

ProtoNode

PROTOCOL GATEWAY

Instant Multiprotocol Deployment for OEM



A Sierra Monitor Company

*ProtoNode is an external, high performance, low cost **Building and Industrial Automation multi-protocol gateway** providing OEMs instant multiprotocol deployment of field protocol, quickly enabling the OEM device to communicate to systems and devices using modern open protocols.*

FieldServer Technologies pre-programs the ProtoNode solution to provide a virtual plug-and-play, easy, complete protocol package for the OEM including: BACnet MS/TP, BACnet/IP, Metasys N2 by JCI, Modbus TCP, Allen Bradley EtherNet/IP, LonWorks and many others. There are no configuration files to download in the field and all configurations are available to the user/installer simply by selecting the proper DIP switches. ProtoNode OEM users have access to the extensive FieldServer driver library.

ProtoNode is the instant answer to a manufacturer's needs to meet customer demands. As an example, a manufacturer might have five different devices, each requiring a variety of protocols to meet their customer's interoperability needs. They desire a single source solution, with multiprotocol, multi-configuration capability, and they need it now! A single ProtoNode Solution can be provided by FieldServer Technologies that has all pretested configuration choices preloaded. Up to 70 different pretested configurations with multiple protocol choices, selectable by DIP switches, can be stored on a single ProtoCarrier solution. A key benefit for the OEM is minimal engineering costs, minimized stocking costs and simplified training and start-up operations!



ProtoNode RER

ProtoNode LER

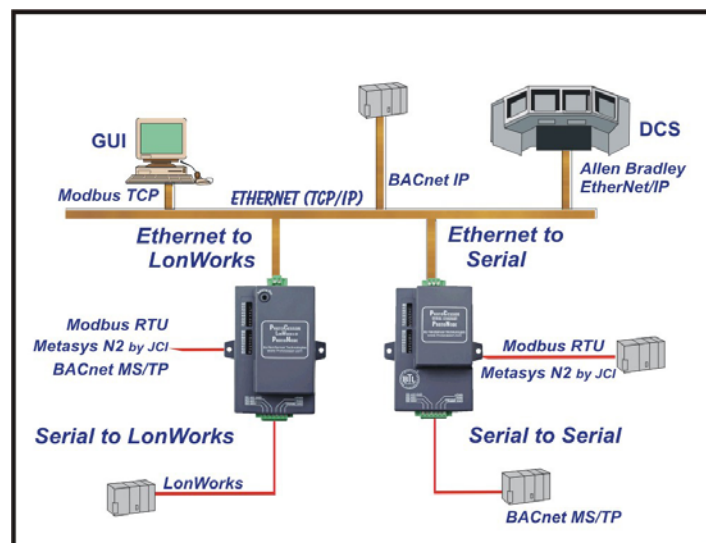


ProtoNode RER is based on an ARM9 processor for fast performance and includes two RS-485 and one Ethernet port. BACnet BTL certified (B-ASC)

ProtoNode LER includes a LONWORKS port plus Ethernet and RS-485 ports. LonMark certified.

ProtoNode Solution:

- ✓ Designed to be full featured, field programmable, and with multiple protocol support for any protocol translation between Serial, Ethernet, or LonWorks environments.
- ✓ Multiple hardware solutions available interfacing with RS-232, RS-485, RS-422, Ethernet or LonWorks.
- ✓ Serial or Ethernet versions support a total of 2400 Host and Field Protocol memory points.
- ✓ LonWorks versions support a total of 1500 Host and Field Protocol memory points.
- ✓ BACnet COV support provides fast data communication while reducing the traffic over a BACnet network.
- ✓ Supports virtual nodes allowing multiple OEM controllers to connect to a single ProtoNode and seen as separate controllers on the various field networks.
- ✓ Easily supports OEM's custom proprietary host serial or Ethernet protocols.
- ✓ Multi-Client and Multi-Server support ensures interoperability between any Industrial and or Building Automation protocols.
- ✓ BTL Marked and LonMark Certified



*Metasys® is a registered trademark of Johnson Controls, Inc.
LonWorks® is a registered trademark of Echelon Corp.
BACnet® is a registered trademark of ASHRAE.*

Specifications

Supported Electrical Connections

| | | Interface Connections | | | | |
|-----------|---------|-----------------------|---------------------|---------------------|-----------------------|-----------------------|
| | | RS-232 ¹ | RS-485 ² | RS-422 ³ | Ethernet ⁴ | LonWorks ⁵ |
| ProtoNode | FPC-N34 | | 2 | | 1 | |
| | FPC-N35 | | 1 | | 1 | 1 |
| | FPC-N36 | | 1 | 1 | 1 | |
| | FPC-N37 | | | 1 | 1 | 1 |
| | FPC-N38 | 1 | 1 | | 1 | |
| | FPC-N39 | 1 | | | 1 | 1 |

¹ Tx/Rx/GND

² +/-Frame Ground

³ TBD

⁴ 10/100 BaseT

⁵ FTT10

Power Requirements

Power: 9-30 VDC or 12-24 VAC

Current draw @ 12V

RER @ 12V = 150 mA

LER @ 12V = 279 mA

Environmental

Operating Temp.: -40°F to 187°F (-40°C to 85°C)

Relative Humidity: 5-90% RH, non-condensing

Enclosure

Dimensions: 4.5 x 3.2 x 1.6 inches (L x W x H)
(11.5 x 8.2 x 4.0 cm)

Warranty

Warranty: Two years return to factory

Approvals

- BACnet Testing Labs (BTL) B-ASC - ProtoNode RER Series
- CE Mark
- DNP3 Conformance Tested
- FCC Part 15
- LonMark 3.4 Certified - ProtoNode LER Series
- OPC Self Certified to Compliance
- RoHS Compliant
- CSA approved to UL 916 standard

BACnet Support

- ProtoCarrier-485 with FFP-485 is BTL Listed
- BACnet COV's
- Support up to 2,000 Host & Field points
- DIP switches are for setting MAC Address, Node-ID, Baud Rate on the RS-485 Field protocol

LonMark Certification on the ProtoNode LER

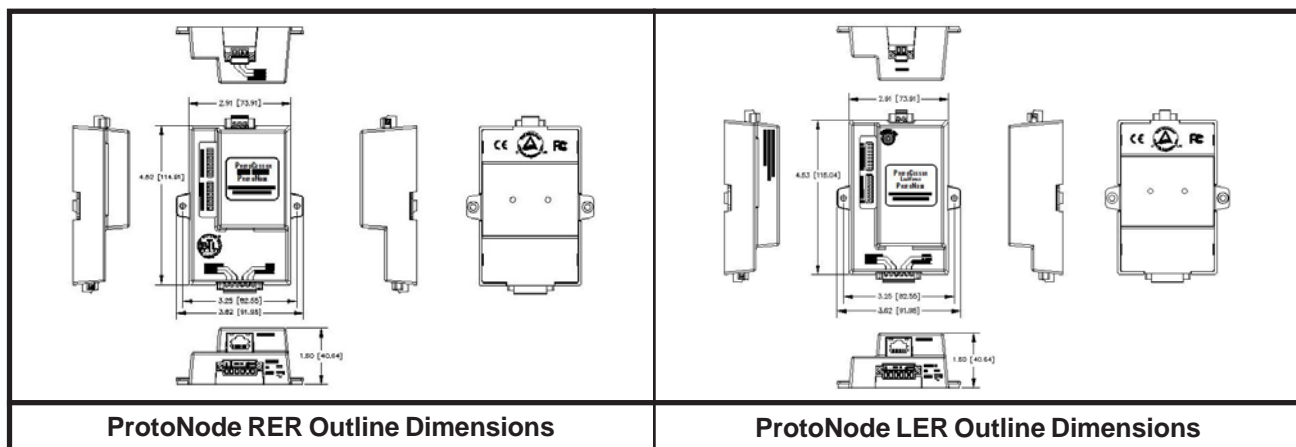
- SPID: 80:00:95:46:00:84:04:07
- Profiles:
 - 0000 - Node object (1)
 - 0001 - Open Loop Sensor Object (5)
 - 0003 - Open Loop Actuator Object (5)

FieldServer Technologies has a full library of over 100 drivers so check with ProtoCessor sales to determine what additional protocols are available to meet specific application needs.



FieldServer Technologies offers a full range of OEM devices to enable manufacturers to easily provide the protocols their customers demand:

- ✓ **ProtoCessor** - embedded protocol translator
- ✓ **ProtoCarrier** - daughter cards to enable addition of ProtoCessor without hardware redesign
- ✓ **ProtoConnect** - semi-custom protocol OEM solution
- ✓ **ProtoNode** - external fully enclosed protocol OEM solution



12/2011