

Overview

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

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.

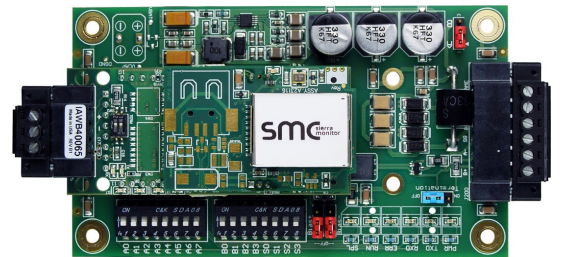
A manufacturer might create five different devices (each requiring a variety of protocols) to meet their customer's interoperability needs. But customers want a single source multi-protocol solution with multi-configuration capability. A single ProtoCarrier Solution is delivered with all configurations pretested and preloaded so everything works smoothly in the field. Up to 70 different pretested configurations with multiple protocol choices, selectable by DIP switches, can be stored on a single ProtoCarrier solution. The OEM reaps the benefits of reduced stocking costs as well as simplified training and start-up operations!

A ProtoCarrier is the perfect tool for OEMs looking for rapid product deployment of field protocol solutions.

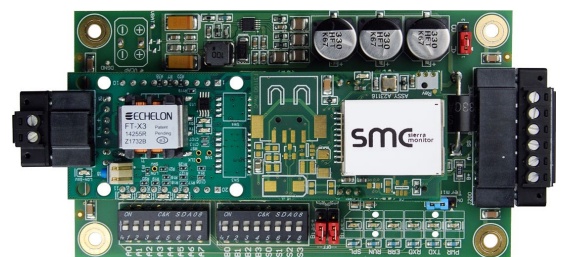
ProtoCarrier Features and Benefits

- 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 ProtoCarrier 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 registers – determined by the model selected.
- Can support OEM proprietary protocols to building management systems.
- BTL 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.

ProtoCarrier FPC-C34



ProtoCarrier FPC-C35



Benefits of the SMC Cloud

- Registering ProtoCarrier BMS/IoT Gateways on MSA Safety’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.
- The SMC 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 FieldServers to the SMC Cloud Platform until 2023.



SMC Cloud

ProtoCarrier	Interface Connections							Point Count			Certifications	
	RS-232	RS-485	RS-422	Ethernet	LonWorks	KNX	M-Bus	Level I	Level II	Level III	BTL	LonMark
FPC-C34		2		1				1500	5000	10000	Yes	
FPC-C35		1		1	1			1500	4096	n/a	Yes	Yes
FPC-C36		1	1	1				1500	5000	10000	Yes	
FPC-C37			1	1	1			1500	4096	n/a	Yes	Yes
FPC-C38	1	1		1				1500	5000	10000	Yes	
FPC-C39	1			1	1			1500	4096	n/a	Yes	Yes
FPC-C40		1		1		1		1500	5000	10000	Yes	
FPC-C41				1	1	1		1500	4096	n/a	Yes	Yes
FPC-C42		1		1			1	1500	5000	10000	Yes	
FPC-C43				1	1		1	1500	4096	n/a	Yes	Yes

Specifications

Power Requirements

Power: 9-30 VDC or 12-24 VAC
(RS-422 = 15-30 VDC or 12-24 VAC)

Current Draw:

- FPC-C34 @ 12V = 240 mA
- FPC-C35 @ 12V = 250 mA
- FPC-C36 @ 15V = 200 mA
- FPC-C37 @ 15V = 210 mA

Environmental

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

Enclosure

Dimensions (HxWxD):
1.2 x 2.2 x 4.2 in.
(3.0 x 5.6 x 10.7 cm)

Mounting Holes: Six (6) holes for easy placement

Weight (Net): 0.10 lbs. (0.04 Kg)

BACnet Support (BTL marked)

- 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

Serial Port Isolation

- 1500v galvanic isolation

LonMark Certification on the ProtoCarrier

SPID: 80:00:95:46:00:84:04:06
Profiles: 0000 – Node object (1)
0001 – Open Loop Sensor Object (5)
0003 – Open Loop Actuator Object (5)

When using this solution, it is necessary to order both the ProtoCarrier and the ProtoCessor.

Approvals

CE and FCC Approved
BACnet Testing Labs (BTL) B-ASC Ver. 16
LonMark 3.4 Certified - ProtoNode Series
TUV Approved to UL 916, EN 50491-3
and CSA C22-2 standards
RoHS3 and WEEE Compliant
DNP 3.0 Conformance Tested

Warranty: 2 years



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