Owner: Engineering		SUBTL SR2-2xIT racks 10kW-No Redundancy	SR2N02010NAA1
Author: Michael Gmerek	Vertiv Co.	Tokw-no Redundancy	-SUBTL
Date: 4/1/2024		SmartRow 2 Submittal	Rev B

#### Contents

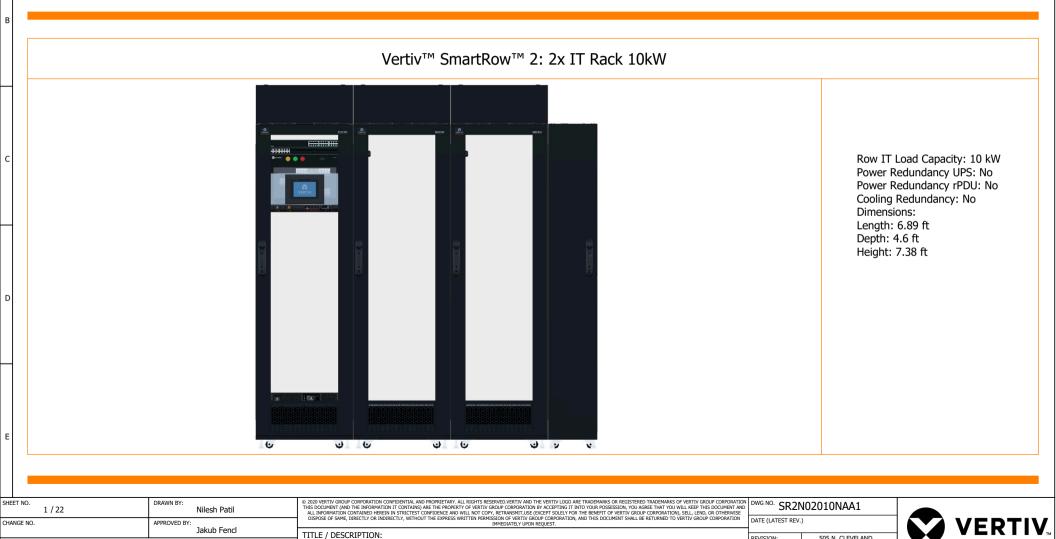
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				Smart	Row 2 S	ite Planr	ning D	atasheet	(208V, 3	8 phase, 4	wire + PE)		
	Configuration Number	Part Number	Max Row Capacity (kW)	IT Racks per Row	Capacity per Rack (kW)	Cooling Units per Row	pdu count	Main Input Breaker Size <sup>6</sup>	Per Condenser Breaker Size	Per Condenser Dry Weight kg (lbs)	Row Dimensions (L x H x D) mm (in)7	Row Weight kg (lbs)	Min. Staging Area m2 (ft2)
	1	SR2N02010NAA1	10	2	5	1	2	100A	N/A <sup>5</sup>	60 (132.3)	2100 (82.7) x 2271 (107) x 1400 (55.2)	1463 (3227)	14.41 (155.2)
	2	SR2N02010PAA1	10	2	5	1	4	100A	N/A <sup>5</sup>	60 (132.3)	2100 (82.7) x 2271 (107) x 1400 (55.2)	1491 (3288)	14.99 (161.4)
	3	SR2N02010FAA1	10	2	5	2	4	100A	N/A <sup>5</sup>	60 (132.3)	2400 (94.5) x 2271 (107) x 1400 (55.2)	2112 (4656)	17.67 (190.2)
	4	SR2N03010NAA1	10	3	3	1	3	100A	N/A <sup>5</sup>	60 (132.3)	2700 (106.3) x 2271 (107) x 1400 (55.2	) 1633 (3601)	15.76 (169.7)
	5	SR2N03010PAA1	10	3	3	1	6	100A	N/A <sup>5</sup>	60 (132.3)	2700 (106.3) x 2271 (107) x 1400 (55.2	) 1675 (3694)	16.34 (175.9)
	6	SR2N03010FAA1	10	3	3	2	6	100A	N/A <sup>5</sup>	60 (132.3)	3000 (118.2) x 2271 (107) x 1400 (55.2	) 2296 (5061)	19.02 (204.8)
	7	SR2N03020NAA1	20	3	6	1	3	175A	15A	118 (260.2)	2700 (106.3) x 2271 (107) x 1400 (55.2	) 1863 (4108)	18.46 (198.8)
	8	SR2N03020PAA1	20	3	6	1	6	175A	15A	118 (260.2)	2700 (106.3) x 2271 (107) x 1400 (55.2	) 1905 (4201)	20.51 (220.8)
	9	SR2N03020FAA1	20	3	6	2	6	175A	15A	118 (260.2)	3000 (118.2) x 2271 (107) x 1400 (55.2	) 2526 (5568)	24.42 (262.9)
	10	SR2N04020NAA1	20	4	5	1	4	175A	15A	118 (260.2)	3300 (130) x 2271 (107) x 1400 (55.2)	2033 (4483)	19.81 (213.3)
	11	SR2N04020PAA1	20	4	5	1	8	175A	15A	118 (260.2)	3300 (130) x 2271 (107) x 1400 (55.2)	2089 (4607)	21.86 (235.3)
	12	SR2N04020FAA1	20	4	5	2	8	175A	15A	118 (260.2)	3600 (141.8) x 2271 (107) x 1400 (55.2	) 2710 (5974)	25.77 (277.4)
	13	SR2N05020NAA1	20	5	4	1	5	175A	15A	118 (260.2)	3900 (153.6) x 2271 (107) x 1400 (55.2	) 2203 (4858)	21.16 (227.8)
	14	SR2N05020PAA1	20	5	4	1	10	175A	15A	118 (260.2)	3900 (153.6) x 2271 (107) x 1400 (55.2	) 2273 (5012)	23.21 (249.9)
	15	SR2N05020FAA1	20	5	4	2	10	175A	15A	118 (260.2)	4200 (165.4) x 2271 (107) x 1400 (55.2	) 2894 (6380)	27.12 (292)
	<ol> <li>2. Floor sul</li> <li>3. No build</li> <li>4. Install in</li> <li>5. 10kW co</li> <li>6. Cable Si</li> </ol>	Environmental Co rface must be lew ing sprinkler heac accordance with ondenser power is zing: 100A = 3 A tensions do not ir	el and contin I should be w national and s sourced from WG ; 175A =	uous (expans vithin 19.7 in local electric m the indoor 2/0 AWG	sion joints sea (0.5 m). al codes unit	led, raised flo	or tile gap	os sealed, no f	loor drains, e	.4 <sup>-⊮</sup> F (28 <sup>-⊮</sup> C) ttc).			
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# Vertiv Row Solution

# Knowledge to Build Optimized Infrastructure Solutions





PAGE DESCRIPTION: 1- Title page / cover sheet

Vertiv<sup>™</sup> SmartRow<sup>™</sup> 2: 2x IT Rack 10kW

B 505 N. CLEVELAND

OH 43081

Page	Page description
/Row/1	Title page / cover sheet
/Row/2	Table of contents : =vRow/1 - =vRow+Thermal/12
vRow/3	Structure identifier overview
vRow/4	vRow Front View
=vRow/4.a	vRow Top View
=vRow/4.b	SR2 Components View
vRow/5	One Line PMC and UPS
vRow/5.a	One Line Diagram Thermal
vRow/6	Part List Vertiv Supplied
=vRow/7	Part List Customer Supplied
=vRow/8	Cable overview : =vRow+Rack2-W202 - =vRow+PMC-PMU_LED Control-W12
=vRow/8.a	Cable overview : =vRow+PMC-W01 - =vRow+Rack1-W207
=vRow+PMC/9	PMC Power Distribution
=vRow+PMC/9.a	Power Distribution
=vRow+PMC/9.b	GXT5 10k-A
=vRow+PMC/9.c	Emergency Fan Control
=vRow+PMC/9.d	RDU501
=vRow+PMC/9.e	PMC Logic
=vRow+PMC/9.f	POE Switch
=vRow+Rack1/10	IT Rack 1
=vRow+Rack2/11	IT Rack 2
=vRow+Thermal/12	Thermal CRV1 & Condenser1

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### Structure identifier overview

SHEET NO

CHANGE NO.

PAGE DESCRIPTION:

3 / 22

3- Structure identifier overview

Full designation	Structure description
Function designation	
=vRow	
+PMC	UPS, Network Switch, FC Controller, PMU
+Rack1	vRack 1
+Rack2	vRack 2
+Thermal	Thermal Components and Condenser

Please note:

This document is intended to provide guidance to a qualified electrical installer. The installer, owner, and end user are responsible for adhering to all applicable building and electrical codes, regulations, laws, and standards, and nothing in this document is intended to conflict therewith. Vertiv is not responsible for any failure to conform therewith. In addition, nothing in this document is intended to conflict with the applicable product manuals, installation guides, or other product documentation, which documents take precedence over this design document. You are responsible for adhering to guidance in the appropriate product documentation, but for your convenience, some such documents are accessible here:



Before installing, connecting to supply or start operation, please review the provided safety and regulatory statements. This system represents a functional unit of an IT infrastructure solution, and the installer, owner, and end user are responsible for its proper operation.

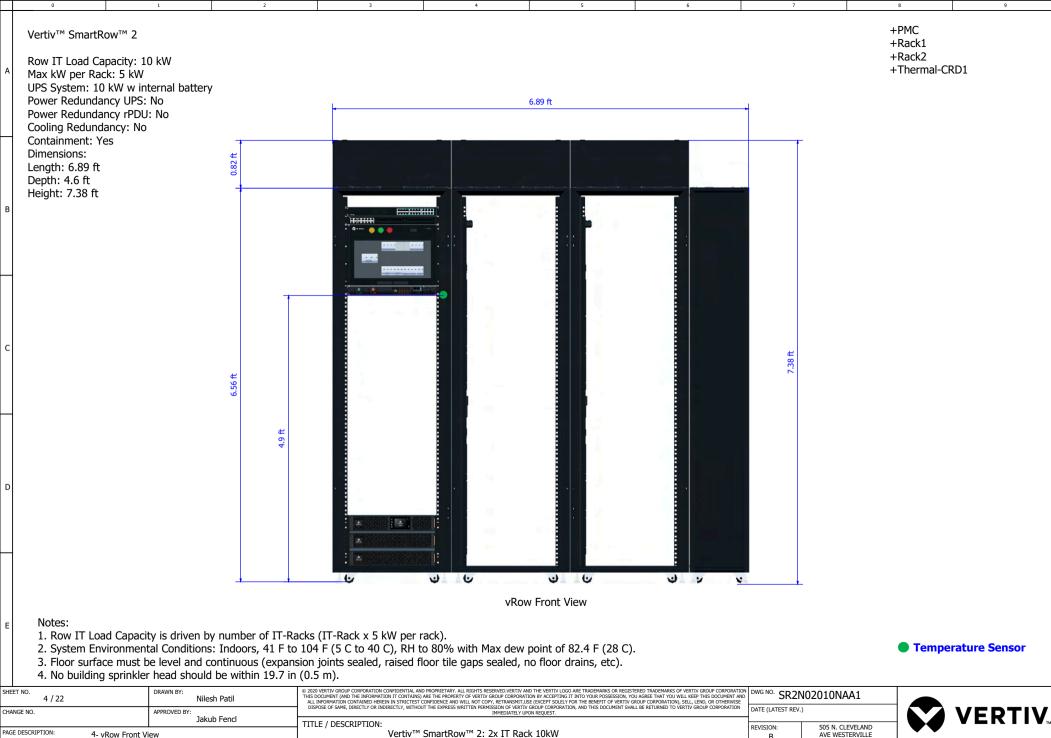




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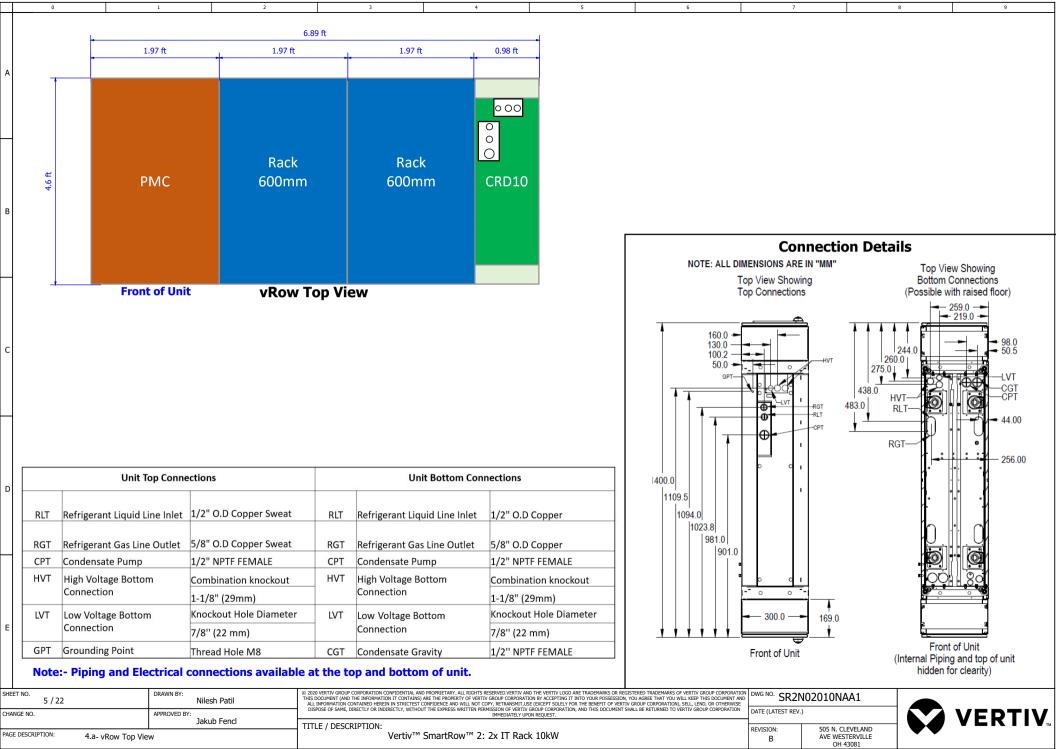
Vertiv<sup>™</sup> SmartRow<sup>™</sup> 2: 2x IT Rack 10kW

B AVE WESTERVILLE OH 43081



PAGE DESCRIPTION: 4- vRow Front View В

OH 43081



# SR2 Main Components

#### 9-inch Touchscreen Panel:

User-friendly display enables easy access to system running status & condition.

#### Centralized Infrastructure Management: Racks with Containment:

equipment and IT devices within the system. Reading & data are consolidated into single platform.

Enables central management of all intelligent EIA310 19-inch rack system coupled with tempered glass door enables fully enclosed system design. Allows focused cooling in IT environment

Explanation of terms:

- FU Emergency Fan Control Unit
- FDS Front Door Switch
- RDS Rear Door Switch
- FDL Front Door Lock Handle
- RDL Rear Door Lock Handle
- DC PS DC Power Supply

#### **Precision Cooling:**

Row-based solution designed to provide maximum cooling in a compact footprint. Cooling modulation enables cooling on demand and guickly adapts to load fluctuation

#### Electronic Lock:

Enables rack level security and access log is recorded intelligently. Supports local & remote door authorization.

#### **Power Management & Distribution:**

Pre-assembled & pre-integrated switchboard with surge protection.

#### **Power Protection:**

On-line double conversion UPS with unity power factor ensures clean power feeding to critical IT equipment.

#### **Power Management & Protection**

- Thermal Management
- Management & Monitoring

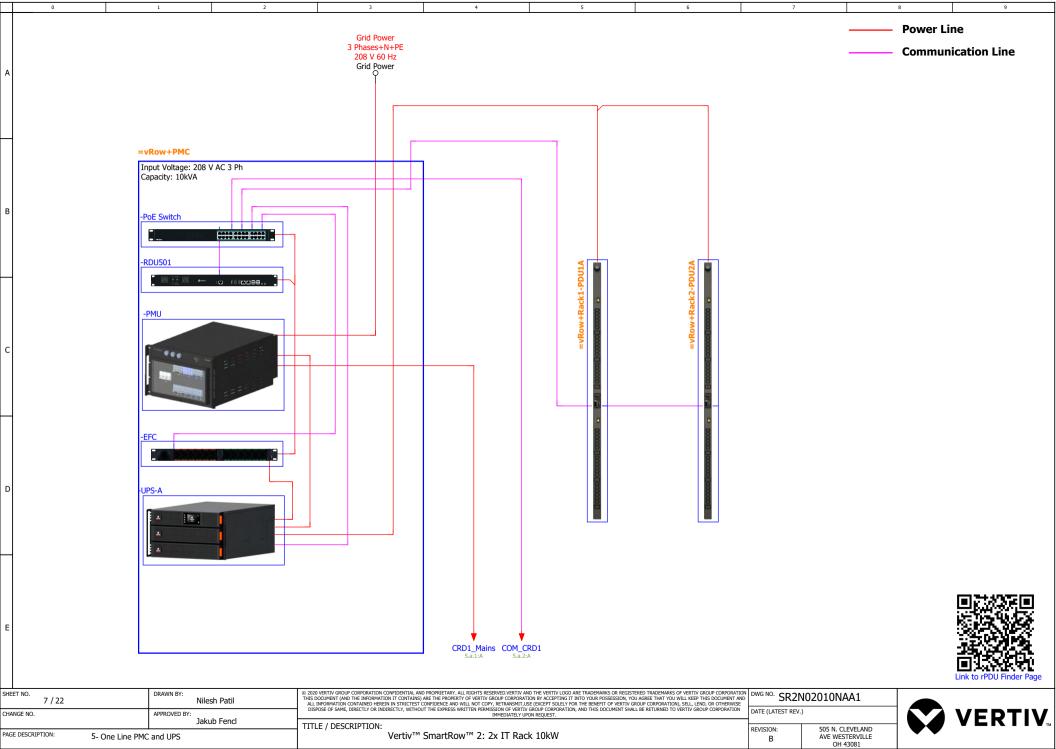
**Emergency Ventilation:** Activates automatically in the event of overheating or cooling unit failure.

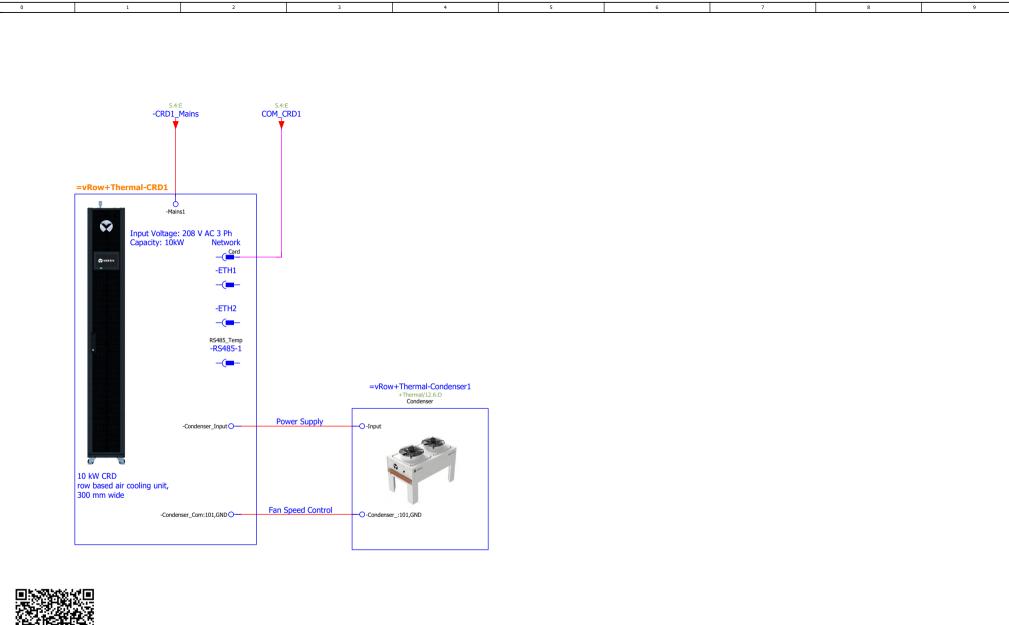
Environmental Sensor: Report critical environmental information and alarm notification. Ensure IT equipment is kept in desired condition.





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Link to CRD Vertiv Product Page

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C	+Thermal-Condenser1 +Thermal/12.6:D	Thermal Outdoor I	Jnit1	Air Cooled Condenser CCD10 for NAM CRD101 208 V 3ph	CCD100S-00A	
	+Thermal-CRD-1 +Thermal/12.0:A	Thermal Indoor Ur	nit1	CRD101 10kW CRV row based Air cooling unit 300 mm wide 208 V 3Ph+PE	CRD101-0D00A	
	+Rack2-PDU2A +Rack2/11.2:B	PDU for Rack2		rPDU, Monitored Unit Level EC, 30A, 208V, 4.9kW, Vertical (36) IEC C13, (6) IEC C19, 15ft power cord with L6-30P, Black Powder Coat.	VP4N3025	
	+Rack1-PDU1A +Rack1/10.2:B	PDU for Rack1		rPDU, Monitored Unit Level EC, 30A, 208V, 4.9kW, Vertical (36) IEC C13, (6) IEC C19, 15ft power cord with L6-30P, Black Powder Coat.	VP4N3025	
	+PMC/9.b.2:A +PMC-UPS-A-POD1 +PMC/9.b.5:A	POD PD2-103		6U, optinal 1x PD2 POD Power Output Distribution 4x 5-15/20R T-Slot and 4x L6-30R	PD2-103	
в	+PMC/9.d.0:B +PMC-UPS-A	GXT5 10 kW UPS-/	Ą	UPS GXT5 10 kW 208 V 60 Hz 2 Phases	GXT5-10KMVRT6U	(LN
	+PMC-POE Switch +PMC/9.f.2:B +PMC-RDU501	POE Switch RDU501 Controller		Liebert RDU501 Intelligent Infrastructure Management Solution	POESwitch24Port RDU501	
	+PMC-PMU +PMC/9.0:A	10kW PMC		PMC,MSR2-New designed PMC for NAM (SKU TBD) - 1P = GXT5 - 20kVA Rack (600w, HMI, SmartLock x2, THD x1, LED, FC, 4G Modem), qty: 1, RDU 501 (8COM card POE Switch for Smart Aisle or Smart Row NAM Solutions	·····	
	+PMC-EFC +PMC/9.c.0:A	Emergency Fan Co	ontrol PDU	rPDU, Switched Unit Level Monitoring EC, 30A, 208V, 4.9kW, Horizontal	VP53100	
Δ	Device Designation Schematic / position	Device Function		Designation	SKU Number	

Device Designation Schematic / position		Designation								Descript	ion				
+Thermal-WA1 +Thermal/12.4:D		Power cable between C 2 Wire + PE, 16AWG	RD to CCD							Power	Cable CR	D to CCD			
+Thermal-WB1 +Thermal/12.4:E		Fan speed control com CRD to CCD	nunication cable							Fan spo	eed conti	ol commu	nication	cable	
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## Cable overview

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Cable type	Function text	Device tag	Conductors	Cross-section (AWG)	Length (m
Smart door lock cascade	RACK2 to CRD1 power cascade cable	+Rack2-W202	2	22	0.85
Communication cable	PMU to 4DI SPD communication network cable	+PMC-PMU-W104	1		1.7
	PMU to RDU501 COM3 meter communication network cable	+PMC-PMU-W105	1		1.8
	PMU to RDU501 D02 Control Red Light Cable	+PMC-PMU_LED Control-W102	1		1.8
	PMU to RDU501 DO1 Strobe siren control cable	+PMC-PMU_LED Control-W103	1		
	PMC to RDU501_COM1 intelligent door lock front door com. cable	+PMC-W101	1		0.9
	4DI to RDU501 Sensor2 SPD Communication Network Cable	+PMC-W106	1		0.3
	PMC to RDU501_ COM1 intelligent door lock rear door com. cable	+PMC-W107	1		0.9
	RDU501 COM2 to HMI communication cable	+PMC-W108	1		0.8
	PMC to RDU501 to PMC cabinet THD communication cable	+PMC-W109	1		0.7
	FC to Switch communication cable	+PMC-W114	1		0.8
	PDU to Switch communication cable	+Rack1-W115	1		3
	PDU1A to PDU2A communication cable	+Rack2-W116	1		3
	CRD1 to Switch communication cable	+Thermal-W110	1		0.85
	Smoke1 to CRV-Door microswitch cable	+Thermal-W401	1		1
Emergency fan to FC	PMC Emergency fan to FC controller cable	+PMC-W209	3	18	1.2
	Rack1 Emergency fan to FC controller cable	+Rack1-W208	3	18	4.5
	Rack2 Emergency fan to FC controller cable	+Rack2-W208	3	18	5.5
Front door light cascade	PMC to Rack1 front door LED light power cable	+PMC-PMU_LED Control-W210	4	20	1
	Cascaded cable for the end RACK front door light	+Rack1-W211	4	20	0.75
Front door microswitch cascade	PMC to RACK1 front door microswitch cascade cable	+PMC-PMU_LED Control-W212	2	20	0.75
	Cascade cable for the end RACK front door microswitch	+Rack2-W213	2	20	0.75
Interconnection CRV/Condenser	Fan speed control CCD1	+Thermal-WB1	2	22	
Power cable	PMU to PMC rear door LED light power cable	+PMC-PMU_LED Control-W07	2	20	1.2
	PMU to PMC front door LED light power cable	+PMC-PMU_LED Control-W09	4	20	1.75
	PMU to PMC front door microswitch power cable	+PMC-PMU_LED Control-W11	2	20	1.25
	PMU to PMC rear door microswitch power cable	+PMC-PMU_LED Control-W12	2	20	1.25

Please note: Always when "conductor" = 1, or "Cross-section" is empty, it represents a network/communication cable.

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### Cable overview

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Cable type	Function text	Device tag	Conductors	Cross-section (AWG)	Length (m)
Power cable	PMU to UPS-A input cable	+PMC-W01	4	6	2.4
	UPS-A to PMU output cable	+PMC-W03	3	20	0.8
	PMU to CRD1 output cable	+PMC-W05	4	12	1.5
	PMU to PMC intelligent door lock power cable	+PMC-W06	2	22	1.2
	PMU to HMI power cable	+PMC-W08	2	22	2.2
	CRD to condensor power cable	+Thermal-WA1	3	16	
Rear door light cascade	PMC to Rack1 rear door LED light power cable	+PMC-PMU_LED Control-W216	2	20	1
	Cascading cable for rear door light of the end RACK	+Rack1-W217	2	20	0.75
Rear door microswitch cascade	PMC to RACK1 rear door microswitch cascade cable	+PMC-PMU_LED Control-W214	2	20	0.75
	Cascade cable for rear door microswitch of end RACK	+Rack2-W215	2	20	0.75
Smart door lock cascade	PMC to RACK1 power cascade cables	+PMC-W201	2	22	0.85
	RACK1 to RACK2 power cascade cable	+Rack1-W201	2	22	0.85
	RACK1 to RACK2 communication cascade cables	+Rack1-W205	1		0.85
	RACK2 to CRD1 communication cascade cables	+Rack2-W206	1		0.85
THD cascading	PMC to RACK1 Cascade Cable	+PMC-W207	1		2
	RACK1 to RACK2 Cascade Cable	+Rack1-W207	1		2

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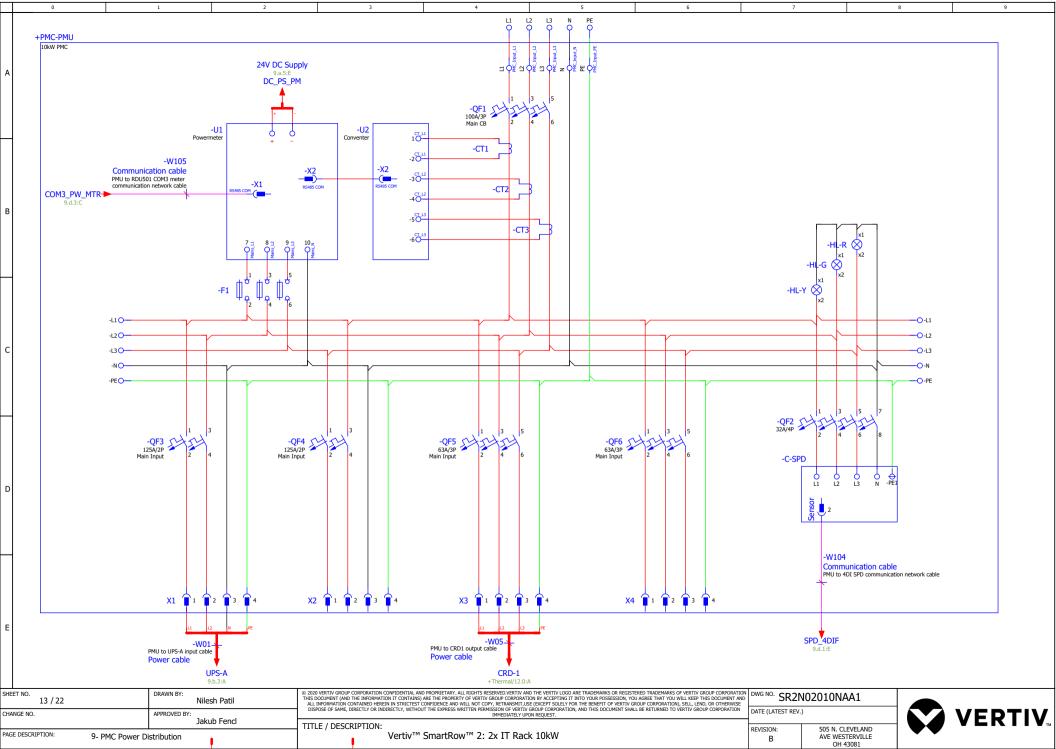
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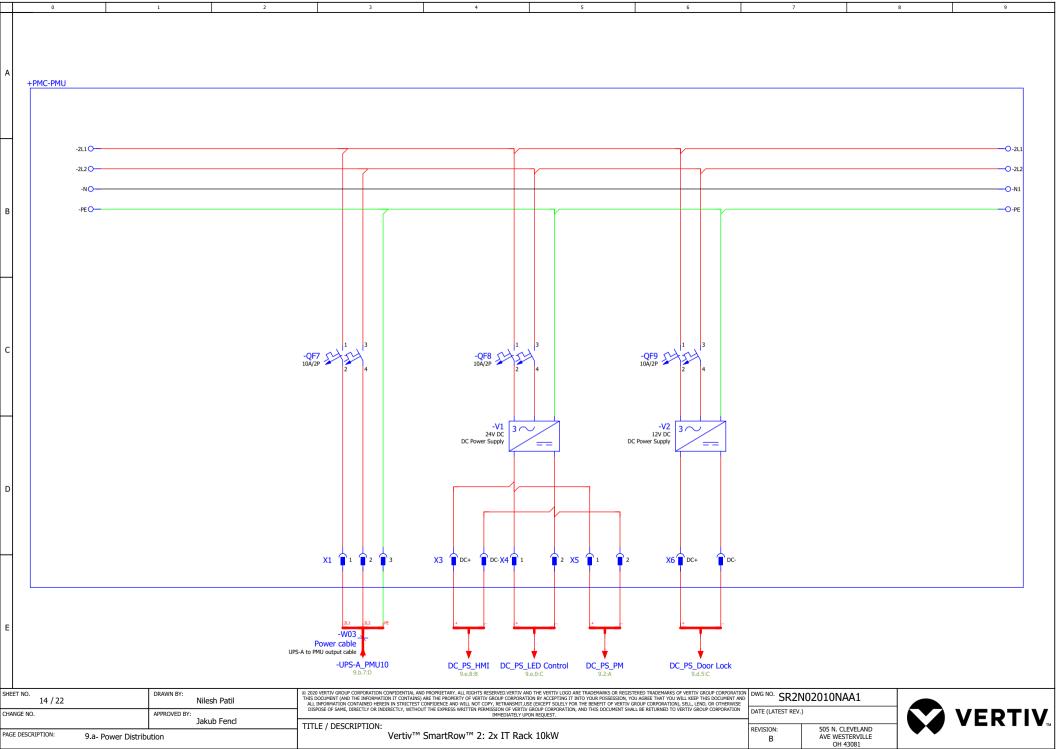
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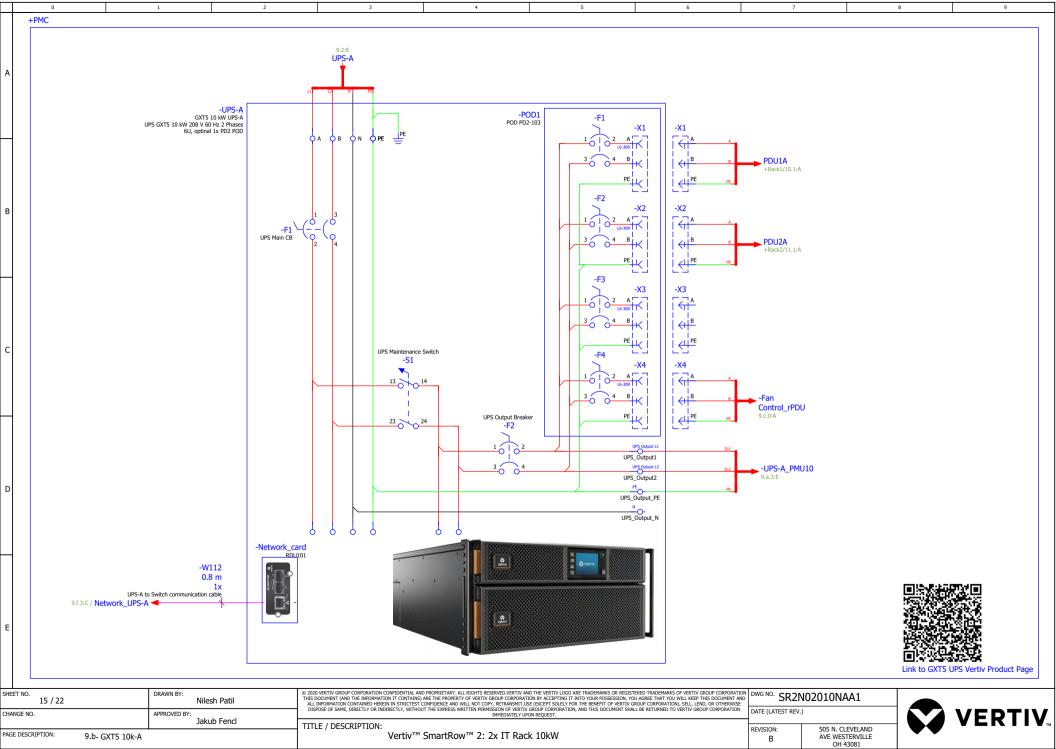
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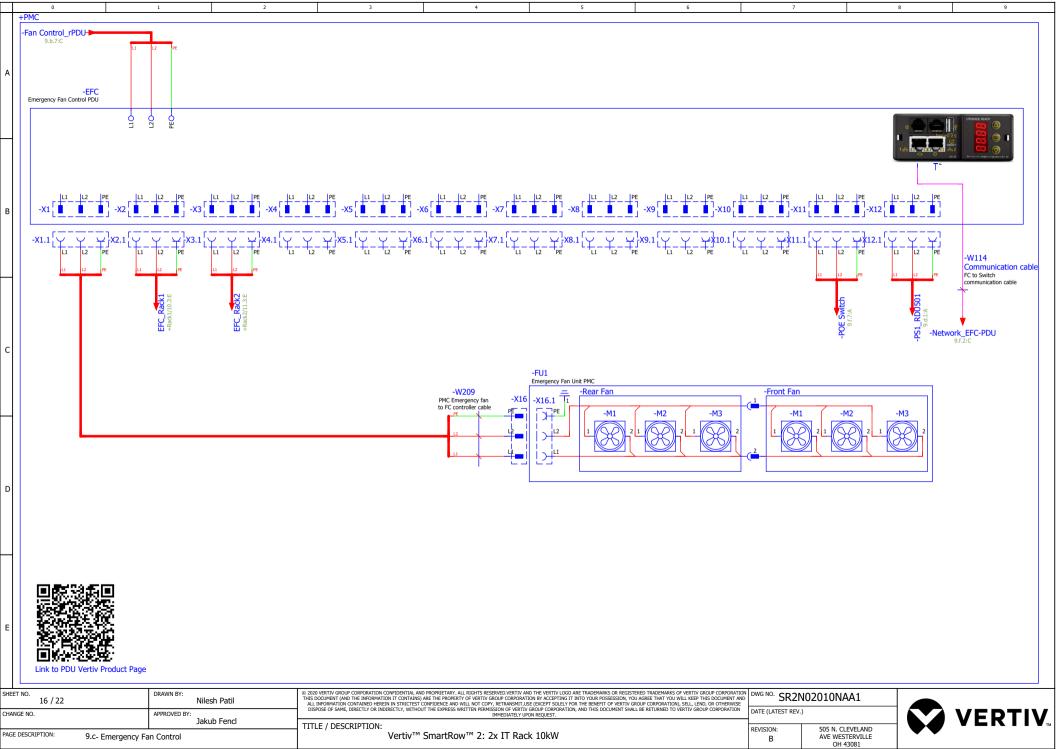
Please note: Always when "conductor" = 1, or "Cross-section" is empty, it represents a network/communication cable.

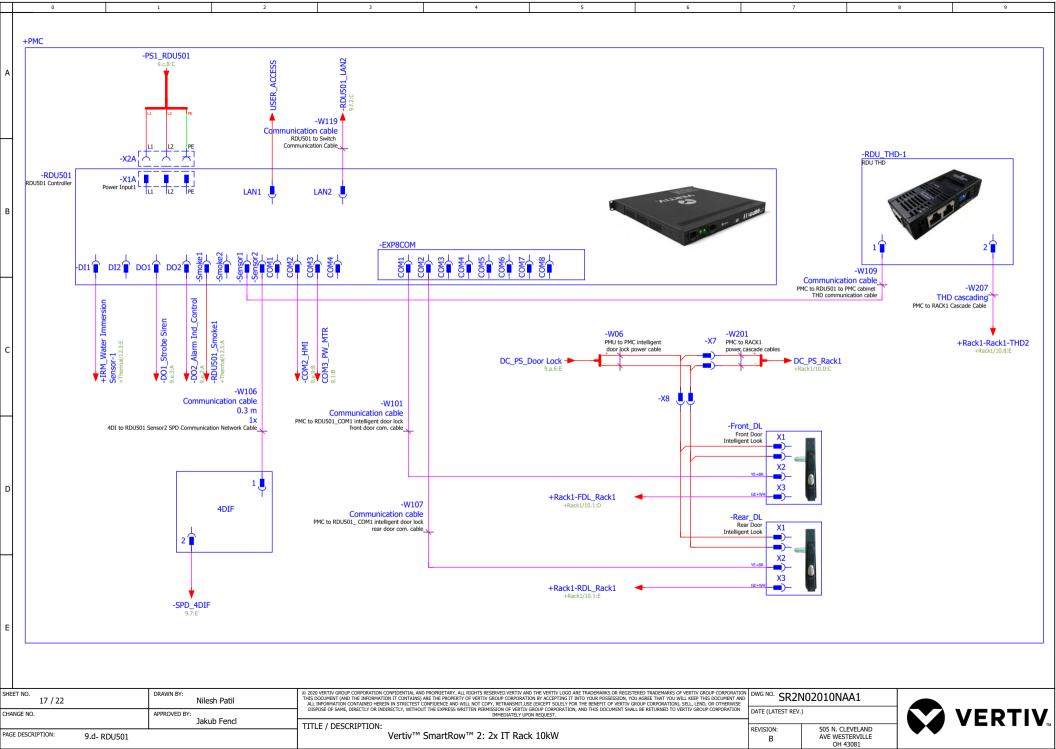
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CHANGE NO.		APPROVED BY: Jakub Fencl	DISPOSE OF SAME, DIRECTLY OR INDIRECTLY, WITHOUT THE EXPRESS WRITTEN PERMISSION OF VERTUR GROUP CORPORATION, AND THIS DOCUMENT SHALL BE RETURNED TO VERTUR GROUP CORPORATION IMMEDIATELY UPON REQUEST.		.)				
			TITLE / DESCRIPTION:	REVISION:	505 N. CLEVELAND				
PAGE	AGE DESCRIPTION: 8.a- Cable overview : =vRow+PMC-W01 -		Vertiv <sup>™</sup> SmartRow <sup>™</sup> 2: 2x IT Rack 10kW	B	AVE WESTERVILLE				
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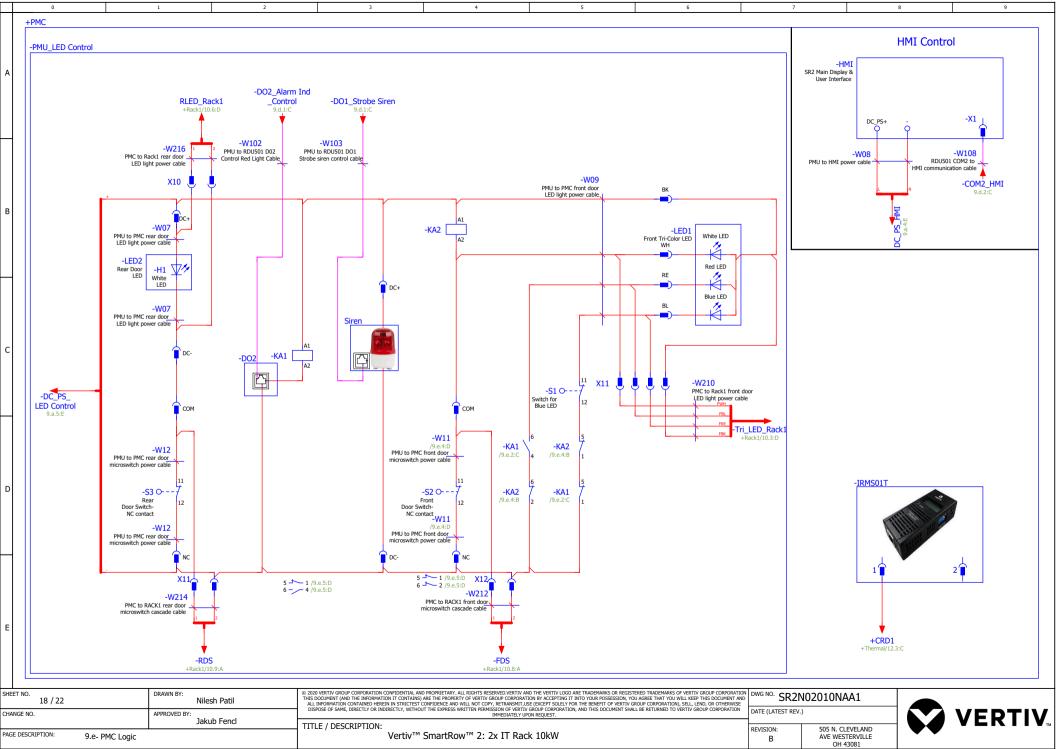




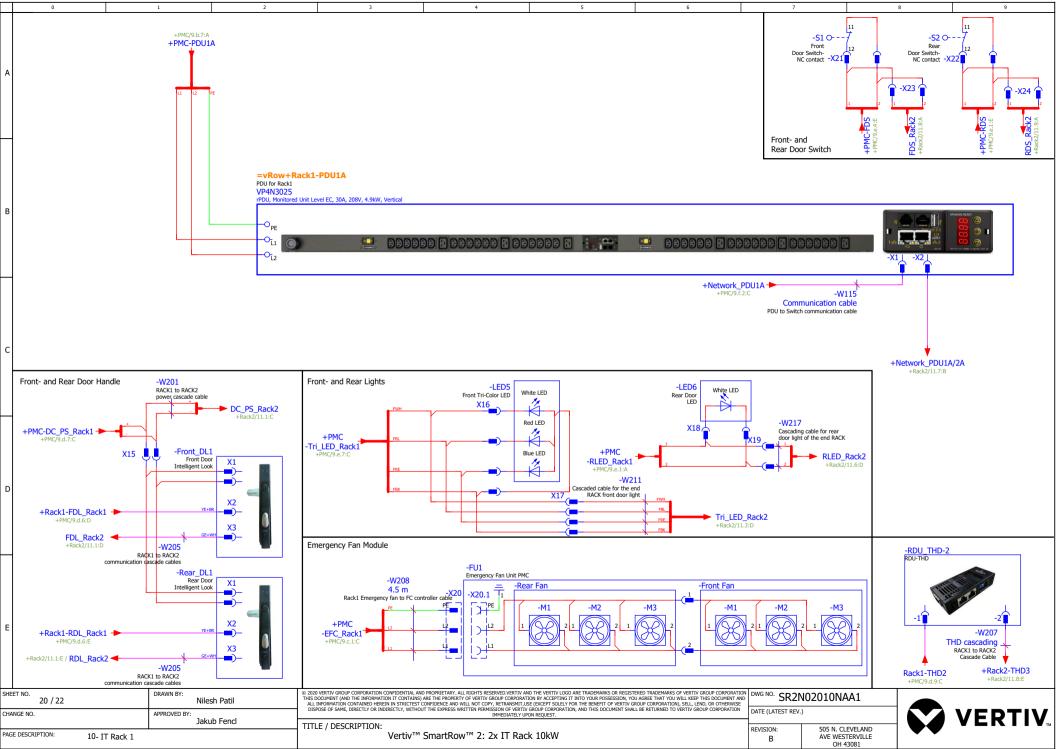


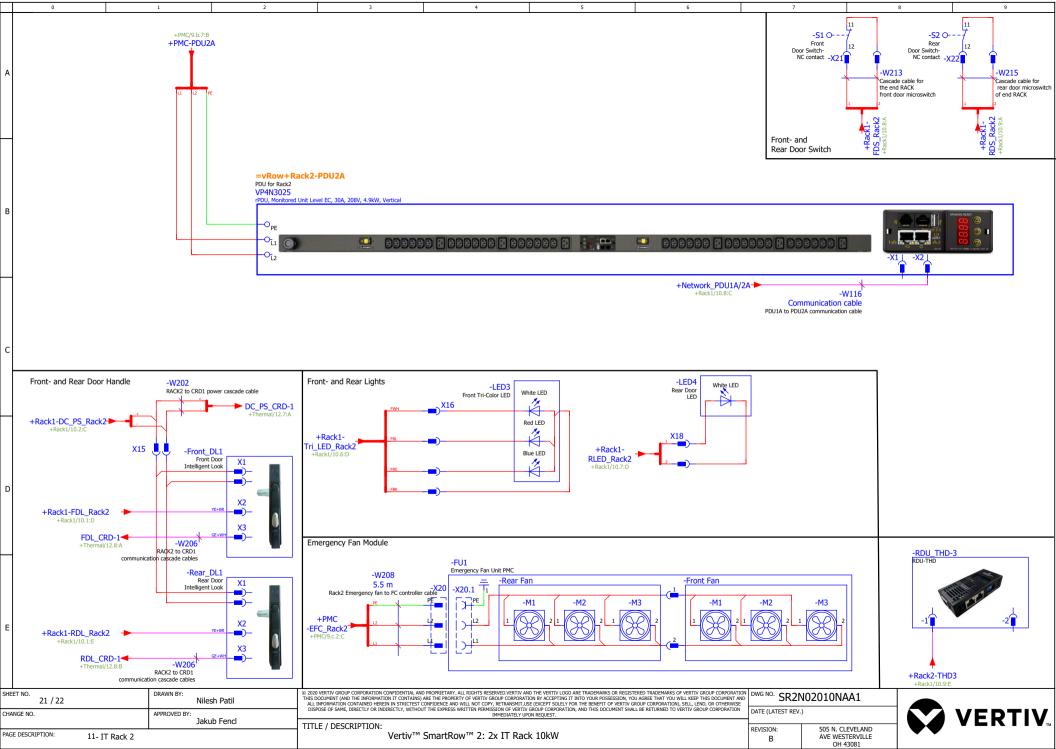


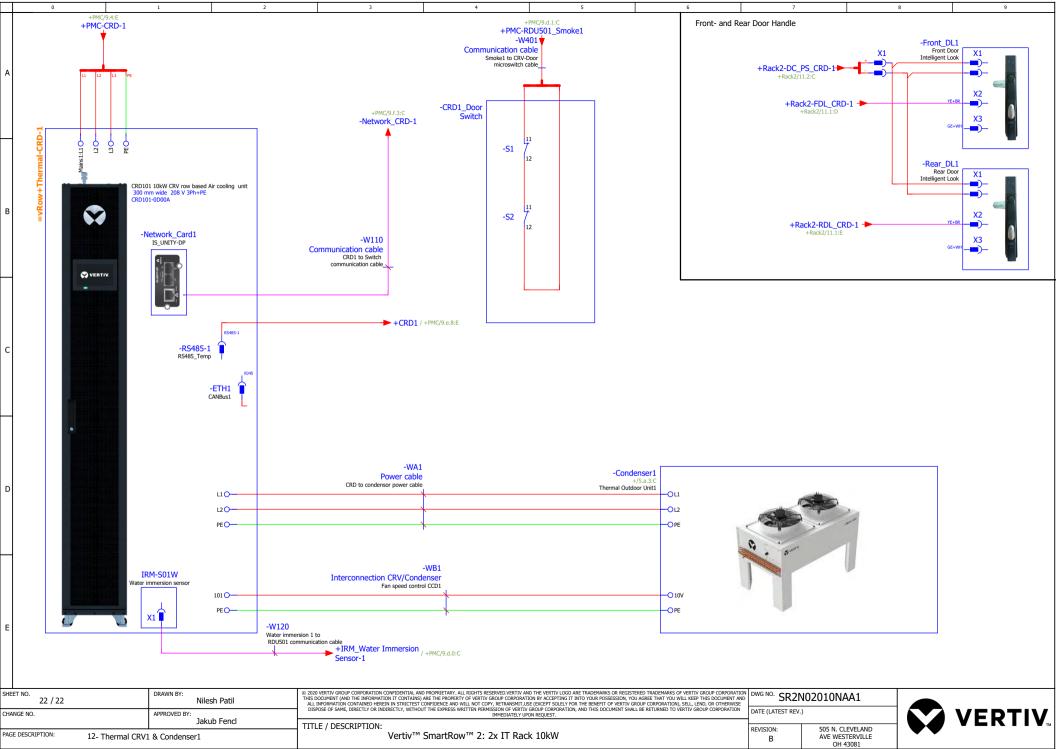


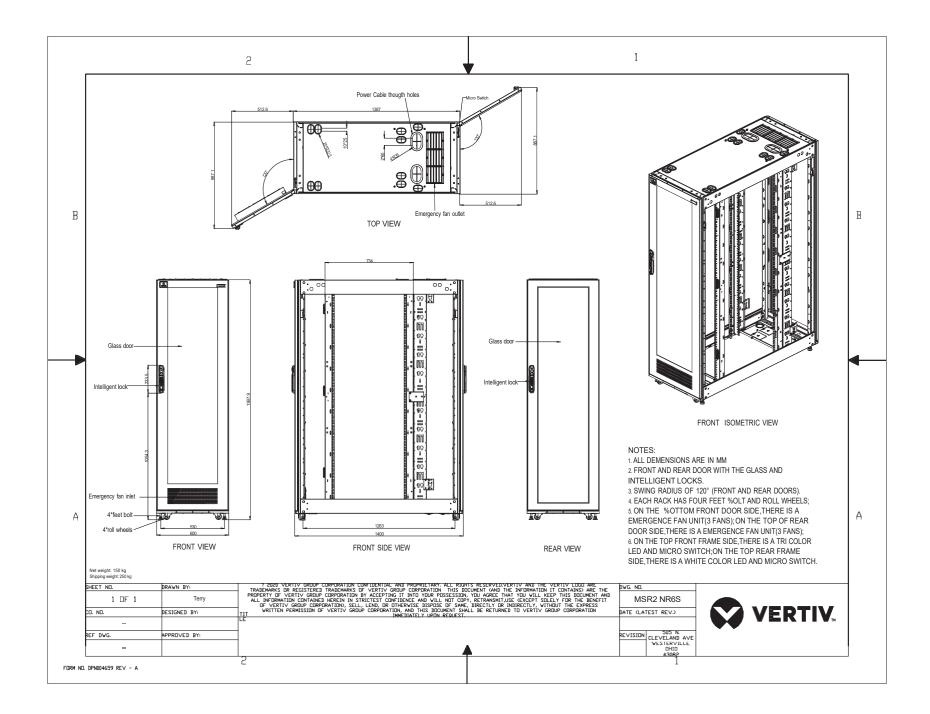


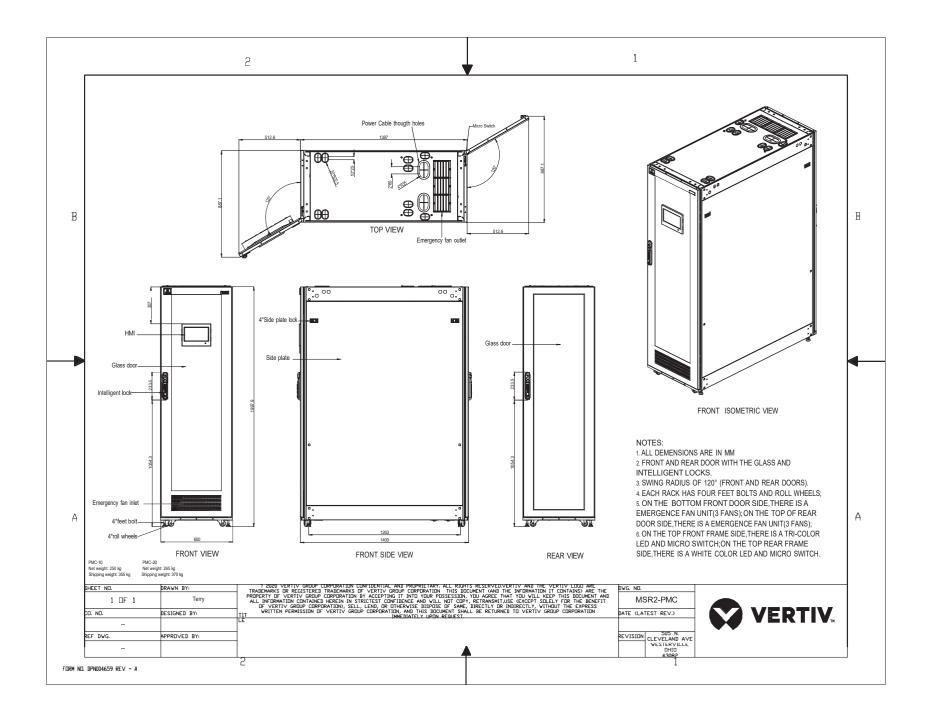
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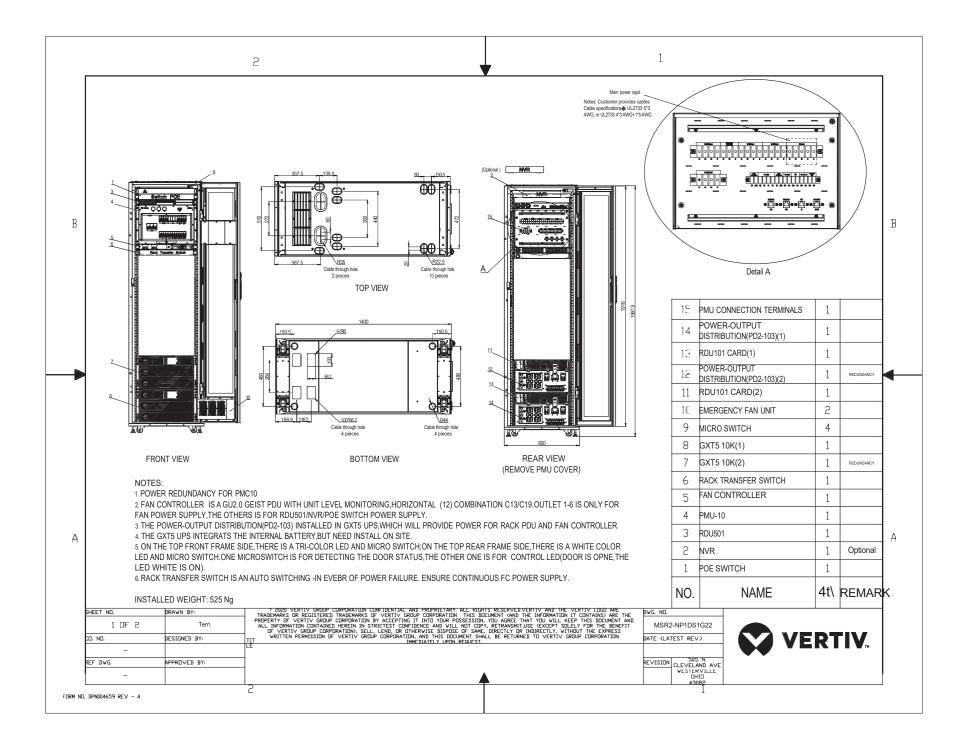


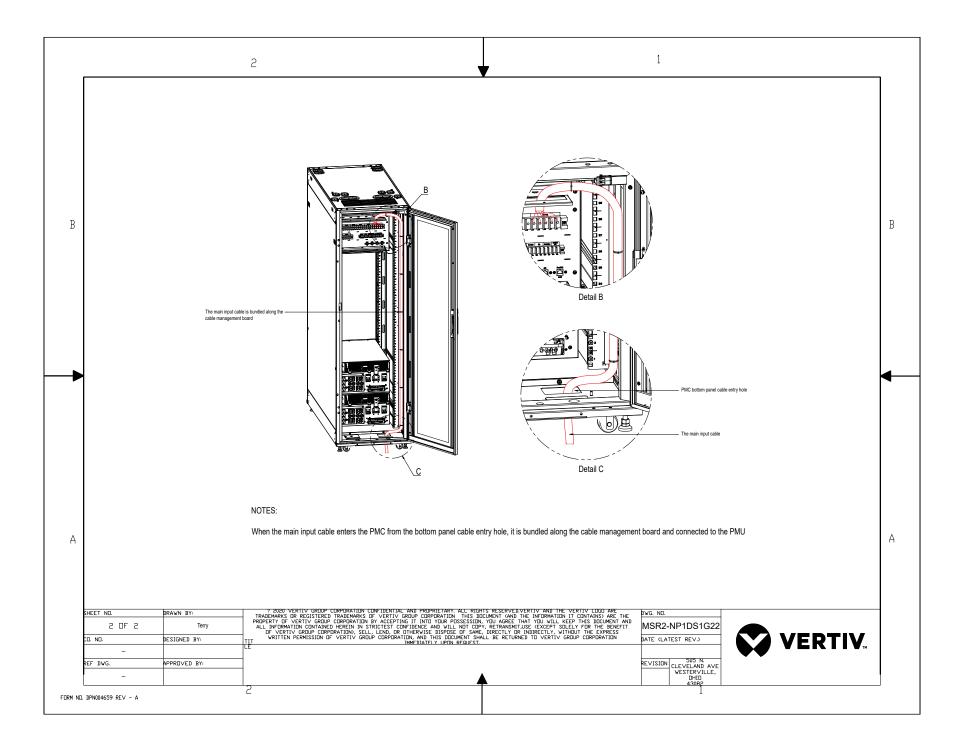


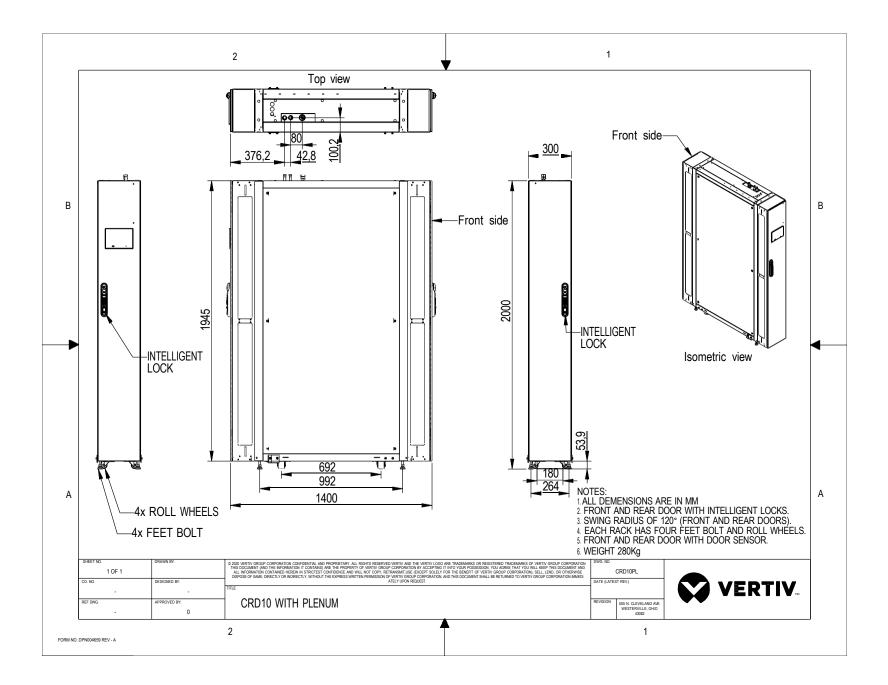


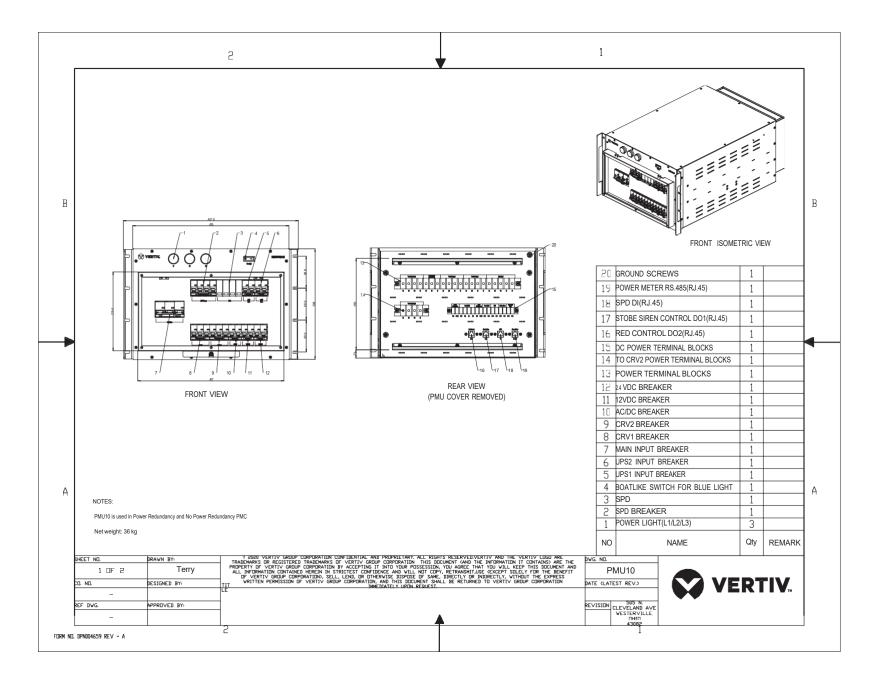


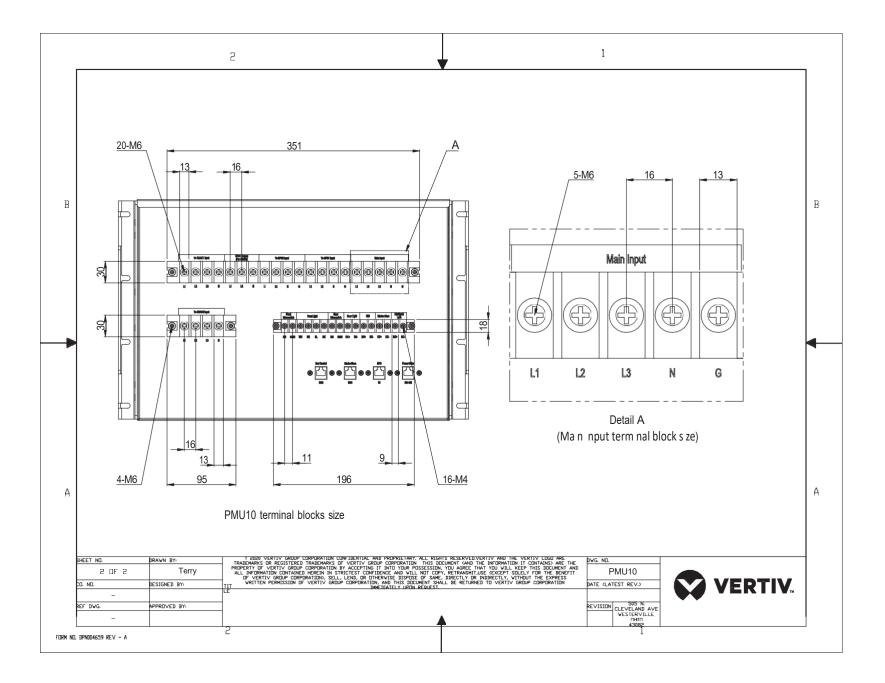


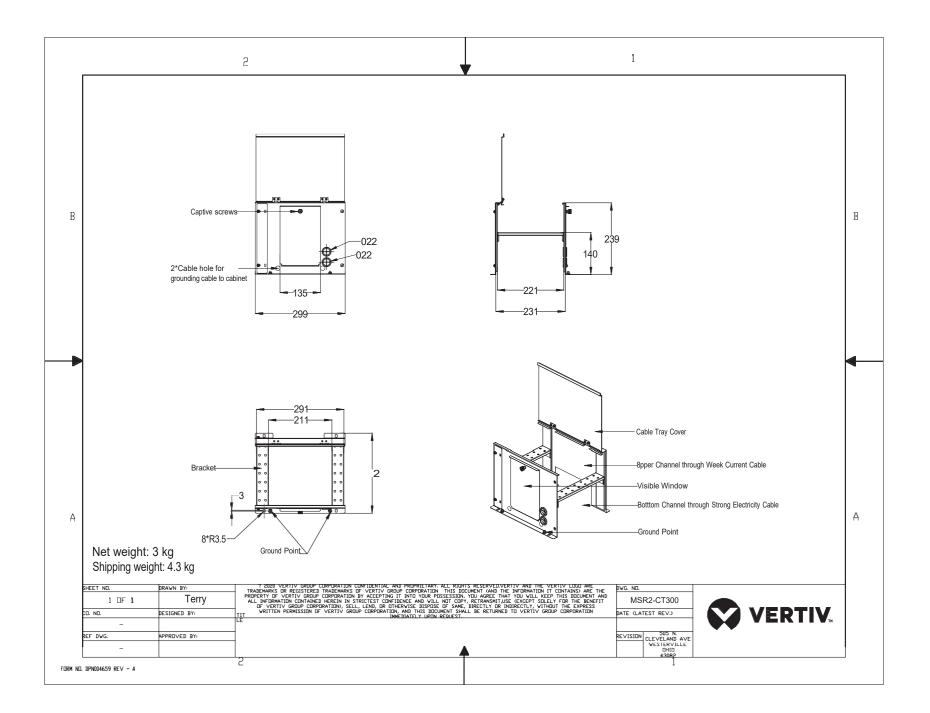


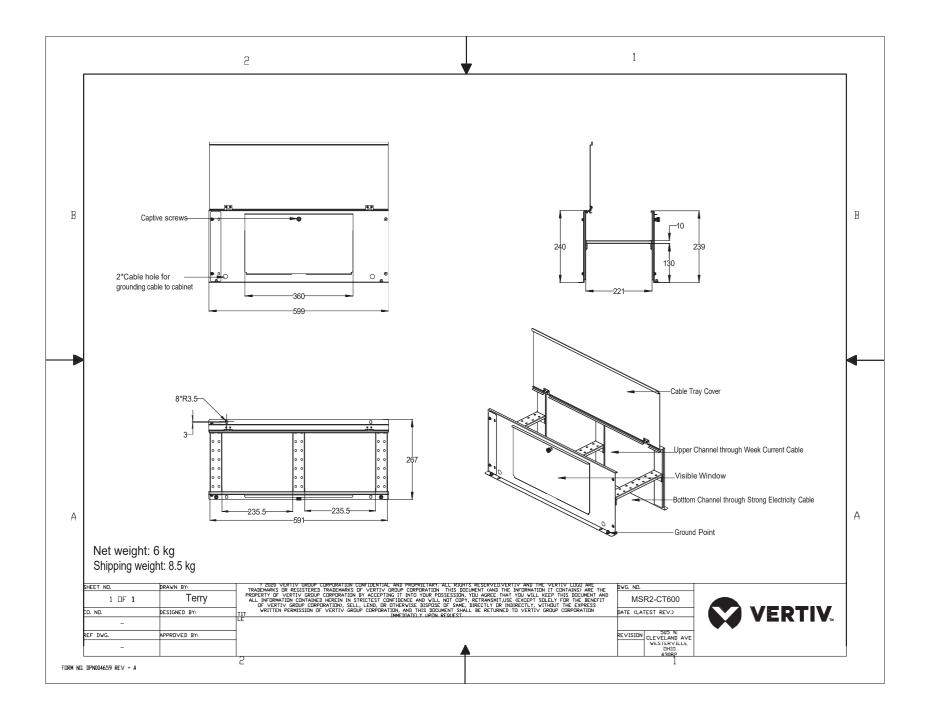












# **SCOPE OF WORK**

#### SmartRow2 Assembly

#### SERVICE SUMMARY

Feature	Detail
On-Site Service	Site trip(s) within the 48 contiguous states. Visit(s) to be scheduled by the customer between 7 am-5 pm, Monday-Friday (excluding weekends & national holidays).
Customer Support	Includes access to the Customer Resolution Center (1-800-543-2378) and the Vertiv Customer Services Network Online Internet portal for extent of product warranty.
Consolidation	The SmartRow2 includes numerous shippable units (typically pallets or boxes) that originate from multiple factories and suppliers. Vertiv consolidates these items into a single customer shipment and reduces the likelihood of shippable units being lost at the customer site. This benefits the customer by relieving the burden of keeping track of multiple partial shipments.
Inside Delivery	Vertiv Service will move the shippable units from the delivery truck to the Staging Area. Vertiv Services will unpackage the shippable units and remove/dispose of the packaging material so that it is ready for assembly. Vertiv will verify that all material on the sales order has been received.
Project Management	Included with Consolidation and Inside Delivery. Vertiv will assign a project manager for the project. The Project Manager will supervise the Consolidation and Inside Delivery Process and communicate hardware shipment schedules with the customer.
Assembly	SmartRow2 is assembled onsite by Vertiv factory-trained and authorized technicians equipped with Vertiv Proprietary tools and software. Vertiv CEs and Vertiv Partners are the only approved OEM service providers for Vertiv products. These technicians are supervised by a Site Manager who also gathers site- specific requirements like safety and work procedures
Factory Startup	Warranty inspection and startup validates the warranty and initializes the warranty coverage period

#### **SERVICE PERFORMED**

#### **Consolidated Shipment**

Shippable units may be available at time of order or built-to-order with a lead time. Vertiv safely stores these items in-warehouse until the customer is ready to receive the SmartRow2 in a single shipment

#### **Inside Delivery**

Vertiv Services will deliver the shippable units from the delivery truck to the Staging Area. Vertiv Services will unpackage the shippable units and remove/dispose of the packaging material so that it is ready for assembly. Vertiv will verify that all material has been received.

Change order option:

• There must be an appropriate loading dock with continuous, level floor from the dock to the staging area. If the shippable units must be moved up/down stairs, the customer must provide a suitable elevator, or charges for special rigging will be incurred. If the customer does not have an appropriate loading dock, nominal charges may/may-not apply for a lift-truck delivery.

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#### **Project Management**

Vertiv will assign a project manager and a site manager for the project.

The Project Manager will supervise the Consolidation and Inside Delivery Process and communicate schedules with the customer.

The Site Manager will supervise the assembly, startup, warranty inspection and turn over the SmartRow2 to the customer

#### **Site-Specific Requirements**

All personnel will be available for up to two hours per week for Site Access, Safety Training and other site-specific requirements Change Order Option:

Vertiv can quote a price for additional man-hours if 2 hours per week is insufficient

#### Assembly

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There shall be continuous, level floor between the Staging Area and the Installation Location so that heavy items can be moved via casters/pallet jacks.

Change Order Option:

• If there is not continuous level floor, the customer must provide or pay for any necessary lift/rigging equipment.

#### Vertiv PMC, including RDU501 SmartRow2 Controller/Display

Vertiv will position, level, and bay together the PMC as described in the submittal documents.

The customer is responsible for providing primary electrical power to the PMC.

Vertiv will program and configure the SmartRow2 RDU501 controller/display. This includes setting IP addresses so that the customer can monitor the system status remotely

Change Order Option:

 Vertiv will quote IP addressing of equipment on the customer network, but this would be done by other personnel and scheduled separately. This is outside the scope of SmartRow2 assembly.

#### Vertiv IT Rack(s)

Vertiv will position, level, and bay together the Vertiv IT Racks as described in the submittal documents.

Vertiv will not populate racks with customer IT gear, including blanking panels, servers, shelves, etc.

The customer must define addressing conventions (1,2,3,4, right-to-left or left-to-right) prior to start of work.

#### **Cable Trays**

Vertiv will install the SmartRow2 cable trays that are included with the SmartRow2 solution as described in the submittal documents

#### Liebert® CRV's, Temperature Sensors, Modbus cables, and associated Plenums

Vertiv will position and level the Liebert® CRV and attach the associated plenums to provide cooling to the SmartRow2.

Vertiv will connect the necessary temperature sensors.

The customer is responsible for piping and primary power to the CRV along with connecting CANBus cable between the CRV and heat rejection. All specific requirements (such as piping traps and proper electrical grounding) for correct product installation are detailed in the product installation manual.

After the SmartRow2 is assembled and the Liebert<sup>®</sup> CRV is piped and powered by the customer in accordance with the product installation manual, Vertiv will perform a factory warranty inspection along with the rest of the SmartRow2

#### Liebert<sup>®</sup> MC / CCD Condensers for Liebert<sup>®</sup> CRV's

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#### **Project Management**

The customer is responsible for installing the associated heat rejection. This includes primary power, CANBus communication wire, piping, refrigerant charging, and all other tasks in the Installation Manual. Any/all penetration points in the walls/ceilings/floors for any wiring or piping are also the customer's responsibility.

#### **Rack PDUs**

Vertiv will install and connect all rack PDUs (if applicable) including GXT5 power extensions (if applicable) as described in the submittal documents

#### Liebert<sup>®</sup> GXT5 Single Phase UPS's

Vertiv will install and connect all Liebert<sup>®</sup> GXT5 UPS's and connect power within the PMC cabinet and output to the PDUs as described in the submittal documents.

Additionally, Vertiv will install ancillary equipment such as Maintenance bypass and PD2-103 cabling and connectors if not already preinstalled.

After the SmartRow2 is assembled and Primary Power to the SmartRow2 is provided by the customer, Vertiv will perform factory startup of all GXT5 equipment along with the rest of the SmartRow2

#### Switch

Vertiv will install and connect the switch within the PMC cabinet. as described in the submittal documents

#### **Firmware Updates**

Vertiv will update firmware of any/all units to the current revision level. Shippable units are sourced globally and firmware evolves as products may be in stock with prior revisions

#### Wiring

Vertiv will run all necessary wiring for power and communication between cabinets as part of assembly. This includes setting IP/DIP switch settings for proper communication between the device and the PMC

#### Accessories

The SmartRow2 is available with lights, door locks/sensors, temperature sensors that Vertiv will connect and install.

Services associated with cameras are sold separately and out-of-scope for the SmartRow2 Assembly

#### **RDU Monitor SmartRow2 mobile application**

Services associated with the RDU Monitor SmartRow2 mobile applications are quoted separately and out-of-scope for SmartRow2 assembly

#### **ASSUMPTIONS AND CLARIFICATIONS**

- Vertiv start-up validates product warranty.
- Defects or damage resulting from installation not performed by Vertiv are not covered.
- Parts and Labor coverage is in accordance with Product Warranty. If a modified warranty is purchased, terms default to that specific package.
- Any customer site visit is limited to eight (8) hours per visit. Any time beyond forty (40) hours/wk or eight (8) hrs/day or additional Startup visits will be billed separately.

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- Expenses incurred due to delays that are beyond the control of Vertiv may be billed at cost.
- Startup visit must be scheduled confirmation of proper installation (if Vertiv not involved with installation).
- This pricing excludes any load bank testing. This can also be quoted separately if required.
- Pricing excludes activities associated with 3<sup>rd</sup> party commissioning
- Pricing excludes any type of circuit breaker NEMA testing. This can also be quoted separately if required.
- Customer/Installing contractor is responsible for providing elevated access as necessary.
- Any additional requests beyond the scope of this document will be billed separately by Vertiv.
- Vertiv will not perform physical changes to the site building (such as drilling holes, etc.)

#### **CUSTOMER RESPONSIBILITIES**

In order to provide timely, accurate and thorough execution of the services described herein, Vertiv requests the following:

- Point of Contact: Provide an authorized point of contact(s), specific for the scope of work, for scheduling and coordination purposes.
- Scheduling: Make dates available for scheduling service. All visits must be requested 4 weeks in advance for assembly and 10 days for startup/warranty-inspection of need by contacting the Vertiv Project Manager. Site must be available for 5 consecutive business days. Customer may choose to pay for premium time if weekend work is necessary.
- Site Access: Prior to time of scheduled work, provide site access including any customer required escort, security clearance, safety training and badging for Vertiv personnel.
- Equipment Access: Convenient access to the equipment covered by the Scope of Work. Prior to scheduled time of work, notify Vertiv personnel of any special requirements for equipment access including lifts, ladders, etc.
- Shutdown: Service may require shutdown of load to ensure electrical connection integrity.
- Notification: If for any reason the work cannot be performed during scheduled time, notify Vertiv personnel 24-hours prior to scheduled event.
- Provide Method of Procedure (MOP) requirements/ templates, and required review period(s)

#### **TERMS AND CONDITIONS**

Subject to all Terms & Conditions as noted in the Vertiv Terms & Conditions or the terms of a Master Agreement between the parties, if any, shall apply.

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