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iSTAR™

Ethernet ready embedded control panel for enterprise security management

Enterprise Security Management

iSTAR's embedded, intelligent design has made it the controller of choice by both corporate security and information technology managers for enterprise solutions.

Network Integration Ease

iSTAR seamlessly integrates with a customer's existing network infrastructure, and in fact, is the only controller in the industry that automatically obtains IP addresses like any other network device via DHCP support.

Advanced Clustering for Unmatched Event Control and Monitoring

With critical features like advanced clustering, event linking and anti-passback, iSTAR is the premier solution for complete database and event management.

Automatic Failover Support Beyond Dialup

Dual network support allows users to create secure, redundant networks for iSTAR controllers ensuring that should one network fail, data and security configurations are fully backed up and functional on the redundant network.

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OVERVIEW

iSTAR™ is an intelligent, modular controller designed to integrate various event management applications on one controller, providing ease of installation and interoperability among vital applications.

With the innovative iSTAR technology, all database event-directed actions can be downloaded to the controller from the host, enabling local management of events versus host management of events, i.e., door lock/unlock, global anti-passback control by cluster, etc. All communication is asynchronous and no polling is necessary to minimize network traffic.

Architecture

General Controller Module (GCM)

The GCM is the base controller card designed around the Windows® CE operating system and Motorola's PowerPC™ processor. It includes network and communication ports, expandable memory and a PC Card Type III slot.

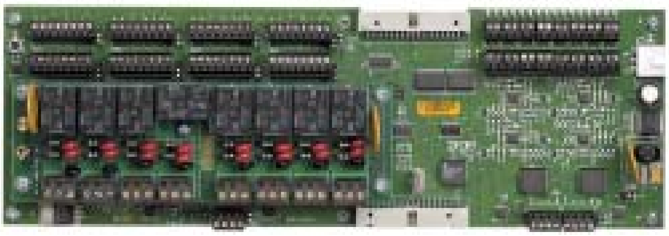
Each GCM supports up to two access control modules (ACM), with eight readers, each. The GCM also has embedded support for three unsupervised inputs to detect low battery, power failure and cabinet tamper.

Configuration information sent from the host to the iSTAR controller informs the ACM of monitor inputs, process card data, control card readers and set outputs. Card reader and output states may be affected directly by user commands at the host or by configured time specifications. All access control decisions (door and elevator) are made by the iSTAR controller and are stored as transactions. All information is stored locally in memory.

Access Control Module (ACM)

Each ACM has 16 supervised inputs and 8 outputs for door control, and can include a combination of RM series or Wiegand type readers.

The ACM provides LED indicators, which allow for visual inspection of status. Two inputs and two outputs on the RM module provide additional flexibility and expandability. Additional add-on input and output boards are available (I/8 and R/8).



Communications and Installation

Communications and Clustering

iSTAR supports Ethernet and RS-232 communication topologies. It also contains a Type III PC Card (PCMCIA) slot for additional types of communications including a modem. iSTAR communication is point-to-point (daisy chaining is not supported). A single connection from the host supports multiple controllers through a TCP/IP subnet.

Controllers in groups of one or more are defined as a cluster. A cluster is a user-defined grouping that contains up to 16 iSTAR controllers. Each cluster has a master controller as primary connection between the cluster and the host, with an alternate master in case the master controller fails or loses network communication. The master and alternate have no differentiating properties from other controllers other than the possibility of requiring additional memory. Since the master controller communicates all event and cardholder data between the cluster and the C•CURE 800/8000 host, it may require more memory than "member" controllers. Field installable memory upgrade kits are available to increase the storage capacity of the standard 16MB iSTAR.

Member controllers in the cluster do not communicate directly with the host; rather, communication to the host is through the master iSTAR controller. The member controllers can communicate directly with other member controllers as needed through the master controller for input/output event linking and anti-passback control.

Communication within a cluster is through TCP/IP over Ethernet. An alternate master controller can also be defined in case of a communication failure to the designated master controller (the member controllers will then communicate through the alternate master controller). The master controller can be configured for automatic dialup communications to the C•CURE 800/8000 system if network communication is lost.

DHCP for Installation Ease

iSTAR now supports Dynamic Host Configuration Protocol (DHCP) to simplify installation. DHCP is a communications protocol that lets network administrators centrally manage and assign Internet Protocol (IP) Addresses from a central point and automatically send a new IP Address when a device is plugged into a different place in the network.

Cluster and Event Linking

iSTAR supports cluster event linking based on events configured by the C•CURE 800/8000 host. This event linking is not just supported within a controller, but is also supported within a cluster.

An input activated on any iSTAR in a cluster will activate a programmed output on any iSTAR in the same cluster. It is not restricted to output following input, but also includes time-controlled events, door events, area events and others. This effectively provides global event linking without reliance on the host. Actions resulting from an event activation that are outside the programmed cluster will be supported with host intervention.

Global Anti-Passback Within a Cluster

iSTAR controllers allow the sharing of cardholder anti-passback status among controllers in a C•CURE area within a cluster. Global anti-passback lets you set up areas with doors on any controller in the cluster, dividing a facility into regions to keep track of cardholder locations. Anti-passback violations include a cardholder passing back a card for another person to use (the system receives two access requests for the same card), and tailgating, in which a cardholder follows another cardholder into a region. A timed anti-passback violation occurs when a person tries to access the same area more than once during a specified period.

Consider the example where a user wants to enforce anti-passback for entrance/exit to a parking facility. The operator would place all iSTAR controllers containing parking garage readers in a cluster, define an area for all doors/access points containing those readers, and activate anti-passback for the area. With or without host communication, anti-passback integrity will be maintained and managed by the cluster.

Configurations Diagnostics

Diagnostics can be done through any computer with a network path to an iSTAR controller. In addition, real-time status and diagnostics can be accessed remotely via the Internet using a web browser, such as Internet Explorer.

The following information can be accessed:

- – Controller time/Boot time
- – Total/Available memory
- – Hardware (MAC) and IP address
- – Connection status
- – Firmware and OS versions
- – Diagnostic data files

Operating with apCs

iSTAR and apCs can operate together with a C•CURE 800/8000 host. They do not communicate directly, nor can they be connected together. However, event linking can easily be configured through the C•CURE 800/8000 host. Although these devices cannot be connected together, they can both exist on the same network.

Redundancy and Security

Dual Network Support

Dual Network Failover Support allows users to utilize both the onboard Ethernet adaptor and the optional PCMCIA Ethernet adaptor simultaneously on a master iSTAR controller - one as the primary adaptor and the other as the secondary adaptor in the case of a failure of the primary Ethernet adaptor or its network. By utilizing dual network support, the user creates two redundant secure networks for iSTAR controllers. In addition, iSTAR supports automatic fall back to dialup communications should the network fail.

Data Security

Secure communication is provided at every level of iSTAR including host/master controller, master/alternate master, and alternate master/members. Encryption is provided through RSA Data Security's RC4 technology implemented using Microsoft CryptoAPI. Multi-key authentication for real-time communication and password authentication for use with the local diagnostic/configuration utility provide a barrier against intrusion into iSTAR.

Extended Application Options

Intrusion Zones

Intrusion zones, standard with C•CURE 800/8000 Model 5 and above, are user-specified groups of inputs, outputs, and doors that define a physical area. Users can define a control zone from any group of objects on the same iSTAR controller. An intrusion zone can include an entire building or laboratory, or a portion of a building or lab. Users can define a door to be unlocked when an intrusion zone is in Access mode, but not when it is in Secure mode.

Grouping inputs and doors into intrusion zones allows easy arming and disarming of physical areas. When an intrusion zone is disarmed (in Access mode), the intrusion zone inputs are disarmed and do not generate activity messages when people enter the intrusion zone. When an intrusion zone is armed (in Secure mode), it is protected. All doors are locked and all intrusion zone inputs are armed. No one can enter the intrusion zone without activating these inputs and causing the system to generate activity messages.

Keypad Commands

Keypad commands, standard with C•CURE 800/8000 Model 5 and above, allow the user to activate events from an RM keypad connected to an iSTAR controller. A command has a unique number that will be entered on the keypad (with optional prompting) to activate a specific event, such as "unlock/lock door". The event may be configured to execute any allowable event action and thus is not limited to events affecting intrusion zone status. The command may be configured to require a card presentation and optionally a PIN to validate the command.

FEATURES & BENEFITS

- Dual Network Failover Support/Redundant Communications
- Ethernet Ready
- Embedded Operating System
- Seamless Integration with C•CURE 800/8000
- Wide Range of Alarm Monitoring
- Advanced Clustering
- Global Anti-Passback Within a Cluster
- Intrusion Zones & Keypad Commands
- Supports up to 16 RM or Wiegand Readers
- Web Diagnostics
- Expandable On-Board Memory to 64 MB
- Secure Communications
- Easily Upgradeable
- Worldwide Compliance

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SPECIFICATIONS

Electrical

Power Input	90 to 260 VAC, 47 to 440 Hz, 0.5 A
Power Output	12 VDC at 3.3 A maximum
Power Consumption	Less than 40 watts typical (12 W typical with 4 RMs, 18 W with 8 RMs)
Auxiliary Hardware	Relay contacts rated at 30 V AC/DC 2.5 A inductive, 5.0 A non-inductive

Mechanical

Dimensions (H x W x D)	61.6 x 41.9 x 10.2 cm (24.25 x 16.5 x 4.0 in)
Unit Weight	0.49 kg (23.3 lbs)
Construction	16 AWG metal wall mounted locking cabinet with tamper switches on door and rear

Environmental

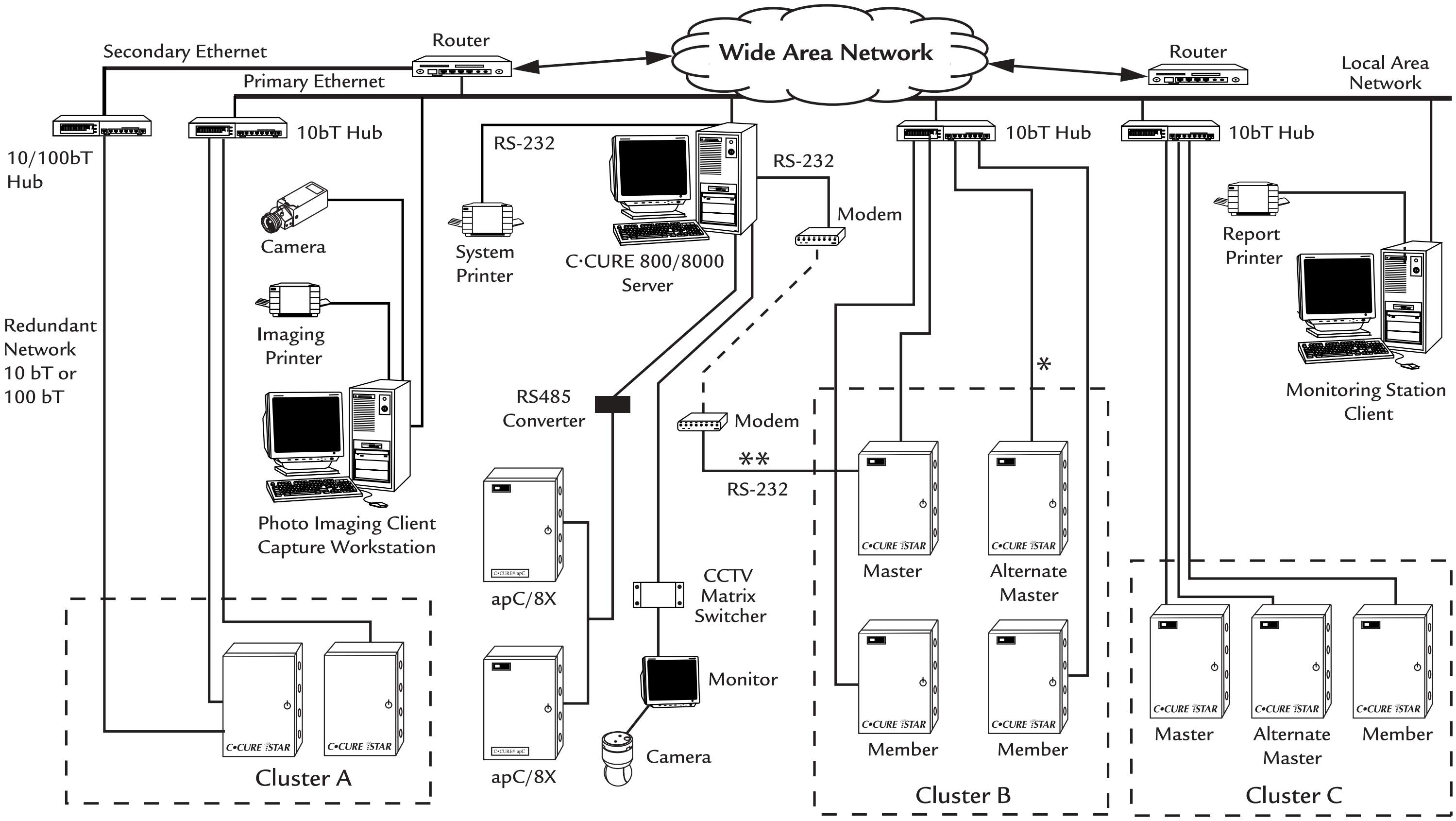
Operating Temperature	0° to 70° C (32° to 158° F)
Storage Temperature	-25° to 85° C (9° to 185° F)
Operating and Storage with Battery	0° to 50° C (32° to 122° F)

Typical Controller Capacity

iSTAR type with number of Cards

16MB iSTAR	
Cards with 1 clearance	65,000
Cards with 10 clearances	55,000
32MB iSTAR	
Cards with 1 clearance	210,000
Cards with 10 clearances	170,000
64MB iSTAR	
Cards with 1 clearance	500,000
Cards with 10 clearances	420,000

Note: Memory allocation within iSTAR is dynamic and shared between cardholders, event storage, and configuration information.



*Alternate Master takes over when Master panel fails
**Alternate communication path takes over when primary communication path fails

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