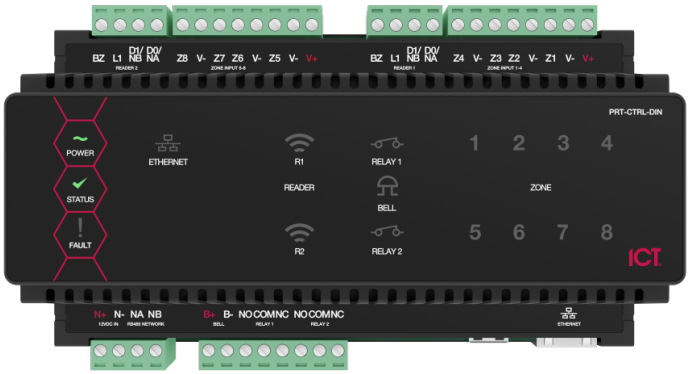
Protege WX DIN Rail Integrated System Controller



The Protege WX DIN Rail Integrated System Controller is the central processing unit responsible for the control of security, access control and building automation in the Protege WX system.

The controller communicates with all system modules, stores all configuration and transaction information, processes all system communication, and reports alarms and system activity to a monitoring station or remote computer.

Feature Highlights

- Web based architecture for cross-platform access and flexible configuration
- Intuitive wizard-driven interface for quick and easy deployment
- Internal industry standard 10/100 ethernet connection
- Comprehensive front panel LED indicators provide device status at a glance
- 32 Bit advanced RISC processor with 2Gb total memory
- Encrypted module network using RS-485 communication
- NIST Certified AES 128, 192 and 256 Bit encryption
- Factory loaded HTTPS certificate
- 2 reader ports, independently configurable for either Wiegand or RS-485 reader operation
- OSDP configurable RS-485
- 8 high security monitored inputs
- 2 high current Form C relay outputs
- 1 high current monitored bell output
- 1 USB port
- Built-in offsite communications dialer (Contact ID or SIA)
- Designed for use with industry standard DIN rail mounting
- Compatible with all Protege expander modules
- Firmware is upgradable directly from the Protege WX interface

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Integrated Access Control

Providing a highly sophisticated access control solution with large user capacity and extensive features:

- Utilize multiple access levels to manage users over scheduled periods across multiple time zones.
- Assign door groups, menu groups, area groups, floor groups and elevator groups to an access level for flexible user management. Each user can be assigned multiple groups in multiple access levels.
- Monitor and control users' area status throughout the entire system with hard and soft anti-passback configuration options.
- Multiple card presentation options allow the use of access control cards, tags, mobile or other credentials to arm and disarm areas associated with doors.
- Count users entering an area and arm the area when the count reaches zero or deny access based on a maximum user count.

Connectivity and System Expansion

Extending the Protege system with onboard local inputs and outputs allows convenient and cost effective expansion without the increased cost of modules for simple system functions:

- 8 monitored onboard inputs can each be configured for EOL (End Of Line), dual EOL, or direct contact.
- 2 high current Form C relays onboard.
- 2 integrated reader ports, independently configurable for Wiegand or RS-485 reader operation.
- RS-485 connections support configuration for OSDP protocol.
- Bell/Siren output onboard with fully monitored operation.
- System expansion is achieved seamlessly by connecting additional expander modules.

Communication

RS-485 communication interface, USB port, onboard 2400bps modem, and a 10/100 ethernet communications port provide a complete solution for system communication, expansion, offsite monitoring and integration.

Secure By Design

ICT controllers are cyber secure, supporting emerging cybersecurity requirements through advanced security features.

With secure encrypted communication, resilience to outages, secure storage of security parameters and no universal default passwords, ICT controllers are inherently designed to protect devices, networks and data from unauthorized access.

Mandatory cybersecurity regulations on connected devices are defining requirements in terms of data & cryptography, logical security, system management and privacy protection.

ICT controllers feature essential requirements of newly introduced standards and legislation aimed at regulating the Internet of Things and IoT devices, along with specifications of emerging new laws.

ICT controllers are Secure By Design.

Secure Encrypted Web Connection

Equipped with a factory loaded HTTPS certificate, ensuring a secure encrypted web connection straight out of the box.

The default certificate provides automatic TLS encryption of data transmissions, secure identity authentication, and message signing to assure data integrity.

Flexible Reader Support

Provides 2 reader ports that can be independently configured for either Wiegand or RS-485 reader operation, allowing the connection of up to 4 readers controlling 2 doors.

Choose Wiegand readers for compatibility with all standard access control systems, or RS-485 for fast, secure communication.

RS-485 readers provide the added benefits of being easier and more cost effective to wire and deploy, and allow for direct integration with Protege systems, enabling you to make changes on the fly once readers are installed. RS-485 also allows for longer cable runs and offers a simpler firmware update process.

OSDP protocol configuration in RS-485 offers additional security and adds scalability, flexibility and ease of implementation.*

* The ICT implementation of OSDP conforms to a subset of the OSDP functionality. For specifications and reader configuration, refer to *Application Note 254: Configuring OSDP Readers*, available from the ICT website.

Integrated Arming/Disarming

Featuring advanced integration of arming and disarming solutions for control of hundreds of alarm areas:

- Deny access to a user based on the status of the area and allow the user to control the area they are entering, in turn reducing false alarms.
- Implement vault control areas to manage time delayed access and unlocking of vault areas in banking facilities without the need for additional hardware control devices.
- Control access to a keypad using a card and PIN function, or allow card presentation to automatically log the user in at the associated keypad.
- Disarm an area associated with an elevator floor on access, or prevent the user from gaining access to the floor based on the area status associated with the floor.
- Arm large numbers of areas using area groups.

Programmable Functions

Programmable functions are special applications that implement logical control of outputs, doors, areas and other devices.

- Perform actions when a particular event or operation occurs, such as setting the room temperature based on the number of people in an area, adjusting internal lighting levels based on a sensor reading, or unlocking doors in the event of a fire alarm.
- Process logic functions to allow complex equations to be evaluated using internal memory data values and output status .
- Control of doors, areas, elevators and outputs can be easily programmed and managed.

Output Follows Input Programming

The Protege system's advanced programming features provide endless opportunities for customized automation. Output follows input programming allows any output or output group in the system to be intelligently controlled by any input or input type. This has a wide variety of applications: from turning on lights and climate control when motion is detected, to unlocking a specific door with a key switch, or auto arming an area after a period of inactivity.

WXpert Mode

Protege WX launches in basic mode with full access control and intrusion detection ready to go. This hides the more complicated features, making the system more intuitive and simple to use.

Complete the Protege WX Level 2 training course to unlock **WXpert mode** (otherwise known as advanced mode), which includes enhanced access and intrusion functionality as well as building automation and elevator control. For more information about these advanced features, request the *Protege WX WXpert Mode Guide* from your ICT representative.

Multifunction Reporting Services

The controller incorporates a host of offsite reporting options.

- Implement IP based reporting using the encrypted ArmorIP protocol or other common IP reporting standards.
- Inbuilt modem dialer supports phone line reporting using Contact ID.
- For complete peace of mind, set up multi-channel reporting using any combination of local ethernet, phone line and 4G network (via the Protege DIN Rail Cellular Modem).

Ethernet 10/100 Connection

Onboard ethernet communication allowing direct connection from a local PC or interconnection to an existing LAN/WAN:

- Directly connect the Protege system across a LAN or WAN interface for high speed upload and download.
- IP reporting functionality using the ArmorIP protocol, Contact ID over IP, SIA over IP and full text reporting methods.
- Full 10/100 compliant network interface allows connection of the controller to all networks at the maximum capable signaling rate.

Upgradable Firmware

Firmware is upgradable directly from the Protege WX interface.

Wall Mountable

The additional wall mounting feature provides absolute convenience and flexibility in module positioning.

Additional Licensed Items

Protege WX's flexible licensing model allows you to extend your system with additional features and integrations, as and when you need them.

Product Code	Description
PRT-WX-LIC-ALEG-1	**Protege WX Allegion Door License**: Enables the connection of a supported Allegion wireless door. A license is required for each connected wireless door. Requires a compatible RS-485 Allegion Hub.
PRT-WX-LIC-AP-1	**Protege WX Aperio RS-485 Door License**: Enables the connection of a supported Aperio wireless door. A license is required for each connected wireless door. Requires a compatible RS-485 Aperio Hub.
PRT-WX-LIC-AP-10	**Protege WX 10 Aperio RS-485 Door License**: Enables the connection of 10 Aperio wireless doors. Requires a compatible RS-485 Aperio Hub.
PRT-WX-LIC-AP-IP	**Protege WX Aperio IP Door License**: Enables the connection of a supported Aperio wireless door. A license is required for each connected wireless door. Requires a compatible IP Aperio Hub.
PRT-WX-LIC-SL-1	**Protege WX Salto SALLIS Door License**: Enables the connection of a supported Salto SALLIS wireless door. A license is required for each connected wireless door. Requires a compatible RS-485 Salto SALLIS Hub.
PRT-WX-LIC-SL-10	**Protege WX 10 Salto SALLIS Door License**: Enables the connection of 10 Salto SALLIS wireless doors.
PRT-WX-TPR-IF	**Protege WX Third Party Reader Interface License**: Enables configuration of a smart reader in Protege WX to link credential type functionality to door operation, most commonly to connect third party readers over ethernet. A license is required for each smart reader configured.

Technical Specifications

Ordering Information	
PRT-WX-DIN	Protege WX DIN Rail Integrated System Controller
Power Supply	
Operating Voltage	11-14V DC
Operating Current	120mA (Typical)
DC Output (Auxiliary)	10.45-13.85V DC 0.7A (Typical) Electronic shutdown at 1.1A
Bell DC Output (Continuous)	10.4-13.45V DC 8 ohm 30W Siren or 1.1A (Typical) Electronic shutdown at 1.6A
Bell DC Output (Inrush)	1500mA
Total Combined Current*	3.4A (max)
Electronic Disconnection	9.0V DC
Communication	
Ethernet	10/100Mbps ethernet communication link
RS-485	3 RS-485 communication interface ports - 1 for module communication, 2 for reader communication
USB	Type-A
Modem	2400bps modem communication
Readers	
Readers	2 reader ports, independently configurable for either Wiegand (up to 1024 bits configurable) or RS-485, allowing connection of up to 4 readers providing entry/exit control for two doors **
	RS-485 reader port connections support configuration for OSDP protocol
Inputs	
Inputs (System Inputs)	8 high security monitored inputs
Outputs	
Outputs	4 (50mA max) open collector outputs for reader LED and beeper or general functions
Relay Outputs	2 Form C relays - 7A N.O/N.C. at 30V AC/DC resistive/inductive
Dimensions	
Dimensions (L x W x H)	156 x 90 x 60mm (6.14 x 3.54 x 2.36")
Net Weight	360g (12.7oz)
Gross Weight	440g (15.5oz)
Operating Conditions	
Operating Temperature	UL/cUL 0° to 49°C (32° to 120°F) : EU EN -10° to 55°C (14° to 131°F)
Storage Temperature	-10˚ to 85˚C (14˚ to 185˚F)
Humidity	0%-93% non-condensing, indoor use only (relative humidity)
Mean Time Between Failures (MTBF)	560,421 hours (calculated using RDF 2000 (UTE C 80-810) Standard)

* The total combined current refers to the current that will be drawn from the external power supply to supply the expander *and* any devices connected to its outputs. The auxiliary outputs are directly connected via thermal resettable fuses to the N+ N- input terminals, and the maximum current is governed by the trip level of these fuses. The Bell output is connected in the same way.

** Each reader port supports either Wiegand or RS-485 reader operation, but *not both at the same time*. If combining reader technologies, they must be connected on separate ports.

Regulatory Notices

For a full regulatory and approval list please visit the ICT website.

RCM (Australian Communications and Media Authority (ACMA))

This equipment carries the RCM label and complies with EMC and radio communications regulations of the Australian Communications and Media Authority (ACMA) governing the Australian and New Zealand (AS/NZS) communities.

AS/NZS 2201.1 Class 5

Protege systems conform to AS/NZS 2201.1:2007 Class 5 intruder alarm systems standards for the construction, operation, performance and installation of intruder alarm equipment and systems installed in clients' premises.

CE – Compliance with European Union (EU)

Conforms where applicable to European Union (EU) Low Voltage Directive (LVD) 2014/35/EU, Electromagnetic Compatibility (EMC) Directive 2014/30/EU, Radio Equipment Directive (RED)2014/53/EU and RoHS Recast (RoHS2) Directive: 2011/65/EU + Amendment Directive (EU) 2015/863.

This equipment complies with the rules of the Official Journal of the European Union, for governing the Self Declaration of the CE Marking for the European Union as specified in the above directives.

Security Grade 4, Environmental Class II, EN 50131-1:2006+A2:2017, EN 50131-3:2009, EN 50131-6:2008+A1:2014, EN 50131-10:2014, EN 50136-1:2012, EN 50136-2:2013, EN 60839-11-1:2013, Power frequency magnetic field immunity tests EN 61000-4-8, Readers Environmental Class: IVA, IK07.

UK Conformity Assessment (UKCA) Mark

This equipment carries the UKCA label and complies with all applicable standards.

UK PD 6662:2017 and BS 8243

Protege systems conform to PD 6662:2017 and BS 8243 at the security grade and notification option applicable to the system.

UL/cUL (Underwriters Laboratories)

- UL1076 for Proprietary Burglar Alarm Units and Systems
- UL1610 for Central-Station Burglar-Alarm Units
- UL294 for Access Control System Units
- CAN/ULC 60839-11-1 for Electronic Access Control Systems
- CAN/ULC S559 for Fire Signal Receiving Centres and Systems
- CAN/ULC S319 for Electronic Access Control Systems
- CAN/ULC S304 for Signal Receiving Centre and Premise Burglar Alarm Control Units

Industry Canada

ICES-003

This is a Class A digital device that meets all requirements of the Canadian Interference-Causing Equipment Regulations.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

CAN ICES-3 (A)/NMB-3(A)

Federal Communications Commission (FCC)

FCC Rules and Regulations CFR 47, Part 15, Class A.

This equipment complies with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference; (2) This device must accept any interference received, including interference that may cause undesired operation.

Designers & manufacturers of integrated electronic access control, security and automation products.
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08-Nov-24