Overview

Sierra Monitor’s ProtoNode Gateways provide a cost effective interface to Building Management Systems (BMS) and an immediate IoT Cloud interface. The ProtoNode enables OEMs to compete in a broader market by meeting specifications for BMS connectivity. Integrated SMC Cloud support further enhances the ProtoNode’s value by enabling remote monitoring, control and data visualization. The only protocol gateway with a no cost cloud interface, ProtoNode dramatically improves time to market and remote site support for OEM field devices.

A single ProtoNode gateway can seamlessly connect one or many OEM devices into BMS networks including BACnet, LonWorks, KNX, Modbus, M-Bus and others.

Cloud enabled devices change the game for OEMs. Users can view data via a configurable dashboard, download historical data and provide remote monitor/control for any connected device. Additionally, notification functions allow SMS/email for trouble or alarm conditions.

Each gateway is delivered pre-configured for the OEM’s specific requirements. No additional programming or mapping is necessary.

ProtoNode Features and Benefits

• Short time to market for BMS, industrial protocols and cloud connected devices.
• No configuration files need to be built in the field to support one or multiple of the OEMS devices.
• One ProtoNode connects multiple Serial and Ethernet devices to field protocol networks (BACnet MS/TP, BACnet/IP, Metasys N2, SNMP, XML over HTTP, EtherNet/IP, DNP 3.0, KNX, M-Bus or LonWorks and many others).
• Supports up to 10,000 device points.
• Can support OEM proprietary protocols to building management systems.
• BTL marked and LonMark certified.
• The optional embedded BACnet Explorer allows reps and OEMs to quickly validate that their product is working on BACnet MS/TP and/or BACnet/IP without needing a BMS Integrator on site.
• On-board diagnostics allow easy troubleshooting for both serial and Ethernet communications.
Benefits of the SMC Cloud

- Registering SMC’s ProtoNode BMS/IoT Gateways on SMC’s tenant based IoT Cloud Platform, effortlessly connects the OEM’s devices to the cloud, allowing secure remote access for diagnostics, monitoring, alarming and configuration of their products in the field.
- SMC’s Cloud Platform Dashboard provides enriched data metrics (averages and real-time values displayed in gauges and graphs) enabling collaboration and comparison across multiple sites.
- No annual subscription to connect SMC’s Gateways to the SMC Cloud Platform until 2023.

<table>
<thead>
<tr>
<th>ProtoNode</th>
<th>Interface Connections</th>
<th>Point Count</th>
<th>Certifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPC-N34</td>
<td>RS-232: 2, RS-485: 1, RS-422: 1</td>
<td>Level I: 1500, Level II: 5000, Level III: 10000</td>
<td>Yes</td>
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<tr>
<td>FPC-N35</td>
<td>RS-485: 1, LonWorks: 1, KNX: 1</td>
<td>Level II: 5000, Level III: 10000</td>
<td>Yes, Yes</td>
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<tr>
<td>FPC-N36</td>
<td>RS-485: 1, LonWorks: 1, KNX: 1</td>
<td>Level II: 5000, Level III: 10000</td>
<td>Yes</td>
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<tr>
<td>FPC-N37</td>
<td>LonWorks: 1, KNX: 1</td>
<td>Level II: 5000, Level III: 10000</td>
<td>Yes, Yes</td>
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<tr>
<td>FPC-N38</td>
<td>RS-422: 1, LonWorks: 1, KNX: 1</td>
<td>Level II: 5000, Level III: 10000</td>
<td>Yes</td>
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<tr>
<td>FPC-N39</td>
<td>LonWorks: 1, KNX: 1</td>
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<tr>
<td>FPC-N40</td>
<td>LonWorks: 1, KNX: 1</td>
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<td>FPC-N41</td>
<td>LonWorks: 1, KNX: 1</td>
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<td>FPC-N42</td>
<td>LonWorks: 1, KNX: 1</td>
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<td>FPC-N43</td>
<td>LonWorks: 1, KNX: 1</td>
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</tbody>
</table>

**Specifications**

**Power Requirements**

- **Power:** 9-30 VDC or 12-24 VAC (RS-422 = 15-30 VDC or 12-24 VAC)
- **Current Draw:**
  - FPC-N34 @ 12V = 240 mA
  - FPC-N35 @ 12V = 250 mA
  - FPC-N36 @ 15V = 200 mA
  - FPC-N37 @ 15V = 210 mA

- **M-Bus:**
  - Slave: 550 mA @ 12V
  - Master (1 Slave): 580 mA @ 12V
  - Master (64 Slave): 980 mA @ 12V

- **Environmental**
  - **Operating Temp:** -40°F to 167°F (-40°C to 75°C)
  - **Relative Humidity:** 5-90% RH, non-condensing

- **Enclosure**
  - **Dimensions (HxWxD):** 4.5 x 3.2 x 1.6 in.
    - (11.5 x 8.2 x 4.0 cm)

- **Warranty:** 2 years

- **BACnet Support**
  - Alarm & Event notification read properties multiples
  - BACnet COV’s, Trend Logging, BBMD and optional BACnet Router support.
  - Support up to 10,000 BACnet Objects
  - DIP switches are for setting MAC Address, Node-ID, Baud Rate on the RS-485 Field protocol

- **LonMark Certification on the ProtoNode**
  - **SPID:** 80:00-95:46:00:84:07
  - **Profiles:**
    - 0000 - Node object (1)
    - 0001 - Open Loop Sensor Object (5)
    - 0003 - Open Loop Actuator Object (5)

- **Serial Port Isolation**
  - 1500v galvanic isolation

- **Approvals**
  - BACnet Testing Labs (BTL) B-ASC Ver. 12
  - LonMark 3.4 Certified - ProtoNode Series
  - UL 916
  - RoHS Compliant
  - DNP 3.0 Conformance Tested
  - CE
  - FCC Approved

**Specifications subject to change without notice**