PANDUIT® building a smarter, unified business foundation
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Product Bulletin

Integrated Network Zone System

The integrated network zone system enables network communications between the control room and manufacturing floor within an industrial facility. Available in three base configurations, the systems are integrated with an Allen-Bradley Stratix industrial Ethernet switch for fast deployment. The active equipment is deployed with network structured cabling and cable management according to best practices and industry installation guidelines. Systems also include Allen-Bradley uninterruptible power supplies installed behind a touch-safe protective cover, and are UL certified.

Key Features	Benefits
Integrated solution	Significantly reduces the amount of effort and complication when integrating the plant floor and enterprise networks, up to 75% reduction in deployment time may be achieved with the integrated solution
Managed switching	Integrated Allen-Bradley Stratix switches offer management and diagnostics from within IT and controls environments and optimizes network traffic
IT ready	Protects from shock hazards, allows clean segmentation between the upper level plant network and the machine level network to help maintain network service level agreements (SLAs)
Validated performance	Thermally tested and validated designs incorporate best practices for switch deployment, media selection, and cable management to maximize performance

Applications

Panduit's Integrated Network Zone System is used to deploy an EtherNet/IP™ network between the enterprise and the plant floor. Using the Integrated Network Zone System allows the usability and familiarity of IT switches while maintaining the critical uptime needs and controls interfaces on the plant floor. This ensures that management and control of your network does not get in the way of making the most effective use of your data available on the network.

Integrated Network Zone System

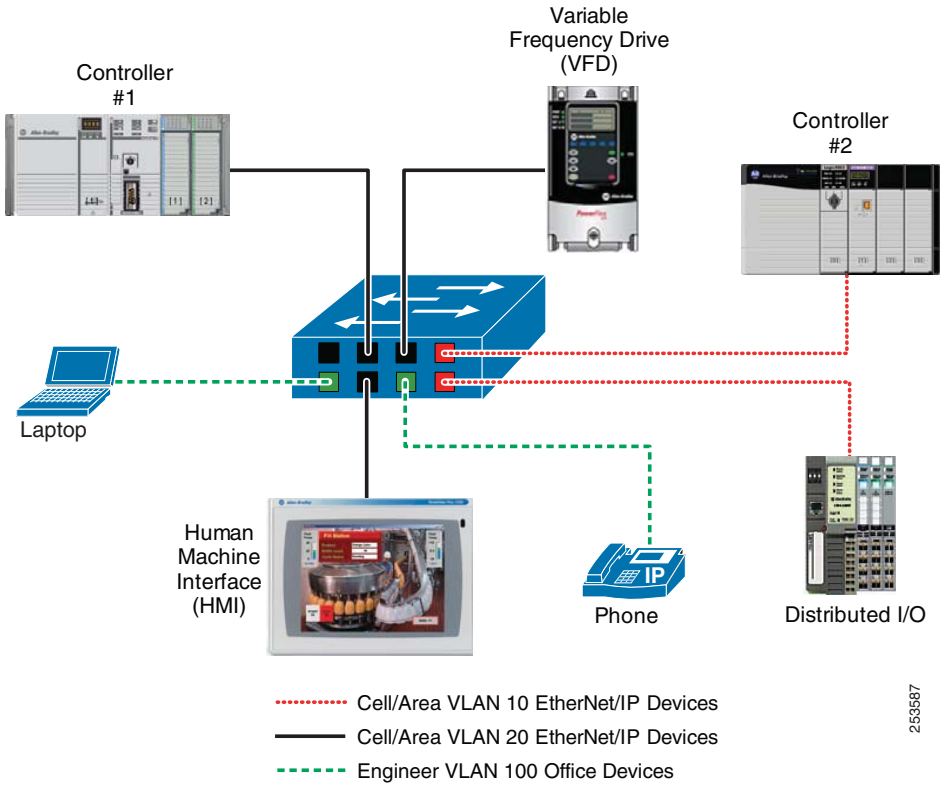
Deploying Zone Network Topology

A highly effective way to deploy EtherNet/IP solutions in a plant floor environment is to follow the recommendations from Rockwell Automation and Cisco in their Converged Plantwide Ethernet (CPwE) design and implementation guide. In this guide the use of zoned network topology is recommended as a best practice.

Using Panduit's Network Zone System integrated with Stratix switches from Rockwell Automation provides a platform for implementing small VLANs for cell/area zones as recommended under CPwE, to improve manageability and limit Layer 2 broadcast domains. The VLAN approach allows one zone enclosure to feed network connections to high priority manufacturing control system nodes as well as lower priority connections for printers or data collection, while segmenting and isolating traffic.

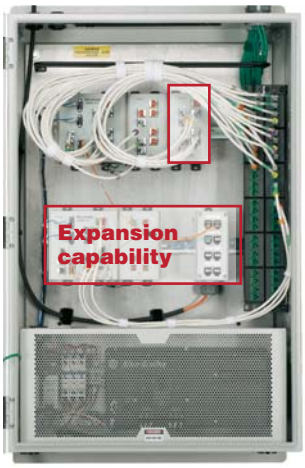
The zone enclosures allow all cables within a cell to be managed and patched within a single enclosure. By using a zone cabling architecture approach, network cabling becomes easier to locate, manage, and maintain because each additional device is routed within the same pathways and enclosures. In this way, managed cabling reduces the number of home runs throughout a facility and also helps reduce abandoned cable in plenum spaces, helping make the workplace run more efficiently and safely.

Following a zone topology allows a highly scalable and flexible deployment using building blocks of the CPwE architecture.



Deploying Machine Control Networks

As EtherNet/IP continues to expand into machine-level networks, more and more devices become connected to the network. This creates the need for proper segmentation to maintain a robust, reliable, secure network infrastructure. Panduit's Integrated Network Zone Systems can help effectively isolate and manage network traffic at the machine.

	Z23N-SBABD1	Z22N-SDAD1	Z11N-SDD
Layout			
Stratix Industrial Ethernet Switches	 Stratix 8000™ Modular Managed Switch 1783-MS10T	 Stratix 5700™ Managed Industrial Ethernet Switch 1783-BMS10CA	
Advanced Switching Technology	Leveraging the Rockwell Automation Integrated Architecture™ technology simplifies switch configuration and integration while providing machine-based diagnostics and troubleshooting tools. Stratix Industrial Ethernet Switches also leverage the Cisco operating system, bringing the world's leading switching technology to the plant floor environment. Advanced switch feature sets include: STP/RSTP/MST, Resilient Ethernet Protocol (REP), Flexlinks, EtherChannel (link aggregation), QoS, IGMP snooping with querier, VLANs with trunking, IEEE 1588 PTP v2, IPv6 support, storm control with alarming, egress traffic shaping; compatible with Cisco Network Assistant (CNA) and CiscoWorks.		
Power Input	120V AC		24V DC or 48V DC
Allen-Bradley UPS	Rated 9 min., 325 watts actual 59 min. (fully expanded)	Rated at 12V 7Ah actual 3.5 hrs	—
Uplinks	Two 1 Gb multimode fiber optic uplinks with LC connector		
Port Count Pre-Installed	16 RJ45 Ethernet	8 RJ45 Ethernet	
Maximum Port Count	48 Ethernet ports*	—	

*Maximum port count requires additional switch and expansion modules to be installed.

Integrated Network Zone System

Technical Information

Standards	UL 508A – Industrial Control Panels
Rating	UL Type 4/12 and IP46
Environment	40°C ambient outside of enclosure or 60°C maximum within enclosure at up to 95% (non-condensing) humidity
Installation	Wall mount with optional outside-mount flange
Dimensions	Z23N-SBABD1: 36.0"H x 24.0"W x 11.7"D (914mm x 610mm x 297mm) Z22N-SDAD1: 24.0"H x 24.0"W x 11.7"D (610mm x 610mm x 297mm) Z11N-SDD: 14.0"H x 12.0"W x 9.7"D (356mm x 305mm x 247mm)

Ordering information

Part Number	Description
Base Configurations	
Z23N-SBABD1	24"x36" integrated system with 16 downlinks, expandable up to 48 and UPS
Z22N-SDAD1	24"x24" integrated system with 8 downlinks and Allen-Bradley UPS
Z11N-SDD	12"x14" integrated system with 8 downlinks
Z23N Add-On Kits	
1783-MS10T	Stratix 8000™ Switch, available from Rockwell Automation
1783-MX08T	Copper expansion module, available from Rockwell Automation
1783-MX08F	Fiber expansion module, available from Rockwell Automation
FSPD504	OptiCore™ Dielectric Conduited Fiber Uplink Cable
PUR6504BU-UY	Copper downlink cable
IAECGP	Downlink gland plate
LEDS12	12.5" LED strip light
LEDDS	Door switch
LEDCPS4	Din-mount power supply
Z22N Add-On Kits	
FSPD504	OptiCore™ Dielectric Conduited Fiber Uplink Cable
PUR6504BU-UY	Copper downlink cable
IAECGP	Downlink gland plate
Z11N Add-On Kits	
FSPD504	OptiCore™ Dielectric Conduited Fiber Uplink Cable
PUR6504BU-UY	Copper downlink cable
IAECGP	Downlink gland plate

Rockwell Automation Strategic Alliance

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Product Bulletin Number **ZCCB01--WW-ENG**
12/2012