



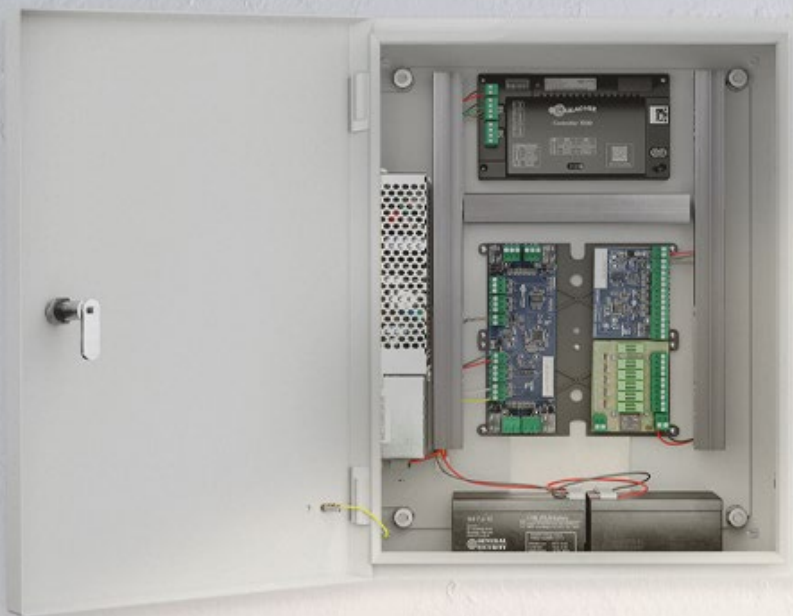
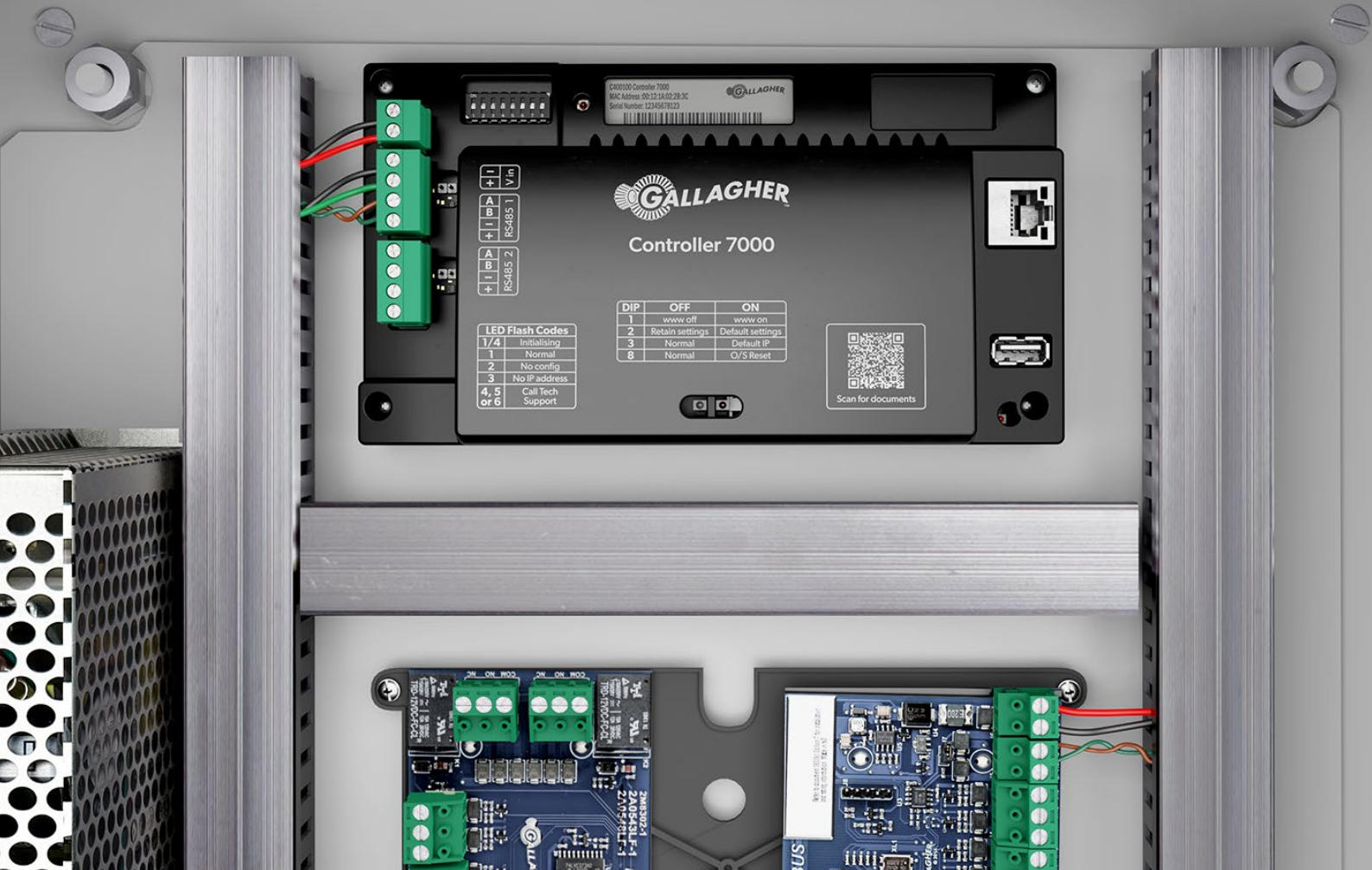
Controller 7000 Standard

The Gallagher Controller 7000 Standard introduces the next level of cyber security, seamless upgrades for existing sites and provides a Platform for the Future.

A new age of cyber defence

The Controller 7000 Standard (C7000 Standard) introduces a new generation of cyber defence with enhanced hardware, that uses industry-leading security infrastructure to generate, process and store cryptographic keys and certificates. With a Controller 7000 you have industry leading protection against attacks on firmware in the supply chain and a platform ready for the future.

The C7000 Standard is an IP based controller that can manage all localized access control, intruder alarms, perimeter security, business automation and logic needs for an organization. Able to operate independently from the Command Centre server, the C7000 Standard ensures predefined responses to monitored events, site safety, and continuity. The C7000 Standard features a highly scalable system design, able to scale from single door systems to global systems with up to 10,000 controllers.



Key features

- IP based 10/100 Ethernet connectivity
- Access control support for up to 10 wired doors, with multiple readers configurable per door
- Intruder alarms monitoring and transmission to external monitoring stations
- Serverless enforcement of business policy, ensuring staff operate in a safe and secure environment - even if connection to the server is lost.
- High speed RS-485 connectivity and software updates to field devices
- Programmable controller-based logic that operates independently of the server
- Industry leading authentication and encryption between the C7000 and all Gallagher elements of the system
- Support for elevator access control
- Support for integrated perimeter security
- Support for integration directly with building management systems
- Support for multiple wiring topologies, allowing easy connectivity of existing field devices without re-wiring
- Native programming interface for integration between the controller and 3rd party systems, independent of Command Centre server connectivity
- Multiple cabinetry and powering options dependent on site requirements
- Peer-to-peer inter-controller monitoring

Provides support for up to:

- 256 alarm zones
- 2000 access groups
- 400 time schedules
- 2,000,000 credentials
- 1,000,000 events
- 1000 active alarms
- An unlimited number of access zones

Access Control

The C7000 Standard supports access control of up to 10 doors and 256 Alarm Zones without the need for further downstream door controllers. The controller supports connectivity to a range of reader protocols, including Gallagher T-Series HBUS, CardaxIV, 3rd Party Wiegand, OSDP, and Aperio* readers.

The C7000 Standard also provides a range of wiring connectivity options for re-use of existing site wiring,

with reader connectivity and door I/O options such as the:

- 8H/4H Module - Connecting directly into the controller, supporting respectively 8 or 4 doors and up to 24 Inputs and 8 Outputs.
- 8R/4R Module - As Above, supporting respectively 8 or 4 readers (CardaxIV), or 4 or 2 doors (Wiegand) and up to 24 Inputs and 8 Outputs.
- HBUS Door Module/HBUS Door Mobile Wiegand - Connected via RS485 wiring to the controller, supporting 2 readers (HBUS or Wiegand respectively) and door I/O up to 256 Inputs and 256 Outputs.

The controller supports advanced access control functions such as mobile credential support, anti-passback, anti-tailgating, dual authorization, elevator floor access, and visitor escorting functions.

**Aperio will be available end of 2023*

Intruder Alarms

Used in conjunction with the Gallagher T20 Terminal, the C7000 supports full intruder alarms functionality, including arming and disarming, entry and exit paths, sensor walk testing, and high security options such as authenticated and encrypted sensor communications and sensor masking detection alarms.

The controller supports transmission of alarms to external monitoring stations via LAN/WAN networks using encrypted DC09 or CSV IP Alarms standard.

Business Policy Enforcement

The C7000 Standard is capable of enforcing business policy at the door, ensuring that all staff and visitors remain physically safe and compliant on site. This can include enforcement of an individual's compliance to enter an area (e.g. site inductions, licenses, and accreditation), safety policies (e.g. automated site lockdown based on a combination of pre-defined events), drug and alcohol policies (e.g. randomized alcohol testing prior to site entry), and fatigue policies (e.g. enforcing rest periods before site re-entry), with enforcement occurring irrespective of Command Centre server connectivity.

Dedicated encryption chip

The Controller 7000 Standard uses a Secure Element to keep all keys and certificates separate from the main microprocessor. This additional level of protection provides industry leading cyber security.

C7000 Starter Kit

This controller supports up to ten doors and allows a small site to get up and running with access and alarms functionality. Limited to the first Gallagher Controller per site, it comes with its own Starter Kit Command Centre license.*

***Coming late 2024**

Controller 7000 Variant Overview

Capacity Support	C6000 Standard	C6000 High Sec	C7000 Single Door	C7000 Standard
Maximum Inputs	24 (expandable to 256)	24 (expandable to 256)	6	24 (expandable to 536)
Maximum Outputs	8 (expandable to 256)	8 (expandable to 256)	2	8 (expandable to 520)
Maximum Doors	10 (recommended)	10 (recommended)	1	10 (recommended)
Maximum Readers	40	40	40	40
Maximum Alarms Terminals	10	10	20*	20*
Maximum Stored Events	80,000	80,000	1,000,000	1,000,000
Maximum Cardholders	500,000	500,000	2,000,000	2,000,000
Maximum Alarm Zones	256	256	256	256
Maximum Active Alarms	100	100	1000	1000
*Only 10 simultaneous log ins allowed				

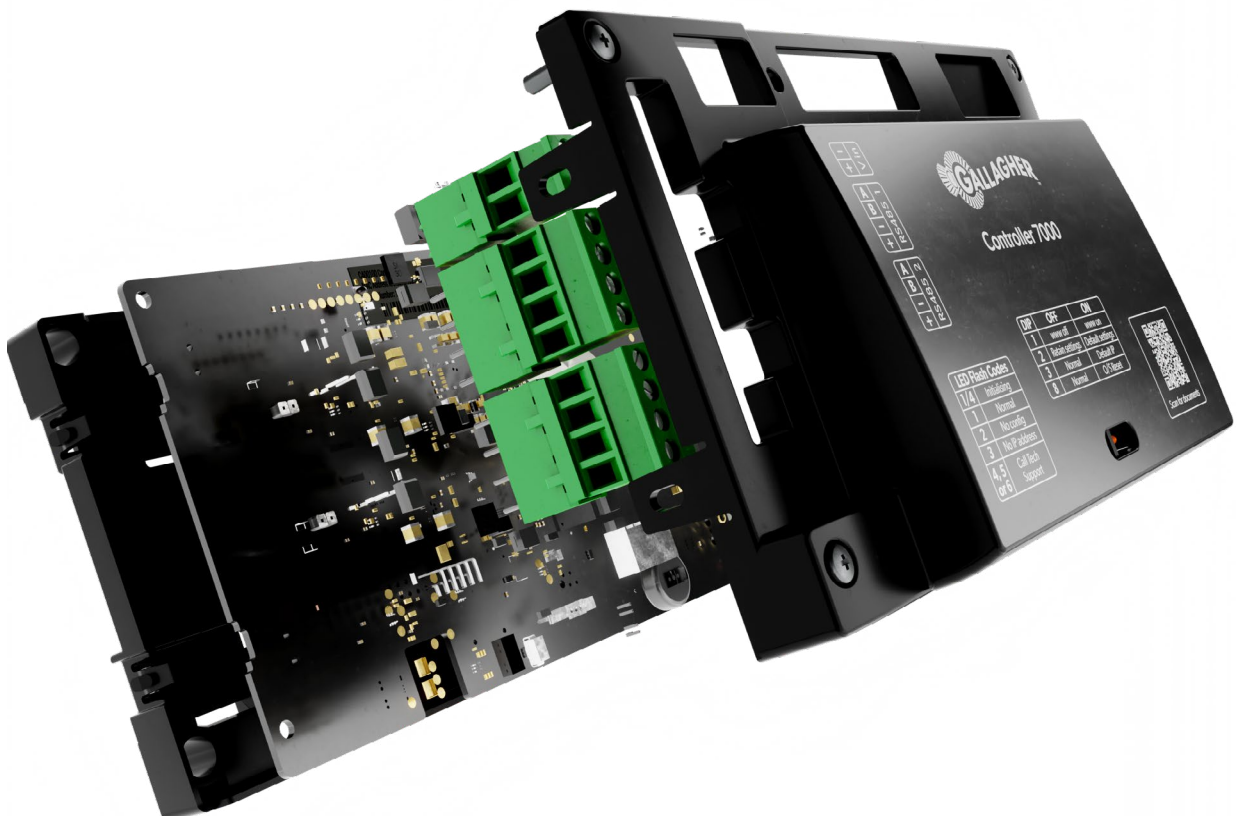
Hardware Features				
Onboard Ethernet	YES	YES	YES	YES
Maximum Ethernet Speed Support	10/100Mbps	10/100/1000Mbps	10/100Mbps	10/100 Mbps
Embedded Processor	ARM9	ARM9	NXP i.MX8x	NXP i.MX8x
Memory	64MB RAM 128MB NAND	64MB RAM 128MB NAND	512MB RAM 4GB eMMC	512MB RAM 4GB eMMC
RS-485 Downstream Ports	YES (2 ports)	YES (2 ports)	YES (1 port)	YES (2 ports)
RS-485 Port Maximum Speed	1Mbps	1Mbps	1Mbps	1Mbps
PoE Support	Yes, non-native	NO	Yes, PoE+ variants	NO
Dual Ethernet (single MAC address)	NO	NO	NO	NO
True Dual Ethernet (two MAC Addresses)	NO	Single MAC	NO	NO
Peer-To-Peer Communications	YES	YES	YES	YES
Virtual Outputs	YES	YES	YES	YES
Upstream Encryption	AES 256bit	AES 256bit	AES 256bit	AES 256bit
Encryption to Field Devices	ECC 256bit Auth, AES 128bit Symmetric	ECC 256bit Auth, AES 128bit Symmetric	ECC 256bit Auth, AES 128bit Symmetric	ECC 256bit Auth, AES 128bit Symmetric
Automatic software upgrades of downstream devices	YES	YES	YES	YES
Offline Controller Logic Support	YES	YES	YES	YES
DIP Switches	8	8	8	8
Run Indicator LED	YES	YES	YES	YES
Power LED	YES	YES	YES	NO
Over-Temperature LED	NO	YES	NO	NO
PSTN Dialler	YES	YES	NO	NO
Tamper Detection	YES – Optical via ADCs	YES – Optical via ADCs	YES – Microswitch	YES - Optical via ADCs
USB Expansion Port	YES	YES	NO	YES
RS232c Serial Port	YES	YES	NO	NO
Secure Boot	No	No	YES 384bit Strength	YES 384bit Strength
External Watchdog Chip	YES	YES	NO	NO
Real Time Clock with backup capacitor	YES	YES	YES	YES
Temperature sensors	NO	YES	NO	NO
External Voltage Measurement (ADC)	YES	YES	YES	YES
Board ID resistors (ADC)	YES	YES	NO – Variant recorded in OTP	NO – Variant recorded in OTP
Connector for Plugin Module	YES	YES	NO	YES
Security Chip	No	AT98 Enhanced VAULTIC HS	Edgelock	Edgelock
Temperature Sensing	NO	YES	No	NO
In Service Relay	NO	YES	NO	NO
Key Lengths	P256 & SHA 1 Factory P384 & SHA 384 Site	P256 & SHA Factory P384 & SHA 384 Site	P384 & SHA 384	P384 & SHA 384
RS485/external power Overload fuses	Polyfuses	Polyfuses	eFuses (monitored)	Polyfuses

Field Device Features

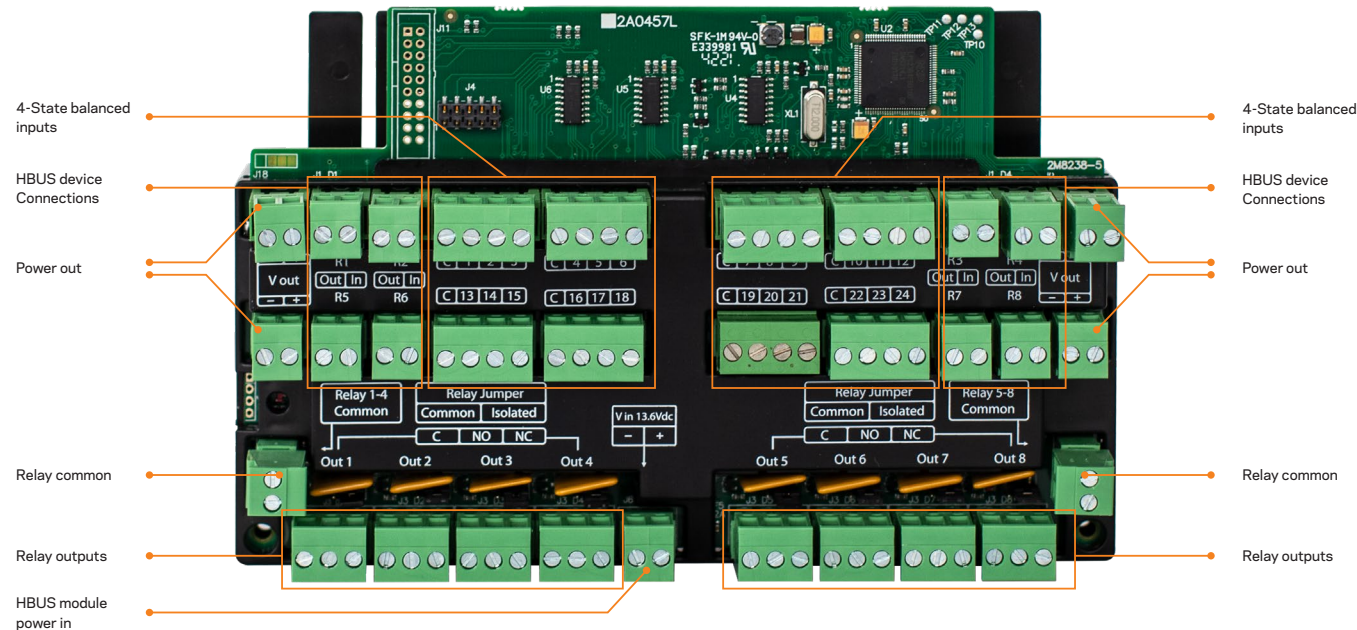
Maximum HBUS Devices per Wiring Run	80	80	80	80
Maximum HBUS Devices Wiring Run Length	500m	500m	500m	500m
Support for Star Wiring of Field Devices	With plug-in module, HBUS Hub or OSDP Hub.	With plug-in module, HBUS Hub or OSDP Hub.	NO	With plug-in module, HBUS Hub or OSDP Hub.
Support for Daisy Chain Wiring of Field Devices	YES	YES	YES	YES
OSDP Reader Support	YES	YES	YES	YES
Customisable Reader Images	YES	YES	YES	YES
Keypad Triggered Events	YES	YES	YES	YES
Reader Mimic Panel Functionality	YES	YES	YES	YES
WCustom Messages on Readers	YES	YES	YES	YES
Field Downloadable Code	YES	YES	YES	YES
End-of-line Encryption Module	NO	YES	NO	NO
Aperio Support	YES	YES	Dec '23	Dec '23
RSI/Schlage RS485 Support	YES	YES	Dec '23	Dec '23
Moduteq/MBus Support	YES	YES	Not yet	Not yet
GBUS support	YES	YES	NO	NO
Wiegand Support	With plug-in module	With plug-in module	YES	With plug-in module
Cardax IV Support	YES - 8R/4R module		NO	YES

Supported Credential Types

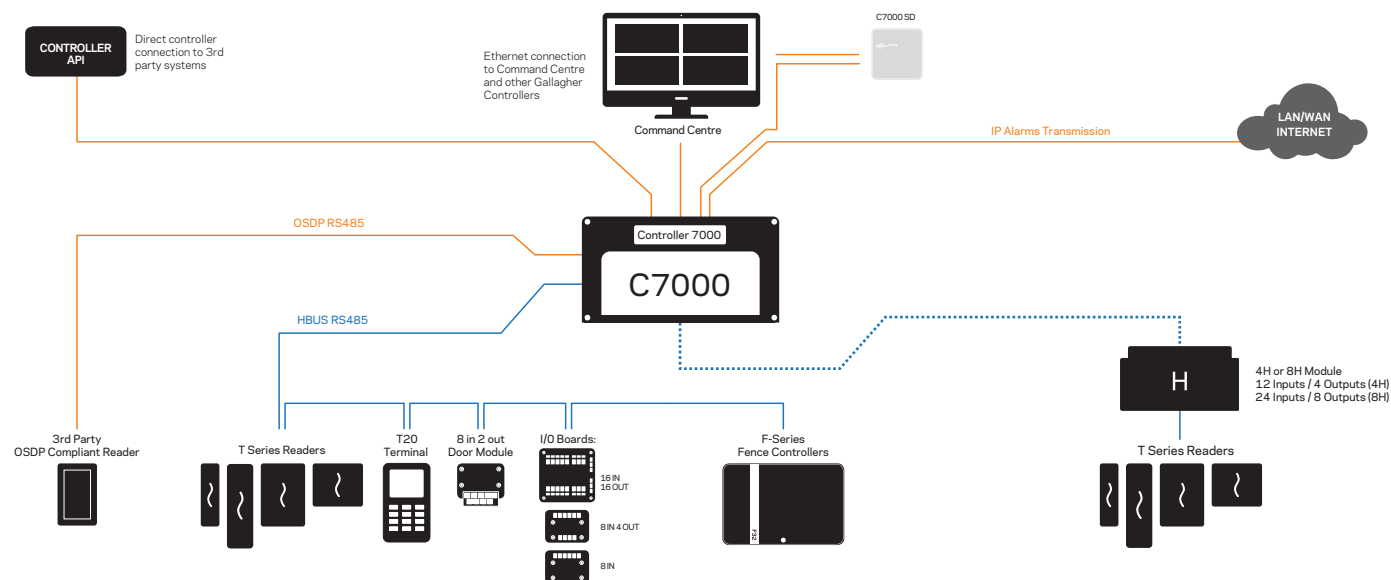
MIFARE DESfire	YES	YES	YES	YES
MIFARE Classic	YES	YES	YES	YES
MIFARE Plus	YES	YES	YES	YES
Mobile Credentials	YES	YES	YES	YES
125 kHz	YES	YES	YES	YES
PIV	NO	YES	NO	NO
PIV-I	NO	YES	NO	NO
TWIC	NO	YES	NO	NO
QR codes	YES	YES	YES	YES



Key features diagram of the Controller 7000 and 8H Module



Controller 7000 System Diagram



Technical Specifications

Product numbers		
C400100	Gallagher Controller 7000 Standard	C400110 Gallagher Controller 7000 Starter Variant
Controller 7000		
Power	Tamper protection	Optical wall and unit tamperers
	Voltage	13.6 v DC±15%
	Idle current @ 13.6Vdc*	Without Plug-in Module or RS485 devices connected: 130 mA Maximum current per RS485 port: 750 mA
Environmental limits	Operating temperature	-10 ° to +70 ° C
	Humidity	95% Non-condensing
Software compatibility	Command Centre v9.0 or later	
Communications	Ethernet network connection	10/100 BaseT Ethernet Port
	RS485 Device Communications (2 Ports)	Maximum speed
	▪ HBUS	1Mbit/s, 500m (1640ft)
	▪ OSDP	115.2Kbit/s, dependent on cable type
	▪ SensorBUS (v9.10 or later)	115.2Kbit/s, dependent on cable type - <i>future feature</i>
	▪ Aperio (end of 2023)	19.2Kbit/s, 1000m max. - <i>future feature</i>
	USB Support	1 x USB 2.0 port
Standards compliance	TCP/IP protocol	256bit AES* symmetric encryption for Controller to Server and Inter-Controller communications
	CE, RCM, UL, UKCA, FCC, IC Compliance and certification information is available on our support site or by contacting Gallagher	
Dimensions	Height x width x depth	100 x 180 x 42mm (3.9 x 7.1 x 1.7in)
	Gallagher mounting footprint	1
Additional notes		
*This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.openssl.org/) Please refer to Technical Reference Manual for more information. * Note: Current measurements are indicative only and exclude external devices. Currents have been rounded up to the nearest 5mA. Please refer to the Gallagher Connectivity Guide and product Installation Notes for detailed power supply and operating characteristics		

