

 **PROTEGE<sup>®</sup>**  
**Protégé 16 Zone Input Expander**

## Protégé 16 Zone Input Expander

The Protégé 16 Zone Input Expander module provides the interface of up to 16 zone inputs, two bell/siren device outputs and two programmable outputs to the Protégé Integrated Access Control, Security and Building Automation system, an advanced technology security product providing seamless and powerful integration.

The Protégé 16 Zone Input Expander module provides interface with up to 16 zone inputs using industry standard alarm detection devices (Motion Sensor, Contact), two low current programmable outputs and controls dual monitored electronic bell/siren outputs.

### Zone Expansion

The Protégé 16 Zone Input Expander provides extensive hardware advancements that provide flexible zone programming and configuration:

- Connect any combination of normally closed or normally open zones, configurable per zone input.
- Utilizes analogue to digital processing with 5X over sampling.
- Four state zone alarm using resistors to provide Short, Alarm, Closed and Tamper conditions.
- Multiple end of line zone resistors can be configured to allow easy migration and replacement of legacy equipment.

### Local Monitored Power Supply

The Protégé 16 Zone Input Expander provides a 16VAC Input for power utilizing low cost transformers and providing a fully monitor reader and door solution:

- Deep discharge prevention of the battery with automatic electronic cut-off.
- Manual or processor controlled battery charge selection of 350mA or 700mA.
- Intelligent charging algorithm monitors battery and AC supply allowing optimum performance to be achieved using standard lead acid batteries.
- Monitored signals for Battery Low/Disconnect and AC Failure using local trouble zones.

### Connectivity and System Expansion

Expanding the Protégé System with local Zone (Input) and PGM (Output) from the 16 Zone Expansion Interface module allows convenient cost effective expansion:

- 16 Zones can be assigned in to any four areas in the system each being processed using different options or features.
- Address configuration of the Protégé multiple reader interface is achieved using an eight way DIP switch.
- Add 4 PGM outputs (2 High Current Bell Siren, 2 Low Current).

### Communication

Galvanic isolated RS-485 communication interface port:

- Network RS-485 port used for all network communication functions and interconnects to other modules.
- 100% isolated prevents ground loops and cross phase differential.

### Upgradable Firmware

Utilizing the latest flash technology and high performance communication mediums the firmware of the Protégé 16Zone Expansion Interface module can be updated using the Protégé System Controller or the Protégé System Management Suite.

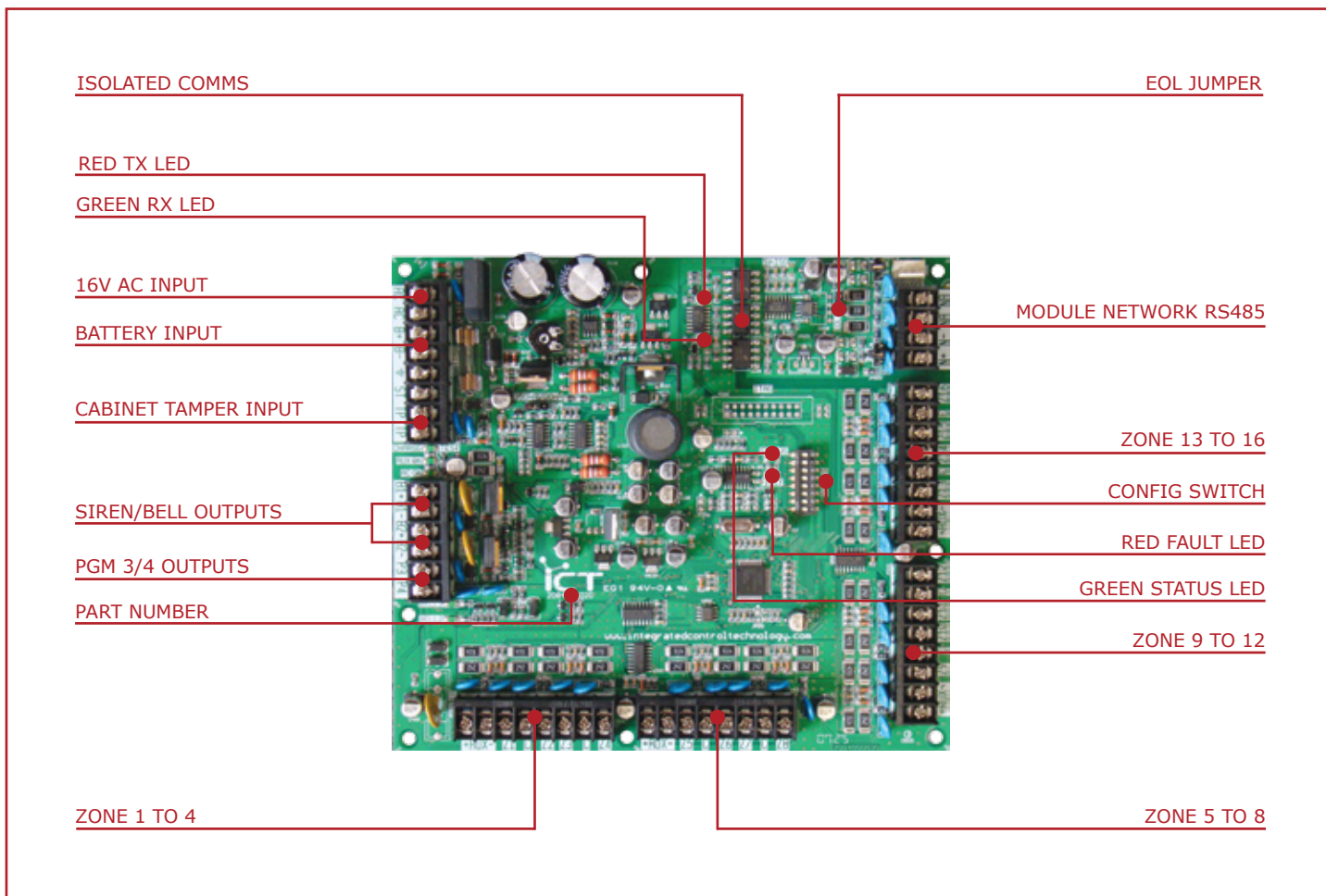
### Bell/Siren Programmable Outputs

High current electronic monitored bell/siren programmable outputs:

- Indication of bell/siren programmable output activation using LED.
- Bell/Siren failure monitoring or bell/siren disconnected (Tamper) displayed as indicator and reported using trouble zone.
- Automatic shutdown on bell/siren over current when activated or shorted. Automatic restore on next deactivation/activation cycle. Shutdown reported using trouble zone.

### System Diagram

The system diagram and full connection overview is available in the Protege System Controller Technical Brochure. This diagram is also available online.



### Technical Specifications

Power	Operating Voltage Operating Current Auxiliary Output	15.5VAC to 16.5VAC, 50-60Hz, 40VA (Max) 97mA (143mA Max) 1.2A Fused / Monitored
Battery Backup	Type Charging Low Battery Electronic Disconnection	13.8V Sealed Lead Acid 350mA/700mA 11.2VDC Alarm, 12.5VDC Restore 8.76VDC
Cable Specifications	Protégé RS-485 Encrypted System Network Communication	Beldon Part Code 9842 or Equivalent. CAT5 / 5e (up to a maximum length of 300m).
Communication	Serial Isolated Power	RS485 Isolated Communication Interface Port 12VDC @ 19mA
Zone (Inputs)	System Zones Enclosure Tamper	16 Standard zones dual EOL resistor (1K+1K) or no resistor per zone Programmable Normally Open or Normally Closed
PGM (Outputs)	Bell/Siren PGMs System PGMs	2 Fixed Voltage High Current Outputs (2.0A Continuous, 2.2A Max) Monitored with Auto Shutdown and Reportable Events. 2 Open Collector (Negative, 50mA Max) Outputs. Programmable for all PGM functions.
Temperature	Operating Storage Humidity	5° to 55°C (41° to 131°F) -10° to +85°C (14° to 185°F) 0%-85% (Non Condensing)
Dimensions	Height Width Depth Weight	161mm (6.33") 183mm (7.20") 35mm (1.37") 735gms (25.92 ounces)

The size of conductor used for the supply of power to the Protégé 16 Zone Input Expander should be adequate in size to prevent voltage drop at the power terminals.

**International Compliance Standards:**

The Protégé 16 Zone Input Expander complies with the following international standards.

For an installation of the Protégé 16 Zone Input Expander to comply with any of the standards all installation procedures and programming configuration settings must be made in accordance with the required standard.

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