

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

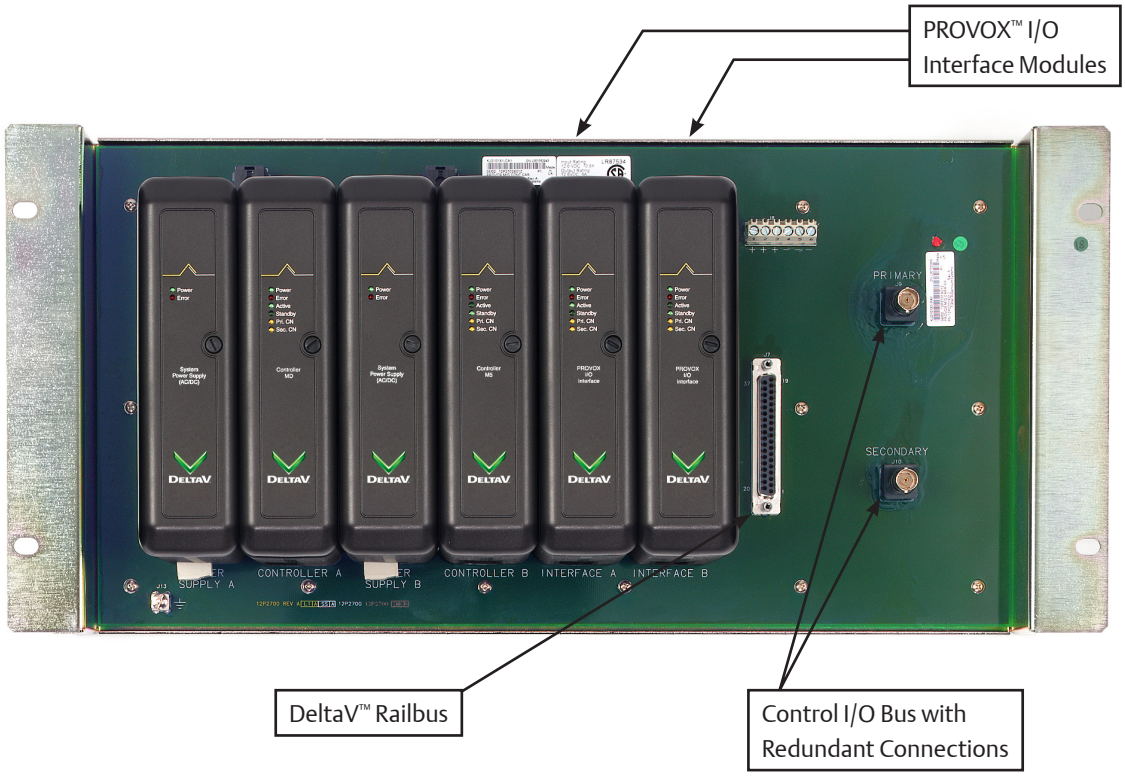
- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Visit our website - *Click HERE*

M-series DeltaV™ Controller Interface for PROVOX™ I/O



Upgrade your PROVOX™ controllers with the M-series DeltaV™ Controller Interface for PROVOX I/O and retain your installed PROVOX I/O (showing redundant configuration).

- Provides a fast and easy upgrade for PROVOX™ IFC, UOC, 20 Series, SR90 and SRx Controllers.
- Maximizes investment in PROVOX I/O.
- Saves wiring costs—no rewiring!
- Redundancy in controllers.
- Redundancy in Control I/O connections.
- Retains the I/O redundancy in Control I/O.

Introduction

Emerson Process Management continues its long-standing excellence in providing solid control solutions with the M-series DeltaV™ Controller Interface for PROVOX™ I/O and DeltaV MQ or MX Controllers. You can transition to DeltaV controllers and connect to PROVOX I/O already installed in your plant, continuing to maximize your original PROVOX I/O investment.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

The DeltaV Controller Interface for PROVOX I/O can be used with both Control I/O and Distributed (MUX) I/O, which connects using the serial buffer card. The interface to PROVOX I/O uses an MQ or MX controller and a DeltaV power supply installed on the PROVOX I/O Carrier.

With this solution, PROVOX I/O support is integrated into standard DeltaV engineering and diagnostics, including DeltaV Explorer and Control Studio.

Benefits

Provides an easy upgrade for PROVOX IFC, UOC, 20 Series, SR90 and SRx Controllers. You can easily upgrade your UOC, IFC, 20 Series, SR90 or SRx controller to a DeltaV controller, and continue to use PROVOX I/O by connecting it to the DeltaV controller carrier.

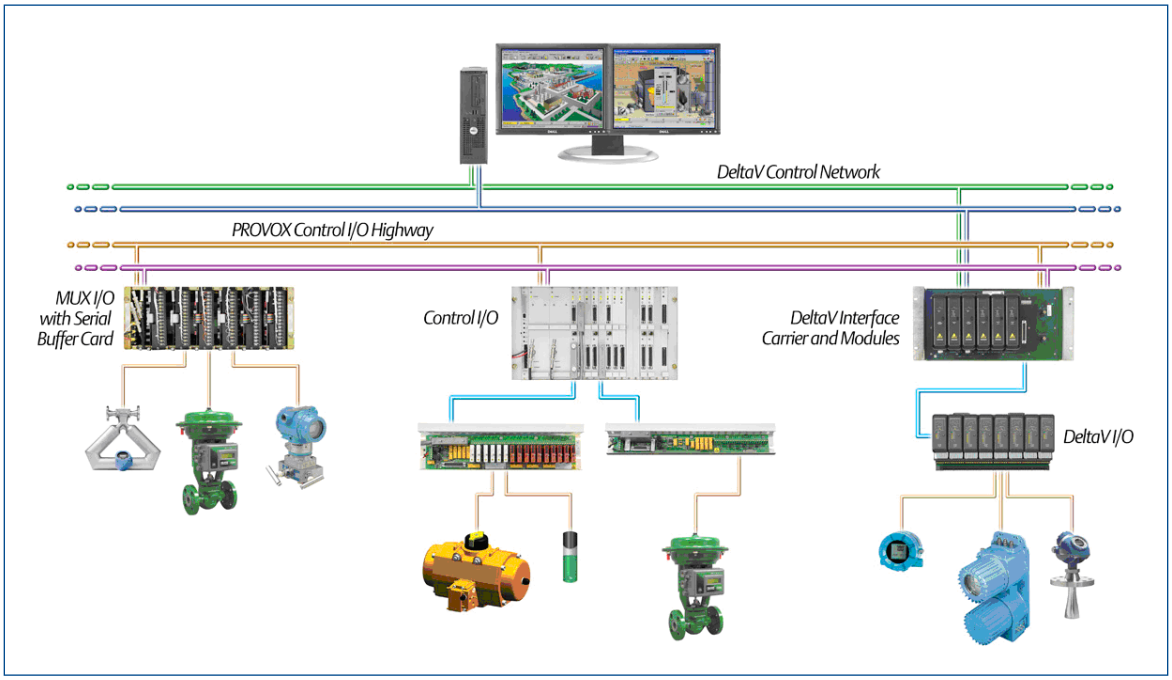
Maximizes investment in PROVOX I/O. Using your PROVOX I/O with a DeltaV controller maximizes your investment in PROVOX I/O, extending its useful life andsaving the cost of new I/O.

Saves wiring costs. The DeltaV Controller Interface for PROVOX I/O enables you to greatly reduce wiring costs and shorten turnaround time, because you don't have to re-wire field devices to new I/O.

Redundancy in controllers. Two DeltaV controllers and power supplies can be mounted on the carrier for full controller redundancy.

Redundancy in Control I/O connections. The DeltaV Controller for PROVOX I/O carrier provides for redundant connections to Control and Distributed I/O files.

Retains I/O redundancy in Control I/O. The DeltaV Controller Interface for PROVOX I/O allows use of flexible redundancy arrangements possible with Control I/O, including 1:1 and 1:N card redundancy.



DeltaV Controller Interface for PROVOX I/O

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Product Description

The DeltaV Controller Interface for PROVOX I/O consists of a 19 inch rack mountable controller carrier, simplex or redundant DeltaVMQ or MX controllers with power supplies, and a PROVOX I/O Interface for each controller.

DeltaV MQ or MX Controller. Mount one DeltaV MQ controller (with DeltaV v12.3 or later firmware) or MX controller (with DeltaV v10.3 or later firmware) on the carrier for a simplex installation. Munt two MQ or MX controllers for a redundant installation. MQ controllers can handle up to 750 DSTs, while MX controllers can handle up 1500 DSTs.

PROVOX I/O Interface Module. The PROVOX I/O Controller Interface supports redundant Control I/O communications and connections to Control I/O and Distributed I/O. Distributed I/O is MUX I/O connected to the controller through the CP6601 serial buffer card.

Controller Carrier. DeltaV controllers mount on a 19 inch rack specifically designed to accommodate:

- Two DeltaV MQ or MX controllers (one in a simplex installation)
- Two PROVOX I/O Interface modules (one in a simplex installation)
- Two DeltaV system power supplies (one in a simplex installation)

Railbus Connection. The PROVOX I/O Interface Carrier 37 pin railbus connection may be used to interface with additional DeltaV M-Series I/O modules. Standard 37 pin DeltaV interface cables are used to connect the PROVOX I/O Controller Interface Carrier to traditional DeltaV I/O horizontal carriers. This feature lets you easily expand your system with DeltaV I/O to fully utilize your DeltaV controller investment.

DeltaV Programmable Serial Cards can connect PLCs and other serial devices formerly connected to PROVOX IDIs or EICs (non weigh scale interface option on the EIC).

Complete Integration. The DeltaV Controller Interface for PROVOX I/O control solution is fully supported by DeltaV Explorer, Control Studio, and Diagnostic applications. You can configure and integrate PROVOX I/O as easily as DeltaV I/O.

DeltaV Explorer fully supports configuration, commissioning and assignment of PROVOX I/O (Control I/O and MUX I/O) cards. You can auto-sense Control I/O cards, and use DeltaV Explorer to enable and configure all I/O channels.

The DeltaV Diagnostic application supports all PROVOX I/O diagnostic messages. You can easily and thoroughly monitor I/O integrity.

HART® Data Availability. The DeltaV Controller Interface for PROVOX I/O solution can read smart information from field devices connected to PROVOX HART input and output cards. All of the HART information available in your PROVOX controller is maintained in the DeltaV, MQ or MX controller.

The interface can pass HART information to a DeltaV application station, enabling you to use applications such as Asset Management Solutions (AMS) to manage the field devices.

Asset Management Solutions. AMS uses the process control network, while DeltaV controllers and the PROVOX I/O Interface provide communications access to smart field devices. This provides a seamless solution to manage your plant assets

Products Included

- DeltaV MQ or MX Controller
- DeltaV Power Supply
- PROVOX I/O Carrier
- PROVOX I/O Interface

Maximize your display engineering efficiency. Emerson offers services for generating your new DeltaV displays. Learn how PROVOX configuration can be automatically converted or how new display and control designs can optimize effectiveness of your new DeltaV Controller Interface for PROVOX.

For more information, see these data sheets:

- Control Configuration Transition Services
- Display Transition Services

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Ordering Information

DeltaV Controller Interface for PROVOX I/O consists of four types of components: a MQ or MX controller, a DeltaV system power supply, a PROVOX I/O Carrier, and a PROVOX I/O Interface. Order entry numbers given in the following table include all components required for a solution. For simplex interface solutions, model numbers include one of each component and model numbers for redundant solutions include one PROVOX I/O Carrier and two each of the other components (controller, power supply, and I/O interface).

Description	Model Number
DeltaV Controller Interface for PROVOX I/O (Simplex)	**VE3021C4R1** (Using the MQ controller)
DeltaV Controller Interface for PROVOX I/O (Redundant)	**VE3021C4R2** (Using the MQ controller)
DeltaV Controller Interface for PROVOX I/O (Simplex)	**VE3021C3R1** (Using the MX controller)
DeltaV Controller Interface for PROVOX I/O (Redundant)	**VE3021C3R2** (Using the MX controller)

Order entry numbers and requirements for individual components of the DeltaV Controller Interface for PROVOX I/O solution are given in this table:

Description	Model Number
DeltaVMQ or MX Controller	**VE3008** or **VE3007**
PROVOX I/O Carrier	**VE4056** (KJ2101X1-CA1)
PROVOX I/O Interface	**VE4018R11** (KJ2101X1-BA1)
DeltaV System Power Supply	**VE5009** (Final assembly P/N 12P3935) is required with PROVOX CP6103 System Power Supply. For other power supply combinations, match source output voltage range to input voltage range of DeltaV Power Supply.

Prerequisites

- For the MQ Controllers, DeltaV software release v12.3 or later is required.
- The MQ Controller can be used on a v11.3.1 System by applying an HotFix to the DeltaV system.
- For the MX Controllers, DeltaV software release v10.3 or later is required.
- One DeltaV ProfessionalPLUS Station is required for each system.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Control I/O Cards

Supported	
Type No.	**Description**
CL6821	Analog I/O Card
CL6824	Analog Input Card
CL6822 CL6825 CL6827	HART Input Card
CL6826 CL6828	HART Output Card
CL6721	Discrete I/O Card
CL6921	External Interface Card – Weigh Scale Interface Option
NOT Supported	
Type No.	**Description**
CL6921	External Interface Card - Allen-Bradley Option
CL6922 CL6923	Intelligent Device Interface

Any I/O card not listed here is not supported.

System Compatibility

- The custom migration PROVOX I/O Carrier used in this solution is not compatible with a DeltaV Virtual I/O Module (VIM) from MYNAH Technologies nor with the VIM2.
- This solution is not compatible with DeltaV M-Series Zone 2 Remote I/O products.
- This migration controller solution does not support assignment of native Smart Wireless Gateways.
- This M-Series solution is not compatible with the >=v11 S-Series products either on the railbus connector or installed on the PROVOX I/O carrier.

Distributed I/O (Multiplexer I/O) cards

Supported (using Serial Buffer Card)	
Type No.	**Description**
DM6311	Analog Input SE 0-10 V Card
DM6311	Analog Input SE 1-5 V Card
DM6312	Isolated Analog Input 0-10 V Card
DM6312	Isolated Analog Input 1-5 V Card
DM6321	Analog Current Input Card (single–ended)
DM6322	Analog Current Input Card (isolated)
DM6331	RTD Input Card
DM6341	Analog Input Low mV Card
DM6341	Analog Input Low Special 1 Card
DM6341	Analog Input Low Special 2 Card
DM6351	Analog Input Thermocouple Type J High
DM6351	Analog Input Thermocouple Type J Low
DM6352	Analog Input Thermocouple Type K High
DM6352	Analog Input Thermocouple Type K Low
DM6353	Analog Input Thermocouple Type T
DM6354	Analog Input Thermocouple Type E
DM6355	Analog Input Thermocouple Type R
DM6361	Discrete Input Card
DM6362	Discrete Input Card (dry contacts)
DM6363	Discrete Input Card (120 Vac)
DM6371	Pulse Count Input Card
DM6372	Pulse Count Input Card (Dry Contacts)
DM6373	Pulse Count Input Card (Vortex)

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

DM6381	Weigh Scale Interface Card
DM6411	Analog Voltage Output Card
DM6421	Analog Current Output Card
DM6431	Time Proportional Output Card
DM6461	Discrete Output Card
DM6462	Discrete Output Card (internal relay)
DM6463	Discrete Output Card (external relay)

NOT Supported	
Type No.	**Description**
DM6004, DM6005	Virtual I/O Coupler
DM6391	**ac²** Interface Card

PROVOX I/O Interface Module Specifications	
Power Requirement (DeltaV system power supply)	+12.0 VDC at 500 mA maximum
Fuse Protection	3.0 A, non-replaceable fuses
Power Dissipation	3.6 W typical, 6.0 W maximum
Dimensions	
Height	15.9 cm
Depth	10.7 cm
Width	4.1 cm
Torque limits	0.11 Nm (1 in-lb)
Mounting	Assigned slots of carrier
Environmental Specifications	
Operating Temperature	0 to 60°C (32 to 140°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Relative Humidity	5 to 95%, non-condensing
Airborne Contaminants	ISA-S71.04-1985 Airborne Contaminants Class G3
Shock (normal operating conditions)	10 g ½-sine wave for 11 ms
Vibration (operative limit)	1 mm peak-to-peak from 5 Hz to 16 Hz, 0.5 g from 16 Hz to 150 Hz
Electromagnetic Compatibility	Per EN61326-1

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

I/O Module LED Indicators	ON Status Indicates
Green – Power	DC power is applied.
Red – Error	An error condition.
Green – Active	I/O Driver is in active state.
Green – Standby	I/O Driver is in standby state.
Yellow – Pri. CIO	Communication status of Primary Control I/O bus
Yellow – Sec. CIO	Communication status of Secondary Control I/O bus
All except power flashing, alternating even and odd	Firmware upgrade in progress.

Specifications for the PROVOX I/O Carrier	
Capacity	Two system power supplies, two controllers, and two PROVOX I/O Interface cards (for redundant controller application)
LocalBus Current (Maximum)	
Input	10.8 A (includes maximum current for 8-wide I/O Interface if extended)
Output	8.0 A (only if extended)
Dimensions	
Height	22.15 cm (5 EIA rail units)
Depth	5.08 cm
Width	48.26 cm
Mounting	19 inch EIA rails
Mounting	Assigned slots of carrier
Environmental Specifications	
Operating Temperature	0 to 60°C (32 to 140°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Emerson Process Management

Asia Pacific: 65.6777.8211
Europe, Middle East: 41.41.768.6111
North America, Latin America:
+1 800.833.8314 or
+1 512.832.3774

www.EmersonProcess.com/DeltaV

©2015, Emerson Process Management. All rights reserved.

The Emerson logo is a trademark and service mark of Emerson Electric Co. DeltaV, PROVOX, and HART are marks of one of the Emerson Process Management family of companies. All other marks are the property of their respective owners.

The contents of this publication are presented for informational purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available on request. We reserve the right to modify or improve the designs or specifications of our products at any time without notice.





Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP