

Use of Cisco Switches on the DeltaV™ Area Control Network (ACN)

This document explains the specific use cases where approved Cisco switches can be used on the DeltaV Area Control Network (ACN). This document also replaces the white papers: 'DeltaV Smart Switches Displace Cisco Switches' and 'DeltaV Supported Cisco Switches'.

Table of Contents

Introduction	3
DeltaV Smart Switches / Cisco Switches Cross Reference Table	3
DeltaV Systems Supported Cisco Switches and Accessories	5

Introduction

The use of DeltaV supported equipment within the DeltaV control network is an important factor in the long term success of DeltaV system's support and maintenance. This is especially important in choosing the DeltaV control network switches. Using untested and unsupported switches can lead to DeltaV system communications issues and problems due to incompatibility between switches and DeltaV embedded devices such as our controllers and I/O nodes. Using supported network devices is even more important due to the more rigorous communications requirements when a system is using DeltaV Electronic Marshalling.

This document provides the list of the currently available Cisco switches that are approved for use and supported on the DeltaV Area Control Network (ACN). See also the whitepaper "FAQ – Using Cisco Switches in the DeltaV Network" and the "DeltaV Smart Switches product data sheet" for further details. The supported DeltaV system versions and specific use cases for Cisco switches are documented on Emerson's Guardian Knowledge Base. Generally, these are supported on all current versions of DeltaV systems and if used as spares in existing DeltaV systems using Cisco switches.

If Cisco switches are used on the DeltaV ACN, they must be quoted and ordered from Emerson using the ordering numbers provided in this document. This list is not to be used to determine the Cisco products information and then used to source them from a Cisco distributor. Cisco distributors do not supply the DeltaV supported version of these switches.

DeltaV systems should be quoted and implemented using the DeltaV Smart Switches. The use of Cisco switches should be limited to replacement equipment and system expansions for existing installations and in situations where Cisco equipment is the stronger preference.

Our product lifecycle support policy for Cisco switches provides for three years of product support commitment after the status change to "Active". All Cisco switches offered as Emerson VE-numbers are already in "Active" status. Please consult with your local Emerson sales office to understand the support characteristics for the Cisco switches to be used on the DeltaV ACN.

DeltaV Smart Switches / Cisco Switches Cross Reference Table

Table 1 provides information to help you determine if and how a DeltaV Smart Switch can be used as a replacement for an existing Cisco switch.

DeltaV Smart Switches are supported in a mixed system with existing Cisco switches and for use in all DeltaV systems starting with v7.3.

All DeltaV Smart Switches provide the same switching functions as the existing Cisco switches. Incompatibilities are due to physical dimensions, fiber connector differences, and the number of Gigabit ports available. However, Cisco switches – even the ones running DeltaV specific configuration – cannot be integrated into the Network Device Command Center (or Smart Switch Command Center for DeltaV systems v12.3.1 and older), therefore the easy port lockdown feature is not available for Cisco switches connected to the DeltaV ACN.









Cisco Switches Model	DeltaV Smart Switches that can be used as replacement
<p>VE6038 Cisco IE 2000-8TC-G-B Industrial Ethernet Switch</p>  <p>8-port 10/100 BASE-TX Fast Ethernet switch with two 10/100/1000 Mbps combo uplink ports (copper / SFP)</p>	<p>VE6043 DeltaV Smart Switch (MD30-Series)</p>  <p>The VE6043S2C2 is a 10-port modular switch with two SFP 10/100/1000Mbps uplink ports and eight 10/100Mbps copper ports (extended specifications).</p>
<p>VE6036 Cisco Catalyst 2960 Plus 24TC-L</p>  <p>24-port 10/100 BASE-TX Fast Ethernet switch with two 10/100/1000 Mbps combo uplink ports (copper / SFP)</p>	<p>VE6046 DeltaV Smart Switch (RM100-Series)</p>  <p>24-port 10/100 BASE-TX Fast Ethernet switch with two 10/100/1000Mbps combo uplink ports (copper / SFP)</p> <p>This unit is a drop-in replacement for the Cisco Catalyst 2960 Plus 24TC-L switch.</p>
<p>VE6037 Cisco Catalyst 2960 Plus 48TC-L</p>  <p>48-port 10/100 BASE-TX Fast Ethernet switch with two 10/100/1000 Mbps combo uplink ports (copper / SFP)</p>	<p>Two VE6046 DeltaV Smart Switches (RM100-Series)</p>  <p>(2x) 24-port 10/100 BASE-TX Fast Ethernet switch with two 10/100/1000Mbps combo uplink ports (copper / SFP)</p>
<p>VE6029 Cisco Catalyst 3850-12S-S</p>  <p>12-Port 10/100/1000Mbps switch. All ports are SFP type</p>	<p>VE6054 DeltaV Smart Switch (RM1040)</p>  <p>16-Port 10/100/1000Mbps switch. All ports are combo type (combo / SFP)</p>
<p>Note: Cisco SFP transceivers are not supported on DeltaV Smart Switches and vice-versa. Please refer to your local Emerson sales office for details about available SFP transceivers for the switches supported on the DeltaV ACN.</p>	

Table 1 – DeltaV Smart Switches / Cisco Switches Cross Reference Table.

DeltaV Systems Supported Cisco Switches and Accessories

Description	VE-number
For detailed information on these switches and accessories please refer to the Cisco data sheets at www.cisco.com . There are no DeltaV product data sheets on these VE-numbers. DeltaV system usage information is available on Emerson’s Guardian Support Knowledge Base.	
24V DC Powered DIN-Rail Mounting Cisco Switch for the DeltaV ACN	
Cisco IE2000-8TC-G-B industrial grade DIN-Rail mounting switch with eight 10/100Mbps copper ports and two 10/100/1000Mbps combo uplink ports (copper / SFP)	VE6038
Cisco 2960Plus Switches for the DeltaV ACN	
Cisco 2960-Plus-24TC-L switch with 24-Port 10/100Mbps copper ports and two 10/100/1000Mbps combo uplink ports (copper / SFP); North American power cord	VE6036P1
Cisco 2960-Plus-24TC-L switch with 24-Port 10/100Mbps copper ports and two 10/100/1000Mbps combo uplink ports (copper / SFP); United Kingdom power cord	VE6036P2
Cisco 2960-Plus-24TC-L switch with 24-Port 10/100Mbps copper ports and two 10/100/1000Mbps combo uplink ports (copper / SFP); European power cord	VE6036P3
Cisco 2960-Plus-24TC-L switch with 24-Port 10/100Mbps copper ports and two 10/100/1000Mbps combo uplink ports (copper / SFP); Australian power cord	VE6036P4
Cisco 2960-Plus-48TC-L switch with 48-Port 10/100Mbps copper ports and two 10/100/1000Mbps combo uplink ports (copper / SFP); North American power cord	VE6037P1
Cisco 2960-Plus-48TC-L switch with 48-Port 10/100Mbps copper ports and two 10/100/1000Mbps combo uplink ports (copper / SFP); United Kingdom power cord	VE6037P2
Cisco 2960-Plus-48TC-L switch with 48-Port 10/100Mbps copper ports and two 10/100/1000Mbps combo uplink ports (copper / SFP); European power cord	VE6037P3
Cisco 2960-Plus-48TC-L switch with 48-Port 10/100Mbps copper ports and two 10/100/1000Mbps combo uplink ports (copper / SFP); Australian power cord	VE6037P4
Cisco 3850 Switch for the DeltaV ACN	
Cisco 3850-12S-S switch with 12-Port Gigabit SFP ports; North American power cord	VE6029P1
Cisco 3850-12S-S switch with 12-Port Gigabit SFP ports; United Kingdom power cord	VE6029P2
Cisco 3850-12S-S switch with 12-Port Gigabit SFP ports; European power cord	VE6029P3
Cisco 3850-12S-S switch with 12-Port Gigabit SFP ports; Australian power cord	VE6029P4
Expansion media module with four SFP ports for the Cisco 3850 Switch (VE6029). All ports are 10/100/1000Mbps.	VE6030M1
Small Form-factor Pluggable (SFP) Transceiver Modules for Cisco Switches	
Cisco GLC-SX-MM Gigabit SFP transceiver module for up to 550 meters of multi-mode fiber optic cable	VE6023
Cisco GLC-LH-SM Gigabit SFP transceiver module for up to 10 kilometers of single-mode fiber optic cable	VE6024
Cisco GLC-T 10/100/1000Mbps SFP transceiver module for up to 100 meters of copper cable	VE6025
Cisco GLC-GE-100FX 100Mbps SFP transceiver module for up to 2 kilometers of multi-mode fiber optic cable (can be connected to Gigabit Ethernet ports only).	VE6026
Cisco GLC-FE-100FX 100Mbps SFP transceiver module for up to 2 kilometers of multi-mode fiber optic cable (can be connected to Fast Ethernet ports only).	VE6027

Table 2 – List of Cisco switches and accessories support on the DeltaV ACN.

Emerson

North America, Latin America:

☎ +1 800 833 8314 or

☎ +1 512 832 3774

Asia Pacific:

☎ +65 6777 8211

Europe, Middle East:

☎ +41 41 768 6111

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