

iSTAR Edge G2

Four-Reader IP Access Control Edge Device



Key features

- Stand-alone IP edge access controller with local database of up to 1,000,000 cardholders
- Controls and powers all access control devices at the door to minimize installation costs
- Power over Ethernet (PoE) module features PoE+, with enough power for two doors and associated devices
- Trusted Execution Environment (TEE) provides advanced hardware-based cybersecurity protection
- Advanced access control feature set including anti-passback, peer-to-peer clustering and local event logic
- Dual GigE Network ports with IPv6, DHCP and 802.1X support
- Supports OSDP Secure Channel for encrypted, two-way reader communications
- Supports embedded High Assurance FICAM operation without additional third-party hardware

Powerful, Stand-Alone Physical Access Control

iSTAR Edge G2 is a powerful, cyber-hardened IP edge access control device that provides reliable, stand-alone physical access control for up to four doors. Its optional Power over Ethernet (PoE) module provides ample power for two doors and allows iSTAR Edge G2 to leverage existing network infrastructure to reduce installation costs.

Overall system reliability is increased by the iSTAR Edge G2 by providing localized decision-making at each door. The controller has a robust local cardholder database of over 1,000,000 personnel records and local alarm and event buffering in the event communication to the host is unavailable.

iSTAR Edge G2 has been designed to drastically lower installation and startup costs. Embedded lock power management, including powered (wet) lock outputs with individual resettable fused protection, eliminates the need for additional power supplies and fused power distribution boards normally required for traditional installations. Combined with removable connectors, a local display for quick troubleshooting and status LEDs, iSTAR Edge G2 streamlines even the toughest installation. Furthermore, with remote web diagnostics, you can find and fix performance issues anywhere in your facility using a web browser.

Advanced Cybersecurity using TEE

iSTAR Edge G2 utilizes a hardware-based Trusted Execution Environment (TEE), a secure, isolated environment within its CPU that runs in parallel to the main Linux operating system. TEE guarantees confidentiality and integrity of code and data loaded by using hardware and software as protection mechanisms. TEE provides reliable storage of keys and other cryptographic materials, and manages a secure boot process to guarantee authenticated sources for hardware and software.

Advanced Network Security

iSTAR Edge G2 features dual GigE Ethernet LAN ports, providing primary and secondary paths back to C•CURE 9000. IPv4 and IPv6 protocols are supported, along with DHCP, DNS, SNMP, TLS 1.3 and 802-1X port authentication protocol for added security. Security risks are further reduced with embedded denial-of-service protection, AES 256 symmetric encryption and unique controller-based certificates for network authentication. The iSTAR Edge G2's embedded web page features unique password management and TLS 1.3 authentication – and the web page feature is managed centrally by C•CURE 9000, which can be disabled if desired.

Advanced Access Control When You Need It

iSTAR Edge G2 is packed with the sophisticated access control features you have come to expect from Software House. Controller-to-controller communications, and event and I/O linking maintain system reliability even when the host is unavailable. Area controls such as cluster-based anti-passback, occupancy control, area pass-through and double-swipe ensure that your areas are controlled exactly to your specifications. In addition, embedded intrusion zone support, controller-based event logic, custom keypad commands and OSDP secure channel support enhance a feature set that is second to none in the access control industry.

iSTAR Edge G2 Reduces Installation and Service Costs

Services costs can add up quickly. A rechargeable coin cell battery for the real-time clock (RTC) and the use of super-caps to provide power for graceful shutdowns when power is lost help to minimize service needs, thereby reducing costs. Local startup and troubleshooting information is available through iSTAR Edge's local web page, including card read information, boot time and memory usage, connection status, network config information and firmware/OS versions. And, the local LCD provides important controller information for quick and easy troubleshooting.

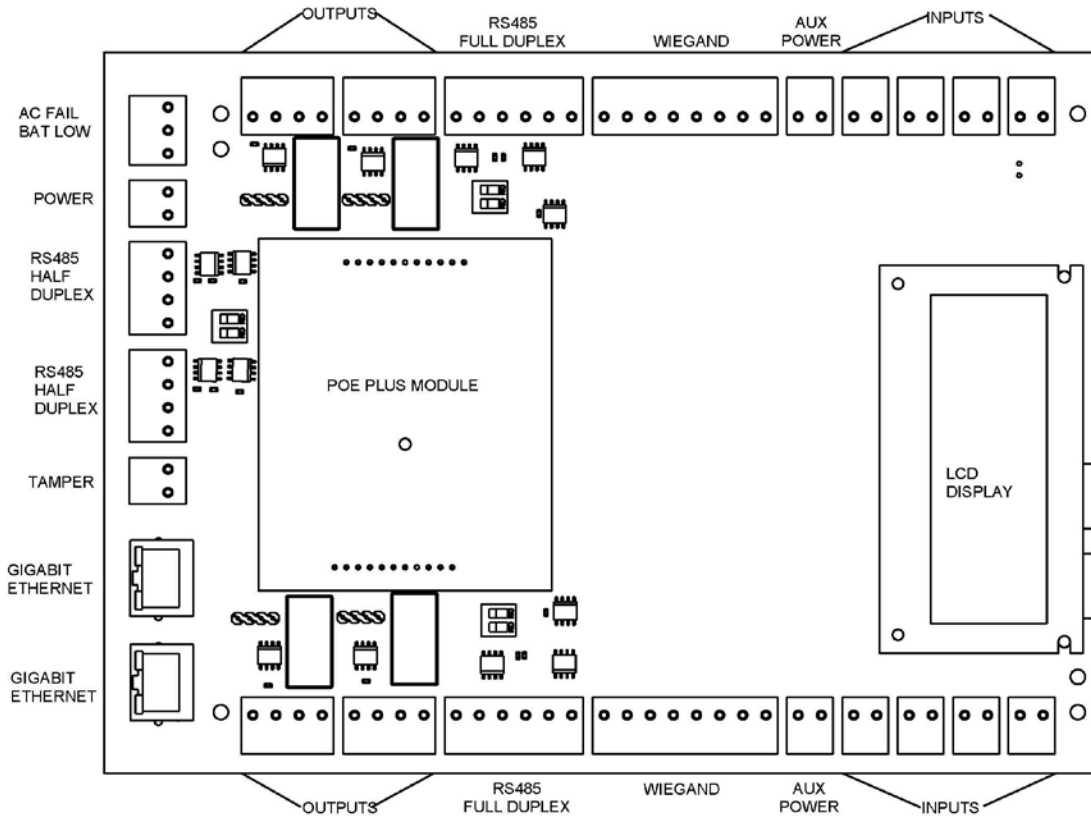
Flexible Reader Support, Expandable Inputs/Outputs

iSTAR Edge G2 supports a variety of access control readers including Wiegand, RM and OSDP Secure Channel readers. In addition, iSTAR Edge G2 has two RS485 full duplex ports that provide direct support for the TST-100 touchscreen terminal, which provides an enhanced user experience at the door.

When additional inputs and/or outputs are needed, you can easily expand iSTAR Edge G2 with up to eight I8 input expansion modules, and up to eight R8 relay output modules. You can also mount up to two modules inside the metal enclosure.



iSTAR Edge G2 Board Layout



Specifications

Physical	
Dimensions	18g Steel Enclosure: 305 x 305 x 101 mm (12 x 12 x 4 in) Board: 190 x 146 x 25 mm (7.5 x 5.75 x 1in) Shipping Box: 381 x 330 x 178 mm (15 x 13 x 7 in)
Weight with Enclosure	4.2 kg (9.3 lbs)
Enclosure Features	Includes lock and tamper switch, and mounting standoffs for two expansion modules (I8, I8-CSI, R8 or RM-4)
Environmental	
Operating Temperature	0°C to 50°C (32°F to 122°F)
Humidity	5 to 95% RH

Electrical

Input Voltage	12VDC (-15/+20%) or 24VDC (-15/+20%)
Input Current	Board: 500mA@12VDC / 250mA@24VDC
Max Power (Boards and Attached Devices)	5A @ 12VDC and 24VDC for boards plus attached devices
Heat Dissipation	140 BTU/HR typical

Electrical - Optional PoE+ Module

Standards Supported	PoE (802.3af), 12.95 W max; PoE Plus (802.3at), 25.5 W max. Power negotiation uses two-state physical discovery or LLDP-MED protocol
Power Available for Attached Devices	PoE: 550 mA@12V; PoE Plus: 1,600 mA@12V
Network Port for PoE	Port 1

Operational

System Memory	16GB Flash eMMC; 2GB RAM
Cardholder Capacity	1,000,000; ten clearances, five cards/person, 40-digit cards
Processor	NXP iMX7
Operating System	Hardened Linux kernel, Yocto project (YP)
Network	Dual GigE LAN ports
Network Authentication	TLS 1.3 using AES256 symmetric encryption, unique certificates
Port Authentication	802.1X port authentication protocol

Readers/Cards

Number of Readers	Four
Reader Types Supported	OSDP, RM, Wiegand, Touchscreen (Two touchscreens max; two Wiegand onboard)
Max. Distance to Reader	OSDP, RM: 1,200 m (4,000 ft) TouchScreen: RM Mode: 1,200 m (4,000 ft) - power varies according to application Smart Mode: 10 m (33 ft) Wiegand: 150 m (500 ft)
Reader Power Available	12VDC, 750mA (wiegand), 12V, 1.2A (RS485)

Inputs/Outputs

Inputs	Eight supervised inputs; tamper, low battery, power fail
Auxiliary Input Power	12VDC, two (350 mA each)
Input Expansion	Up to 64 additional inputs using I8 expansion modules
Outputs	Four, individually configurable via jumper as power sourcing (wet) or dry contact relay
Output Expansion	Up to 64 additional Form C outputs using R8 expansion modules
Output Power, Wet	12 VDC or 24 VDC, 0.75A per port
Output Protection	Load switch, 0.75A, snubber, transzorb
Output Rating, Dry	30V AC/DC, 3A

Regulatory

Security	UL 294, UL 1076
Emissions	FCC Part 15 Class A
Immunity	EN 55022, EN 55024, EN 50130-4
Safety	EN 60950-1 EM/EMC; UL 2043, for use in plenums

Ordering Information

Model Number	Description
GSTAR004	iSTAR Edge G2 door controller with metal enclosure, supports four readers
GSTAR004-POE	iSTAR Edge G2 door controller with metal enclosure and PoE/PoE+ module, supports four readers
GSTAR004-RM	iSTAR Edge G2 door controller with metal enclosure and two RM-4 modules, supports four readers
GSTAR004-MB	iSTAR Edge G2 board only, supports four readers
GSTAR004-MBP	iSTAR Edge G2 board only and PoE/PoE+ module, supports four readers

About Johnson Controls

Johnson Controls is a global diversified technology and multi-industrial leader serving a wide range of customers in more than 150 countries. Our 120,000 employees create intelligent buildings, efficient energy solutions, integrated infrastructure and next generation transportation systems that work seamlessly together to deliver on the promise of smart cities and communities. Our commitment to sustainability dates back to our roots in 1885, with the invention of the first electric room thermostat.

For additional information, please visit www.swhouse.com or follow [Software House](#) on LinkedIn, Twitter, and Facebook.

© 2020 Johnson Controls. All rights reserved. Product offerings and specifications are subject to change without notice.
Actual products may vary from photos. Not all products include all features. Availability varies by region; contact your sales representative.

SH1272-DS-202008-R01-HS-EN