

## Rockwell Automation<sup>®</sup> Remote I/O to PROFIBUS DP-V1 Master Gateway, non-CE 5604-RIO-PDPMV1

The ProLinX<sup>®</sup> family Allen-Bradley Remote I/O Adapter to PROFIBUS DPV1 Master communications module (5604-RIO-PDPMV1) creates a powerful connection between devices on a Remote I/O network and PROFIBUS slave devices. The module is a stand-alone DIN-rail mounted protocol gateway that provides one Remote I/O port and a PROFIBUS DPV1 Master with a RS-485 9-pin D shell female connector interface with isolated Opto-Couplers.

The RIO interface is an adapter (slave) which can be connected to a RIO scanner (master) that controls the data transfer.

The PROFIBUS DPV1 Master (PDPMV1) protocol driver supports Master implementations of the protocol on either a Mono-Master or Multi-Master network. The DPV1 master supports FDT/DTM communication when using the PSW-cDTM-PDPM FDT communication DTM. The PROFIBUS DPV1 Master FDT communication DTM software is an interface between any compliant FDT software container, an FDT device DTM and applicable PROFIBUS slave devices.

The ProLinX Communication Modules provide connectivity for two or more dissimilar network types. The modules, encased in sturdy extruded aluminum, are stand-alone DIN-rail mounted protocol gateways, providing communication between many of the most widely used protocols in the industrial automation today.



### General Specifications

- Allows for legacy in-chassis PROFIBUS DPV1 master applications to migrate to and/or sustain support for Allen-Bradley 1771 Remote I/O<sup>™</sup>.
- ProSoft Configuration Builder (PCB) software with easy-to-use PROFIBUS master network and gateway configuration. Sample PCB configuration file included.
- The gateway provides an Ethernet port and supports FDT/DTM Ethernet communications using the included communication DTM for use with FDT compliant software containers.
- The RIO gateway enables the migration of distributed PROFIBUS I/O without impacting existing Allen-Bradley Remote I/O networks.
- 24VDC Power supply for current loops is included.
- 1771 PLC 5 Sample ladder logic provided
- Sample PCB configuration file included

# Functional Specifications

## Remote I/O

- Rack Number Addressing: 0 to 63
- Rack Size: ¼-rack, ½-rack, ¾-rack and full rack
- Starting Group: 0, 2, 4, 6
- Last Rack: Yes or No
- Baud Rate: 57.6K, 115K, 230K
- Supports block-transfers of data with scanner
- Supports I/O data movement. Amount determined by rack size configuration
- BTR Command - up to 63 words
- BTW Command - up to 64 words

## PROFIBUS DPV1

- Easy-to-use drag and drop Master Busview configuration interface via ProSoft Configuration Builder software
- Project-unique GSD file import library
- Monitoring and Modification of process data and DPV1 acyclic data
- Multi-drop on a PROFIBUS DPV1 network with other compatible devices
- Automatic project documentation
- Automatic Bus Parameter calculation
- Online slave diagnostics
- Supports all standardized baud rates, up to 12Mbps
- Supports extended diagnostic data (DPV1)
- Auto baud detection at all valid PROFIBUS DPV1 rates
- CRC checksum determination of slave configuration consistency to processor
- Master Status LED Indicators for Operations, Network Communication, Master Token-Hold and Network Configuration.
- FDT/DTM PROFIBUS master transport communication DTM software included (see PSW-CDTM-PDPM)
- Up to 125 Slaves can be connected with a repeater
- Up to 1536 cyclic bytes input and 1536 bytes output data
- Supports Extended Diagnostic Data
- RS-485 optically isolated PROFIBUS Interface with on board DC-DC converter
- Acyclic communications (DPV1), Read and Write
- Alarm Handling (DPV1)
- Supports Sync and Freeze commands
- Supports PROFIdrive 3.1 compliant parameter read and write operations
- Supports Multicast and Broadcast telegrams (DPV1)



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## Hardware Specifications

Specification	Description
Power Supply	24 VDC nominal 18 to 32 VDC allowed Positive, Negative, GND Terminals 2.5 mm screwdriver blade
Current Load	500 mA max@ 32 VDC max
Operating Temperature	-20 to 50 Deg C -4 to 122 Deg F
Storage Temperature	-40 to 85 Deg C -40 to 185 Deg F
Relative Humidity	5 to 95% (w/o condensation)
Dimensions	Standard 5.20H x 2.07W x 4.52D in. 13.2H x 5.25W x 11.48D cm. Extended 5.20H x 2.73W x 4.52D in. 13.2H x 6.93W x 11.48D cm.
LED Indicators	Power and Module Status Application Status Serial Port Activity LED Serial Activity and Error LED Status
Configuration Serial Port	Mini-DIN RS-232 only No hardware handshaking
Ethernet Port	10Base-T Connector Link and Activity LED indicators Electrical Isolation 1500 V rms at 50 Hz to 60 Hz for 60 s, applied as specified in section 5.3.2 of IEC 60950: 1991 Ethernet Broadcast Storm Resiliency = less than or equal to 5000 [ARP] frames-per-second and less than or equal to 5 minutes duration
RIO Connector	3 pos screw-terminal adaptor(J803)
RIO LED Indicators	Active - Green
PROFIBUS Connector	DB-9F Standard PROFIBUS connector and isolated Opto-Couplers
PROFIBUS LED Indicators	Ready, Run, Error and Token LED Indicators
Shipped with each unit	Mini-DIN to DB-9M cables per serial port 4 ft RS-232 configuration cable 2.5mm screwdriver

## Agency Approvals and Certifications

ATEX	EN 60079-0:2009, EN 60079-15:2010
cULus	UL 1604, EN 60950
CB Safety	IEC 60950-1:2005-Ed2, EN60950-1:2006, CB243333-2393116



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## Additional Products

ProSoft Technology® offers a full complement of hardware and software solutions for a wide variety of industrial communication platforms.

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## Ordering Information

To order this product, please use the following:

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5604-RIO-PDPMV1

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