Challenger10 Control Panel

TS1016

Overview

Challenger10 is an advanced security solution designed for commercial and corporate sectors and is the perfect solution for the security requirements of banks, retail outlets, educational facilities and more. Challenger10 is a modular system which can be scaled for almost any application, from small to large commercial installations. With thousands of programmable options, Challenger10 has been designed to meet any security and access requirement and can be tailored to your own security policies.

Designed and built with the latest technology for superior access control and integrated networking, Challenger10 is the result of significant research and development, built on the successful foundations of Challenger V8 and its peripherals.

With 99 areas, Challenger10 can be partitioned with no loss of performance, whether you are using one or all 99 areas, which is due to the onboard 32-bit micro processor. Tailor your own solution by using the many configuration options to suit your site's requirements. Your system can be customised to individually arm areas by time and location, which gives you incredible flexibility to protect people and assets.

Users can be assigned a start and end date that is stored in the panel, meaning a permanent connection to management software is no longer required to activate or remove a person's access.

Challenger10 has been designed heavily around corporate network requirements. An integrated onboard Ethernet port allows remote reporting and management of your system on a Local or Wide Area Network (LAN/WAN). Dynamic IP address support for management software connections makes setup quick and simple.

Power efficiency and protection are key features of the onboard management system. This ensures that the Challenger10 battery is constantly charged and your current and voltage can be monitored via an LCD keypad.

Whilst maintaining backwards compatibility to legacy V8 peripherals, Challenger10 gives you the ability to upgrade your current Challenger system, allowing more scale and benefits than ever before. Existing Challenger sites can benefit from significantly reduced installation times when upgrading from a V8 to the feature-rich Challenger10 panel, saving you time and money. Selected RAS models provide enhanced keypad navigation to make programming and managing your security system easier with Challenger10. Firmware updates to the panel and certain peripherals can now be completed remotely using Titan software giving you peace-of-mind and a lower total cost of ownership.

Multiple communication paths operate various reporting formats and give you the ability to communicate to multiple control rooms and software packages simultaneously. The communication paths can filter by areas, events and time.

For those sites that require safety checks prior to opening, the panel can automate an area search process which reports a message to your monitoring service if the search has failed to complete on time. Add to this, an extended range of input testing and reporting features where individual inputs can be automatically tested with normal operation within a specified number of days and you have one of the most feature-rich intrusion detection systems available.

Features

- On-board Ethernet, USB, PSTN and RS-232
- iOS and Android mobile apps for simple and convenient operation
- High level integration to building automation to improve energy efficiency in buildings
- Full text descriptions of panel items (e.g. users, inputs, areas, doors, etc.) are stored in the panel
- Backup and restore panel configuration using on-board SD card slot
- Fully backwards compatible with most Challenger V8 peripherals
- Remote flash firmware upgradeable
- Automated input testing and enforcement of procedures to minimise maintenance costs and ensure compliance
- Highly scalable. Start small then expand your system as your organisation grows
- Fully flexible communications with options for simultaneous and redundant reporting to monitoring stations, management software and third-party systems
- Support for multiple end-of-line (EOL) resistor values for economical upgrade from other alarm systems
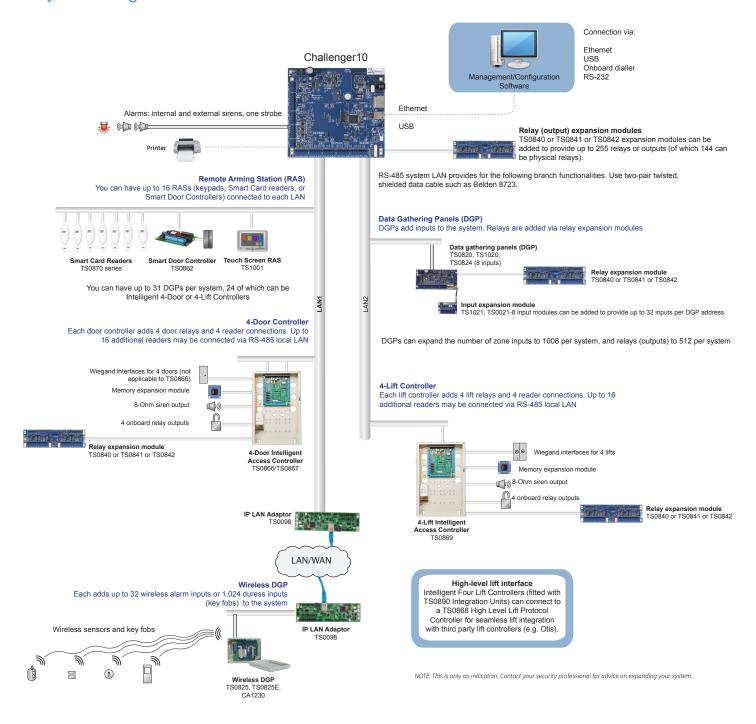
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Powerful system architecture

The Challenger10 panel is the heart of the system, and comprises a modular 'add as you go' design. By adding intelligent door and/or lift controllers, input/output expanders, memory expanders and LAN devices, you can cost-effectively add capacity and functionality as it is required. Multiple panels can be networked into one system via management software.

Challenger uses cost-effective and reliable RS-485 data bus technology that is capable of running long distances while minimising cable runs. Challenger LAN data can even be carried by optical fibres or over IP (optional interface modules required).

System diagram

Challenger10

Connection via:

Ethernet
USB
Onboard dialler
RS-232

Management/Configuration Software

Ethernet

USB

Alarms: internal and external sirens, one strobe

Printer

Relay (output) expansion modules
TS0840 or TS0841 or TS0842 expansion modules can be added to provide up to 255 relays or outputs (of which 144 can be physical relays).

Remote Arming Station (RAS)
You can have up to 16 RASs (keypads, Smart Card readers, or Smart Door Controllers) connected to each LAN

RS-485 system LAN provides for the following branch functionalities. Use two-pair twisted, shielded data cable such as Belden 8723.

Data Gathering Panels (DGP)
DGPs add inputs to the system. Relays are added via relay expansion modules

Smart Card Readers
TS0870 series

Smart Door Controller
TS0862

Touch Screen RAS
TS1001

You can have up to 31 DGPs per system, 24 of which can be Intelligent 4-Door or 4-Lift Controllers

Data gathering panels (DGP)
TS0820, TS1020, TS0824 (8 inputs)

Relay expansion module
TS0840 or TS0841 or TS0842

Input expansion module
TS1021, TS0021-8 input modules can be added to provide up to 32 inputs per DGP address

DGPs can expand the number of zone inputs to 1008 per system, and relays (outputs) to 512 per system

4-Door Controller
Each door controller adds 4 door relays and 4 reader connections. Up to 16 additional readers may be connected via RS-485 local LAN

4-Lift Controller
Each lift controller adds 4 lift relays and 4 reader connections. Up to 16 additional readers may be connected via RS-485 local LAN

LAN1

LAN2

Wiegand interfaces for 4 doors (not applicable to TS0866)

Memory expansion module

8-Ohm siren output

4 onboard relay outputs

Relay expansion module
TS0840 or TS0841 or TS0842

4-Door Intelligent Access Controller
TS0866/TS0867

Wiegand interfaces for 4 lifts

Memory expansion module

8-Ohm siren output

4 onboard relay outputs

Relay expansion module
TS0840 or TS0841 or TS0842

4-Lift Intelligent Access Controller
TS0869

IP LAN Adaptor
TS0098

LAN/WAN

Wireless DGP
Each adds up to 32 wireless alarm inputs or 1,024 duress inputs (key fobs) to the system

Wireless sensors and key fobs

IP LAN Adaptor
TS0098

High-level lift interface
Intelligent Four Lift Controllers (fitted with TS0890 Integration Units) can connect to a TS0868 High Level Lift Protocol Controller for seamless lift integration with third party lift controllers (e.g. Otis).

Wireless DGP
TS0825, TS0825E, CA1230

NOTE: This is only an indication. Contact your security professional for advice on expanding your system.
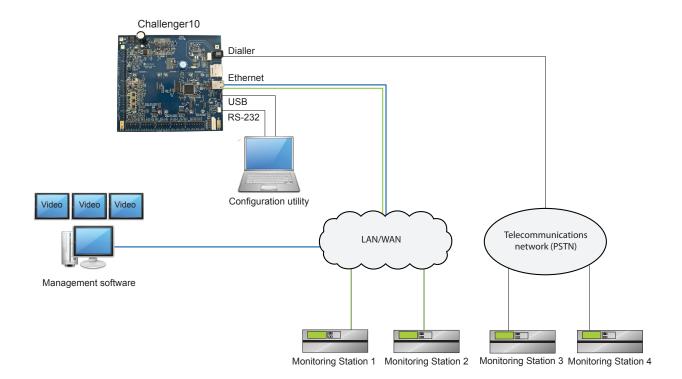
Communication technology

The Challenger10 panel uses advanced communication path technology and provides the perfect solution and flexibility for your security needs.

With Challenger10 you have the ability to filter by area, events and time, while communicating via multiple reporting formats.

Multi-tenanted sites can report alarms to their preferred security monitoring provider on a single panel and multiple paths over one Ethernet port, simultaneously.

Communication system diagram

Ordering information

TS1016	Challenger10 panel with plug pack in TS0307 enclosure
TS1016B	Challenger10, board only

Specifications

System Features	
Areas	99
Area groups	255
Inputs on board	16
Max. system inputs	1008
Automation zones	100
Outputs on board	Two 8 Ohm sirens, internal and external, 1 strobe. The external siren is monitored for tamper conditions
Supports access control	Yes
Supports lift control	Yes
Max. access control doors	96 when using TS0867 or TS0866 plus 32 RAS doors
Anti-passback	Yes (requires TS0866/TS0867)
SD Card	Onboard
Connection options (onboard)	Ethernet Interface USB RS-232 serial PSTN modem
10/100Mbps	Yes (10/100) onboard
Modem	56kbps
Relays or outputs	Use expansion modules and DGPs to add up to 512 relays or outputs
Macro logic programs	48
Input shunts	32
Reporting formats	Contact ID Large, Computer polled, Computer Event Driven, Tecom IP Receiver, Serial STU and Printer
Communications bus	RS-485 x 2
Maximum cabling distance	1,500 m (unless extended by LAN Isolation Interfaces, fibre or IP LAN Adapter)
System Capacity	
Users	2,000 built-in with name and 10-digit PIN (65,535 using TS1084 expansion module)
Alarm groups	255
Door groups	255
Floor groups	128
Alarm log	5,000
Access log	5,000
Holidays/Special days	24 holidays, option for recurring annually, plus 8 holiday types
Time zones	48 'hard' time zones plus 16 'soft' time zones
Communication Paths	10 concurrent
Physical and Environmental	
Temperature	0 to 50°C
Relative humidity	0 to 90% noncondensing
Dimensions in enclosure (W x H x D)	345 x 450 x 73 mm
Weight	4.31kg (installation weight, no plug pack) 5.95kg (shipping weight)
Regulatory Compliance	ACMA: C-Tick for Australia and New Zealand ACMA: A-Tick for Australia PTC 211 / 13 / 007 for New Zealand Telecoms
Electrical	
Input voltage to PCB	16-18VAC (space for 7 Ah battery allocated)
Battery test	Dynamic battery testing
Fuse Protection	Individual PTC (Positive Temperature Coefficient) fuse protection for: LAN, battery, auxiliary and internal siren, plug pack, external siren and strobe, relay expansion and J15 serial
Current Consumption	
Total current limit	1300mA
Operating Current (no peripherals connected)	200mA no battery fitted
Auxiliary intelligent power supply	700mA
Intelligent battery charging	300mA

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