposed modifications or additional terms are specifically rejected and deemed a material alteration hereof. If this document shall be deemed an acceptance of a prior offer by Buyer, such acceptance is expressly conditional upon Buyer's assent to any additional or different terms set forth herein.
11. **REELS** - When Graybar ships returnable reels, a reel deposit may be included in the invoice. The Buyer should contact the nearest Graybar service location to return reels.
12. **CERTIFICATION** - Graybar hereby certifies that these goods were produced in compliance with all applicable requirements of Sections 6, 7, and 12 of the Fair Labor Standards Act, as amended, and of regulations and orders of the United States Department of Labor issued under Section 14 thereof. This agreement is subject to Executive Order 11246, as amended, the Rehabilitation Act of 1973, as amended, the Vietnam Veterans' Readjustment Assistance Act of 1974, as amended, E.O. 13496, 29 CFR Part 471, Appendix A to Subpart A, and the corresponding regulations, to the extent required by law. 41 CFR 60-1.4, 60-741.5, and 60-250.5 are incorporated herein by reference, to the extent legally required.
13. **FOREIGN CORRUPT PRACTICES ACT** - Buyer shall comply with applicable laws and regulations relating to anti-corruption, including, without limitation, (i) the United States Foreign Corrupt Practices Act (FCPA) (15 U.S.C. §§78dd-1, et. seq.) irrespective of the place of performance, and (ii) laws and regulations implementing the Organization for Economic Cooperation and Development's Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, the U.N. Convention Against Corruption, and the Inter-American Convention Against Corruption in Buyer's country or any country where performance of this agreement or delivery of goods will occur.
14. **ASSIGNMENT** - Buyer shall not assign its rights or delegate its duties hereunder or any interest herein without the prior written consent of Graybar, and any such assignment, without such consent, shall be void.
15. **GENERAL PROVISIONS** - All typographical or clerical errors made by Graybar in any quotation, acknowledgment or publication are subject to correction. This agreement shall be governed by the laws of the State of Missouri applicable to contracts to be formed and fully performed within the State of Missouri, without giving effect to the choice or conflicts of law provisions thereof. All suits arising from or concerning this agreement shall be filed in the Circuit Court of St. Louis County, Missouri, or the United States District Court for the Eastern District of Missouri, and no other place unless otherwise determined in Graybar's sole discretion. Buyer hereby irrevocably consents to the jurisdiction of such court or courts and agrees to appear in any such action upon written notice thereof.
16. **PAYMENT TERMS** - Payment terms shall be as stated on Graybar's invoice or as otherwise mutually agreed. As a condition of the sales agreement, a monthly service charge of the lesser of 1-1/2% or the maximum permitted by law may be added to all accounts not paid by net due date. Visa, MasterCard, American Express, and Discover credit cards are accepted at point of purchase only.
17. **EXPORTING** - Buyer acknowledges that this order and the performance thereof are subject to compliance with any and all applicable United States laws, regulations, or orders. Buyer agrees to comply with all such laws, regulations, and orders, including, if applicable, all requirements of the International Traffic in Arms Regulations and/or the Export Administration Act, as may be amended. Buyer further agrees that if the export laws are applicable, it will not disclose or re-export any technical data received under this order to any countries for which the United States government requires an export license or other supporting documentation at the time of export or transfer, unless Buyer has obtained prior written authorization from the United States Office of Export Control or other authority responsible for such matters.
18. **CANCELLATION; CHANGES FOR SERVICES** - Buyer may cancel or make changes to a statement of work up to five (5) business days prior to commencement of the work. All changes and cancellations after such date are subject to Graybar's prior written approval in Graybar's sole and absolute discretion. Buyer shall pay to Graybar amounts necessary to cover cancellation, restocking fees and other charges applicable to the cancelled goods or services including those incurred or committed to by Graybar.

Signed: _____

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QUOTATION

Aug 7, 2020

Prepared by: Giovanni Castiglione

Quote validity: 60 days

Quotation for:

Kapsch TrafficCom USA Inc.
7701 Metropolis Drive, Suite 100
78744, Austin, Texas

PART NUMBER	DESCRIPTION	QUANT	UNIT PRICE	AMOUNT
ETH-SER-EE9	Industrial Ethernet to Serial Server/Converter	3	\$86.95	\$260.85
PRODUCT TOTAL:				\$260.85 USD
SHIPPING	Free shipping			\$0.00
	FedEx, UPS and DHL express shipping options also available			
AVAILIBLTY	Stock - Can ship same day ordered			
TERMS	NET 30 TERMS			

If you have any questions concerning this quotation, please contact Mordy Naftaly at 1-877-218-7964 ext. 704 or sales@serialcomm.com.

THANK YOU FOR YOUR BUSINESS!

REV 1.3 - 2/22/2018



Jeddy Ventures LLC
DBA SerialComm
1298 Evans Road
Wall Township, NJ 07719

PHONE 1 (877) 218-7964
FAX 1 (732) 749-3598
E-MAIL sales@serialcomm.com
WEB SITE www.serialcomm.com