Pre-Configured Micro Data Center (MDC)

specifications

The pre-configured micro data center (MDC) shall be factory assembled to include the connectivity and cable management necessary to enable rapid installation of switch, server, and storage devices. The cabinet configuration shall be 24 or 42 RU and shall allow for installation of standard 29 inch (737mm) depth equipment. All metal elements within the cabinet shall be single-point bonded to ensure effective equipment grounding. The system shall meet EIA-310-E, TIA/EIA-942 and UL2416. Each MDC shall incorporate a set of four casters to simplify deployment. The MDC shall be easily expandable by purchasing add-on kits. Option for dynamic rated MDC shall be available to support IT equipment under typical shipping conditions.

technical information

	42 RU MDC	**24 RU MDC**
Dimensions:	27.6 in. (700mm) X 48.0 in. (1200mm) X 79.8 in. (2026mm)	23.9 in. (606mm) X 42.0 in. (1066mm) X 48.4 in. (1230mm)
Material:	Steel with durable black polyester epoxy powder coat finish	
Compliance:	EIA-310-E, TIA/EIA-942, UL2416	
Static load rating:	2500 lbs.	2000 lbs.
Packaging:	Cabinet ships assembled, one per pallet; Optional ramp shipped in upright position attached to pallet	

key features and benefits

Pre-configured solution	Includes the cabinet, connectivity and cable management in one part number to simplify specification and ordering and enable fast, repeatable integration
Reference architecture	Provides a physical map of the logical network layer and follows recommended installation practices, such as the Rockwell Automation* and Cisco** Converged Plantwide Ethernet (CPwE) architecture, to improve debug processes and increase system reliability and uptime
Dynamic rated	Incorporates reinforced structure and is shipped on shock-proof pallet with ramp to allow for safe transport of IT equipment under typical shipping conditions
Expansion ready configuration	Includes space for future expansion of server, storage, and related patching elements to allow for increased network capacity without requiring addition to control room footprint
Bonded structure	Incorporates single-point bonded cabinet, ground bar system and ESD port to help ensure network reliability and prevent equipment failure
Integrated cable management with bend radius control	Maintains bandwidth through the network for increased uptime

applications

The pre-configured MDC allows industrial system integrators to quickly and reliably deploy rack mount equipment while protecting the critical physical media that makes up the industrial network. The MDC is supplied in an assembled form, ready to accept the servers, switches and storage in its state-of-the-art cabinet housing.

The dynamic rated cabinet is designed to allow the equipment to be installed at one facility and be safely shipped to another location. This is ideal for system integrators or Value Added Resellers (VARs), as it allows the equipment to be pre-installed, cabled and ready for quick deployment. The heavy duty reinforced frame and shock pallet have been tested and approved to support the additional weight of equipment. An optional re-useable ramp allows the cabinet to be easily unloaded from the pallet.

The system is aligned with the CPwE architecture for manufacturing, including a demilitarized zone (DMZ) with firewall appliances and redundant compute and switching resources.
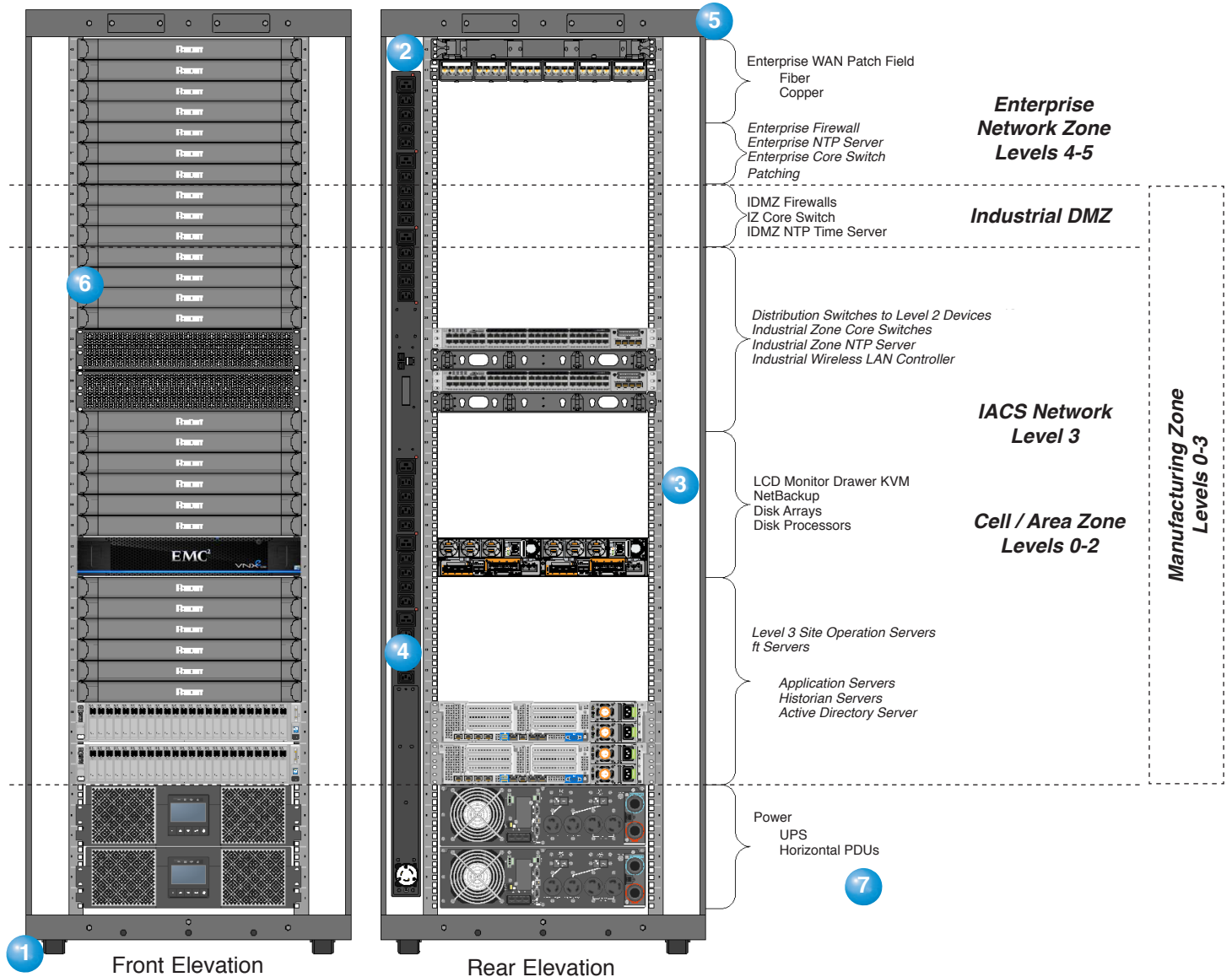
*Rockwell Automation is registered by Rockwell Automation in the Patent and Trademark Office of the United States.
**Cisco is a registered trademark of Cisco Technology Inc.

Pre-Configured Micro Data Centers (MDC)

42 RU, dynamic rated MDC:	MDC79D
24 RU, dynamic rated MDC:	MDC48D
42 RU MDC:	MDC79

42 RU MDC Add-On Kits

4 RU din-rail conversion kit:	IABDIN4
Grounding jumper kit:	RGEJ660PF
Fiber shelf:	FCE1UA + 4 FAPs
(LC connector):	FAP12WAQDLCZ
LC to LC patch cord:	FX2ERLNLNSNM002
Mini-Com® TX6™ PLUS UTP Jack Module:	CJ688TGBL-24
28 AWG Shielded Category 6A Patch Cord:	STP28X**xx
Network security devices: RJ45 Blockout, Red:	PSL-DCJB
RJ45 Lock-in, Red: Other colors available.	PSL-DCPLX
PDUs:	P24G01M (NEMA L6-30) P24G06M (IEC-60309-6H 2P+E)

24 RU MDC Add-On Kits

4 RU din-rail conversion kit:	IABDIN4
Grounding jumper kit:	RGEJ660PF
Fiber shelf: (LC connector):	FCE1UA + 4 FAPs FAP12WAQDLCZ
LC to LC patch cord:	FX2ERLNLNSNM001
28 AWG Shielded Category 6A Patch Cord:	STP28X**xx
Network security devices: RJ45 Blockout, Red:	PSL-DCJB
RJ45 Lock-in, Red: Other colors available.	PSL-DCPLX
PDU:	P12B47M

Pre-Configured Micro Data Center (MDC)

A micro data center or MDC is a versatile combination of hardware, software and cabling that serves as an end-to-end networking hub, sized to serve the demands of a manufacturing environment. Panduit's pre-configured MDCs are designed and validated to allow a physical layout that facilitates deployment of best-in-class logical network architectures.

79" Micro Data Center (Full Rack)

The 42 RU MDC is designed for active hardware enabling up to 200 devices within the manufacturing floor. It is designed to house switches, firewalls, storage, servers, and UPS equipment.
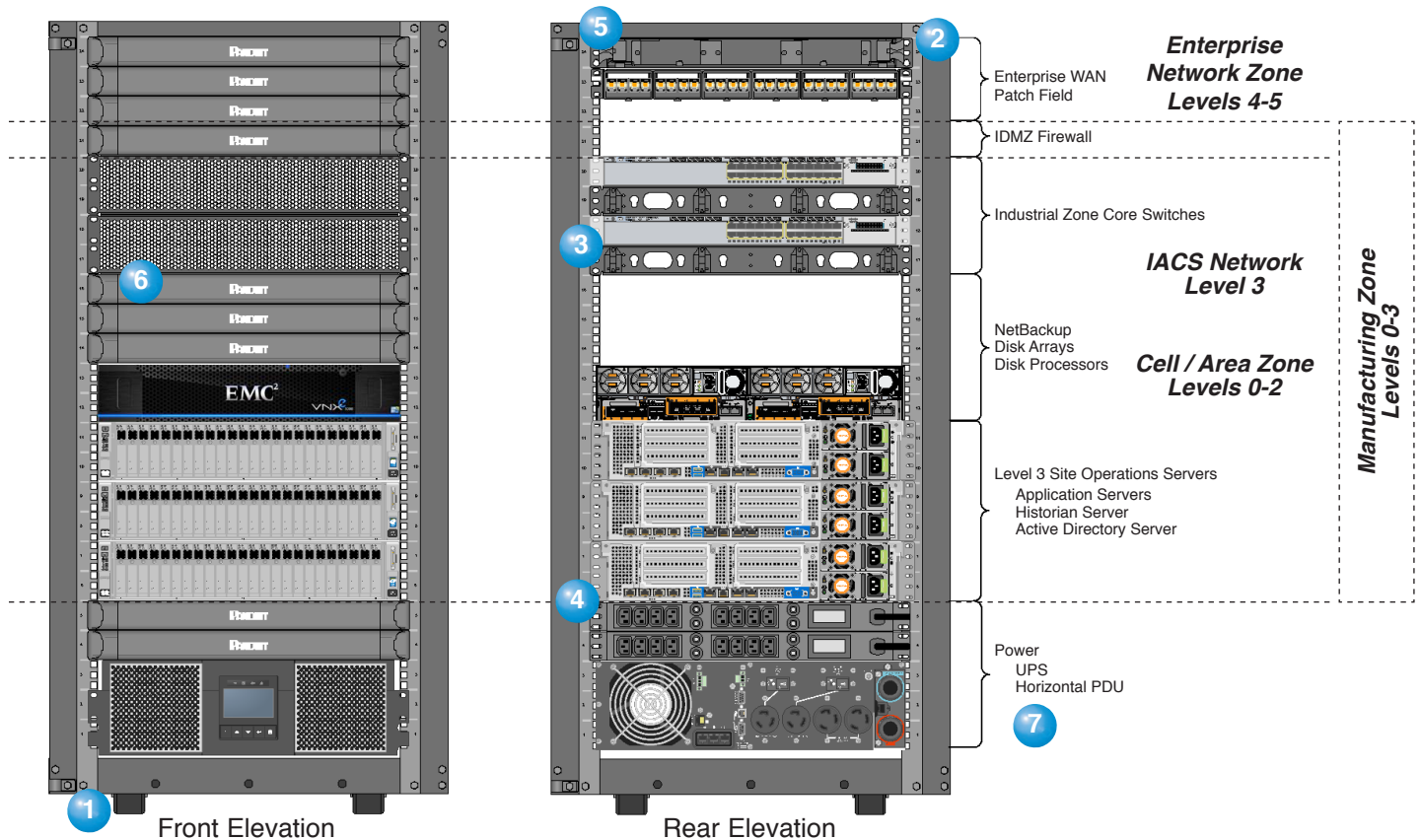

Front Elevation

Rear Elevation

Enterprise WAN Patch Field
  Fiber
  Copper

Enterprise Firewall
Enterprise NTP Server
Enterprise Core Switch
Patching

IDMZ Firewalls
IZ Core Switch
IDMZ NTP Time Server

Distribution Switches to Level 2 Devices
Industrial Zone Core Switches
Industrial Zone NTP Server
Industrial Wireless LAN Controller

LCD Monitor Drawer KVM
NetBackup
Disk Arrays
Disk Processors

Level 3 Site Operation Servers
ft Servers

  Application Servers
  Historian Servers
  Active Directory Server

Power
  UPS
  Horizontal PDUs

Enterprise Network Zone Levels 4-5

Industrial DMZ

IACS Network Level 3

Cell / Area Zone Levels 0-2

Manufacturing Zone Levels 0-3

1. Delivered with casters installed and on shock-absorbing pallet with ramp for safe shipping and fast integration.

2. 24-port patch panel CPPL24WBLY pre-installed to enable structured cabling.

3. Vertical cable managers are pre-installed to route and protect data cabling.

4. Space included for a vertical power outlet unit with 10 receptacles (sold separately).

5. Includes fiber optic patching enclosure FCE1UA with space for 4 FAPs.

6. Blanking panels included to optimize air flow within micro data center.

7. Delivered with box which includes all necessary patch cords, jacks, and other accessories needed to finish integration of popular micro data center configurations.

48" MDC (Half Rack)

The 24 RU MDC is designed for active hardware enabling 30-50 devices within the manufacturing floor. It is designed to house switches, firewalls, storage, servers, and UPS equipment.
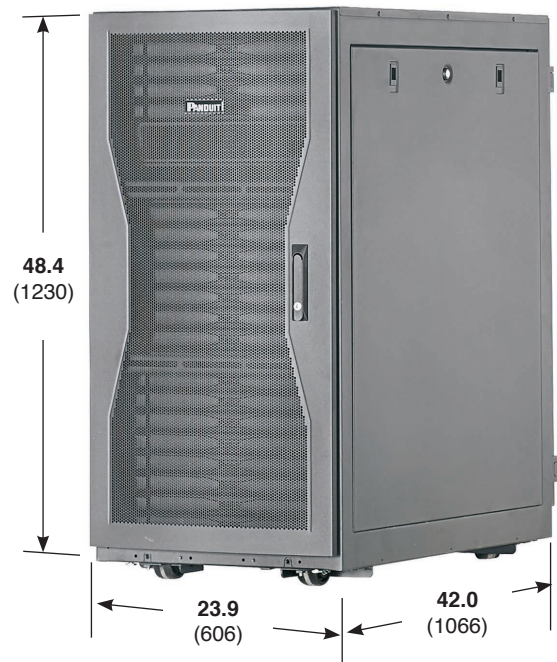

Front Elevation

Rear Elevation

Enterprise Network Zone Levels 4-5

Enterprise WAN Patch Field

IDMZ Firewall

Industrial Zone Core Switches

IACS Network Level 3

NetBackup
Disk Arrays
Disk Processors

Cell / Area Zone Levels 0-2

Level 3 Site Operations Servers
   Application Servers
   Historian Server
   Active Directory Server

Power
   UPS
   Horizontal PDU

Manufacturing Zone Levels 0-3

1. Delivered with casters installed and on shock-absorbing pallet with ramp for safe shipping and fast integration.

2. 24-port patch panel CPPL24WBLY pre-installed to enable structured cabling.

3. Multiple horizontal cable managers are pre-installed to route and protect data cabling.

4. Space included for rack-mount power outlet units (sold separately).

5. Includes fiber optic patching enclosure FCE1UA with space for 4 FAPs.

6. Blanking panels included to optimize air flow within micro data center.

7. Delivered with box which includes all necessary patch cords, jacks, and other accessories needed to finish integration of popular micro data center configurations.

Pre-Configured Micro Data Center (MDC)

42 RU 79" MDC

79.8
(2026)

27.6
(700)

48.0
(1200mm)

24 RU 48" MDC

48.4
(1230)

23.9
(606)

42.0
(1066)

Dimensions are in inches. (Dimensions in parentheses are metric).

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