

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 Panduit's maintenance free and networked 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
Uninterruptible power	No battery, maintenance-free power interruption protection provides peace of mind without concern of battery life. Includes remote management with life monitoring, available uptime, temperature and more

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.

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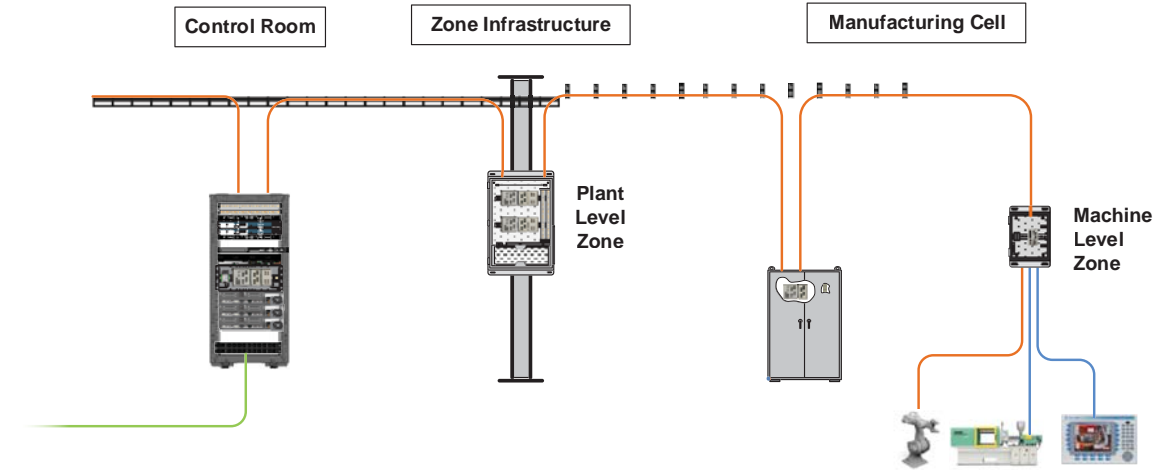
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Deploying Zone Network Topology




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 Plant-wide 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 in the CPwE to improve manageability and limit Layer 2 broadcast domains†.

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. Managed cabling helps reduce the number of home runs throughout a facility and 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.

Layout	Part Description	Stratix Industrial Ethernet Switches	Power Input	Panduit Networked UPS	Uplinks	Downlink Port Connectivity Provided	Maximum Downlink Port Count
Z23N-SBAAD5	24" x 36" Network Zone System with Stratix 8000 1783-MS10T switch with 2 1Gb MM fiber optic uplinks, with redundant power supplies and no battery maintenance-free UPS.	Stratix 8000* Modular Managed Switch 1783-MS10T 	100-250 V ac	No Battery, Maintenance-free, with remote management UPS, estimated holdtime = 7 minutes fully expanded	Two 1 Gb OM3 multimode fiber optic uplinks with LC cord and adaptors	8 RJ45 Ethernet	48 RJ45 Ethernet††
Z23N-SBABD5	24" x 36" Network Zone System with Stratix 8000 1783-MS10T switch with 2 1Gb MM fiber optic uplinks and 1783-MX08T expansion module, with redundant power supplies and no battery maintenance-free UPS.				16 RJ45 Ethernet		
Z23N-SBABA5	24" x 36" Network Zone System with Stratix 8000 1783-MS10T switch with 2 1Gb copper uplinks and 1783-MX08T expansion module, with redundant power supplies and no battery maintenance-free UPS.				Two 1 Gb copper uplinks	16 RJ45 Ethernet	
Z23N-SBACD5	24" x 36" Network Zone System with Stratix 8000 1783-MS10T switch with two 1Gb MM fiber optic uplinks and two 1783-MX08T expansion modules, with redundant power supplies and no battery maintenance-free UPS.				Two 1 Gb OM3 multimode fiber optic uplinks with LC cord and adaptors	24 RJ45 Ethernet	
Z23N-SBAGD5	24" x 36" Network Zone System with Stratix 8000 1783-MS10T switch with 2 1Gb MM fiber optic uplinks and 1783-MX08F expansion module, with redundant power supplies and no battery maintenance-free UPS.				8 RJ 45 Ethernet 8 MM Fiber		
Z23N-SBBAD5	24" x 36" Network Zone System with 2 Stratix 8000 1783-MS10T switches each with 2 1Gb MM fiber optic uplinks, with redundant power supplies and no battery maintenance-free UPS.				16 RJ45 Ethernet		
Z23N-SBBFD5	24" x 36" Network Zone System with 2 Stratix 8000 1783-MS10T switches each with 2 1Gb MM fiber optic uplinks and 2 1783-MX08T expansion modules, with redundant power supplies and no battery maintenance-free UPS.				48 RJ45 Ethernet		
Z23N-SGABD5	24" x 36" Network Zone System with Stratix 8300 1783-RMS10T switch with 2 1Gb MM fiber optic uplinks and 1783-MX08T expansion module, with redundant power supplies and no battery maintenance-free UPS.	Stratix 8300* Modular Managed Switch 1783-RMS10T			16 RJ45 Ethernet		
Z22N-SDAD5	24" x 24" Network Zone System with Stratix 5700 1783-BMS10CGA switch with 2 1Gb MM fiber optic uplinks, with redundant power supplies and no battery maintenance-free UPS.	Stratix 5700* Managed Industrial Ethernet Switch 1783-BMS10CGA 	100-250 V ac	No Battery, Maintenance-free, with remote management UPS, estimated holdtime = 9 minutes fully expanded	Two 1 Gb OM3 multimode fiber optic uplinks with LC cord and adaptors	8 RJ45 Ethernet	8 RJ45 Ethernet
Z22N-SDAA5	24" x 24" Network Zone System with Stratix 5700 1783-BMS10CGA switch with 2 1Gb copper uplinks, with redundant power supplies and no battery maintenance-free UPS.				Two 1 Gb copper uplinks		
Z22N-SEAD5	24" x 24" Network Zone System with Stratix 5700 1783-BMS20CGP switch with 2 1Gb MM fiber optic uplinks, with redundant power supplies and no battery maintenance-free UPS.				Stratix 5700* Managed Industrial Ethernet Switch 1783-BMS20CGP	Two 1 Gb OM3 multimode fiber optic uplinks with LC cord and adaptors	
Z11N-SDD	12" x 14" Network Zone System with Stratix 5700* 1783-BMS10CGA switch with 2 1 Gb MM fiber optic uplinks.	Stratix 5700* Managed Industrial Ethernet Switch 1783-BMS10CGA 	24 V dc or 48 V dc	N/A	Two 1 Gb OM3 multimode fiber optic uplinks with LC cord and adaptors	8 RJ45 Ethernet	8 RJ45 Ethernet
Z11N-SDA	12" x 14" Network Zone System with Stratix 5700* 1783-BMS10CGA switch with 2 1 Gb copper uplinks.				Two 1 Gb copper uplinks		
Z11N-SED	12" x 14" Network Zone System with Stratix 5700* 1783-BMS20CGP switch with 2 1 Gb MM fiber optic uplinks.				Stratix 5700* Managed Industrial Ethernet Switch 1783-BMS20CGP	Two 1 Gb OM3 multimode fiber optic uplinks with LC cord and adaptors	

†For additional reference see the Panduit Popular Configuration Drawing "Overview of Industrial Switch Deployment" PCD0001.

††Maximum port count may require additional switch and expansion modules to be installed.

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.

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Technical Information

Standards	UL 508A – Industrial Control Panels
Rating	UL Type 4/12 and IP66 All electrical components rated for Class 1, Division 2 environments
Environment	40°C ambient outside of enclosure or 60°C maximum within enclosure at up to 95% (non-condensing) humidity; Z11N systems rated up to 50°C ambient
Installation	Wall mount with optional outside-mount flange
Dimensions	Z23N series: 36.0"H x 24.0"W x 11.7"D (914mm x 610mm x 297mm) Z22N series: 24.0"H x 24.0"W x 11.7"D (610mm x 610mm x 297mm) Z11N series: 14.0"H x 12.0"W x 9.7"D (356mm x 305mm x 247mm)

Configuration Options

Shielded connectivity:	For deployments requiring shielded copper cabling, add an "S" to the end of the part number. For example: Z23N-SBAAD1S. These systems will include shielded Category 6 jacks and shielded patch cables.
Singlemode uplinks:	For singlemode fiber optic uplinks substitute "D" for "E". For example: Z23N-SBAAE1 These systems will include two SM SFP transceivers (1783-SFP1GLX) and two SM fiber optic patch cables per switch.

Add-On Kits

Part Number	Part Description
Z23N Add-On Kits	
1783-MS10T	Stratix 8000* switch, available from Rockwell Automation.
1783-MX08T	Stratix 8000* copper expansion module, available from Rockwell Automation.
1783-MX08F	Stratix 8000* fiber expansion module, available from Rockwell Automation.
FSPD504	OptiCore® Dielectric Conduited Fiber Uplink Cable.
FLCDMC5BLY	LC OptiCam® Multimode Fiber Optic Connector or any LC fiber connector.
PUR6504BU-UY	Copper downlink cable.
LEDS12	12.5" LED strip light.
LEDDS	Door switch.
LEDCPS4	Din-mount power supply.
Z22N Add-On Kits and Z11N Add-On Kits	
FSPD504	OptiCore® Dielectric Conduited Fiber Uplink Cable.
PUR6504BU-UY	Copper downlink cable.
1783-BMS10CGN	Stratix 5700 10-port switch with NAT (Network Address Translation) – available by request.
1783-BMS20CGN	Stratix 5700 20-port switch with NAT (Network Address Translation) – available by request.
FLCDMC5BLY	LC OptiCam® Multimode Fiber Optic Connector or any LC fiber connector.
Related Items – Pre-Configured Micro Data Center for Industrial Network Deployment	
CQSMDC48	24 RU Pre-Configured Industrial Micro Data Center, 48.4" (1239mm) height, network cabling, 4 casters, and shock pallet.
CQSMDC79	42 RU Pre-Configured Industrial Micro Data Center, 78.1" (1984mm) height, network cabling, 4 casters, and shock pallet.

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