Technical Specifications

Controller Models	S-Series - 2/4/8 doors per controller (CAS-2S/4S/8S) Advanced - Series -12/16 doors per controller (CAS-12S/16S)
Microprocessor Model	Motorola 68HC11MCU
Operating Frequency	S-Series: 8 MHz Advanced-Series: 12 MHz
Clock System	Real-Time
EPROM / Flash	S-Series 64K Bytes / 128K Bytes Advanced-Series 128K Bytes
RAM	S-Series: 128K Bytes Advanced-Series: 1M Bytes
Watchdog	1 Internal and 1 External
Battery Back-Up for Memory	3.6V onboard rechargeable backup battery
Type of Storage System Used	Static RAM
Operating Temperature Range	0-65°C
Baud Rate	9600 (Controller to reader) 2400 (PC to controller)
Stop Bits	1
Data Bits	8
Maximum Storage Capability	S-Series: 5,000 cards user and 2,500 transactions Advanced-Series : 5,000 cards user and 50,000 transactions
Input Voltage	12V DC
Input Voltage Tolerance	11V-13.8V DC
Rated Current Input	1A
Number of Controllers Can Be Connected	16 or 32 Controllers (Depends on software version)
Number of Readers Can Be Connected	S-Series: 4/8/16 readers (Depends on Controller Types) Advanced-Series: 24/32 readers (Depends on Controller Types)
Type of Reader Technology	-Contact-less Smart Card -Wiegand 26 bits / Magnetic Signal -Magnetic Stripe Track 2, ABA Format -Barcode 2/5 or 3/9 format
Type of Usage	Stand-Alone (Reader to Controller) Network-Operated (Reader to Controller to PC)
Communication Cable Used	1 Pair RS-485 from Reader to Controller for each bus 1 Pair RS-485 from Controller to PCI-Interface
Maximum Length of Communication	1 km (Cable Length)
Recommended Cable Type	BELDEN Cable 24AWG Standard 1419 A
Housing	ABS Casing
Alarm Features	S-Series: 4 digital inputs points & 1 relay output Advanced-Series: 7 inputs point & 1 fire alarm Alarm Arming/Disarming can be manually controlled or timer controlled
Timer	S-Series: 100 Timer Sets with 3 Intervals Advanced-Series: 256 Timer Sets with 3 Intervals
Time Zone	S-Series: 100 user Time Zone (9 days/time zone) Advanced-Series: 256 user Time Zone (9 days/time zone)
Support Multi-Door and Anti-Pass Back	Function available for S-Series and Advanced-Series
Holidays	2 types of 30 dates Progammable Holiday

Controller Programming Mode Security	3 Passwords: (no access card needed)
	    *Technical Password - Diagnostics only
	    * User Password - Arming & Disarming only
	    * Master Password - Highest Privilege

Continuous Card Swiping Facility When Door Is Open	Function Available
Controller Display Unit	20 characters x 2 rows Liquid Crystal Display with back-light
Software Requirements (Recommended Configurations)	Run on Window 95/98/NT/Millenium Edition or Compatible Pentium II, 64MB RAM, 10GB Hard Disk and Display 800 x 600 resolution
Diagnostic Systems	Built-In Diagnostics
Indications	Sound Indication When Release Button Is Pushed, Door Left Open And Force Open
Programming Mode	Menu Driven Programming & Software Programming
Log File Supporting Through Software	Function Available
Auxiliary Relay Output	20 Type Programmable Event (Applicable for K-Series & Advanced-Series Only)
Interlocking Capability	Function Available Between Any Pair of Door (Applicable for N-Series Only)

Model / Features	Control up to	Card Strorage	Events transaction	Time sets (3 intervasl each)	TimeZone (7 days+2 holidays / time zone)	User accessibility
CENTURION CAS-1S	1 door	2,500	2,500	50	50	50
S-SERIES CAS-2S / 4S / 8S	2/4/8 door	5000	2,500	100	100	100
ADVANCED-SERIES CAS-12S	12 doors	5,000	50,000	256	256	256
CAS-16S	16 doors	5,000	50,000	256	256	256

Ordering Information

Controller

(S-Series)

Dimension
194mm(W) x 291mm(H) x 81mm(D)

Stock code	Description
CAS-2S	2-doors controller
CAS-4S	4-doors controller
CAS-8S	8-doors controller

(Advanced Series)

Dimension
194mm(W) x 291mm(H) x 81mm(D)

Stock code	Description
CAS-12S	12-doors controller
CAS-16S	16-doors controller

Reader

Dimensions :
170H x 185W x 35D mm

Stock code	Description
PRO-NDT	Proximity reader c/w 12 keys polycarbonate key-pad reader interface unit & ABS casing with blue LCD (Format : Magnetic Signal)
PRO-NDH	HID proximity reader c/w 12 keys polycarbonate keypad, reader interface unit ABS casing with blue LCD. (Format : Wiegand 26 bits)
CAS-MSN26	Contact-less smart card reader (Mifare Card Serial Number) c/w 12 keys polycarbonate key-pad, reader interface unit & ABS casing with blue LCD (Format : Wiegand 26 bits)
PRO-4SM-T	Proximity reader c/w 12 keys polycarbonate key-pad, reader interface unit & metal casing.(Format : Magnetic Signal)

Recommended Accessories

Stock code	Description
CPC30	3A/13.8Vdc power supply unit with battery charger
CLP-22-2W	RS485 lightning / surge arrestor (2 wires)
600LB	12Vdc,600lbs electric magnetic lock
Bat7	7AH sealed lead acid rechargeable battery
Communication Cable	Belden 1419

For a full accomplishment of CE marking for door access system, the recommended accessories on the above item need to be included.

SmartGuard Series Software

Dimension
97mm(W) x 135mm(H) x 37mm(D)

Stock code	Description
PCI-1/2	Smart Guard Standard software c/w PC-interface unit. - 1/16 controller version. - Able to manage door / car park access.
PCI-PRO	Smart Guard Pro software c/w PC-interface unit. - 1 Bus 16 controllers version. - Support fingerprint controller. - Able to manage door / lift / car park access.
PCI-PRORM	Multiple site remote monitoring software c/w PC-interface unit. - 1 Bus 16 controllers version. - Support fingerprint controller. - Able to manage door / lift / car park access.
PCI-RMAGN	-Remote program data collector. (Remote Agent)
CV2588	-RS485 to LAN converter. (UTP Ethernet 10 Base T with TCP/IP protocol)
CAS-OEM	Software development kit to communicate with Castle S-Series Controller. (CASWIN-OEM)
PCI-C/S-1A	Smart Guard Client-Server software c/w PC-interface unit. - 1 Bus 16 controllers version. - Able to manage door / lift / car park access.
PCI-C/S-2A	Smart Guard Client-Server software c/w PC-interface unit. - 2 Bus 32 controllers version - Able to manage door / lift / car park access.
PCI-C/S-RM1A	Smart Guard Client-Server remote software c/w PC-interface unit. (Multiple site remote monitoring) - 1 Bus 16 controllers version - Able to manage door / lift / car park access.

SmartGuard series software runs on : Win 95, NT, 98, 98(SE), ME, 2000 Professional

System Configuration [RS-485 Connection]
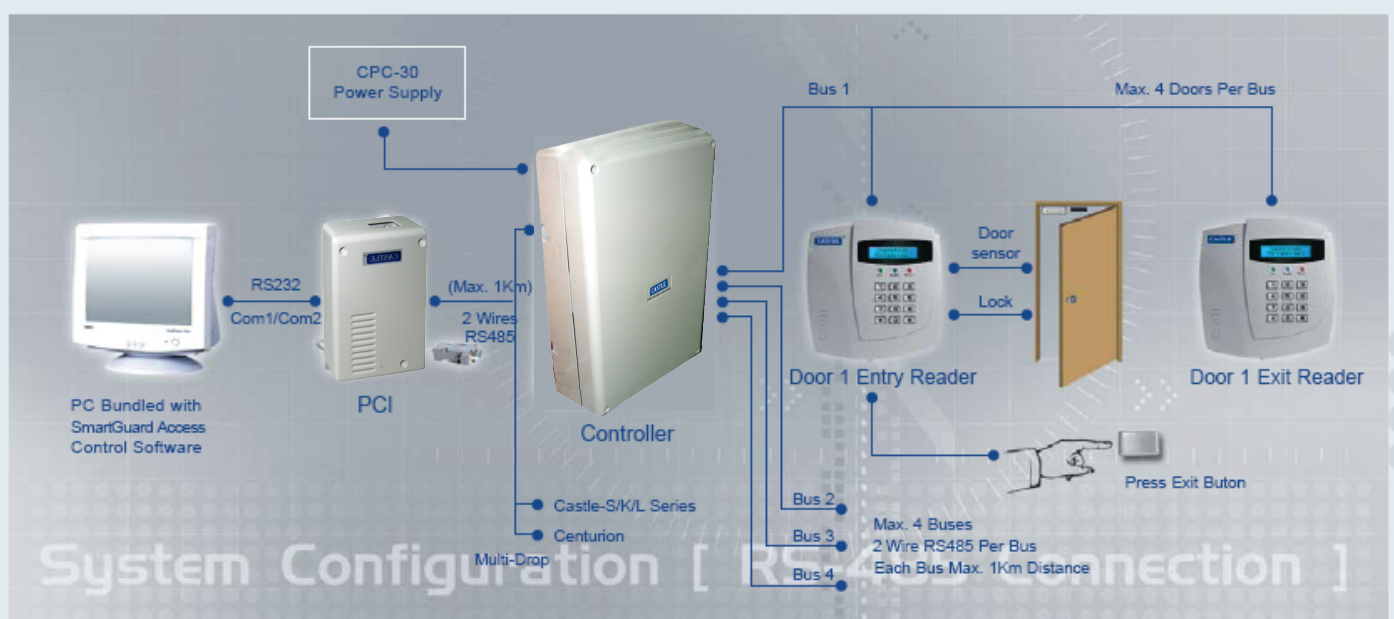
Lift Access Control (SL-Series)

The Castle 2SL is an expandable lift access system. It can be configured to control floor accessibility up to 16 floors/32 floors/48 floors, in multiple of 16. CTR-16 16-relay controller controls the floor selection button. Expanding the system from controlling 16 floors to 20 floors is only by adding one more CTR 16 to the system.

Features

Controls up to 2 lifts/COP under one controller (2 bus)
Controls up to 16/32/48 floor selection buttons on each lift / COP
1 bus can only support 1 reader and 3 relay controller (relay board)
2 core wires required for communication (Max. distance 1 km)
5,000 card holders
2,500 transactions
100 Time sets each with 3 time intervals
100 Time zones
100 Access Levels
100 Floor Access Levels
100 Floor Zones each with 6 floor intervals
2 x 20 backlit LCD, menu driven programming
Connects to PCI-PRO, PCI-CS1, PCI-CS2 for data downloading and online transactions monitoring
Can be networked through 2 wires RS-485 with Castle-S series Door Access and Car Park Access
Controller to PC running SmartGuard Pro and controlled under the same software
Power supply : 12 Vdc @ 500 mA

CTR-16 Relay Board
General Specification

Controls up to 16 relays output
On board 10A 24Vdc, 6A 240Vac relay
For lift selection button and lift expansion
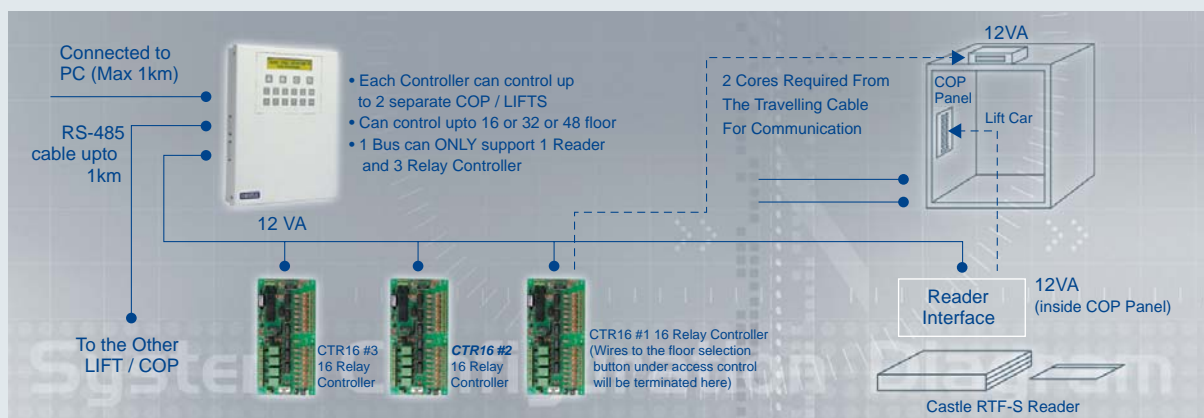Power supply : 12Vdc @ 500mA

Accessories
16 relays output board
Power supply
PC-Interface unit - PCI-PRO, PCI-Pro-Remote
or PCI-Client Server

Ordering Information

Stock Code	Description
CAS-2SL	Control 2 lift car only
	Dimension : 68D x 189W x 547Hmm
CTR-16	16 units on board 10A/24 Vdc, 6A/240 Vac relay
	Dimension : 120L x 255Wmm
LR-PROX-T	Proximity reader c/w reader interface unit
	without keypad
	Dimension : 35D x 128W x 167Hmm
LR-MAG	Magnetic swipe reader c/w reader interface unit with
	12 keys polycarbonate keypad Dimension : 35D x
	128W x 167Hmm

System Configuration Diagram

Connected to PC (Max 1km)

RS-485 cable upto 1km

12 VA

To the Other LIFT / COP

- Each Controller can control up to 2 separate COP / LIFTS
- Can control upto 16 or 32 or 48 floor
- 1 Bus can ONLY support 1 Reader and 3 Relay Controller

CTR16 #3 16 Relay Controller

CTR16 #2 16 Relay Controller

CTR16 #1 16 Relay Controller (Wires to the floor selection button under access control will be terminated here)

2 Cores Required From The Travelling Cable For Communication

12VA

COP Panel

Lift Car

Reader Interface

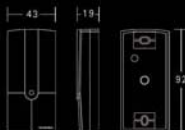12VA (inside COP Panel)

Castle RTF-S Reader

PLASMA MINI

The PLASMA MINI Series prides itself in being discreet yet stylish. The stylish Black strip in the center of the Reader illuminates in blue when activated, once again shows ADALO's ambition to be different from others!

Pearl White   Metalic Silver

PLASMA PRO

The PLASMA PRO Series encompasses classic lines with a modern touch. PLASMA PRO Series is available in both standard and keypad versions. The keypad version features a sensor touch keypad, which would only light up upon sensing the human touch. Once again, the Reader illuminates in blue when activated, once again shows ADALO's ambition to be different from others!

Pearl White   Pearl White   Metalic Silver   Metalic Silver

*All PLASMA Series Readers are featured with ADALO's GKNS Encryption.

Specifications:

	PLASMA MINI	PLASMA PRO	PLASMA PRO-K	ART	ART-K	IMPRESS PRESTIGE	IMPRESS ELITE
Model	PLASMA MINI	PLASMA PRO	PLASMA PRO-K	ART	ART-K	IMPRESS PRESTIGE	IMPRESS ELITE
Model Number	P110/P120	P210/P220	P210K/P22OK	A850/A860/870	A850K/A860K/A870K	I630	I510/I530/I550
Voltage	DC 9−15V						
Power Consumption	<2W						
Frequency	13.56MHz						
Card Technologies	LEGIC、MIFARE、INSIDE						
Compliance	ISO 15693、ISO 14443A、ISO 14443B						
Cable Distance	Wiegand interface 150m						
Communication Interface	Wiegand 26 / Wiegand 34						
Indicator	1 Tri−color LED、1 Beeper		1 Tri−color LED、1 Beeper、1 LGF			1 Tri−color LED、1 Beeper	
Keypad output	X	X	O	X	O	X	X
Weatherproof	IP67	IP67	IP64	IP64	IP64	IP67	IP60
Dimension(mm)	92*43*19	141*43*20	141*43*20	150*52*19	150*52*19	95*95*20	95*95*20
Weight(g)	90	130	105	100	100	170	170
Housing aterial	Polycarbonate						Polycarbonate +Leather
Color Choices	Pearl White / Metalic Silver	Pearl White / Metalic Silver	Pearl White / Metalic Silver	Crimson Red / Midnite Black / Mystic Brown	Crimson Red / Midnite Black / Mystic Brown	Ash Gray	Optional Leather Choices
Environment	−30℃ to +65℃、5% to 95% relative humidity non−condensing						

E-Guard

Standalone Access System

Touch

Sensor

Keypad

E-Guard Plus

Ordering Code:
EGX   : E-Guard
EGX-M : E-Guard Plus
Available Color:
Black

MEMBER

ASIAN PROFESIONAL SECURITY ASSOCIATION

Elegant Touch-Sensitive
Immune to environmental wear-and-tear

Stylish . Innovative . Easy

E-GUARD FEATURES

- 200 cards user storage. *
- Card format: Magnetic ABA. *
- 4 digits of 32 set PIN access number.
- PIN only, Card only and Card+PIN mode. *
- Configurable door lock release time from 1-99 (Default time: 10 seconds).
- Configurable door open time from 1-99 (Default time: 15 seconds).

- Tricolour LED for Valid, Error & Ready status indication.
- One output for door locking system.
- One output for alarm or door bell system.
- Alarm input
- Reader Lock features.
- 6 digits of programmable Master PIN.
- Support exit reader.
- Exit button input & door sensor input

* E-Guard Plus features

SPECIFICATION

Operating voltage	:12Vdc	Watchdog	:Yes
Input voltage tolenrance	:12 - 13.8Vdc	Buzzer	:Yes
Rated current input	:1A	Housing	:ABS
Operating temperature	:0 - 65° C	Weight	:160 gram
Operating humidity	:0 - 90 %	Dimension	:H (115mm) x W (84mm) x D (23mm)

*Specifications subject to change without prior notice.