ACTAtek

How to implement ACTAtek solution in projects?

ACTAtek Support Team

ACTAtek ID Management Platform

ACTATek provids state-of-art <u>web-based</u> ID management solutions. Based upon ACTAtek ID management platform, a person can be authenticated using a combination of fingerprint, RFID Smart Card and PIN (password). RFID smart cards can be any of HID iClass, HID proximity, Mifare, EM, CEPAS and other cards available in the market.

Coupled with ACTAtek's Access Manager, enterprise can deploy web/cloud based ACTAtek ID management solution for Physical Security, Workforce Management, Payroll Management, Security surveillance, and RFID tagged Asset Management.

ACTAtek's Ecosystem

Physical Security

Workforce Management

ACTAtek3s
Terminals

IP based
Smartcard
Readers

Mobile
ACTAtek3s

Secured I/O Controller

Access Manager Suite

Enterprise Smart Time

Power Solutions, UPS, PoE,
Locks and Accessories

Smartcards, Key fobs:
Mifare, HID, EM, CEPAS

ACTAtek™

Traditional ACS v.s. ACTAtek solution

Host PC — Software — RJ-45 — **Control Panel** — Wiegand — Card Reader

V.S

ACTAtek3
IP:192.168.1.100

RJ-45
TCP/IP

Browser
PC

Remote Management (Browser only and real-time monitor)
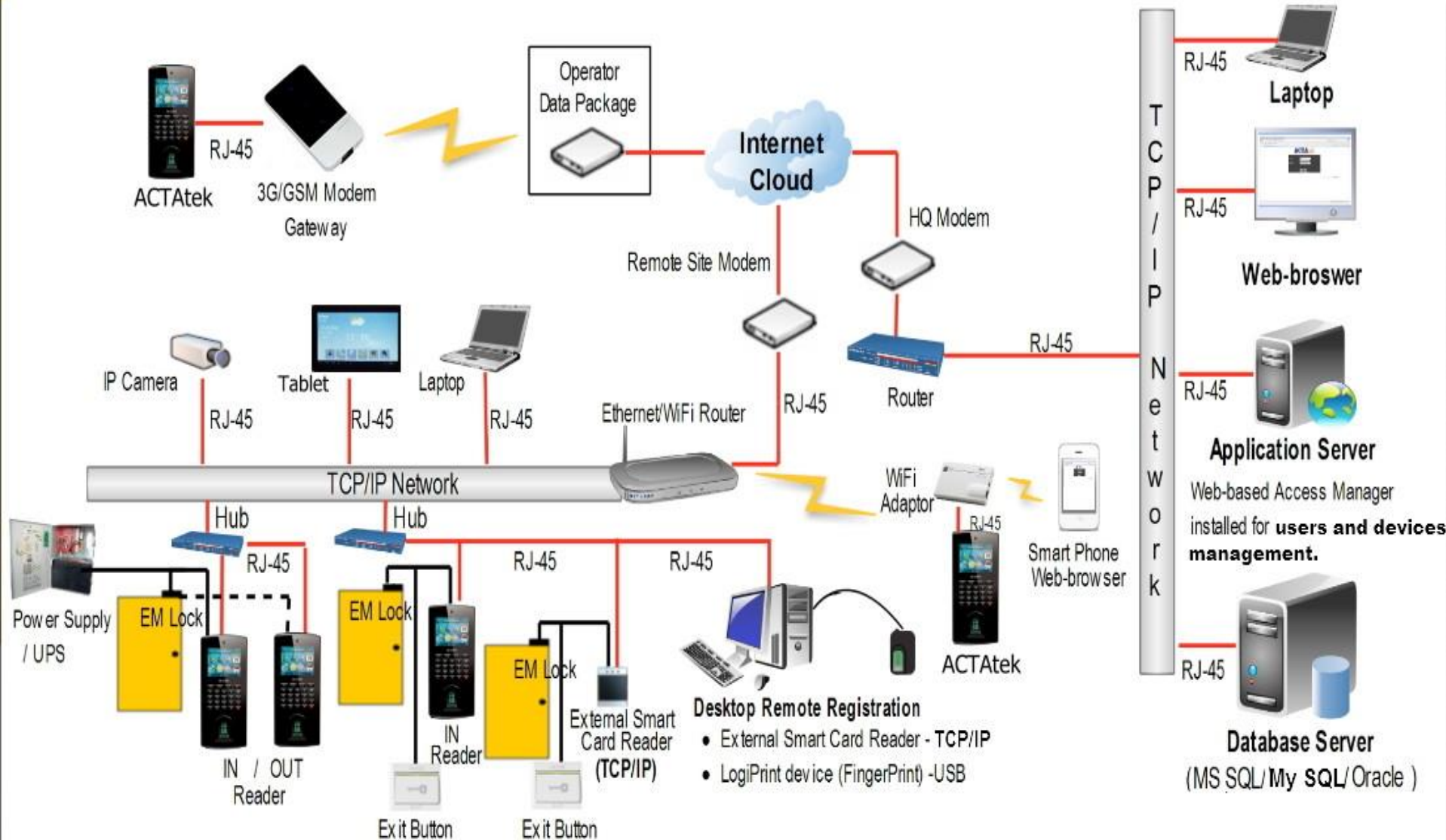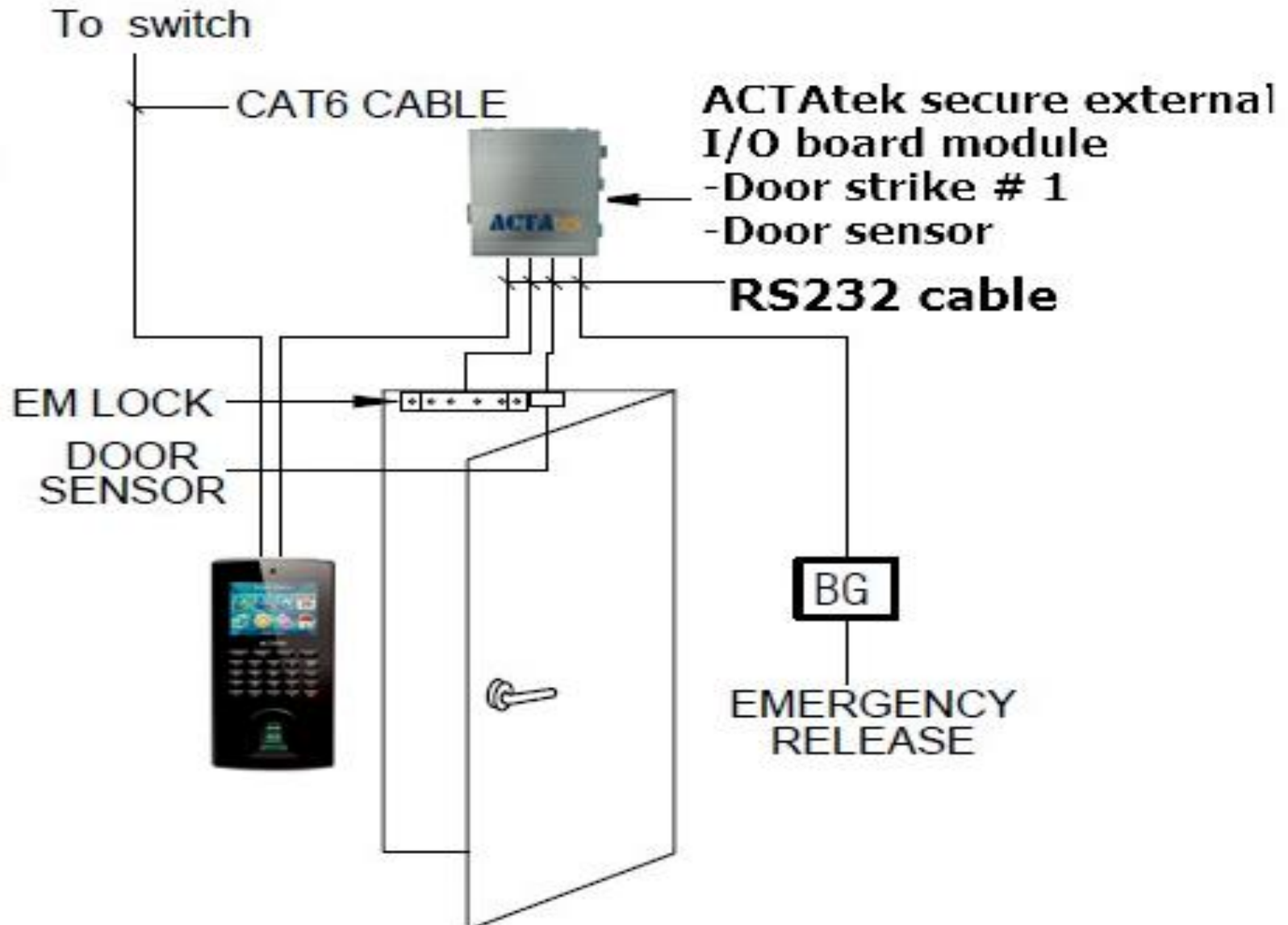
Browser   Browser

Any Mobile Internet Device(3G/WiFi)

IP-based technology topology to provide extra flexibility in system design and reduce cost on installation and maintenance using existing network infrastructure.
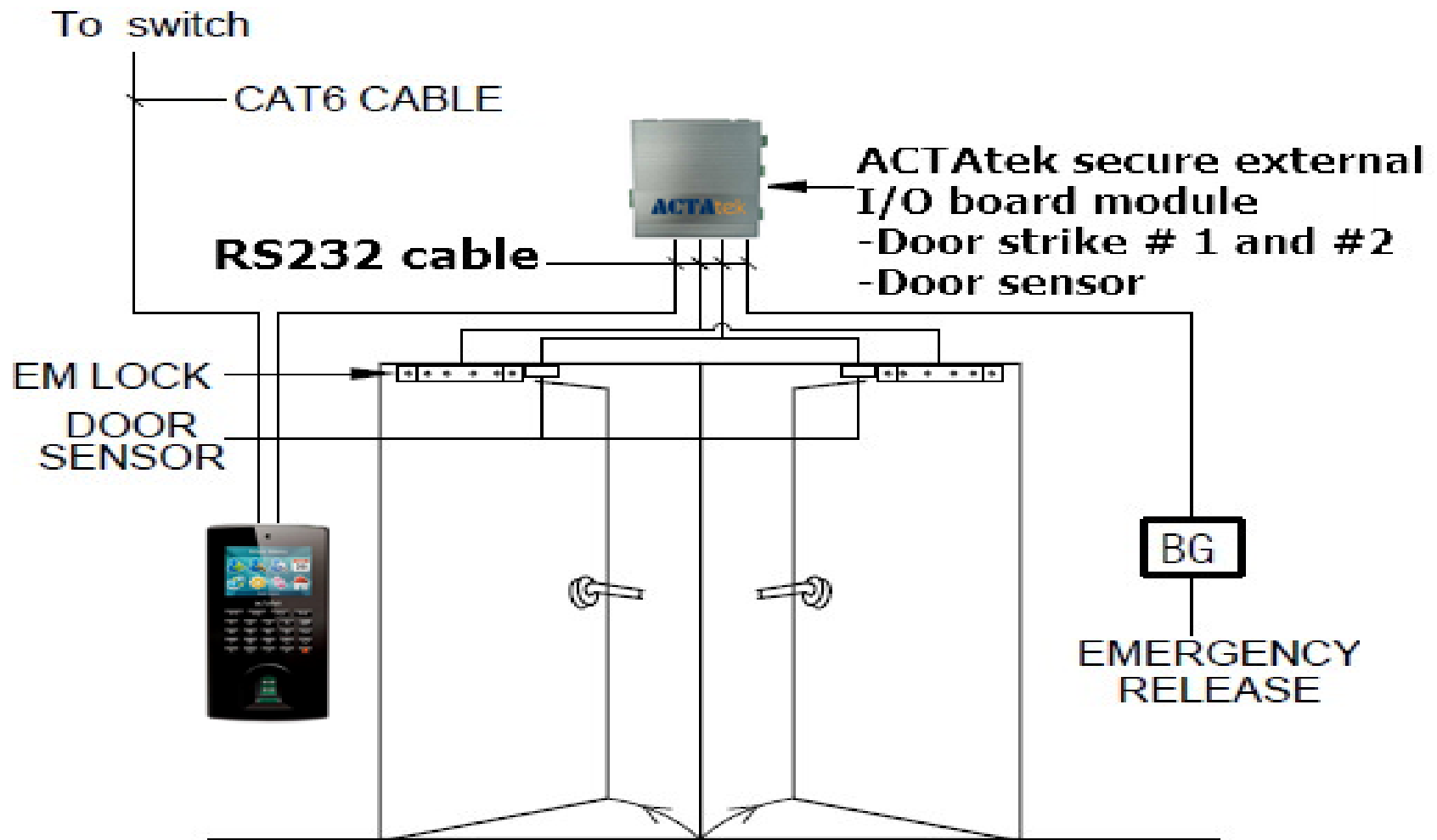
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Deployment Architectures

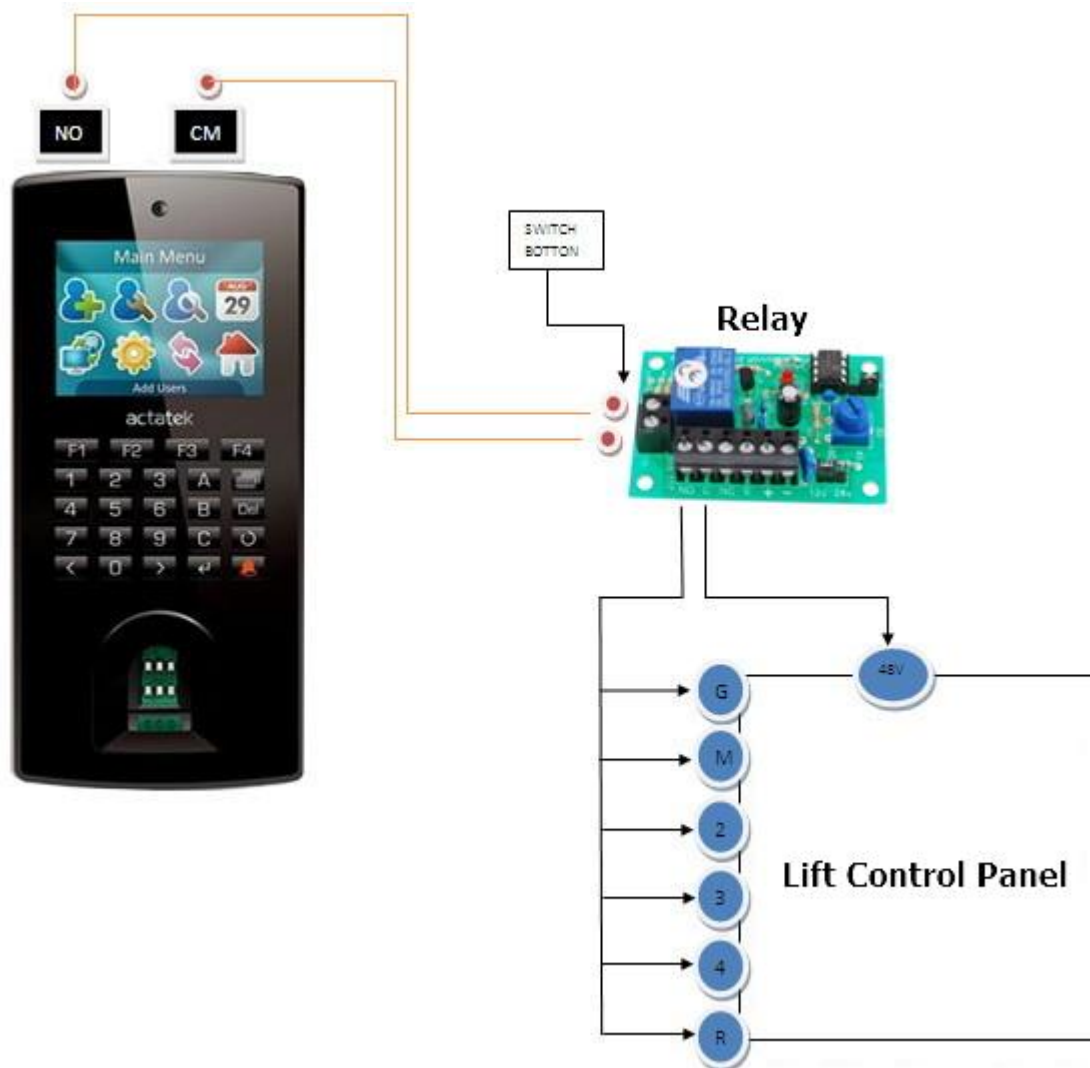*-Standalone (controller & reader) or network deployment (Internet cloud ready)*

Typical installation of card access for single leaf door with EM lock

To switch

CAT6 CABLE

ACTAtek secure external
I/O board module
-Door strike # 1
-Door sensor

RS232 cable

EM LOCK

DOOR SENSOR

BG

EMERGENCY RELEASE

Typical installation of card access for double leaf door with EM lock

Typical installation of card access for the integration with the lift control panel

Typical installation of card access for the integration with car park system

- Unique identification code, canot be duplicated, high security
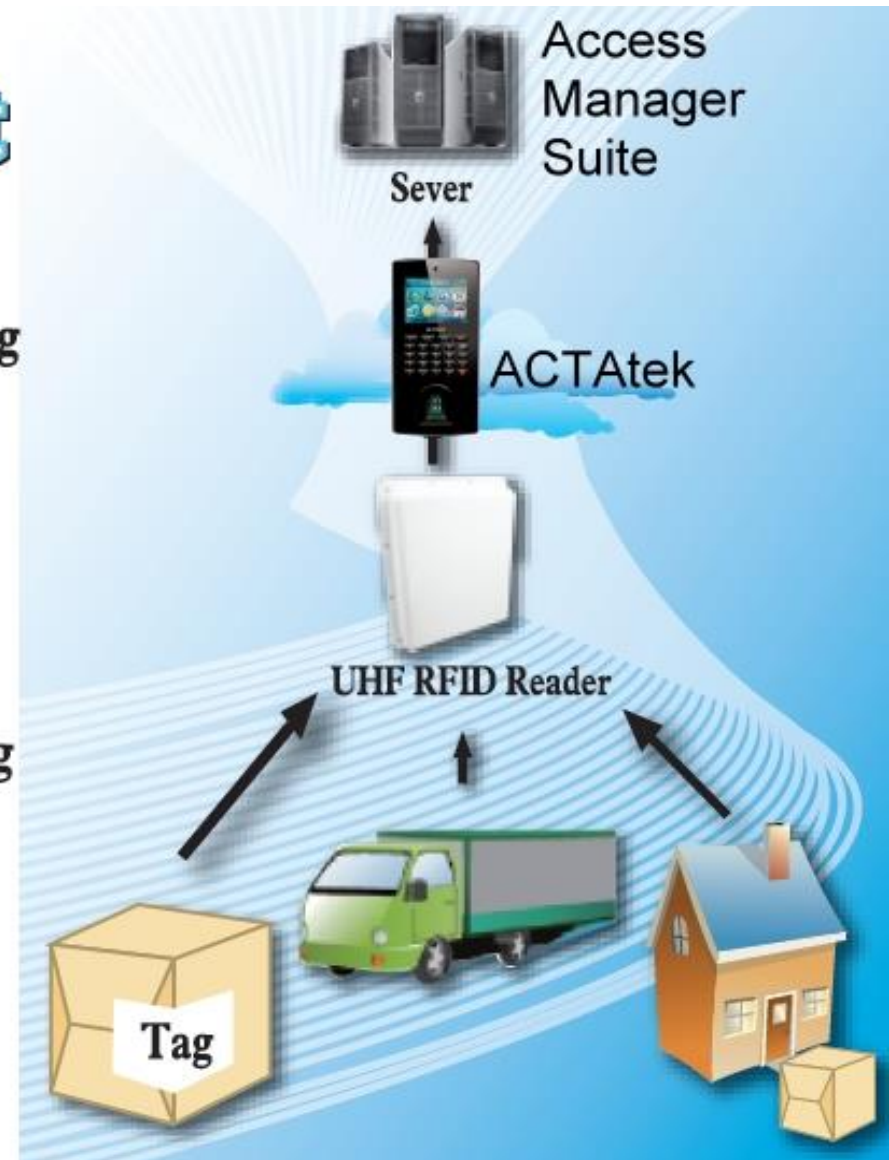- Automatic, no batteries

Intelligent Parking Management

UHF RFID Reader

RS485

LED DISPLAY

VEHICLE BARRIER

ENTRY STATION C/W INTERCOM

eTag

ACTAtek

Two level high security solution

❑ Level one (barrier 1): Authentication by long range vehicle tag with first level transaction record in real-time and to the cloud

❑ Level two (barrier 2): Authentication by finger with second level transaction record in real-time and to the cloud

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Logistics Management

1. Saves manpower and resources, increasing efficiency of logistics management.

2. Immediately grasp transport information of goods.

3. Improves time efficiency of goods entering and leaving warehouses and transfer stations.

4. Facilitates vehicle scheduling.

Access Manager Suite

Sever

ACTAtek

UHF RFID Reader

Tag

ACTAtek

ACTAtek
(controller)

UHF RFID Reader

Personnel access control

1. Install the reader with antenna in the ceiling

2. When personnel carry with them tags in their bags or wallets

3. And step onto the floor with a space of 2mX2m, the reader reads the tags on the entering persons and opens the automatic doors for the person.
   (No pulling out of cards required!)

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Traffic detection system

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Access Manager Suite

UHF RFID Reader

1. Knows exactly where cars are and the volume of traffic.

2. Knows in real time what car is on what position on what road.

3. Vehicle Driving Recorders can be used in the investigation of vehicle driving records in cars that cause traffic accidents.

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Key Features

- **Award winning Biometric module** – high standards of accuracy and reliability of fingerprint verification

- **Truly IP65** – Not only is the unit weather-proof, dust-proof and shock-proof with proven robustness under drop-tests, but importantly the Biometric Module is also IP65 rated

- **Highly Reliable** biometric authentication performance under rainy conditions and sweaty fingers

- **Support for multiple verification methods** within a single unit. Actatek's combination units offer Fingerprint, Smartcard, PIN with multi-level verification.

- **CMOS Camera photos comparison** feature permits objective comparison of personnel's image at the time of access event with the image registered in the database

- **CMOS Camera analog video output to DVR** make ACTAtek device a all-in-one Video Surveillance solution.

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Benefits

- Eliminate 'Buddy-Punching': Use Biometric Verification for access as well as time & attendance

- Identify 'Phantom-Workers': Use CMOS Camera photos taken or videos recorded at DVR to compare for isolating access events by suspicious unregistered personnel

- Minimize 'Effort & Costs': Deploy Access-Control over existing IP networks, Simplify and Automate access reporting, time/attendance reports and integration into payroll systems

- Enhance 'Accessibility and Utilization': Obtain decision making information over Ethernet/Wireless, Internet/3G, anytime/anywhere on Laptop, Smartphone or Tablet-pc using a true real-time, multi-door, multi-location at one system

ACTAtek

ACTAtek3 Accessories

➢ **<u>Door lock connection:</u>**

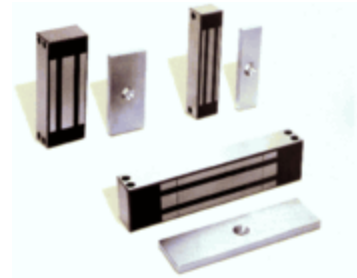**There are 2 types of Door lock:**
    Fail-Safe Lock & Fail-Secure Lock

➢ **<u>Fail Safe</u> = power off, it's unlocked**
➢ **<u>Fail Secure</u> = power off, it's locked**

➢ **Electric locking devices include:**
- ☐ **Electric strikes**
- ☐ **Electromagnetic locks**
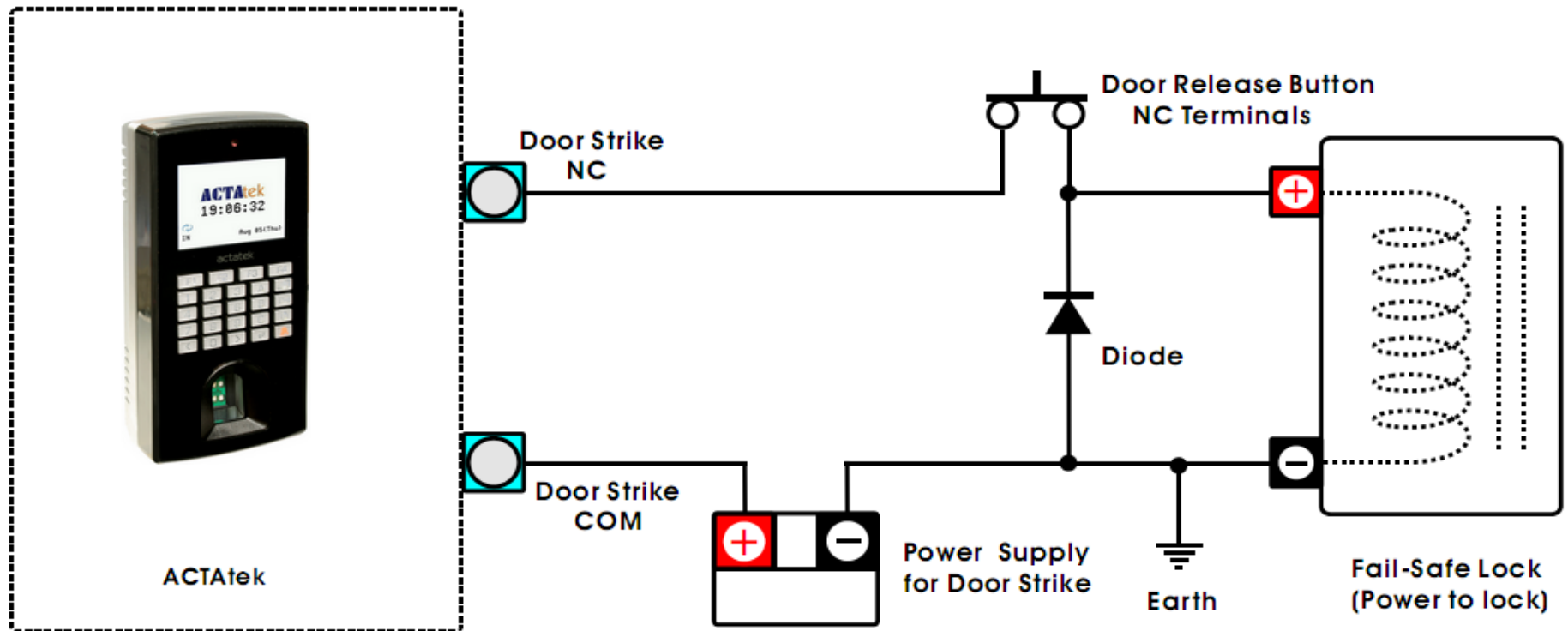- ☐ **Electromechanical locks**
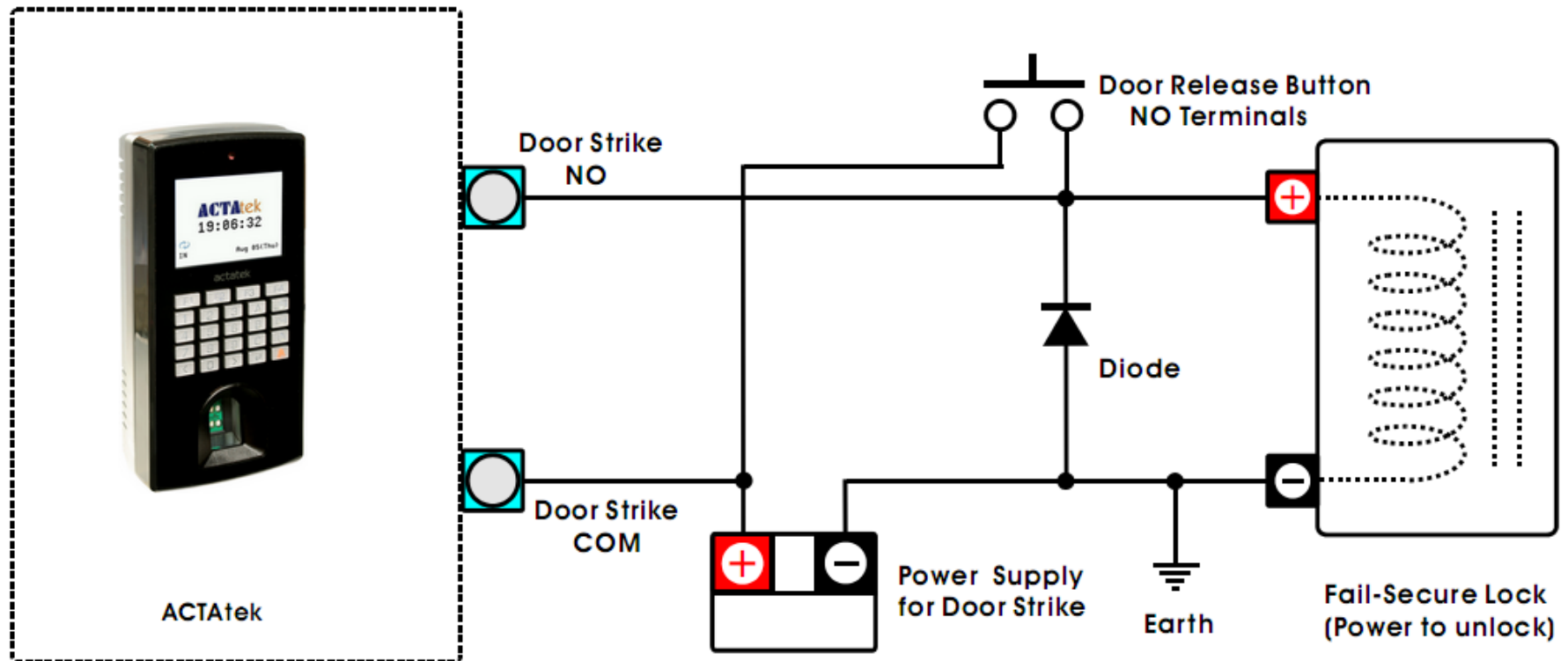
Door Lock Connection

1. **ACTAtek3 support electric door lock that rating within 30V/5A**
2. **Independent power supply have to be provided for the electric door lock**
3. **Diode have to be installed to prevent back EMF**

Connection Diagram for Fail-Safe Lock

Door Release Button NC Terminals

Door Strike NC

Door Strike COM

Diode

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Power Supply for Door Strike

Earth

Fail-Safe Lock (Power to lock)

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Connection Diagram for Fail-Secure Lock

Door Release Button
NO Terminals

Door Strike
NO

Door Strike
COM

Diode

ACTAtek

Power Supply
for Door Strike

Earth

Fail-Secure Lock
(Power to unlock)

ACTAtek

UPS (Uninterruptible Power Supply)

UPS Technical Specifications

Features	Technical Specifications
Battery Type	VRLA
Supply Voltage	100-240 AC 50/60Hz
Output	13.5V DC +/-2%, 3Amp (Max.)
Battery Capacity	12V DC, 7Ah / 12Ah
Operating Temperature	0 to 45 Degrees Celsius
Humidity	Up to 95% non - Condensing
Battery Charging Time	18 – 36 Hours
Average Continuous Operation with ACTAtek™ Connected	12Ah: 10-16 hours
Average Continuous Operation with ACTAtek™, External Secure Relay and electric lock (500mA lock) Connected	12Ah: 8-10 hours
Relock Delay time	0-15 seconds
Weight	5kg
Dimension	16.5cm x 21.5cm x 11.5cm
Warranty	1 Year

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ACTAtek
IP Based
Smart Card Reader

ACTAtek

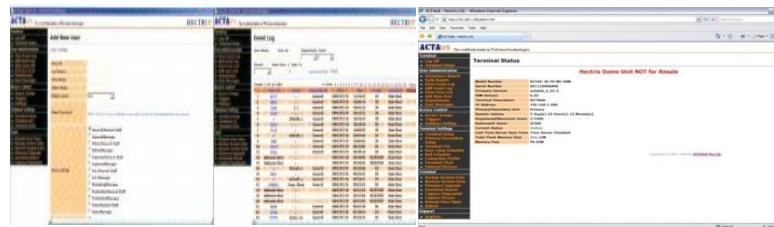# ACTAtek IP based Smart Card Reader

-Cost effective solution

TCP/IP ready

The **IP Based Smartcard Reader** is an attractive, small, cost effective unit that can be used as a means of extending the ID management platform from a full biometric or smartcard access control system to additional card authentication door access control or time and attendance system.
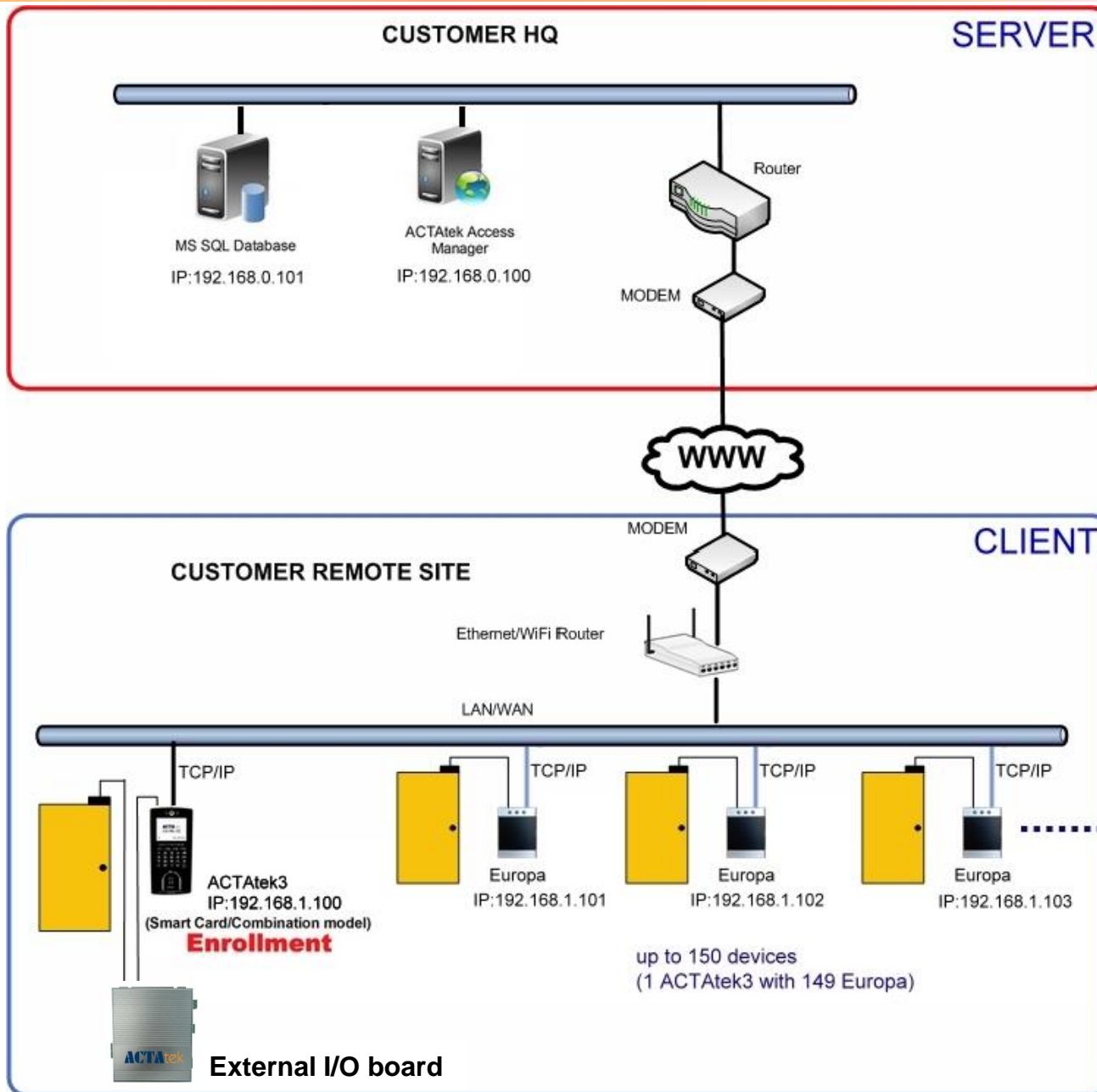
- Easy installation with IP65 compliant
- Fully integrated into the ACTAtek web-based applications
- Seamless and transparent data gathering in real-time
- Access Manager support
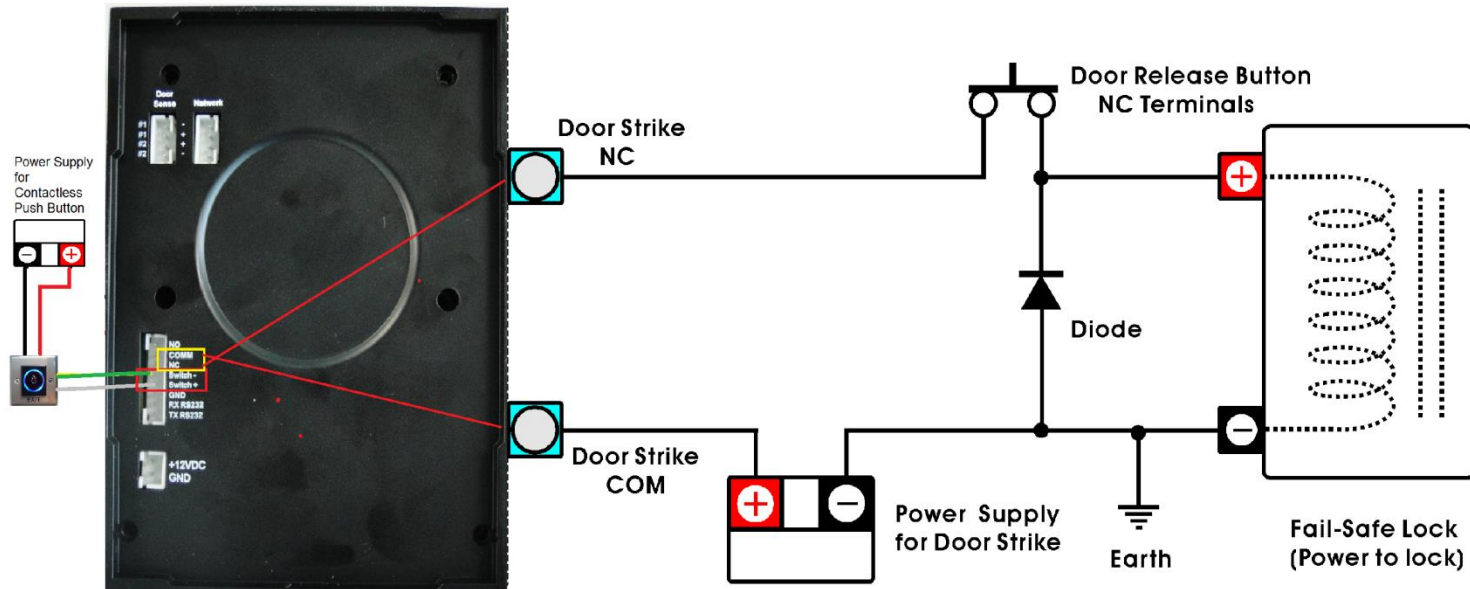- ACTAtek offers MiFare, HID iClass and HID Proximity smartcards

Embedded Software (Access webpage via browsers)

-Default IP: 192.168.1.100

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CUSTOMER HQ

SERVER

MS SQL Database
IP:192.168.0.101

ACTAtek Access Manager
IP:192.168.0.100

Router

MODEM

WWW

MODEM

CLIENT

CUSTOMER REMOTE SITE

Ethernet/WiFi Router

LAN/WAN

TCP/IP

ACTAtek3
IP:192.168.1.100
(Smart Card/Combination model)
Enrollment

TCP/IP
Europa
IP:192.168.1.101

TCP/IP
Europa
IP:192.168.1.102

TCP/IP
Europa
IP:192.168.1.103

up to 150 devices
(1 ACTAtek3 with 149 Europa)

External I/O board

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Connection Diagram for Fail-Safe Lock

Description:

If the External IP Reader is used as an Access Control System, there are some instructions must be followed:
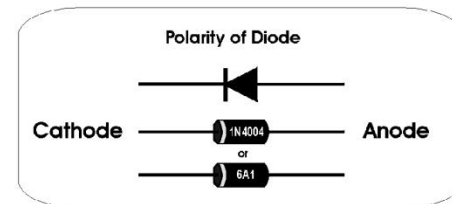
1. The External IP Reader requires a 12V DC/2A (or above) Swithcing Power Supply.

   Please do not share the power supply with any other devices, including door lock, Unstable power supply would damage the ACTAtek seriously.

2. Use separate power supply for ACTAtek; External IP Reader

3. An additional Diode is required to avoid Back EMF from the Electric Lock, which could damage the External IP Reader

   To operate a non-polar Electric Lock, you should assign the Positive & Negative terminal for the Lock accorded with the polarity of Diode: The terminal that connects to Cathode End of Diode is Positive, the other one is Negative.
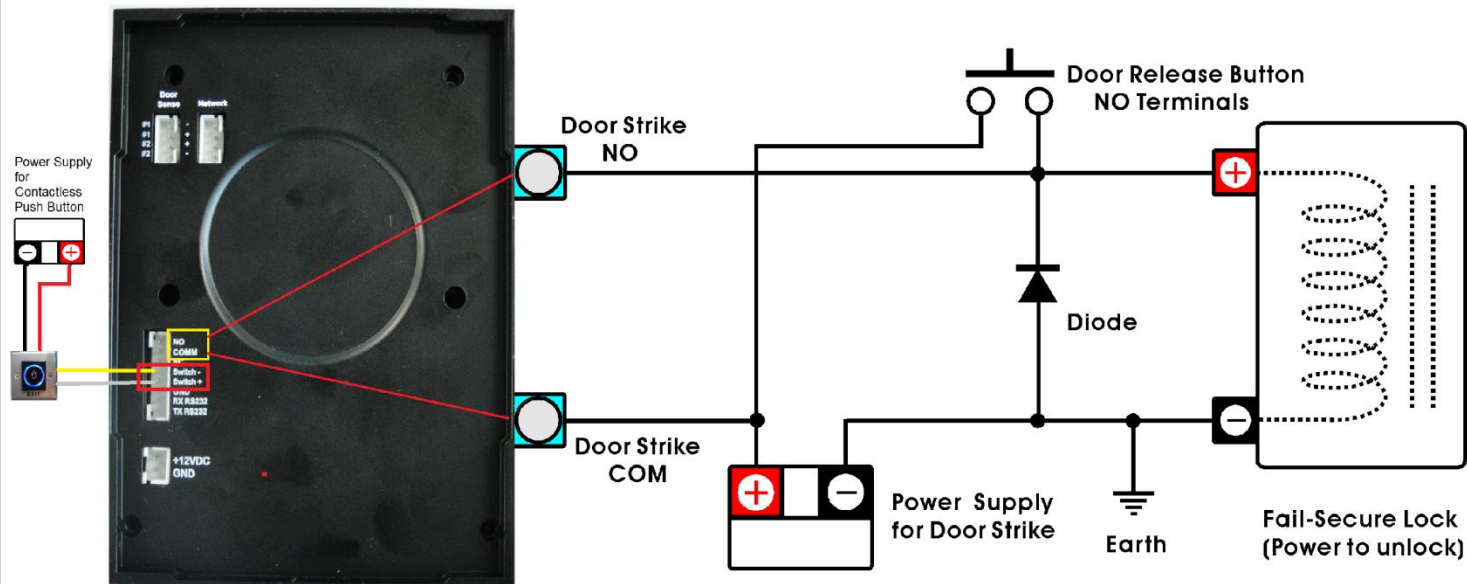
4. Diode Selection: a) Use P/N:1N4004, if the Door Lock rates within 1A

   b) Use P/N:6A1, if the Door Lock operating current is within 1 - 6A.

* Failing to comply the above installation instruction might cause severe damage to External IP Reader

Title:	Fail-Safe Lock Connection	
Author: **ACTAtek Pte Ltd**	www.actatek.com	
Date: Nov. 15, 2011	Sheet: 1 of 1	
Revision: 1.0		

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ACTAtek
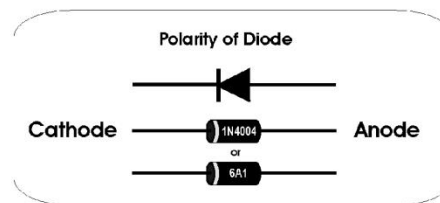
Connection Diagram for Fail-Secure Lock

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Author: **ACTAtek Pte Ltd**	www.actatek.com	
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Revision: 1.0		

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ACTAtek Networking Mobility

The ACTAtek 3G Wireless Gateway:

➤GSM SIM card – HSDPA connectivity

➤Built-in WiFi Access Point

WiFi router

WiFi adapter:

➤Ethernet connection(RJ-45) to ACTAtek

➤Acts as WiFi adapter (or Access Point/repeater)

ACTAtek-WiFi

Smart Phone

The ACTAtek Mobile kit:

➤ IP67 Rugged box

➤ 12V battery operated power supply
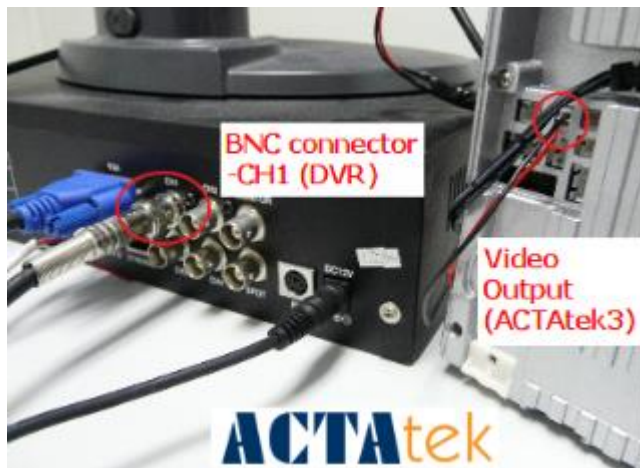
ACTAtek

ACTAtek Video Camera

ACTAtek

BNC connector

Parameters	Values	Unit
Type supported	VGA CMOS	
NTSC(M)output	712x486	Pixel
PAL	704x576	Pixel
Maximum Frame Rate	60 (@27MHz in NTSC) 50 (@27MHz in PAL)	FPS

BNC connector -CH1 (DVR)

Video Output (ACTAtek3)

ACTAtek

CH1-Video recording in real time

Video Camera

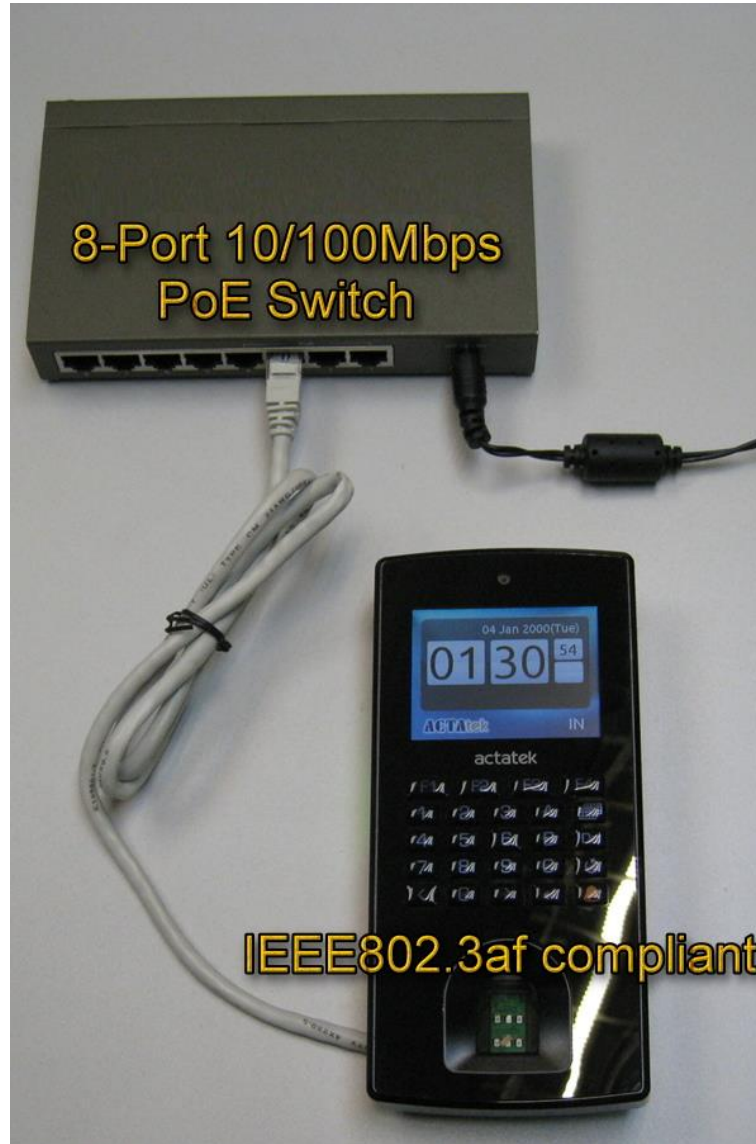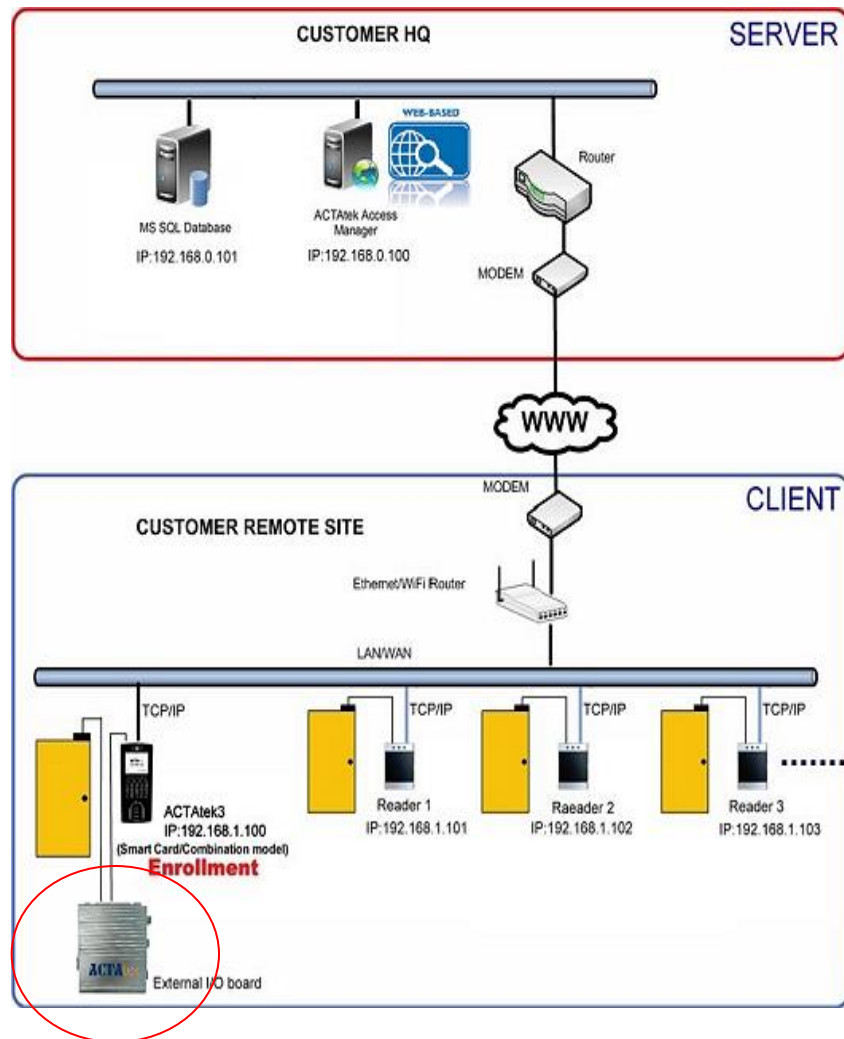**ACTA**tek

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ACTAtek3 built-in PoE model

External I/O board

For added security, **external I/O baord** is used to expand the connectivity interface of ACTAte3 to support

- Door strikes
- Door switches
- Door sensors
- Wiegand output signal
- +12VDC output

ACTAtek™
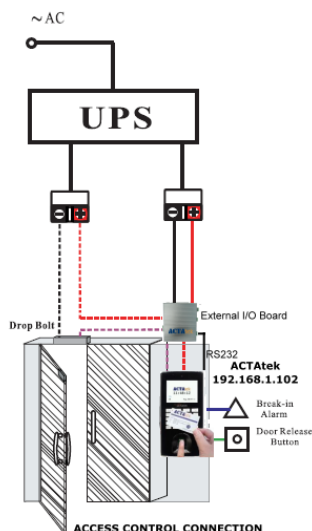
ACTAtek External Input / Output board

-Link up with ACTAtek3 to support standard 26bit Wiegand output signal to work with the 3rd party controller

Used in conjunction with the ACTAtek3 unit, the External I/O board provides an additional layer of security for access control systems when the ACTAtek3 terminals are exposed to general access. An encrypted serial link from the ACTAtek3 unit connected to the External I/O board ensures the door release mechanism cannot be operated directly. This means that even when there is a vandal attack or someone removes the ACTAtek3 terminal by force, the External I/O board Secure Relay will maintain operation and keep the door mechanism locked against unauthorised access.

I / O Type	Support
Door Strike	x Two
Door Switch	x Two
Door Sensor	x Two
Wiegand Out	x One (26bit)
Power supply	12 V

ACCESS CONTROL CONNECTION

Thank you

ACTAtek ID Management

ACTAtek