4 | **3** | **2** | **1**

1 Cat 6 cable UTP, CMP (plenum)

2 Wyr-Grid® Overhead Tray Routing System

3 Dielectric Double Jacketed Fiber Cable

Physical Infrastructure backbone for building automation networks.

6 Fiber Patch Cable

16 Patch Cables

D

Wyr-Grid

IT Network

IDF

12

Managed OT switch deployed in Industrial Distribution Frame

5 J-Pro™ Cable Support System

8 Smart Zone G5 Rack PDU

11 Single Port Adapter

C

9 Angled Patch Panel

14 UTP Jack module

Ethernet Network Uplink

Zone

13

Controller

10 Fiber Adapter Panel

4 DIN rail patch panel

17 Single Service Port

18 Panduit UPS

Ring Manager switch deployed in Zone Enclosure

Controller

B

Motor Drive

BACnet IP Network

15 Angled Field Terminable Plug

VFD

Controller

Controller

Ring Topology Field Controllers

Controller

TEMP
23.5°

BACnet MS/TP Network

Controller

Supervisor

Controller

7 SPE cable

VAV

A

ASHRAE BACnet

Color Coding Legend	Fiber	Ethernet	BACnet MS/TP	#	BOM reference (Ref.) number on back page	PCD017-APR21-ENG	**PANDUIT**™	**Building Automation Network**

4 | **3** | **2** | **1**

Bill of Materials

Ref.	Part Number	Description
		Fiber, Copper Cable, and pathways
1	PUP6C04BU-ULP	TX6™ Category 6 U/UTP Copper Cable, 4-pair, 23 AWG Solid, UTP, CMP, Blue. 1000 ft. carton
2	WG12BL10	Wyr-Grid® Pathway Section, 12.0"W x 10.0'L
3	FOJDZ12**	OM4 fiber, Dielectric Double Jacketed (indoor/outdoor), Riser, Low Smoke Zero Halogen, Multimode, 12 fiber
4	CDPP8RG	IndustrialNet™ 8-Port Shielded DIN Rail Mount Patch Panel, includes labels and label covers
5	JP2W-L20	J-Pro™ Cable Support System, for wall mount applications, one 1/4" (M6) mounting hole for user supplied screw, 2" max. bundle capacity, nylon 6.6 with metal attachments, Black, 50pc. package
6	FZ2ERLNLNSNM*	Duplex Fiber Patch Cord is OM4 with 1.6mm jacketed cable. Riser (OFNR) rated, LC duplex connectors, standard insertion loss; * determines length in meters
7	SP-SFCS1IG-CEG	Single Pair Ethernet (SPE) Shielded Copper Cable, 18/7 AWG stranded tinned copper conductors, foamed polyethylene insulation, foil shield, tinned copper braid shield, and copper ground wire, 1000 ft. reel
		Network Zone, Industrial Distribution Frame, and Patching
8	P24G01M	SmartZone™ G5 Monitored Switched Per Outlet (MSPO Series) Rack PDU, 30 A Single Phase, 208 V, (20) C13 & (4) C19 receptacles, NEMA L6-30P plug; 68.9"L x 2.05"W x 2.1" D, Black
9	CPPA48HDWBLY	High Density Angled Modular Patch Panel accepts up to 48 Mini-Com® Modules for unshielded applications in 1 RU, mounts to 19" and 23" racks and cabinets, Black
10	FAP6WAQDLCZ	LC Fiber Adapter Panel, OM3/OM4, contains six LC duplex multimode fiber optic adapters, Aqua, zirconia split sleeves
11	CADIN1BL	Mini-Com® DIN Rail Mount Adapter mounts to standard 35mm DIN rails and accepts any single-port Mini-Com® Module, Black, includes label and label cover
12	ZDF48-RA	Pre-Configured Industrial Distribution Frame Enclosure ready for two access and two distribution switches; available in several sizes and stainless steel versions
13	Z23*	Pre-Configured Network Zone System, 24" x 36", stainless steel enclosure, for two industrial switches, includes (16) Cat 6 UTP copper patch cords and jacks, (4) MM LC fiber patch cords with (6) adaptors, backplane and cable management; available in mild steel, stainless steel, or sloped versions and various levels of integration
		Connectors, Patch Cords, and UPS
14	CJ688TGBL	TX6™ PLUS Category 6, RJ45, 8-position, 8-wire, UTP Mini-Com® Universal Jack Module, Black
15	FPUD6X88MTG	Angled TX6A™, Category 6A UTP Field Term RJ45 Plug, for field termination of 4-pair twisted pair cable; Category 6A performance, compatible with Category 6 and 5e unshielded systems.
16	UTP28SP7BU	Category 6 Performance, 28 AWG UTP Patch Cord with TX6™ Modular Plugs on each end, Blue, 7'; available in other colors, lengths, and wire gauge size
17	ISSP2BL	30.5mm Notched Single Service Port, Black; Mini-Com® Module ordered separately
18	UPS00100DC	Uninterruptible Power Supply (UPS) is maintenance free and requires no battery; 100W, 24 V DC; ultracapacitor technology reduces the risk of downtime from battery failures

* Several versions of part available, not a complete part number, **Additional fiber counts available.

About this Configuration
Panduit offers a reliable end-to-end network physical layer infrastructure, for building automation systems and intelligent building Internet of Things (IoT) applications, which simplifies network deployments and provides future ready designs.

Migrating to Ethernet
Building automation systems are moving into standards-based Ethernet networks and away from proprietary and serial networks. Having an engineered design for the network physical infrastructure allows for optimal performance and expansion. With the proliferation of sensors and IoT, building automation systems are becoming more network centric and require reliable and expandable physical infrastructure.

Structured Cabling
Structured cabling is a planned cabling system that systematically lays out the cable management necessary for communications. Structured cabling provides testable links, wired spare ports, and the use of solid cable for the system backbone. While building automation will still consist of some point-to-point connections, developing a structured cabling system for the majority of connections is beneficial.

Single Pair Ethernet Cabling
Future proof the network by installing Single Pair Ethernet cable. This cable can be used for many types of traditional fieldbus networks and will accommodate Single Pair Ethernet solutions as they become available.

For more information contact your local distributor or Panduit Sales Representative.

PANDUIT™