

# 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 CE approved.



## Key Features

## Benefits

<b>Integrated solution</b>	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
<b>Managed switching</b>	Integrated Allen-Bradley* Stratix switches offer management and diagnostics from within IT, and controls environments and optimizes network traffic
<b>IT-ready</b>	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)
<b>Validated performance</b>	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.

\*Allen-Bradley, Integrated Architecture, Stratix 8000, and Stratix 5700 are trademarks of Rockwell Automation, Inc.

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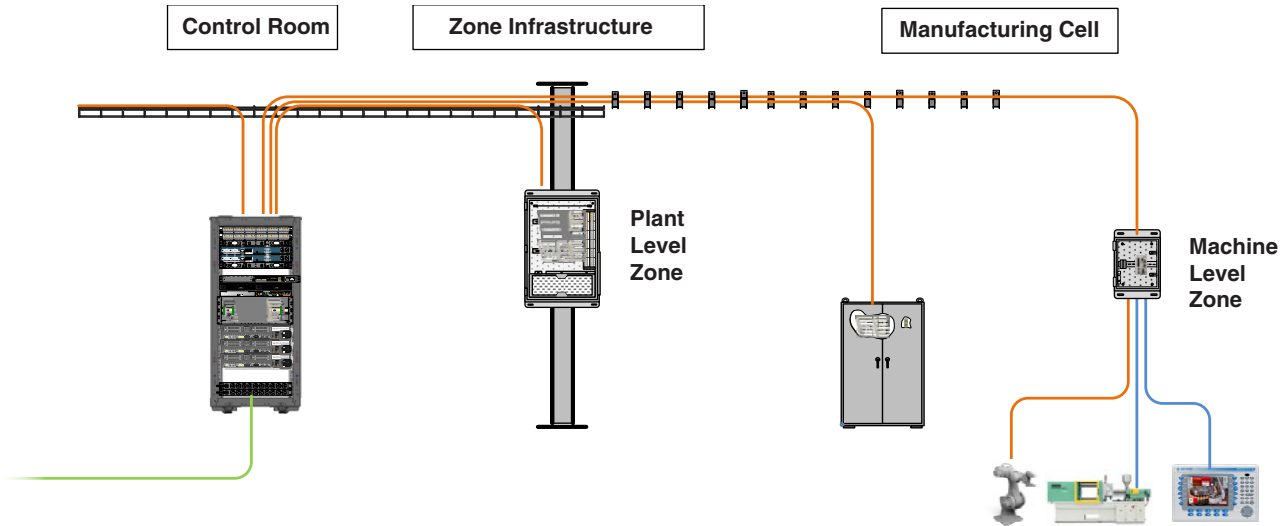
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## Deploying Zone Network Topology

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	Allen-Bradley* UPS	Uplinks	Downlink Port Count Pre-Installed	Maximum Downlink Port Count
Z23N-SBAAD1		24" x 36" Network Zone System with Stratix 8000* 1783-MS10T switch with 2 1 Gb MM fiber optic uplinks, with redundant 100-250Vac power supply input and UPS pre-installed.		100-250Vac	Rated at 12 V 7Ah tested to 59 minutes (fully expanded)	Two 1 Gb OM3 multimode fiber optic uplinks with LC cord and connector	8 RJ45 Ethernet	48 RJ45 Ethernet††
Z23N-SBABD1		24" x 36" Network Zone System with Stratix 8000* 1783-MS10T switch with 2 1 Gb MM fiber optic uplinks and 1783-MX08T expansion module, with redundant 100-250Vac power supply input and UPS pre-installed.					16 RJ45 Ethernet	
Z23N-SBABA1		24" x 36" Network Zone System with Stratix 8000* 1783-MS10T switch with 2 1 Gb copper uplinks and 1783-MX08T expansion module, with redundant 100-250Vac power supply input and UPS pre-installed.				Two 1 Gb copper uplinks		
Z23N-SBBAD1		24" x 36" Network Zone System with 2 Stratix 8000* 1783-MS10T switches each with 2 1 Gb MM fiber optic uplinks, with redundant 100-250Vac power supply input and UPS pre-installed.				Four 1 Gb OM3 multimode fiber optic uplinks with LC cord and connector		
Z23N-SBBFD1		24" x 36" Network Zone System with 2 Stratix 8000* 1783-MS10T switches each with 2 1 Gb MM fiber optic uplinks and 2 1783-MX08T expansion modules, with redundant 100-250Vac power supply input and UPS pre-installed.					48 RJ45 Ethernet	
Z22N-SDAD1		24" x 24" Network Zone System with Stratix 5700* 1783-BMS10CGA switch with 2 1 Gb MM fiber optic uplinks, with redundant 100-250Vac power supply input and UPS pre-installed.		100-250Vac	Rated at 12 V 7Ah tested to 3.5 hrs.	Two 1 Gb OM3 multimode fiber optic uplinks with LC cord and connector	8 RJ45 Ethernet	8 RJ45 Ethernet
Z22N-SDAA1		24" x 24" Network Zone System with Stratix 5700* 1783-BMS10CGA switch with 2 1 Gb copper uplinks, with redundant 100-250Vac power supply input and UPS pre-installed.				Two 1 Gb copper uplinks		
Z22N-SEAD1		24" x 24" Network Zone System with Stratix 5700* 1783-BMS20CGP switch with 2 1 Gb MM fiber optic uplinks, with redundant 100-250Vac power supply input and UPS pre-installed.	Stratix 5700* Managed Industrial Ethernet Switch 1783-BMS20CGP			Two 1 Gb OM3 multimode fiber optic uplinks with LC cord and connector	16 RJ45 Ethernet	16 RJ45 Ethernet, 2 SFP+
Z11N-SDD		12" x 14" Network Zone System with Stratix 5700* 1783-BMS10CGA switch with 2 1 Gb MM fiber optic uplinks.		24 V dc or 48 V dc	N/A	Two 1 Gb OM3 multimode fiber optic uplinks with LC cord and connector	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 connector	16 RJ45 Ethernet	16 RJ45 Ethernet, 2 SFP+

†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

<b>Standards</b>	CE
<b>Rating</b>	UL Type 4/12 and IP66
<b>Environment</b>	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
<b>Installation</b>	Wall mount with optional outside-mount flange
<b>Dimensions</b>	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)

## Add-On Kits

Part Number	Part Description
<b>Z23N Add-On Kits</b>	
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.
PUC6004IG-EY	Copper downlink cable (CM).
PUL6004BU-EY	Copper downlink cable (LSZH).
LEDS12	12.5" LED strip light.
LEDDS	Door switch.
LEDCPS4	Din-mount power supply.
<b>Z22N Add-On Kits</b>	
FSPD504	OptiCore™ Dielectric Conduited Fiber Uplink Cable.
PUC6004IG-EY	Copper downlink cable (CM).
PUL6004BU-EY	Copper downlink cable (LSZH).
<b>Z11N Add-On Kits</b>	
FSPD504	OptiCore™ Dielectric Conduited Fiber Uplink Cable.
PUC6004IG-EY	Copper downlink cable (CM).
PUL6004BU-EY	Copper downlink cable (LSZH).
<b>Related Items – Pre-Configured Micro Data Center for Industrial Network Deployment</b>	
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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PANDUIT CANADA  
Markham, Ontario  
cs-cdn@panduit.com  
Phone: 800.777.3300

PANDUIT EUROPE LTD.  
London, UK  
cs-emea@panduit.com  
Phone: 44.20.8601.7200

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Republic of Singapore  
cs-ap@panduit.com  
Phone: 65.6305.7575

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