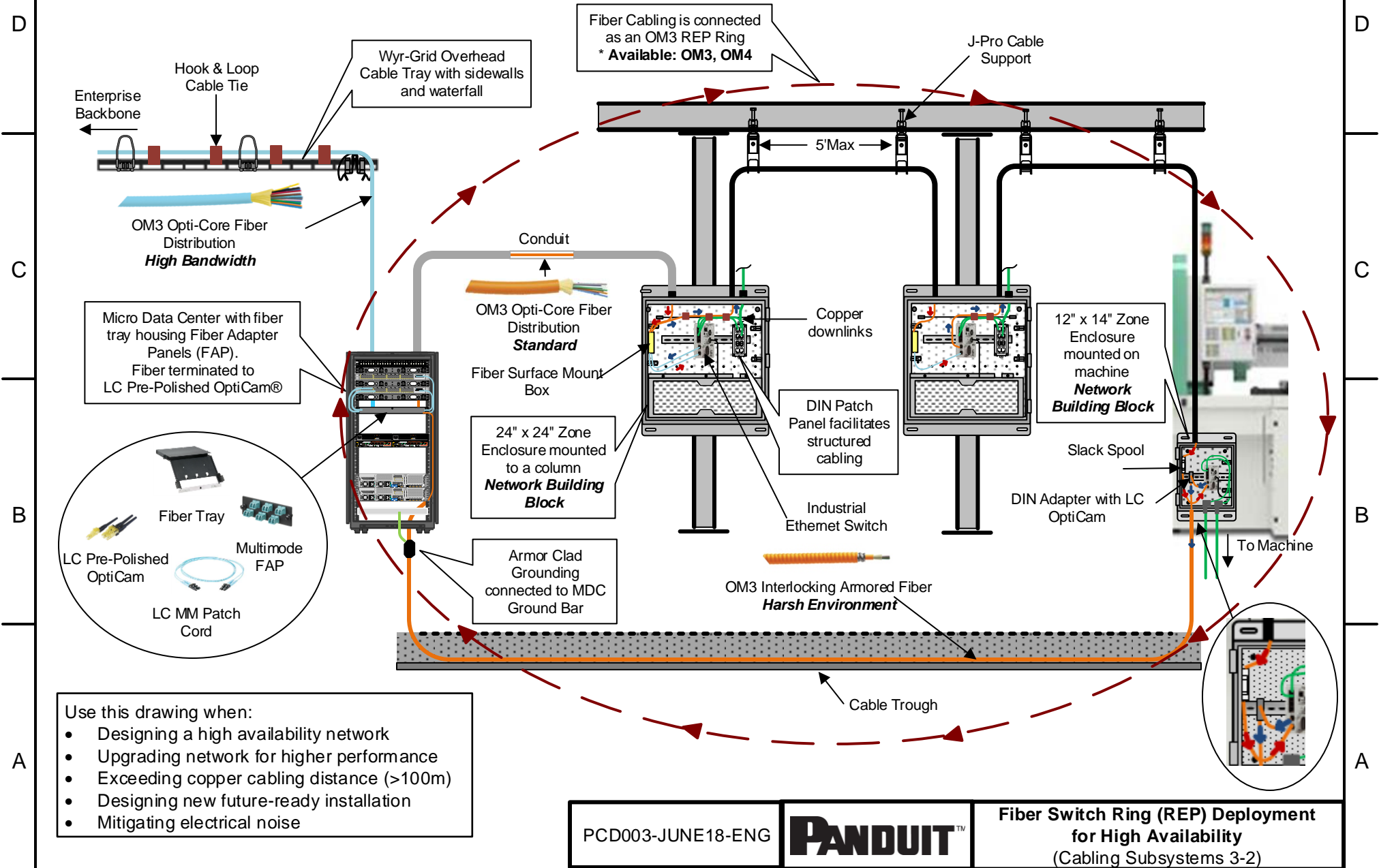


This drawing shows various fiber cabling, pathways, adapters, and connectors for a Resilient Ethernet Protocol (REP) switch ring using an Industrial switch for high availability.



Use this drawing when:

- Designing a high availability network
- Upgrading network for higher performance
- Exceeding copper cabling distance (>100m)
- Designing new future-ready installation
- Mitigating electrical noise

Bill of Materials

Part Number	Description
Cabling, Patch Cords and Zone Enclosure	
FODRX12Y	50um OM3 12 Fiber Indoor Distribution Cable, Riser (OFNR), 900um buffered fibers
FODPX06Y	50um OM3 6 Fiber Indoor Distribution Cable, Plenum (OFNP), 900um buffered fibers
FODRX12Y	50um OM3 12 Fiber Indoor Distribution Cable, Riser (OFNR), 900um buffered fibers
ACG24K	Armored cable grounding kit
FX2ERLNLNSNM002	2 fiber OM3 LC duplex to LC duplex patch cord OFNR (riser) rated, 16mm jacketed cable Std IL 2 meters
Z22*	24" x 24" Network Zone System with 8 downlinks and UPS (Universal, Switch-Ready, Integrated and Pre-Configured)
Z11*	12" x 14" Network Zone System with 8 downlinks (Universal, Switch-Ready, Integrated and Pre-Configured)
NWSLC-2Y	Cable identification sleeve, 1" length, 100-piece package
FLCCLIW-X	Lock in connector
PSL-LCAB-BU	LC duplex adapter block-out device

Adapters, Connectors, DIN Patch Box and Tray

FCE1U	1 RU Rack mount fiber enclosure
FLCDMCXAQY	LC OptiCam OM3/OM4 10Gig 50/125um multimode duplex fiber connector
FAP8WAQDLCZ	LC 10Gig OM3/OM4 FAP loaded with eight LC 10Gig duplex multimode fiber optic adapters with zirconia ceramic split sleeves
FDME8RG	IndustrialNet 8-port DIN Rail fiber optic enclosure

Pathways

WG12BL10	12"W x 10"L Wyr-Grid pathway section
WGSPL1218BL	Wyr-Grid straight splice connector
WGSW4BL	Wyr-Grid 4"H snap-on sidewall
JP2SBC50-L20	J-Pro screw-on beam clamp for use with flanges up to 1/2" thick
HLB2S-C0	Tak-Ty hook & loop stacked strip cable tie

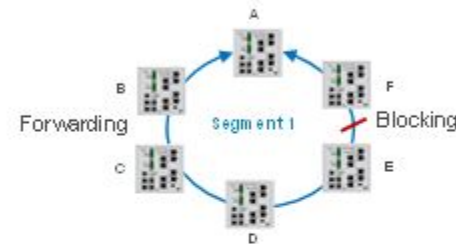
*Network Zone Enclosures available in mild steel, stainless steel or sloped versions and various levels of integration. For an expanded product offering visit panduit.com/networkpartsamerica or the online catalog at panduit.com.

About this Configuration

Fiber is ideal for high-bandwidth, long-distance and electrical-noise-immune transmission. This drawing lays out the options for media, methods to route, protect and patch fiber for a high availability REP switch ring.

Resilient Ethernet Protocol (REP) Ring

Resilient Ethernet Protocol (REP) is a segment concept. Segments can be wrapped into rings seen as a redundant link to form a redundant network that self-heals (typically less than 80ms).



Best Practices

- Fiber switch uplinks minimize network drop out during discovery after a disconnect as well as provide the largest bandwidth headroom.
- Controlling fiber bend radius using spools, waterfalls, etc. minimizes signal attenuation to achieve the greatest distance and performance.
- Structured cabling accommodates network expansion, speeds up troubleshooting, and improves reliability. It is a cabling infrastructure that has demarcation points such as patching and horizontal cabling.
- Cable identification using labels and color coding speeds up troubleshooting and maintenance activities (moves/adds/changes). When applying labels, use a sleeve.
- Prevent unauthorized access and cable changes with block-out and lock-in port control products.
- Grounding of armored fiber cabling required for electrical code.
- Link testing with a power meter ensures optimal signal transmission.
- Conduit fill should not exceed 60% capacity.

References

- Panduit Fiber Optic Infrastructure Application Guide
- ANSI/TIA 568C
- NECA/FOA 301