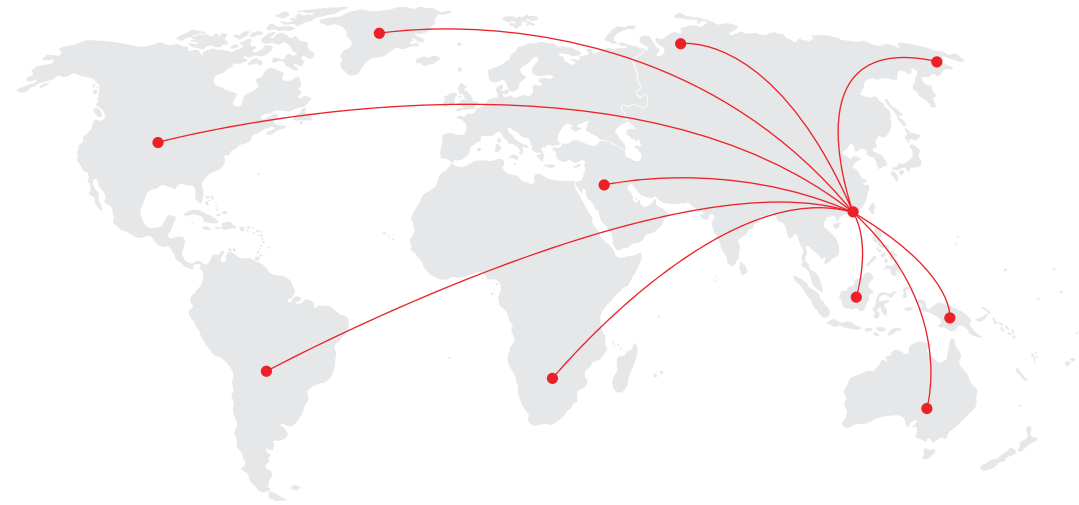


# ALL IN ONE SYSTEM SOLUTION WHERE BUILDING NEEDS

---

---



## PRODUCT CATALOG

CCTV Dynamic Integration | Door Access Control | Car Park Control | Lift Control  
Time Attendance | Alarm Monitoring | Room Reservation | Club House Facility Booking



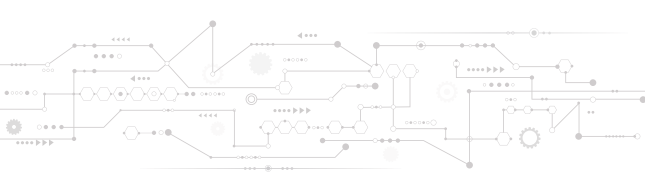
AST - Advanced System Technology Limited

---

Website: [www.ast-hk.com](http://www.ast-hk.com)



Advanced System Technology Limited



# A LEADING COMPANY

## Focus on Excellence in Intelligent Management System

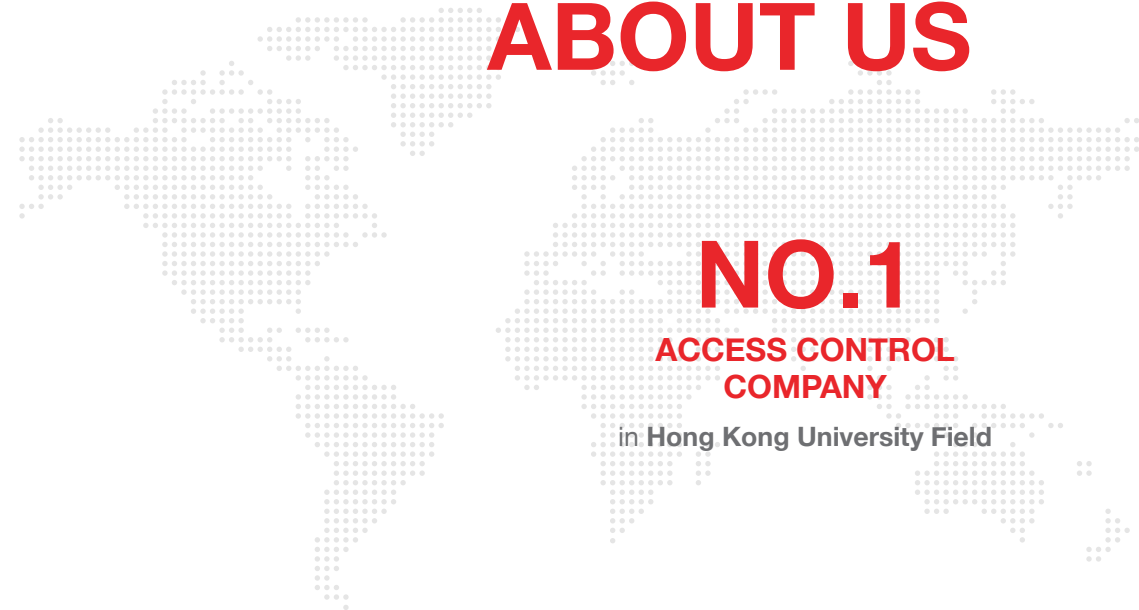
Advanced System Technology Limited (AST) was founded in 2007 by a group of experienced hardware and software specialists. The core team members has over 20 years of experience in security system design. AST has targeted to provide a robust and user friendly integrated security platform that suits the need of users in different aspects.

In 2008, AST has launched their flag ship product, Intelligent Management System (IMS). The system is so well designed with innovative functions and is easy to use. It soon dominates the access control system market in Hong Kong, especially, in the tertiary education sector. After years, AST has earned a good reputation in the security industries with their leading edge system design, scalable system backbone, and stable equipment manufactured.

In 2016, AST becomes one of the most famous brand for access control system in Hong Kong and is now the No. 1 access control system provider for universities in Hong Kong. In one of the deployed AST system, which supports over 5,000 readers in one single platform, handles over 100,000 transactions daily. Regardless of the success of previous years, AST continues to enhance the system features by integration with third parties system. This leads AST system to another level as a more completed integrated system for future needs.



## SOMETHING ABOUT US



**NO.1**  
**ACCESS CONTROL**  
**COMPANY**  
in Hong Kong University Field

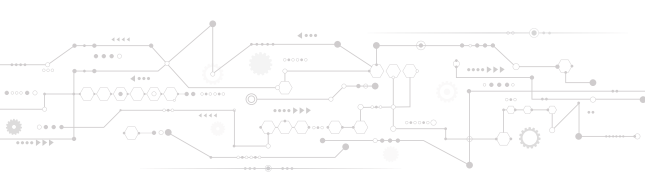
Deployed  
**> 50,000 DOORS**  
in Hong Kong

**> 1200 DOORS**  
for University of Hong Kong (HKU)

**> 1000 READERS**  
for Chinese University of Hong Kong (CUHK)

**> 1500 ACCESS DOORS**  
for Vocational Training Council (VTC)

**> 3500 TIME ATTENDANCE READERS**  
for Vocational Training Council (VTC)



**Smart Card Readers**

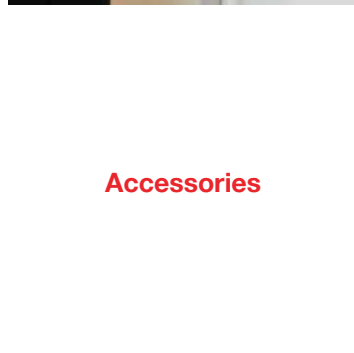


**CCTV Dynamic Integration**

# TABLE OF CONTENT

## Intelligent Management System

What is Intelligent Management System?	1
Intelligent Management Software	3
• CCTV Dynamic Integration	5
• Door Access Control	7
• Car Park Control	8
• Lift Control	9
• Time Attendance Management	10
• Alarm Monitoring	11
• Room Reservation	12
• Club House Facility Booking	13



**Accessories**



**iMS Intelligent Management Software**



## Panels / Controllers (For Door / Car Park / Lift / Alarm)

AST-P10X/P13X/P15X iMS Panel	17
AST-P20 iMS-WiFi Panel	19
AST-CT10 Wiegand Controller	21
AST-CT11 RS485 Controller	23
AST-CT51/CT53 12 Zone I/O Board	25
AST-P12 iMS-POE Network Controller	27



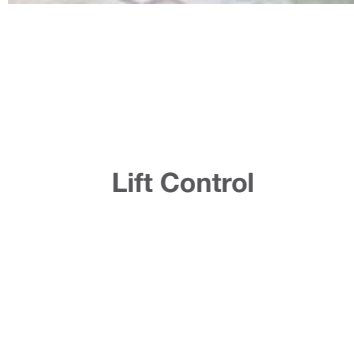
**Car Park Access Control System**



**Alarm Monitoring**

## Smart Card Readers

AST-R12 Mifare Reader	31
AST-R12K Mifare Reader (With Keypads)	33
AST-R18 Mifare Reader	35
AST-RL11/RK11 LCD Mifare Reader	37
AST-RT16 Touch Screen Mifare Reader	39
AST-RT22 USB Smart Card Reader	41
SRT-D190 UHF RFID Reader	43
SRT-E190 UHF Entrance Pass RFID Reader	45



**Lift Control**

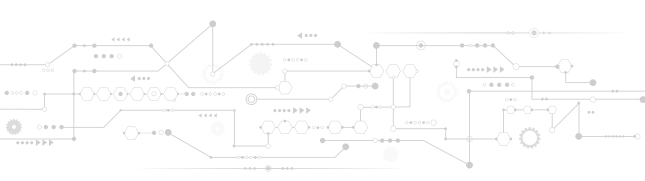


**Door Access Control**

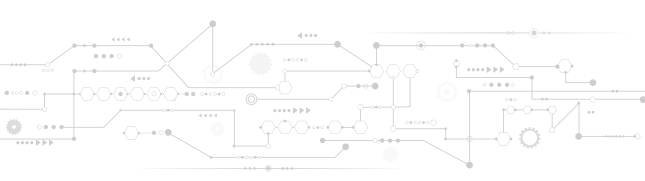


## Accessories

AST-DR010 Dielectric Release Button	49
-------------------------------------	----



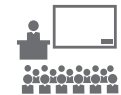
# INTELLIGENT MANAGEMENT SYSTEM



# What is **Intelligent Management System?**



CCTV Dynamic Integration



Time Attendance



Door Access Control



Room Reservation



Car Park Control



Alarm Monitoring



Lift Control



Club House Facility Booking



iMS is an integrated solution that supports multi-applications. It provides advanced distributed architecture for enterprise scalability. It allows your organization to provide local and remote control for the companies that spans globally.

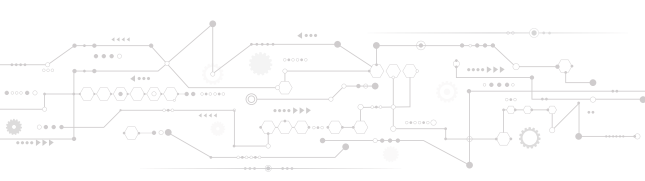
The system is using central MSSQL database for information storage. All operators are allowed to manage and monitor their own group of users and doors based on the operator privilege setting.

## SYSTEM ARCHITECTURE



## GENERAL FEATURES

- CCTV Dynamic Integration
- Door Access Control
- Car Park Control
- Lift Control
- Alarm Monitoring
- One Stop Card Issuance
- Room Reservation
- Club House Facility Booking
- Visitor Management
- Event and Time Attendance



## INTELLIGENT MANAGEMENT SOFTWARE

Intelligent Management Software is the core software module for the intelligent Management System. It supports access control, car park control, lift control and alarm monitoring in a single software interface. The software provides user-friendly graphic interface for administrator and operator usage. The system is designed based on server client system model. It gives support for multiple client stations in the same network.

- Multiple Client Station
- Operator Privilege Control
- One Stop Card Issuance
- Issue Date and Expiry Date Control
- Time Code and Time Zone Setup
- Access Group Setup
- Door Access Method Setup
- User Import and Export Function
- Schedule Backup Function
- Electronic Map Function
- Email and SMS Notification Alert
- Multi-Language
- Event & Audit Trail Report
- Time Attendance Report

## SPECIFICATION

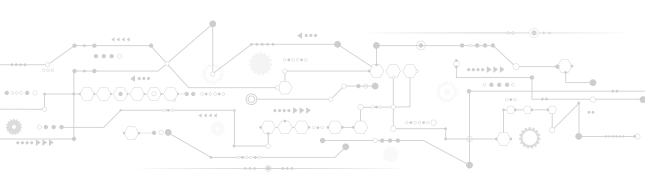
### Intelligent Management Software

#### Server Workstation Requirement

<b>CPU</b>	Intel Pentium 4 CPU or above
<b>RAM</b>	2G (Server), 1G (Client Terminal) or above
<b>Hard disk Size</b>	20G or above (Server), 5G (Client Terminal) or above
<b>Display</b>	1024 x 768 resolution or above
<b>Platform</b>	Window XP, Win7, Win8, Win10, Window Server (Eng, Chinese and Simplified Chinese)

#### System Capacity

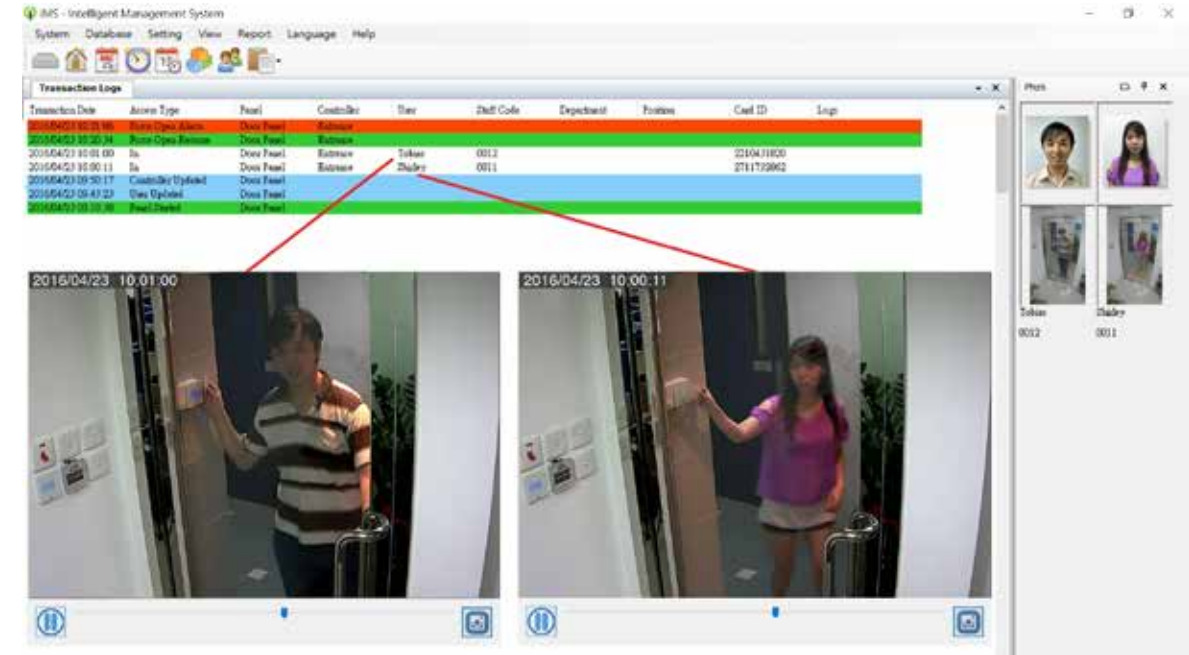
<b>User Record</b>	Wiegand 34 Bits
<b>Transaction Record</b>	4G Transactions (~40,000,000 events) or Upgrade to SQL to unlimited
<b>Access Group</b>	128 Access Group
<b>Time Zone/Time Code</b>	128 Time Zone/128 Time Code
<b>Hardware Capacity</b>	Up to 1024 Doors/128 Lifts/10,000 Alarm Points
<b>Holiday</b>	Unlimited Holiday Setting (32 active holidays will be uploaded to hardware on schedule)
<b>Operator</b>	Unlimited Operators and Operator Privilege Control
<b>Response Speed</b>	0.1 s (Event upload to Server), Less than 1s (Display in client terminals)
<b>Language</b>	English, Chinese, Simplified Chinese

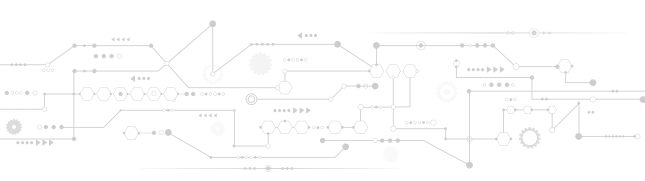


## CCTV DYNAMIC INTEGRATION

The increasing demand for integration of access control and CCTV system has led to the cooperation between AST and Uniview. Thanks to Uniview's "1 Second Footage Retrieval technology", operators in security control room can monitor the whole building security event in a single software platform. Whenever there happens a security event, system can provide a real time video with pre- & post-video footage for operator to verify the case in real time. It definitely enhances the operator response time to the alert and provides "better security · better world".

- Real Time vs "1 Second Footage Retrieval" for Event Verification
- Real Time Snapshot vs Stored User Photo Upon Card Access
- Real Time Video on E-MAP
- View Playback on Transaction

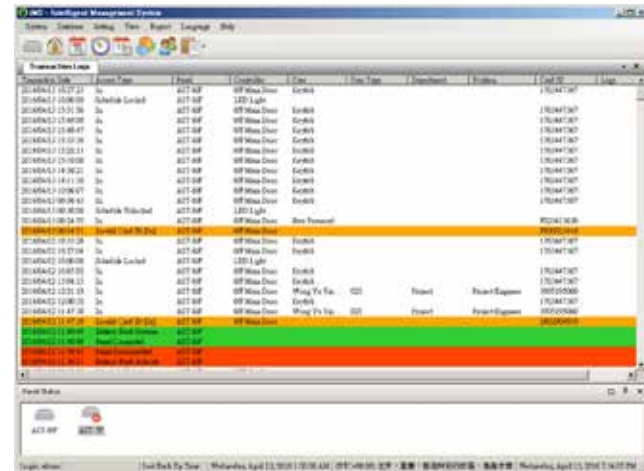




## DOOR ACCESS CONTROL

Door access control is the core function of AST system. It is one of the earliest access control implementation that supports true TCP/IP and Wifi as connection interface. With the support of contemporary network infrastructure, doors in different physical location can be monitored and managed in one single system. It contains almost all the features required for door access. More than that, the system is capable to extend its functionality for the access of turnstiles, lift, car park, and even mail box.

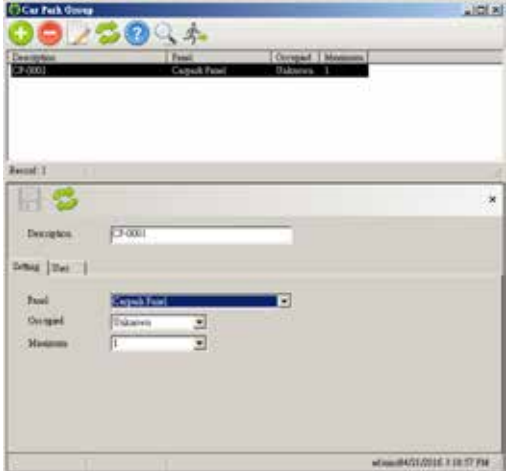
- TCP/IP based
- Scalable Architecture
- Remote Site Support
- Real Time Door Status Monitoring
- Remote Door Lock Control
- Photo Popup on Access
- Speedy and Robust
- Wide Range Reader Support
- All in One

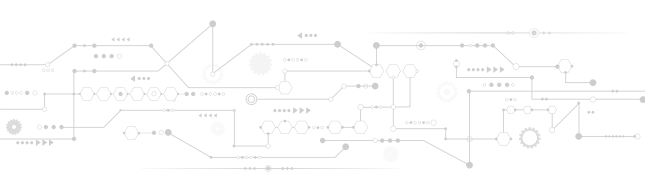


## CAR PARK CONTROL

In Hong Kong, most estates has their own car park. For monthly paid car park tenants, they can be easily get access to the carpark with their estate smartcard. AST system helps to manage the usage of the parking slot. It supports parking slot counting and allows a family (or a group of users) to share a preset amount of parking slots. The system will count the car entry and exit automatically and therefore avoid the abuse usage of parking slot. In addition, the introduction of long range RFID reader even eliminates the need of lowering the window for card placement, which somehow causes trouble in outdoor car park in rainy days.

- Group Anti Passback
- Parking Slot Counting
- Full Sign Indication Signal
- Long Range RFID Reader

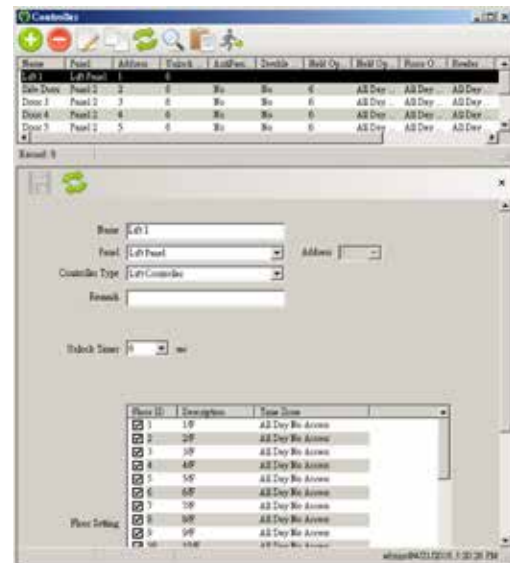




## LIFT CONTROL

In commercial building, there are increasing concerns about unauthorized access to the floor of their tenants. It drives the lead of securing the access of lift. With lift control equipment setup in the building, only authorized tenants are able to use the lift with secured lift calling button at the outside of the lift. To further increase the security, the lift itself can also be secured to restrict the access of tenants for their own floors, and the public floors.

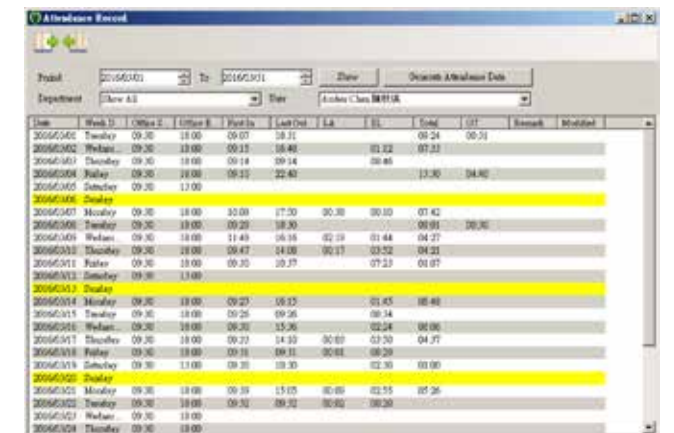
- Secure Lift Calling Button
- High/Low Level Integration with Lift System
- Up to 64 Lift Buttons in One Lift
- Programmable Time Period for Individual Floor

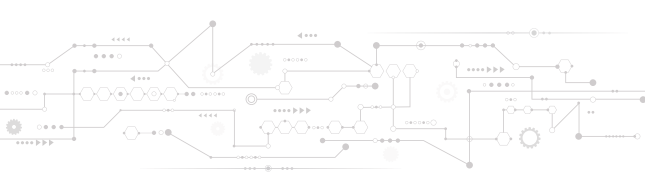


## TIME ATTENDANCE MANAGEMENT

The use of access control system in office environment provides information for the presence of staff. In the old practice, another clock-in/out devices are used for attendance taking. With AST system, attendance taking can be done transparently when you arrived office and get access to the door. The system provides synchronization of time for all readers. It minimizes the argument for different times in the staff's watch and in office's clock.

- Time Clock Display on Reader
- Time Synchronized in Every Reader
- Robust Attendance Data
- Weekly Based/Roster Based
- Manual Attendance Record
- Attendance Reporting





## ALARM MONITORING

In building management, there are many alarm points, such as panic button, door contact, motion sensor, break glass, etc, that requires monitoring and logging. With AST system, alarm monitoring is supported as a supplementary function for door access. It shares the same network infrastructure as access control and this enables alarm monitoring to be happened in real time. To ease the reading of the alarm point location, electronic map can be configured. It saves time for location finding of the alarm.

- Over 10,000 Alarm Points in One System
- Real Time Alarm Monitoring
- Various Icons for Alarm Type
- Electronic Map
- Software Reset of Alarm Output

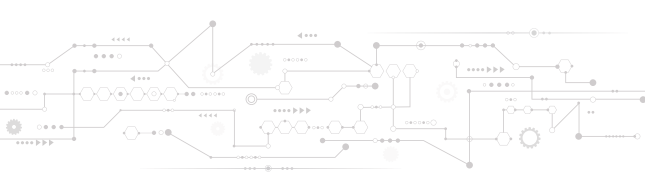


## ROOM RESERVATION

AST provides room reservation on a web based platform. It is suitable for schools, libraries and offices to manage the usage of their venues. Users can access the web based booking system to check the availability of venue and make the booking. The system supports email notification. It provides instant update of booking status change for the user. With the integration of door access, only user that booked the room in specific period can get access to the room. Nowadays, everyone is talking about power saving. The use of AST room reservation system is able to minimize the power usage of the room with their Building Management System integration. No more waste of power when the room is not in use.

- Web Based Booking System
- Search/Make Booking/Manage Booking
- Auto-Approval/One Level Approval/Two Level Approval
- Supports Email Notification
- Graphics Display for Booking Status
- Access Control System Integration
- Building Management System Integration





## CLUB HOUSE FACILITY BOOKING

The smartcard in an estate can be used for door access control, car park control, lift control, and even payment of club house. AST offers a club house facility booking module which shares the user information of iMS and is specialized for the payment solution in the club house of an estate. The system handles the daily operation of a club house for booking management. It supports payment balance by centralized account or by card balance. Different type of facilities can be setup and configured in the system. It also provides a wide range of accessories to allow better user experience with the system.

- Booking Management
- Centralized Account/Card Balance
- Session Based Facility/Ticket Based Facility
- Receipt Printing/Cash Drawer/POS display
- Payment Report
- Shared user information with iMS

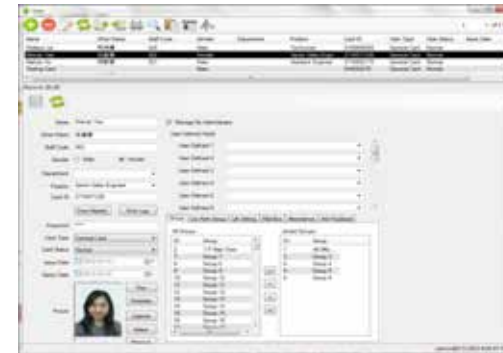


## OTHER FEATURES



### CARD ISSUANCE

- Badge Design
- Photo Taking
- Badge Printing
- Card Enrolment



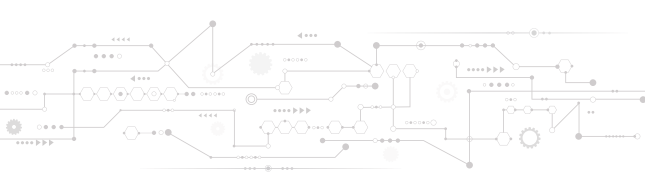
### USER MANAGEMENT

- User Information Record
- Photo Storage
- Access Group Setup
- Issue Date Control
- Expiry Date Control
- Loss Card Control

Item	Week	Day	Officer	In	Out	L.A.	E.L.	Total	OT	Remark
2014-12-01	Tue	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-02	Wed	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-03	Thu	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-04	Fri	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-05	Sat	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-06	Sun	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-07	Mon	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-08	Tue	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-09	Wed	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-10	Thu	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-11	Fri	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-12	Sat	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-13	Sun	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-14	Mon	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-15	Tue	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-16	Wed	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-17	Thu	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-18	Fri	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-19	Sat	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-20	Sun	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-21	Mon	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-22	Tue	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-23	Wed	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-24	Thu	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-25	Fri	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-26	Sat	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-27	Sun	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-28	Mon	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-29	Tue	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-30	Wed	08:30	08:30	17:30	17:30			09:00	01:30	
2014-12-31	Thu	08:30	08:30	17:30	17:30			09:00	01:30	
Total Annual Minutes										36
Total Early Leave Minutes										426
Total Sick Leave Minutes										426
Total Absent Days										6

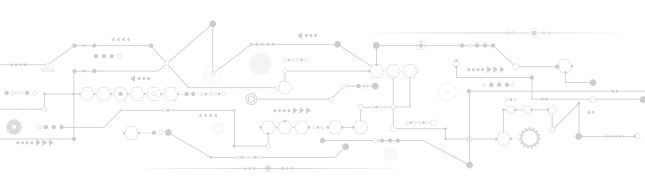
### REPORTING

- System Log
- User/Door Events Report
- First In Last Out Report
- Absent Report
- Late Arrival and Early Leave Reports
- OT Report & etc



# PANELS / CONTROLLERS

FOR DOOR / CAR PARK / LIFT / ALARM



# AST-P10X/P13X/P15X IMS PANEL



IMS-Panel is an embedded device designed for Access Control, Lift Control, Car Park Control and Time Attendance System. The panel has a streamlined design that features the latest technology and a minimum of circuit boards to provide a highly dependable, cost-effective solution.

The panel is using embedded operation system to increase the security level and equipped with a true TCP/IP connection for real time monitoring and control. Through the TCP/IP connection, multinational corporations can easily control and monitor their worldwide spread offices via Internet.



Integrated

Smart Card

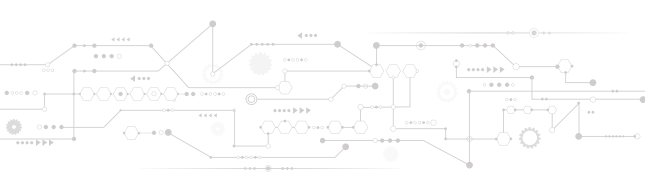
Network

## GENERAL FEATURES

- Support Access Control, Lift Control, Car Park Control and Time Attendance System
- LED Indications
- Surge and Lightning Protection

## SPECIFICATION

	Access Control (AST-P10X)	Lift Control (AST-P13X)	Car park Control (AST-P15X)
<b>Capacities</b>			
User Record	12,000 User		
Transaction Record	12,000 Transaction		
Access Group	128 Access Group		
Time Zone / Time Code	128 Time Zone/128 Time Code		
Holiday	32 Holiday Slots		
Car Park Group	-	-	1000 Parking
Support Interface Units	Up to 8 Interface Units	Supports 56 Floors	-
<b>Communication</b>			
Network Interface	100Mbps		
Serial Port	19200bps (8,n,1)		
485 Interface	9600bps (8,n,1)		
<b>General</b>			
Power	12V / 100mA		
Working Environment	-10°C to 50°C 10% to 90% RH		
Dimensions	105mm x 85mm x 25mm (H x W x D)		

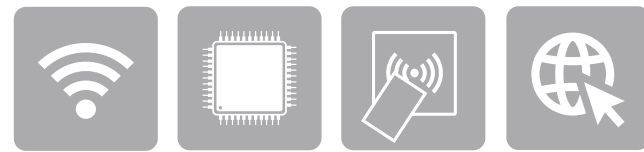


# AST-P20 IMS-WIFI PANEL



IMS-WiFi Panel is an embedded device design for Access Control. The panel has a streamlined design that features the latest technology and a minimum of circuit boards to provide a highly dependable, cost-effective solution.

The panel is using embedded operation system to increase the security level and equipped with a WiFi connection for real time monitoring and control. With the WiFi connection, applications like shuttle bus is made possible. This board provides a solid solution for access control location which cannot be physically wired and requires communication through wireless signals.



WiFi      Integrated      Smart Card      Network

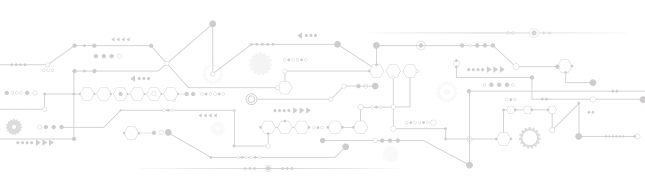
## GENERAL FEATURES

- WiFi Connection
- LED Indications
- Surge and Lightning Protection

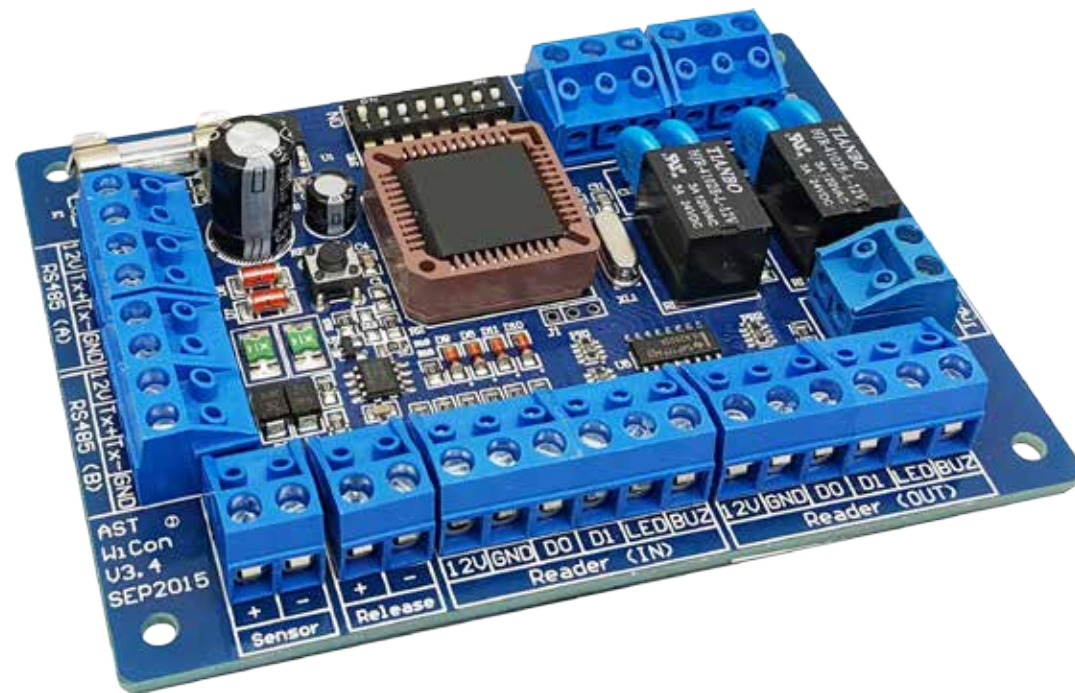
## SPECIFICATION

### AST-P20

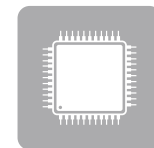
Capacities	
User Record	12,000 User
Transaction Record	12,000 Transaction
Access Group	128 Access Group
Time Zone / Time Code	128 Time Zone/128 Time Code
Holiday	32 Holiday Slots
Support Interface Units	Up to 8 Interface Units
Communication	
Network Interface	802.11b/g Wi-Fi
Serial Port	19200bps (8,n,1)
485 Interface	9600bps (8,n,1)
General	
Power	12V / 100mA
Working Environment	-10°C to 50°C 10% to 90% RH
Dimensions	95mm x 85mm x 25mm (H x W x D)



# AST-CT10 WIEGAND CONTROLLER



Wiegand Controller is a door interface module to provide the connectivity between iMS-Panel and door accessories (including readers, sensors, release buttons, locks, alarm and etc). It provides full features door control with low wiring cost. The controller will collect all the hardware status and return to the iMS-Panel via RS485 network. The iMS-Panel will make decision according to the access control setting to unlock the door or deny the access.



Integrated



Smart Card



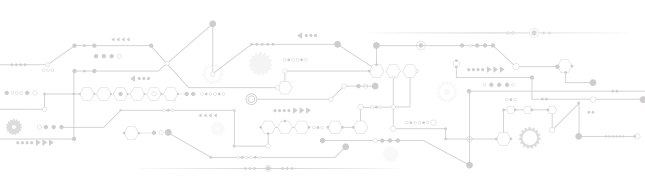
Lightning & Surge Protection

## GENERAL FEATURES

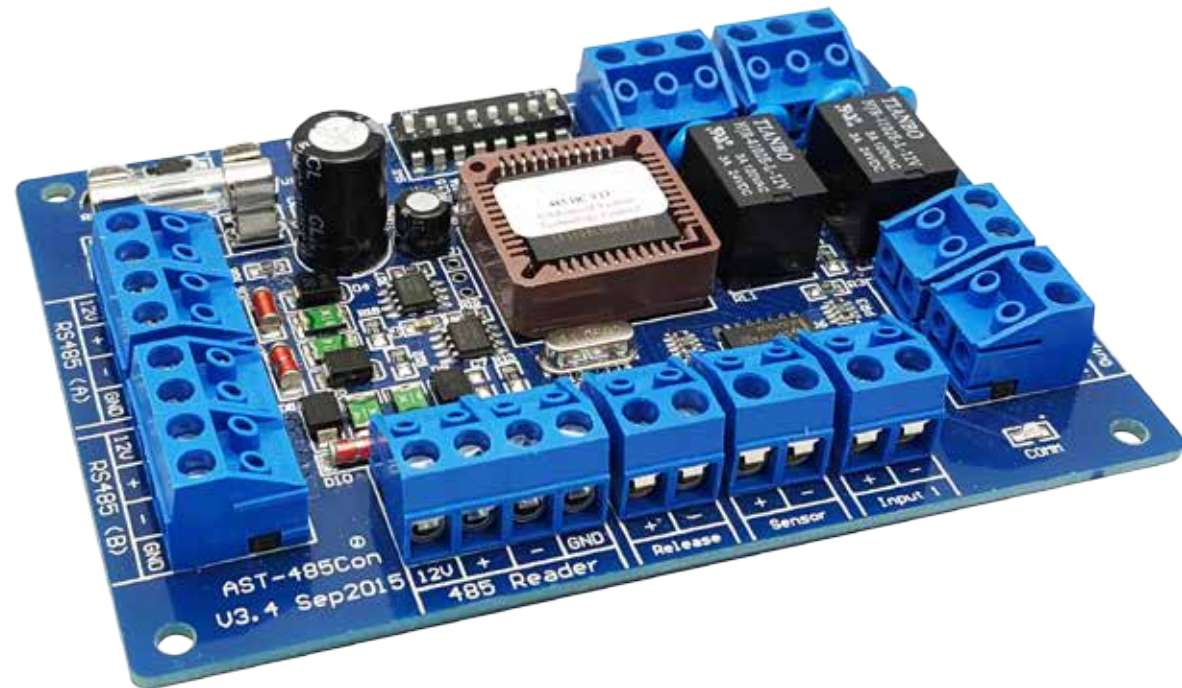
- Support Multi-Card Type Reader
- Support Multi-Card Length
- Selectable address
- LED Indications
- Surge and Lightning Protection

## SPECIFICATION

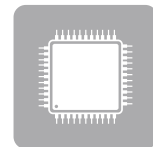
	Access Controller (AST – CT10)	Car Park Controller (AST-CT15)
<b>Capacities</b>		
Reader Port	2 Wiegand Ports (IN and Out Readers)	
Input	2 (Sensor and Release)	
Output	2 (Lock and Alarm)	
<b>Communication</b>		
485 Interface	9600bps (8,n,1) up to 1.2km	
<b>General</b>		
Power	12V / 100mA	
Working Environment	-10°C to 50°C 10% to 90% RH	
Dimensions	155mm x 155mm x 60mm (Metal Enclosure) 107mm x 80mm x 30mm (Board Size)	



# AST-CT11 RS485 CONTROLLER



RS485 Controller is a door interface module to provide the connectivity between iMS-Panel and door accessories (including readers, sensors, release, locks, alarm and etc). It mainly provides bi-directional communication between readers and panel to allow the readers provide clock information display with synchronizes to the server.



Integrated



Smart Card



Lightning & Surge Protection

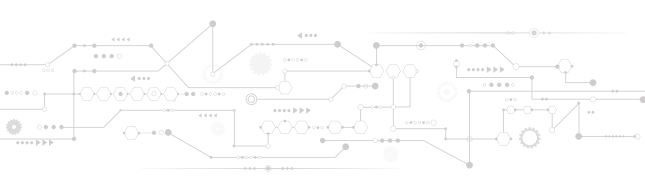
## GENERAL FEATURES

- Support Multi-Card Type Reader
- Support Multi-Card Length
- Selectable address
- LED Indications
- Surge and Lightning Protection

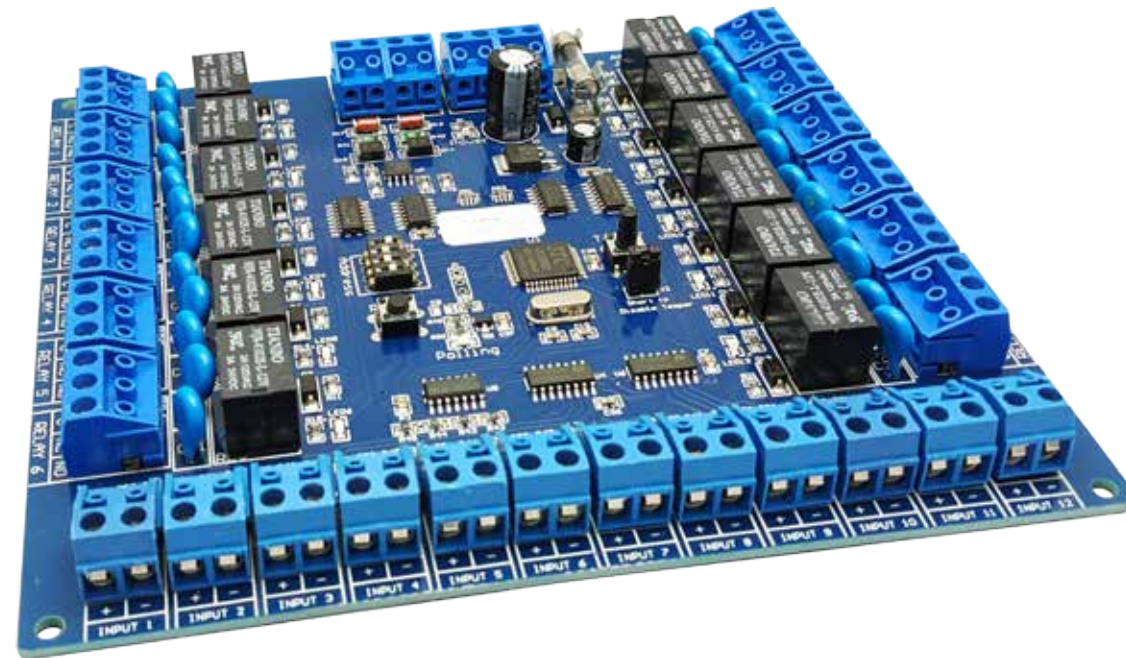
## SPECIFICATION

AST-CT11

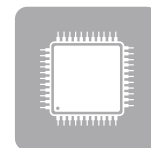
Capacities	
Reader Port	RS485 Port (Support IN and Out Readers)
Input	2 (Sensor and Release)
Output	2 (Lock and Alarm)
Additional	1 Input and 2 Outputs
Communication	
485 Interface	9600bps (8,n,1) up to 1.2km
General	
Power	12V / 100mA
Working Environment	-10°C to 50°C 10% to 90% RH
Dimensions	155mm x 155mm x 60mm (Metal Enclosure) 107mm x 80mm x 30mm (Board Size)



# AST-CT51/CT53 12 ZONE I/O BOARD



12 Zone I/O Board is an interface unit that provides Alarm Monitoring or Lift Control System. The I/O Board provides address selection to allow linking up to 8 Interface Boards in the same RS485 Network. It can provide up to 96 Inputs and Outputs Control in the same node. Each output provides LED indication for easy monitoring and the RS485 port provides Surge and Lightning Protection.



Integrated



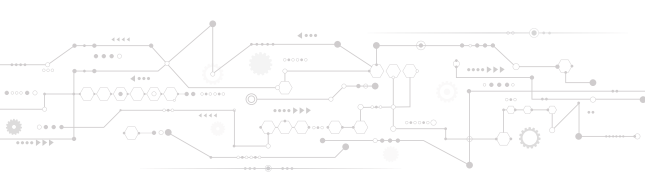
Lightning & Surge Protection

## GENERAL FEATURES

- Support Supervisor Mode Input
- Support 12 Alarm Input Point
- Support 12 Dry Contact Output Point
- Selectable address
- LED Indication
- Surge and Lightning Protection

## SPECIFICATION

	Alarm IO (AST-CT51)	Lift IO (AST-CT53)
<b>Usage</b>		
Function	RS485 Port (Support IN and Out Readers)	
<b>Interface</b>		
Input	12 Input Points	
Output	12 Output Point (NC and NO Selectable)	
<b>Communication</b>		
485 Interface	9600bps (8,n,1) up to 1.2km	
<b>General</b>		
Power	12V / 500mA (Max)	
Working Environment	-10°C to 50°C 10% to 90% RH	
Dimensions	250mm x 210mm x 65mm (Metal Enclosure) 152mm x 137mm x 30mm (Board Size)	

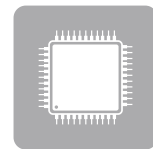


# AST-P12 IMS-POE NETWORK CONTROLLER



iMS-POE Network Controller is a complete IP based access control system. All the power usage for the door including reader and lock can be provide by a single CAT5 cable. It can reduce the cable costs and manage easily.

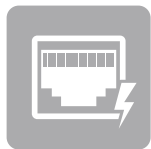
The panel is using embedded operation system to increase the security level and equipped with a true TCP/IP connection for real time monitoring and control. Through the TCP/IP connection, multinational corporations can easily control and monitor their worldwide spread offices via Internet.



Integrated



Smart Card



Power Over Ethernet (POE)

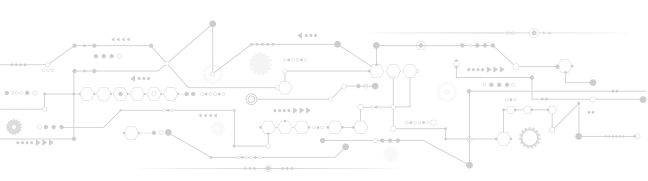
## GENERAL FEATURES

- Supports Power Over Ethernet (POE)
- Embedded System Design
- Supports 100,000 Users
- Supports 100,000 Transactions
- Network based single door controllers

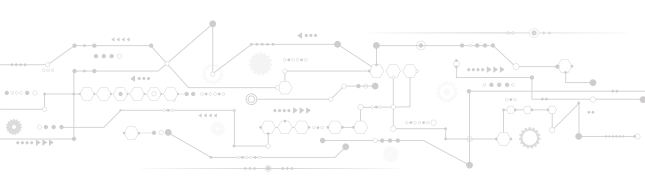
## SPECIFICATION

iMS – POE Network Controller (AST-P12)

Capacities	
User Record	100,000 User
Transaction Record	100,000 Transaction
Access Group	128 Access Group
Holiday	32 Holidays
Communication	
Network Interface	100Mbps with POE
Serial Port	19200bps (8,n,1)
Reader Ports	Wiegand Interface x 2 and RS485 Interface
485 Interface	19200bps (8,n,1)
IO Interface	Input x 4, Dry Contact Output x 2, 12V Control x 2
General	
Power	12V / 100mA
Working Environment	-10°C to 50°C 10% to 90% RH
Dimensions	160mm x 98mm x 25mm (H x W x D)



# SMART CARD READERS

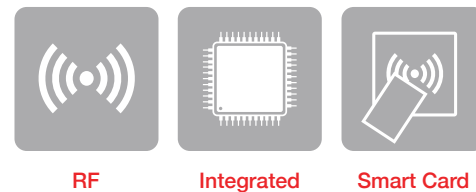


# AST-R12 MIFARE READER



Mifare Reader is a contactless smart card reader. The reader adopts the widely recognized Mifare technology. It provides high reliability, fast response time and low power consumption for a wide range access control system.

The reader provides glass frame cover to increase the durability and is easy for cleaning. It has built in bi-color LED and Buzzer to provide visible and audio alert for users.



RF

Integrated

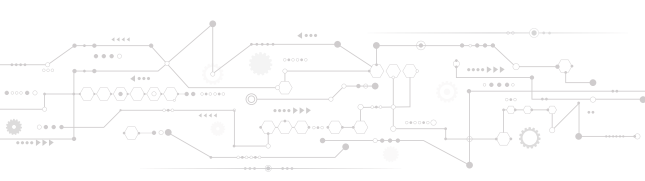
Smart Card

## GENERAL FEATURES

- Built in dual color light pipe
- Build-in buzzer
- Support ISO14443 Type A,B,C Smart Card
- Up to 7cm Reading Range

## SPECIFICATION

	AST-R12	AST-R12F
<b>Card Interface</b>		
<b>Operate Frequency</b>	ISO 14443 Type A , 13.56MHz	ISO 14443 Type A,B,C , 13.56MHz
<b>Card Type</b>	Mifare Series, Mifare Plus	Mifare, Mifare Plus, Desfire, Felica and etc
<b>Read Range</b>	Up to 7cm	Up to 7cm
<b>Response Time</b>	0.1s	0.2s
<b>Interface</b>		
<b>Communication</b>	Wiegand 34 Bits	Wiegand 34/64 Bits
<b>LED Control</b>	Yes	Yes
<b>Buzzer Control</b>	Yes	Yes
<b>General</b>		
<b>Power</b>	12V / 150mA	
<b>Working Environment</b>	-10°C to 50°C 10% to 90% RH	
<b>Color</b>	Glass Surface with Black or White Color	
<b>Dimensions</b>	86mm x 86mm x 11mm (Flush Mount) / 86mm x 86mm x 22mm (Surface Mount)	

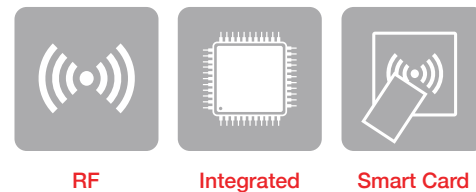


# AST-R12K MIFARE READER (WITH KEYPADS)



Mifare Reader with Keypads is a contactless smart card reader. The reader adopts the widely recognized Mifare technology. It provides high reliability, fast response time and low power consumption for a wide range access control system.

The reader provides glass frame cover to increase the durability and is easy for cleaning. It has built in bi-color LED and Buzzer to provide visible and audio alert for users.



RF

Integrated

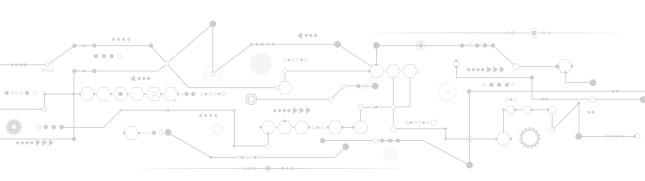
Smart Card

## GENERAL FEATURES

- Support 3 x 4 Keypads with backlight
- Build-in buzzer
- Support ISO14443 Type A,B,C Smart Card
- Up to 5cm Reading Range

## SPECIFICATION

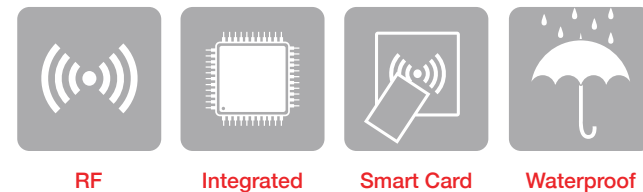
	AST-R12K	AST-R12KF
<b>Card Interface</b>		
<b>Operate Frequency</b>	ISO 14443 Type A , 13.56MHz	ISO 14443 Type A,B,C , 13.56MHz
<b>Card Type</b>	Mifare Series, Mifare Plus	Mifare, Mifare Plus, Desfire, Felica and etc
<b>Read Range</b>	Up to 5cm	Up to 5cm
<b>Response Time</b>	0.1s	0.2s
<b>Interface</b>		
<b>Communication</b>	Wiegand 34 Bits / Wiegand 8 bits for keypads	Wiegand 34/64 Bits / Wiegand 8 bits for keypads
<b>Keypads</b>	3 x 4 Keypads with backlight	
<b>LED Control</b>	Yes	Yes
<b>Buzzer Control</b>	Yes	Yes
<b>General</b>		
<b>Power</b>	12V / 150mA	
<b>Working Environment</b>	-10°C to 50°C 10% to 90% RH	
<b>Color</b>	Glass Surface with Black or White Color	
<b>Dimensions</b>	86mm x 86mm x 11mm (Flush Mount) / 86mm x 86mm x 22mm (Surface Mount)	



# AST-R18 MIFARE READER



Mifare Reader is a contactless smart card reader. The reader adopts the widely recognized Mifare technology. It provides high reliability, fast response time and low power consumption for a wide range access control system. It has built in bi-color LED and Buzzer to provide visible alert for users. The Wiegand protocol interface compatible with all standard access control system.



RF

Integrated

Smart Card

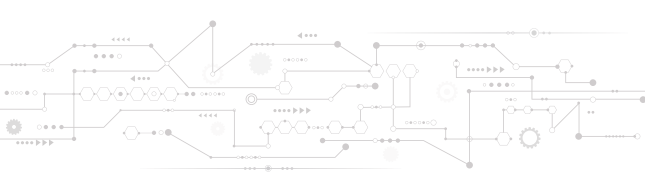
Waterproof

## GENERAL FEATURES

- Built in Bi-Color LED PIPE
- Build-in 3x4 output keypads (Wiegands)
- Build-in buzzer
- Support ISO14443 Type A Smart Card
- Up to 7cm Reading Range

## SPECIFICATION

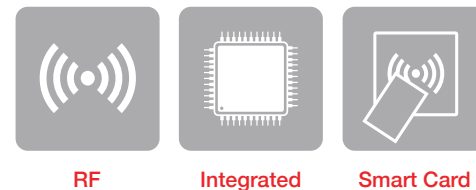
	AST-R18 (WIE)	AST-R18 (485)
<b>Card Interface</b>		
<b>Operate Frequency</b>	ISO 14443 Type A , 13.56MHz	
<b>Card Type</b>	Mifare Light, Mifare S50/S70, Mifare Plus S2K/S4K/X2K/X4K	
<b>Read Range</b>	Up to 7cm	
<b>Response Time</b>	0.1s	
<b>Interface</b>		
<b>Communication</b>	Wiegand 34 Bits with LED and Buzzer Control	RS485 Interface (19200,8,n,1)
<b>General</b>		
<b>Power</b>	12V / 150mA	
<b>Working Environment</b>	-10°C to 50°C 10% to 90% RH	
<b>Color</b>	Black / White	
<b>Dimensions</b>	86 mm x 86mm x 20mm	



# AST-RL11/RK11 LCD MIFARE READER



LCD Mifare Reader is a contactless smart card reader. The reader adopts the widely recognized Mifare technology. It provides high reliability, fast response time and low power consumption for a wide range access control system. It has built in bi-color LED and Buzzer to provide visible alert for users. The reader provides an LCD display unit for showing the current date time of the system and corresponding result for access control.



RF

Integrated

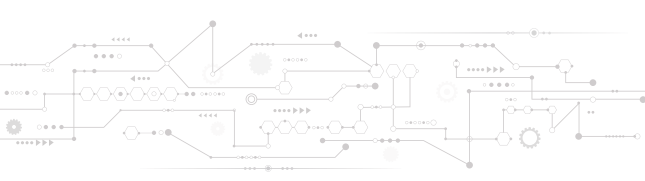
Smart Card

## GENERAL FEATURES

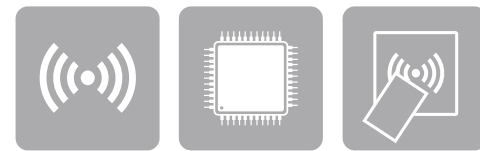
- Built in Bi-Color LED PIPE
- Build-in 3x4 output keypads (Wiegands)
- Build-in buzzer
- Support 3 x 4 Keypads with backlight
- Support ISO14443 Type A Smart Card
- Up to 7cm Reading Range

## SPECIFICATION

	AST-RL11	AST-RK11
<b>Card Interface</b>		
Operate Frequency	ISO 14443 Type A , 13.56MHz	
Card Type	Mifare Light, Mifare S50/S70, Mifare Plus S2K/S4K/X2K/X4K	
Read Range	Up to 7cm	
Response Time	0.1s	
<b>Interface</b>		
Communication	RS485 Interface (19200,8,n,1)	
Display	2 x 16 characters	
Keypads	No Keypads	3 x 4 Keypads with backlight
<b>General</b>		
Power	12V / 150mA	
Working Environment	-10°C to 50°C 10% to 90% RH	
Color	Black / White	
Dimensions	96mm x 123mm x 34mm	



# AST-RT16 TOUCH SCREEN MIFARE READER



RF      Integrated      Smart Card

Touch Screen Mifare Reader is built for Booking & Access Control System. The graphic display module is used to display the booking information's, clock, keypads and card status. The system clock will auto synchronized with the server. The reader has built in touch screen keypads for Door Code, Card or Card + PIN access.

The reader adopts the widely recognized Mifare technology. It provides high reliability, fast response time and low power consumption for a wide range access control system. The RS485 connection provides up to 1.2km communication distance.

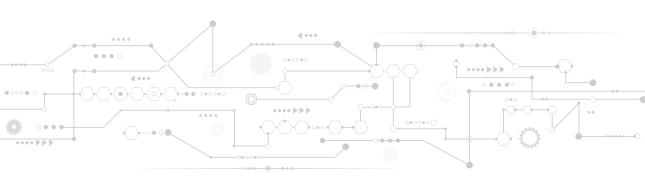
## GENERAL FEATURES

- Graphic Interface
- Support Scramble Keypads
- Built in Buzzer
- Support ISO14443 Type A Smart Card
- Up to 5cm Reading Range
- Provide Dual SAM Slots

## SPECIFICATION

### AST-RT16

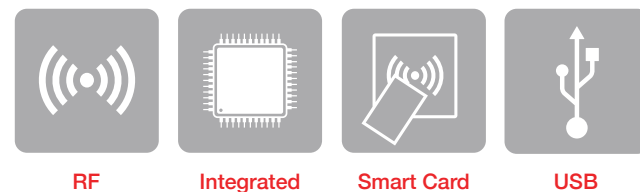
AST-RT16	
<b>Card Interface</b>	
Operate Frequency	ISO 14443 Type A , 13.56MHz
Card Type	Mifare Light, Mifare S50/S70, Mifare Plus S2K/S4K/X2K/X4K
Read Range	Up to 5cm
<b>Interface</b>	
Communication	RS485 Protocol
Display Resolution	480 x 272 pixels Color
Keypads	3 x 4 Keypads with scramble functions
<b>General</b>	
Power	12V / 200mA
Working Environment	-10°C to 50°C 10% to 90% RH
Color	Black / White
Dimensions	128mm x 88mm x 17mm



# AST-RT22 USB SMART CARD READER



USB Smart Card Reader is a desktop smart card reader which adopts the widely recognized ISO14443 technology. It provides high reliability, fast response time and low power consumption for a wide range smart card application development. The reader has built in bi-color LED and Buzzer to provide visible and audio indication for users. The USB connection support most operation system including Linux, Windows performs (WinXP, Win8, Win10 and etc) and MAC PC.



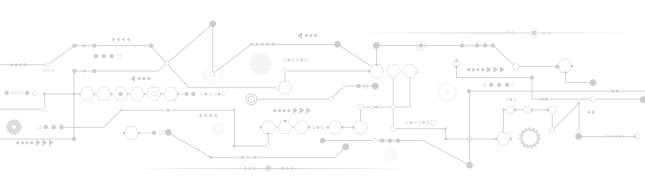
## GENERAL FEATURES

- HID Driver Interface
- Support keyboard emulation mode
- Build in Bi-Color LED and Buzzer
- Support ISO14443 Type A,B,C Smart Card
- Up to 5cm Reading Range
- Provide Dual SAMs Slot

## SPECIFICATION

### AST-RT22

AST-RT22	
<b>Card Interface</b>	
<b>Operate Frequency</b>	ISO 14443 Type A,B,C , 13.56MHz
<b>Card Type</b>	Mifare Light, Mifare Series, Mifare Plus Series, Desfire, Felica and etc
<b>Read Range</b>	Up to 5cm
<b>Communication</b>	
<b>USB Port</b>	USB2.0
<b>General</b>	
<b>Power</b>	USB Port (5V / 150mA)
<b>Working Environment</b>	-10°C to 50°C 10% to 90% RH
<b>Color</b>	Black
<b>Dimensions</b>	102mm x 82mm x 15mm



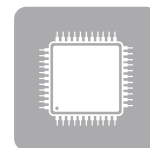
# SRT-D190 UHF RFID READER



SRT-D190 is a UHF RFID reader, the reader supports most EPC Gen2 (ISO18000-6C) UHF Proximity Card. It provides high reliability, fast response time and low power consumption for long distance identify. The reader has built in dual LED and Buzzer to provide visible and audio indication for users.



RF



Integrated



UHF Card



Waterproof

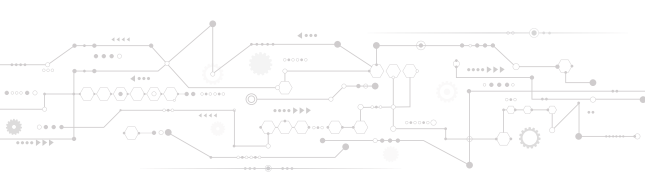
## GENERAL FEATURES

- Multi-Protocol EPC Gen2 (ISO18000-6C)
- Adjustable Antenna Power up to 30dBm
- 9 dBi Antenna, Support up to 10M
- Wiegand and RS485 Interface

## SPECIFICATION

### SRT-D190

Card Interface	
Operate Frequency	902-908Mhz
Card Type	EPC Gen2 (ISO18000-6C)
Read Range	Up to 10m
Communication	
Wiegand	34Bit
RS485	9600 (8,n,1)
General	
Power	15V /1A
Working Environment	-10°C to 50°C 10% to 90% RH
Color	White
Dimensions	228mm x 228mm x 52.3mm
Compliance	EN302 208-1,2 V1.3.1, EN301 489-1,3,5 EN 55022, EN 60950, EN 60068-2-6 27,31, EN 60529 EN 60590-1, IEC 68-2-32, FCC 15.247

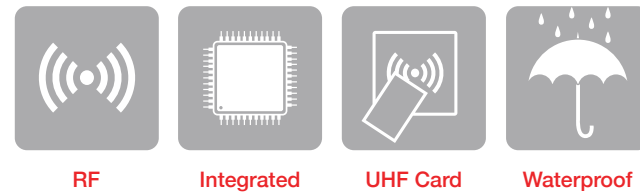


# SRT-E190

## UHF ENTRANCE PASS RFID READER



SRT-E190 is a UHF RFID reader, the reader supports most EPC Gen2 (ISO18000-6C) UHF Proximity Card. It provides high reliability, fast response time and low power consumption for long distance identify. The reader is design for door access for upto 5m.

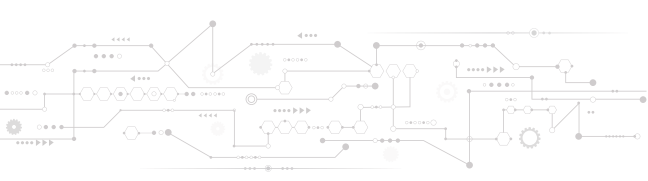


### GENERAL FEATURES

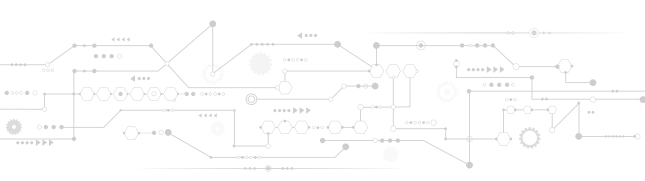
- Multi-Protocol EPC Gen2 (ISO18000-6C)
- Adjustable Antenna Power up to 25dBm
- 6.5 dBi Antenna, Support up to 5M
- Wiegand and RS485 Interface

### SPECIFICATION

SRT-E190	
<b>Card Interface</b>	
<b>Operate Frequency</b>	902-908Mhz
<b>Card Type</b>	EPC Gen2 (ISO18000-6C)
<b>Read Range</b>	Up to 5m
<b>Communication</b>	
<b>Wiegand</b>	34Bit
<b>RS485</b>	9600 (8,n,1)
<b>General</b>	
<b>Power</b>	12V /1A
<b>Working Environment</b>	-10°C to 50°C 10% to 90% RH
<b>Color</b>	White
<b>Dimensions</b>	105mm x 105mm x 35mm
<b>Compliance</b>	EN302 208-1,2 V1.3.1, EN301 489-1,3,5 EN 55022, EN 60950, EN 60068-2-6 27,31, EN 60529 EN 60590-1, IEC 68-2-32, FCC 15.247



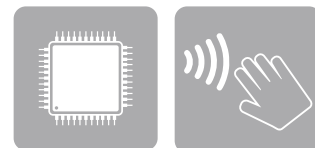
# ACCESSORIES



# AST-DR010 DIELECTRIC RELEASE BUTTON



The release button provides touch less function to open the door to prevent spread of disease. It provides glass frame cover to increase the durability and allow cleaning. It has built in bi-color LED and Buzzer to provide visible and audio indication for users.



Integrated

Contactless

## GENERAL FEATURES

- Support Touch Less 2-3cm
- Build in Buzzer
- Built in Bi-Color LED

## SPECIFICATION

AST-DR010

Card Interface	
Read Range	Dielectric Sensor support up to 3cm
Response Time	0.2s
Interface	
Communication	Dry Contact Output 12V 1A (C, NC,NO)
Buzzer	Enable / Disable
General	
Power	12V / 100mA
Working Environment	-10°C to 50°C 10% to 90% RH
Color	Glass Surface with Black or White Color
Dimensions	86mm x 86mm x 11mm (Flush Mount) / 86mm x 86mm x 22mm (Surface Mount)