SOFTWARE HOUSE

From Tyco Security Products

iSTAR Ultra SE

Special Edition iSTAR Ultra, Compatibility and Future-Proofing with Pro Mode and Ultra Mode

(Ultra Mode available in early 2016)

Features That Make a Difference:

- Powerful network-ready door controller for up to 32 readers (16 from ACMs)
- Dedicated DIP switch allows you to go from “Pro mode” for use with C•CURE 800/8000 and C•CURE 9000 to “Ultra mode” for use with C•CURE 9000
- Dual GigE network ports for redundant network operation
- Hardened Linux embedded OS for improved security and scalability
- Enables wireless locks to communicate with C•CURE 9000 providing a fully integrated and managed lock solution
- Includes global anti-passback and advanced peer-to-peer clustering
- Native intrusion zone functionality
- Manages up to 500,000 cardholders in local memory
- Socketed relays improve serviceability
- Dedicated input for fire alarm interlock overrides door locks during fire conditions (Ultra mode only)[1]
- Onboard 256-bit AES network encryption (Ultra mode only)
- Rack-mount models provide flexibility in mounting options
- Flexible adapter plate to mount in existing iSTAR Pro enclosures
- Great solution for enterprise and government installations

iSTAR Ultra SE is a powerful, intelligent network-ready controller that supports up to 32 readers. With a strong iSTAR Ultra feature set, the iSTAR Ultra SE provides an extra level of compatibility (“Pro mode”) to ensure all Software House systems can take advantage of its enhanced capabilities. The controller features the same General Controller Module (GCM) as iSTAR Ultra, and one or two Access Control Modules (ACM) to accommodate field wiring from readers, inputs, and outputs. The iSTAR Ultra SE ACM size, footprint, and connectors are identical to the iSTAR Pro ACM allowing for an easy upgrade to the iSTAR Ultra SE.

In “Pro mode”, iSTAR Ultra SE has the feature set of the iSTAR Pro providing compatibility with C•CURE 800/8000. In “Ultra mode”, additional high end features such as AES encryption and ASSA ABLOY Aperio wireless lock support are enabled. Changing between “Pro mode” and “Ultra mode” is accomplished via a dedicated DIP switch on the GCM board.

iSTAR Ultra SE was designed with flexibility and compatibility in mind. When your project calls for a controller with a smaller footprint, an upgrade from an earlier Software House controller, or when the project does not require the additional embedded lock power management features of iSTAR Ultra, iSTAR Ultra SE gets the job done.

Supports up to 32 Readers

iSTAR Ultra SE uniquely combines support for traditional hardwired access control doors with support for wireless lock sets, all in the same controller. Up to 32 readers are supported by the iSTAR Ultra SE, of which 16 may come from the I/O units of the ACM – the rest can be made up of wireless lock sets and devices.

iSTAR Ultra SE is ideal for areas that require many readers in close proximity to the panel. For more distributed installations, iSTAR Ultra SE includes up to 16 RS-485 ports, allowing the installer to run longer distances to each door.

Networking Strength and Security

iSTAR Ultra SE includes two onboard gigabit network ports for primary and secondary communications to the host. AES 256-bit FIPS 140-2 network encryption, with custom key management and denial-of-service protection, secures the controller from potential network threats. iSTAR Ultra SE supports both static and dynamic IP addresses, using DHCP and DNS to simplify network installation. In addition, the powerful iSTAR Configuration Utility (ICU) reduces startup time by allowing you to view online controllers, change configuration parameters, and download new firmware from a single interface.

iSTAR Ultra SE uses a GCM which includes standard 2GB RAM and 16GB SD card for memory.Database backups and all buffered transactions are stored to non-volatile SD card memory. A real-time clock battery keeps the clock powered during a power failure.

[1] Available with C•CURE 9000 v2.50 or higher

Features

Ultra Mode vs Pro Mode

iSTAR Ultra SE provides the ultimate compatibility with the ability to be used with both C•CURE 800/8000 and C•CURE 9000 systems. For C•CURE 800/8000 systems, the controller is set to “Pro mode” and will operate as an iSTAR Pro. It can cluster with other iSTAR Pros and even supports a dial-up connection back to the C•CURE 800/8000 host. “Pro mode” is also very useful when upgrading iSTAR hardware ahead of a C•CURE 9000 upgrade – it allows you to upgrade the hardware first, while still on the previous access control software.

For C•CURE 9000 v2.50 and greater, you can set the Ultra SE to “Ultra mode” to take advantage of additional high end features. When the controller is in “Ultra mode”, it has all of the powerful iSTAR Ultra features including AES encryption, 32-reader connectivity, ASSA ABLOY wireless lock integration, and configurable input circuit types. It can also cluster with iSTAR Ultra, iSTAR Edge, iSTAR eX, or iSTAR Pro (non-encrypted).

	Ultra Mode	Pro Mode
Compatibility	C•CURE 9000, v2.50 and above	C•CURE 800/8000 v10.3, C•C9000 v2.40 and below
10/100/1Gb Ethernet, Full Duplex	Yes	Yes
Dual Network Ports	Yes	Yes
AES 256 Encryption, FIPS 197	Yes	No
Dialup Support	No	Yes
Selectable Input Circuit Types	Yes	No
Total # of Readers Supported	32	16
# of Supervised Inputs per ACM	16	16
# of Relay Outputs per ACM	8	8
# Wiegand Readers per ACM	8	8
# RM Readers per ACM	8	8
# I/O Modules per ACM	16-I8 & 16-R8	8-I8 & 8-R8
Schlage Wireless Locks per GCM	32	16
Aperio Wireless Locks per GCM	32	none
# Personnel, 10 clearances/per, 5 cards/per, long card #s	500,000	500,000

Ensure Reliable Communication with Clusters

iSTAR Ultra SE supports peer-to-peer communications across clusters meaning that the controllers communicate with one another without needing host intervention. Clusters are user-defined groups of up to 16 controllers and can be created to enhance security by separating a widely dispersed facility into different controlled areas. For example, events linking inputs on one controller to outputs on another controller will still be active without the host.

Local and Global Anti-Passback Provides Effective System-Wide Security

Anti-passback prevents cardholders from passing their credentials back to others in order to gain access to secured areas. Global anti-passback is critical for ensuring uncompromised security on a large scale. Building upon cluster-based anti-passback as described above, the controllers are able to send an anti-passback violation notice to the C•CURE server. Tailgating, or following another cardholder into a secured area without presenting a separate badge, can easily be flagged within the C•CURE monitoring station.

Rack Mount Flexibility

iSTAR Ultra SE is available in a modular rack mount configuration, reducing the space requirements and costs associated with installing a panel on the wall. Separate GCM and ACM modules can be arranged in the rack to optimize your server room installation. For example, the GCM can be mounted in the front of a four-post rack, while the ACM and field wiring can be located in the rear of the rack. Field wiring on the ACM is easily routed through the top and/or bottom of the enclosure, with the ACM board mounted front and center for convenient servicing.

Keypad Commands Provide the Ultimate in Control

iSTAR Ultra SE supports custom keypad commands which provide a powerful way to easily activate events in C•CURE. These commands include anything from triggering a duress call and sounding an alarm, to locking and unlocking doors directly from an RM reader keypad. Commands can be configured to require a card presentation and/or a card and PIN to validate the command. Keypad commands can also be used to arm and disarm intrusion zones.

Arm and Disarm Intrusion Zones to Enhance Security

For your most critical areas, iSTAR Ultra SE features built-in intrusion zone functionality allowing you to monitor and respond to intrusion alarms quickly, without relying on a third-party intrusion panel. Any door or input on the iSTAR Ultra SE, including inputs from I8 expansion modules, can be configured as part of an intrusion zone, either as a 24/7 monitored input such as a glass break detector, or as a controlled input such as a motion sensor or door. Zones can be armed and disarmed using a combination of card and/or PIN, and/or from the C•CURE 800/8000 or C•CURE 9000. Entrance and exit delays, bypass, and custom triggers and commands are all configurable per zone for the utmost in flexibility.

Extended Card Formats, Multiple Credentials Enhance Flexibility

iSTAR Ultra SE supports extended card formats of up to 256 with multiple data fields, providing the utmost in flexibility when configuring custom card formats. Longer card numbers and formats offer greater protection against card duplication, and are especially valuable to customers who require card numbers that exceed 10 digits.

Features

iSTAR Ultra SE allows administrators to assign up to five active cards per cardholder record rather than having to create a separate record for each card. This simplifies the management and maintenance of personnel records. For additional flexibility, iSTAR Ultra SE can support up to 128 card formats systemwide and ten card formats per reader.

Built-in Diagnostics to Easily Test and Troubleshoot

iSTAR Ultra SE includes both built-in web diagnostics pages and a local LCD to test and troubleshoot inputs, outputs, reader ports, and last card read. In addition, via the network, you can retrieve real-time status and diagnostics of:

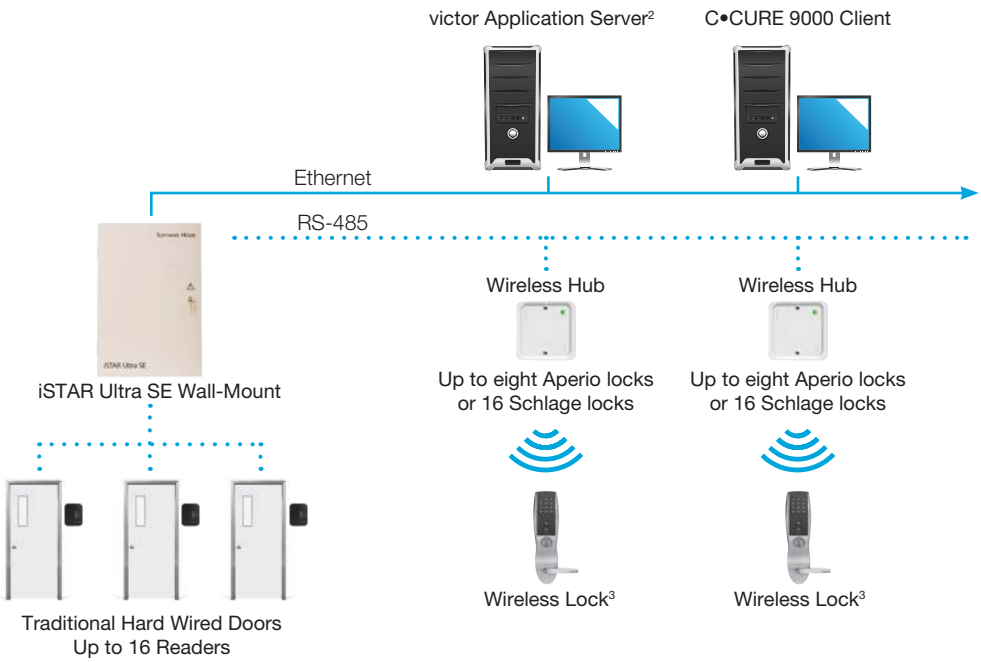
- controller time/boot time
- total/available memory
- connection status
- firmware and OS versions
- hardware (MAC) and IP addresses
- downloaded clearances and cardholders

Fully Integrated and Managed Lock Solution

Utilizing iSTAR Ultra SE, wireless locks from ASSA ABLOY or Schlage communicate with C•CURE 9000, providing a fully integrated and managed lock solution. Up to 32 ASSA ABLOY Aperio or Schlage AD300 and AD400 locksets can be managed by a single iSTAR Ultra SE (in Pro mode - up to 16 Schlage locks, no Aperio support). In addition to traditional locksets, the Aperio line also includes cabinet and data center locks, allowing you to extend the breadth of your access control system to non-traditional openings. Each lockset communicates using AES 128-bit encrypted wireless technology to an a wireless hub, which is then connected to the iSTAR Ultra SE with a simple RS-485 communications bus. Each hub can accommodate up to eight Aperio or 16 Schlage wireless locks.

All activity and alarms from each wireless device are sent to the iSTAR Ultra SE and then up to the C•CURE 9000 in real time, guaranteeing a high level of control and visibility of door actions. Besides standard card access transactions, each device also communicates low battery, tamper, and communications status to the system.

iSTAR Ultra SE and Wireless Lock System Layout



[2] The C•CURE 9000 Server component is now called the victor Application Server.
[3] ASSA ABLOY Aperio or Schlage AD300 or AD400 but not both.

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Specifications

Physical

Dimensions (H x W x D)	
Wall-Mount	61.6 x 41.9 x 10.2 cm (24.25 x 16.5 x 4.0 in)
Rack Mount GCM	86 x 445 x 252 mm (3.4 x 17.5 x 10 in) (2U rack height)
Rack Mount ACM	175 x 445 x 125 mm (6.9 x 17.5 x 4.9 in) (4U rack height)
GCM Board	165 x 266 x 26 mm (6.5 x 10.5 x 1.02 in)
ACM Board	121 x 311 x 38 mm (4.75 x 12.25 x 1.5 in)
Weight	
Wall-Mount	10.6 kg (23.3 lbs)
Rack Mount GCM	4.3 kg (9.5 lbs)
Rack Mount ACM	4.1 kg (9.0 lbs)
Enclosure Material	16 gauge cold rolled steel, with tamper switch
Environmental	
Operating Temperature	0 - 50°C (32 - 122°F)
Operating Relative Humidity	5 - 95% RH non-condensing
Storage Temperature	-20 - 60°C (- 4 - 140°F)

Electrical

Power Requirements, GCM	12 VDC +/- 20%, 0.5 A plus up to 1.5 A per RS-485 port
Power Requirements, Each ACM	12V DC +/- 20%, 0.5A for core board; 1.5A per RS-485 port; 0.8A per Wiegand; 12V DC (Wiegand 5V max, 1.25A total); Total ACM core board plus outputs not to exceed 5A.
Power Supply (Optional)	
Power Input	90 to 240V AC, 47 to 63 Hz, 1.7A
Power Output	12V DC at 5.0 A maximum
Heat Dissipation	GCM: 20.5 BTU/hr, each ACM: 20.5 BTU/hr
Memory and RTC Backup	CR 2032 lithium battery provides RTC backup; database and buffered transactions stored in non-volatile memory

System and Network

CPU	Freescale i.MX6 1 GHz dual core Cortex-A9
System Memory	2 GB RAM
SD Storage	16 GB SD card
Primary Network Port	10/100/1000 Mbps, full duplex, auto-negotiate
Secondary Network Port	10/100/1000 Mbps, full duplex, auto-negotiate
Network Encryption	Optional AES 256-bit, with custom key Management (Ultra mode only)
Indicators and Switches	LCD for diagnostics, LEDs for power, LAN activity, serial port activity, output status, encryption-enable switch (Ultra mode only), Ultra mode/Pro mode switch
Modem Port thru USB Modem	Supported on C•CURE 800/8000, C•CURE 9000 v2.50 (Pro mode only)

Memory Capacity[4]

Ten clearances, five cards/ person, 40-digit card.	500,000 cardholders
Transaction Buffer Size	10,000 minimum, 500,000 maximum

Inputs, GCM

Dedicated Inputs	Cabinet tamper, AC fail, low battery
Distance, GCM to ACM	Up to 1.83 m (6 ft)

[4] Memory allocation is dynamic and shared between cardholders, event storage, and configuration information.
[5] iSTAR Ultra SE (Ultra mode only) supports 32 readers (ACM and/or wireless) total of which 16 may come from ACMs
[6] Only 16 Schlage PIMs and readers are supported on one RS485 port in Pro mode
[7] Up to two ACM boards per iSTAR Ultra
[8] Available with C•CURE 9000 v2.50 or higher

Specifications for Wireless Lockset Support[5]

Wireless Lockset Technologies Support	ASSA ABLOY Aperio (ultra mode only), Schlage AD300 & AD400, WA Series[6]
GCM RS485 Ports to Connect Wireless Hubs	2 (Ultra mode), 1 (Pro mode, Schlage only)
Max # of Locksets per RS485 Port	16
Max # of Wireless Hubs/PIMs per RS485 Port	15 (Aperio); 16 (Schlage)
Max # of Locksets per Wireless Hub	8 (Aperio); 16 (Schlage)

Specifications per ACM Board[7]

Readers

Number of Readers Supported, per ACM Board	8
Types of Readers Supported	Wiegand signaling and RM (RS-485)
Reader Technologies Supported	Multi-Technology, Proximity, Smart Card (incl. PIV II & TWIC), Wiegand, and Magnetic Stripe (RM only)
Maximum Data Distance to Door	RM: 1,219 m (4,000 ft); Wiegand: 150 m (500 ft)
Reader Power Status Indication	On/off indication per port, through C•CURE 9000
RM Bus Communications	Eight ports, RS-485 half duplex, two wire, plus optional two wires for device power

Inputs

Number of General Purpose Inputs per ACM	16 supervised inputs, configurable EOL circuit per input when in Ultra mode
Additional Dedicated Inputs	Cabinet tamper (standard); fire alarm interlock, fire alarm key switch override, supervision supported (Ultra mode only)[8]
Input Expansion	64 per ACM (Pro mode); 128 per ACM (Ultra mode) using I8 modules on RM bus

Outputs

Number of Relay Outputs per ACM	8
Output Rating, Dry Contact	0 to 30V AC/DC, 5 A max
Output Protection	Snubber and transzorb (outputs use socketed relays)
Output Expansion	64 per ACM (Pro mode); 128 per ACM (Ultra mode) using R8 modules on RM bus

Regulatory

Access Control	UL 294, CSA C22.2 No. 205 (Canada);
Burglar Alarm	UL 1076, ULc 1076 (Canada)
CE	EN 55022 (EMI), EN 55024 (EMC), EN 60950-1(Safety)
Safety	IEC 60950-1
EMI	FCC Part 15 Class A, EN 55022, ICES-003 (Canada), VCCI Class A ITE (Japan), C-Tick (AS/NZS CISPR 22 - Australia/New Zealand)
EMC	EN 55024, EN 50130-4, IEC 62599-2, EN 61000-6-1
Encryption	FIPS 197 (Utra mode only)

Related Products

iSTAR Pro

iSTAR Edge

C•CURE 9000

Approvals

UL CERTIFIED · CE · FIPS 197 AES Encryption Approved · FC

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