

Protégé 16 PGM Output Expander

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Protégé 16 PGM Output Expander

The Protégé 16 PGM Output Expander module provides the control of 16 High Current FORM C relay outputs or 16 Elevator Floors (connected with the PRT-RDI2) from the Protégé Integrated Access Control, Security and Building Automation system, an advanced technology security product providing seamless and powerful integration.

The Protégé 16 PGM Output Expander module provides the control of 16 High Current FORM C relay outputs or 16 Elevator Floors (connected with the PRT-RDI2).

Intelligent relay voltage disable and monitoring with a direct connection for Destination Reporting Interface (PRT-PX16-DRI) allows a simple and structured elevator control solution.

Intelligent Hardware Interface

The Protégé 16 PGM Output Expander provides extensive hardware advancements that allow flexible and structured control of lighting, automation and elevator systems from one device:

- 16 FORM C Relays capable of switching resistive loads up to 5AMPS.
- Indication to show the relay state for all relays on board. The display indication is not obscured when attaching the PRT-PX16-DRI destination interface board.
- Fire control input automatically disables the relay voltage supply for use in a fail safe mode for elevator fire control. Fire control event is monitored and provides feedback using a fire power disabled event.
- High performance 32 Bit ARM processor.
- Power output indicator shows power is available on the reader voltage outputs on the Relay Power. Fire Control can be overridden by the Fire Control Override Jumper.

Local Monitored Power Supply

The Protégé 16 PGM Output Expander operates from a 16VAC Input, 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 PGM's (Output) from the 16 PGM Expansion Interface module allows convenient cost effective expansion and added benefit of high current onboard FORM C relays:

- 16 Multiple Function PGM (Programmable Output) Outputs for use in any programmable PGM entry.
- Ideal for connection in an electrical switch room to control signage, lighting and building automation.
- Connect directly to the slave port of the PRT-RDI2 for elevator system control with the added ability to perform Destination Reporting Audits.
- Address configuration of the Protégé 16 PGM Expansion interface is achieved using an eight way DIP switch. Switch 5, 6, 7 and 8 are used for enabling the elevator function when connected to the PRT-RDI2.
- PGM's can be configured to automatically turn on when powered up, communication failure or to resume previous state.

Communication

Full galvanic isolated RS-485 communication interface port allow powerful communication options:

- Network RS-485 port used for all network communication functions and interconnects to other modules.
- Connects to the Slave port of the PRT-RDI2 for operation as a elevator floor controller. Up to 16 PRT-PX16 units can be connected providing two elevator cars the ability to control 128 floors each.

Upgradable Firmware

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

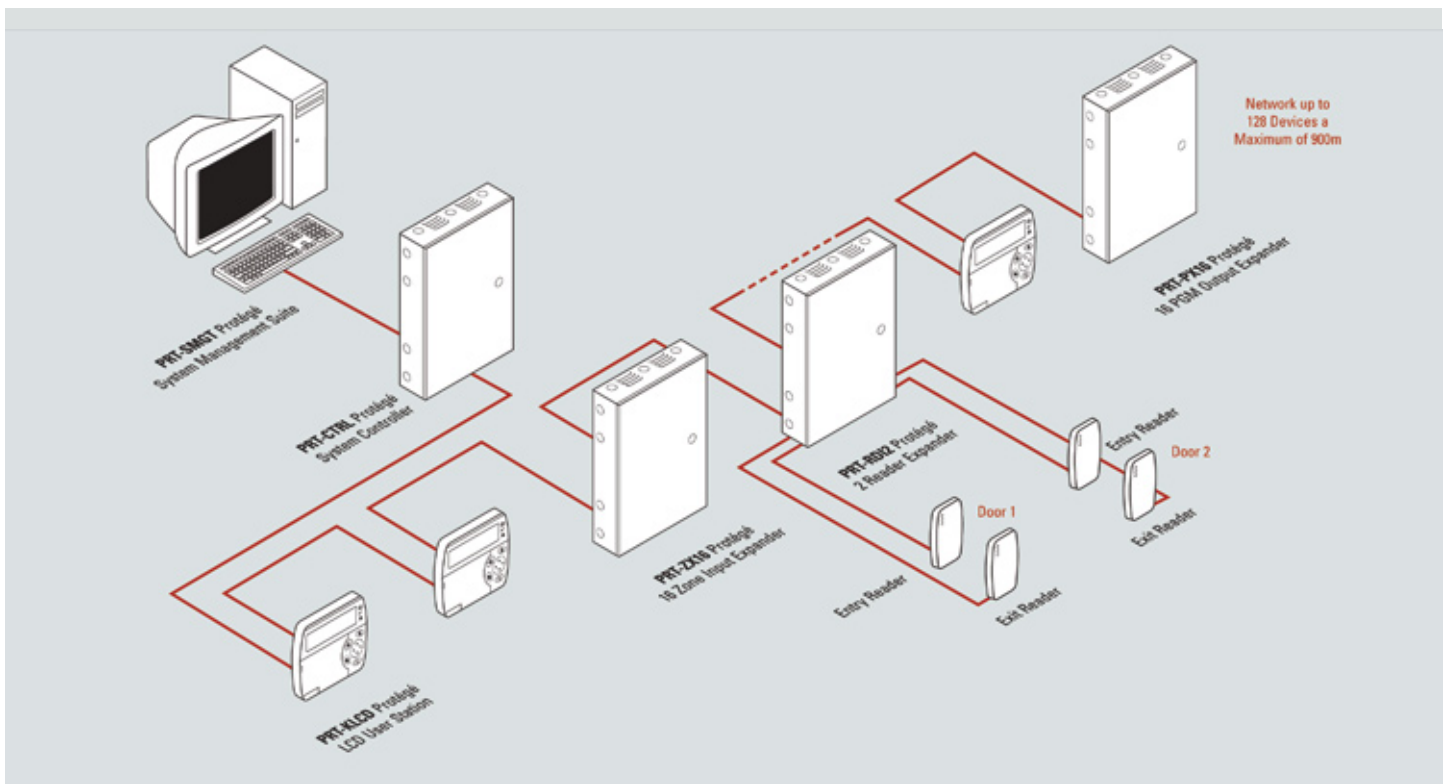
Elevator Control

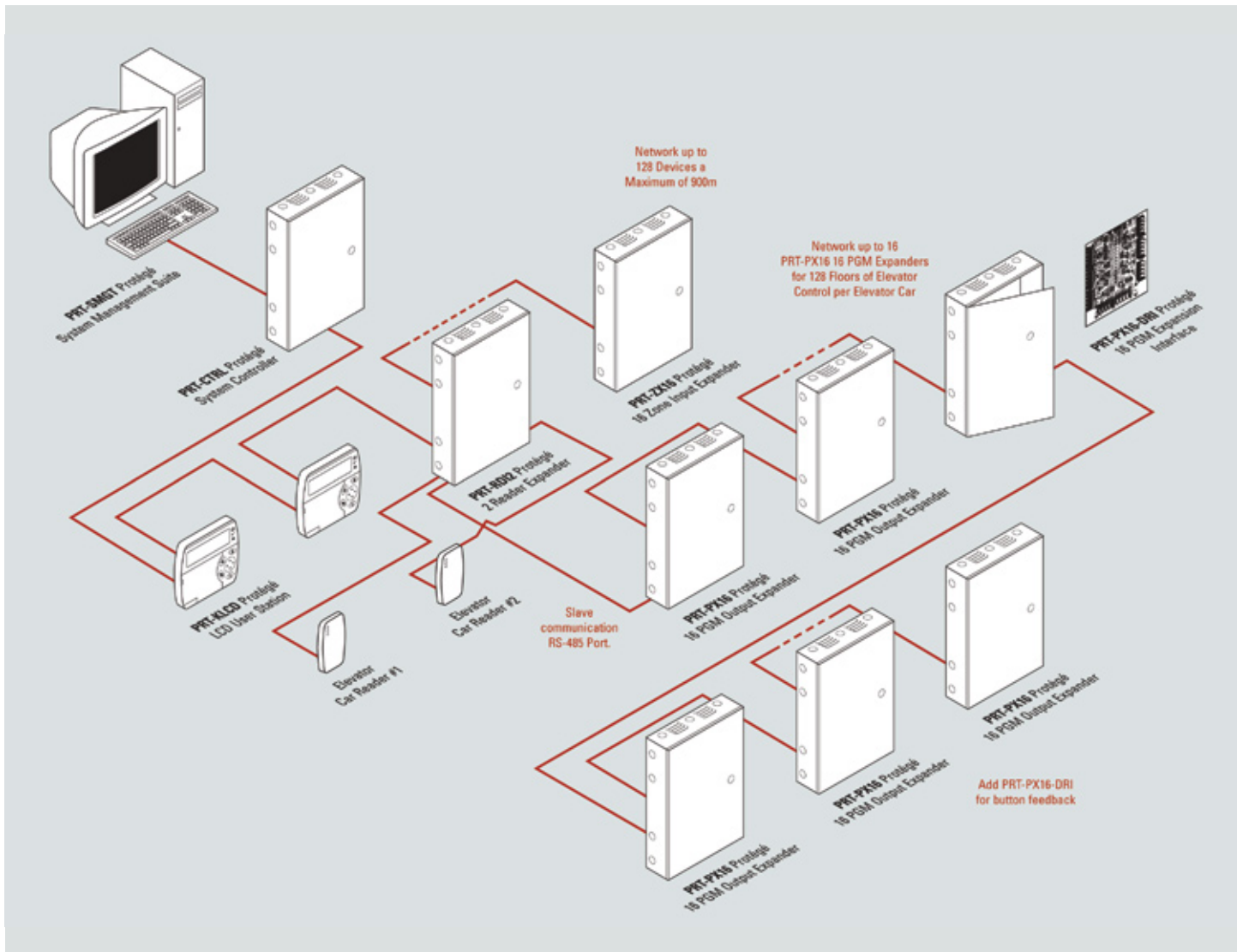
The Protégé 16 PGM Output Expander when connected with the PRT-RDI2 module allows the control of two independent elevator car floor selection buttons:

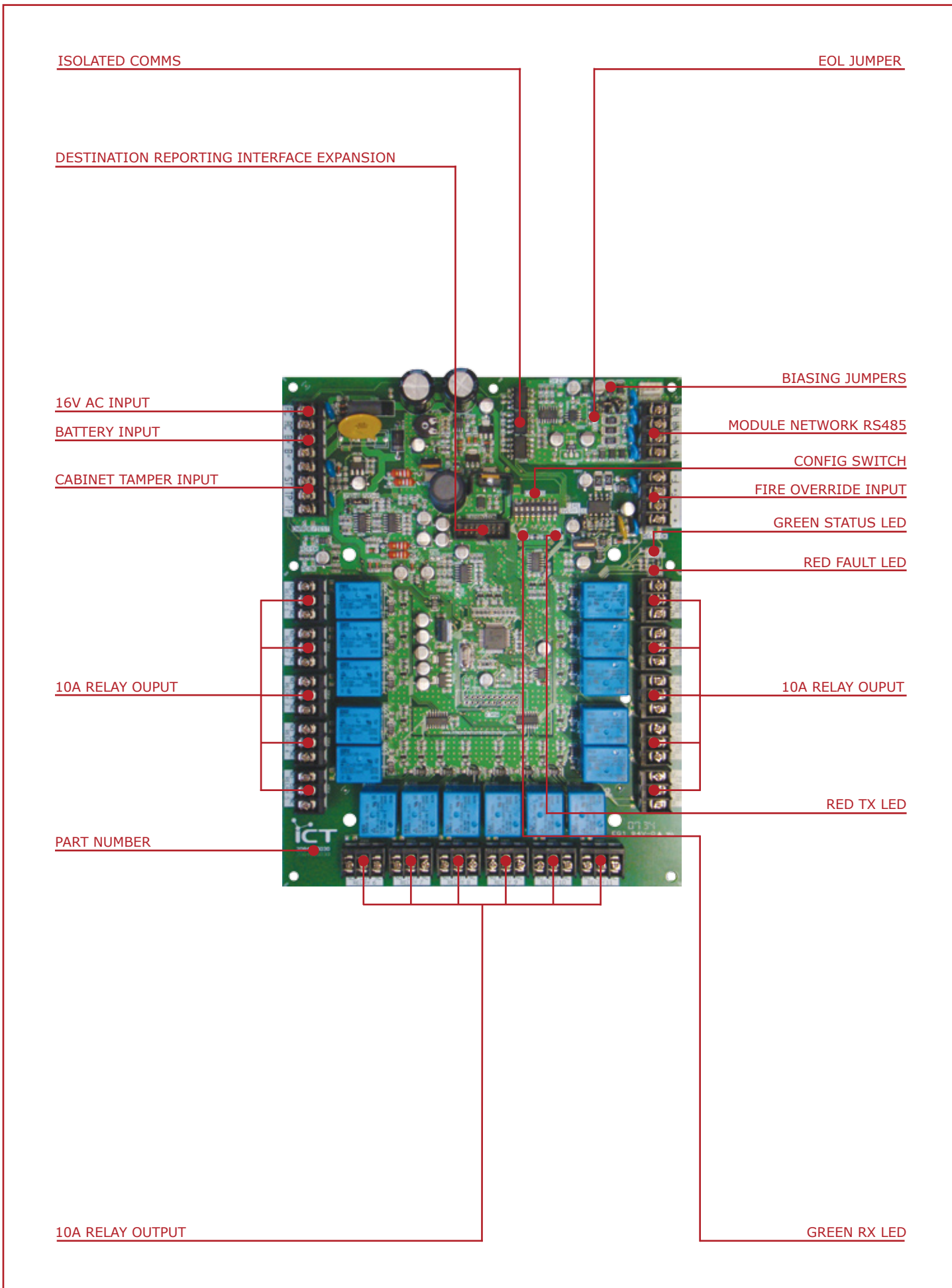
- Utilise button feedback for floor selection monitoring and single badge, single floor control prevents user tailgating with full floor selection audit. Requires the addition of the PRT-PX16-DRI Destination Reporting Interface.
- Deny access to a user based on the status of the area on a specific floor that they are attempting to access (Button Feedback Required).

- Floor Relay can unlock using the 'Late Open' option forcing the floor to remain locked after schedule until valid access to the floor. Requires the addition of the PRT-PX16-DRI Destination Reporting Interface.
- Interface to the PRT-PX16 using the slave RS485 communication port for intelligent elevator control (Controls 16 Floors per PRT-PX16 per elevator car).
- Optional high level RS485 communication to Elevator Control System (Requires protocol documentation to be provided).
- Invert floor control relays for full fail safe operation or for fail secure.
- Programmable all secure and all access modes providing a simple and effective fault diagnostic solution.

Standard Configuration







Technical Specifications

Power	Operating Voltage Operating Current Auxiliary Output	15.5VAC to 16.5VAC, 50-60Hz, 40VA (Max) 119mA (1145mA Max All Relays Activated) 150mA 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 (900m) or Similar.
Communication	Serial Isolated Power	RS485 Isolated Communication Interface Port 12VDC @ 28mA
Expansion Unit		Daughter Board 16 Galvanic Isolated Inputs using the PRT-PX16-DRI Destination Reporting Interface Unit.
Zone (Inputs)	Enclosure Tamper Fire Control Isolated	Normally Closed 12-24VDC 6.5mA Input
PGM (Outputs)		Relay FORM C 16 5A (Max) FORM C Relay Outputs with Status Indication.
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	183mm (7.20") 234mm (9.21") 35mm (1.37") 1020gms (35.97oz)
Enclosure	Height Width Depth Weight	406mm (15.98") 330mm (12.99") 89mm (3.50") 5150gms (181.660oz)

The size of conductor used for the supply of power to the Protégé 16 PGM Output Expander should be adequate in size to prevent voltage drop at the power terminals of no more than 5% of the rated voltage

International Compliance Standards:

The Protégé 16 PGM Output Expander complies with the following international standards.

For an installation of the Protégé 16 PGM Output 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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