

# ACT-457A

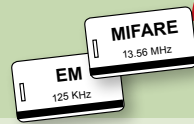
## 5.7" RISC-based RFID Panel PC

**PoE**  
IEEE802.3at

CMOS Digital Camera with Microphone

### Features

- 5.7" TFT touch color screen, full interface display, all operations can be done directly on the touch screen
- Integrating with RMI Alchemy™ AU1250 500MHz media processor provides hardware decoding for MPE1/2/4, DivX and WMV9
- Dual 125KHz-EM/13.56MHz-Mifare RFID reading capacity
- Built-in open door relay, alarm relay and exit button input
- Windows® CE5.0 operating system support
- IP64 front panel watertight and dustproof is the perfect solution for harsh environments
- Optional IEEE802.3at Power Over Ethernet (PoE) compliant



## Low Power, High Multimedia Performance

Integrated with RMI Alchemy™ technology to enable users to play DVD quality video efficiently at full-frame rates with low power consumption. The integrated MAE (Media Acceleration Engine) supports common digital video formats including MPEG1, 2, 4, DivX, and WMV9, and delivers full D1 resolution without the need for a DSP or specialized coding.

Multi Video/Audio Format Support Table			
Format	Stream Type	Audio Format	Supported Bit Rates
MPEG-1	System	MPEG	8 Mbps
	Program	MPEG	10 Mbps
MPEG-2	Transport	MPEG	8 Mbps
	Unencrypted only	WMA	2.5 Mbps
WMV9	CBR w/o filters, 720x480	WMA	2.5 Mbps
	VBR w/o filters, 720x480	WMA	2.5 Mbps
DivX	Unencrypted only / no subtitles - V3.11	MP3/AAC/MPEG	4 Mbps
	V4	MP3/AAC/MPEG	4 Mbps
	V5	MP3/AAC/MPEG	4 Mbps
MPEG-4 MP4 ISO/EIC 14496-2	Advanced Simple Profile – level 5	AAC	3 Mbps
MPEG-4 AVI	Advanced Simple Profile – level 5	MP3, AC-3	4 Mbps

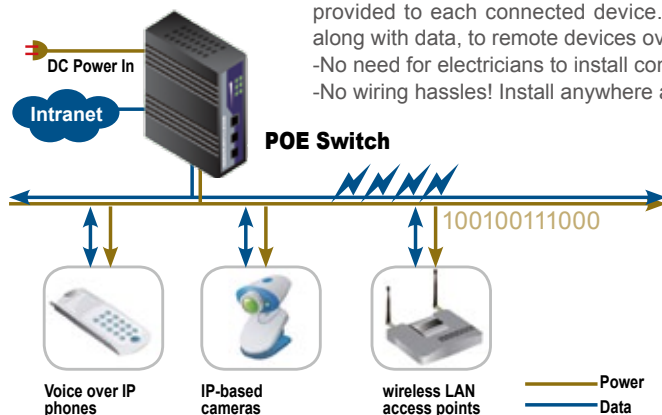


**6.2W Only**

## PoE Power Reduces Cost of System Installation

The ACT-457A is IEEE 802.3at compliant. The IEEE 802.3at PoE standard ensures that 25W of DC power is provided to each connected device. PoE Technology describes a system to safely transfer electrical power, along with data, to remote devices over standard category 5e cable in an Ethernet network.

- No need for electricians to install conduit, electrical wiring, and outlets throughout the enterprise.
- No wiring hassles! Install anywhere a RJ-45 jack is present.



**PoE**  
IEEE802.3at

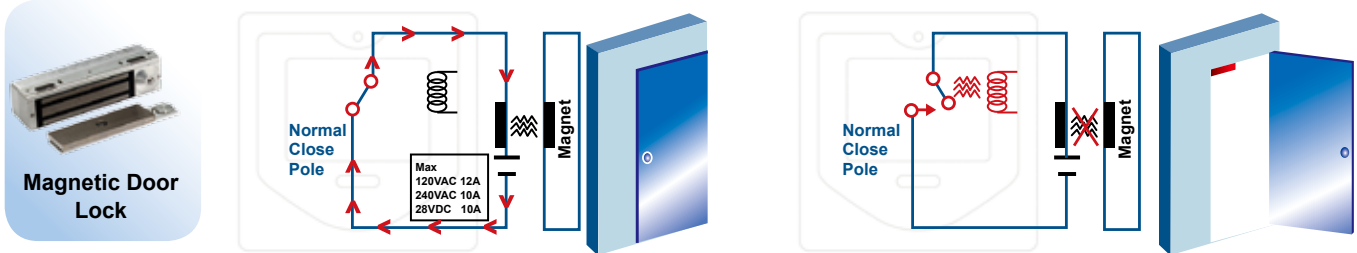


## How Does the Relay Switch Work in the ACT-457A?

ACT-457A has two built-in output controls. Electricity flows through one circuit while the other circuit controls the flow of electricity. When the electromagnet is energized, it exerts a force on the armature that overcomes the pull of the spring and moves the contact. The contact is then complete or the circuit is broken. When the electromagnet is de-energized, the contact returns to its original position.

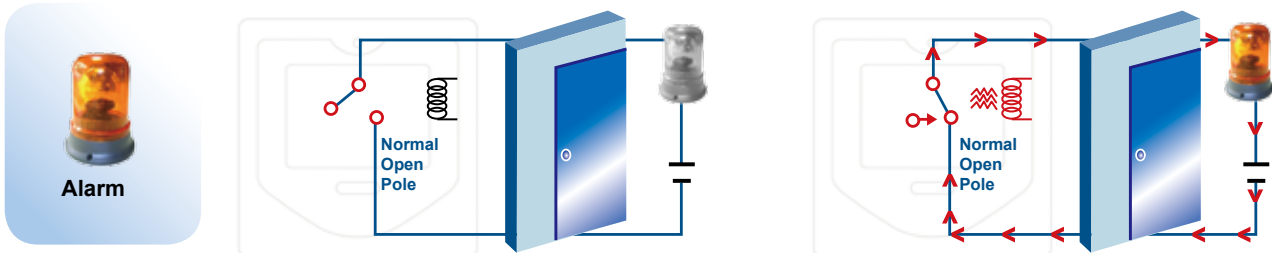
### Normal Close Example:

In its normal state, the relay is typically closed. When the electromagnet is energized, it will open and break the circuit.



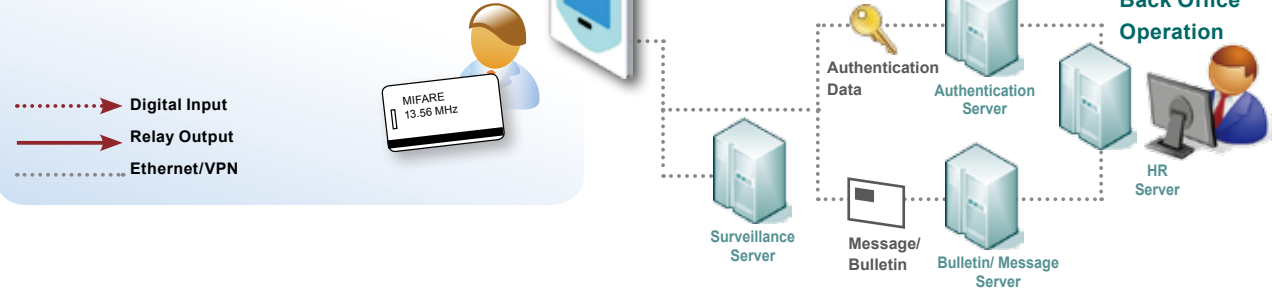
### Normal Open Example:

When the relay is open, there is no connection between the two wires until the relay receives a signal (outside source energizes the relay) to close. Simply put, an open relay is the same as a light switch that is turned off, and will always be off until turn on.



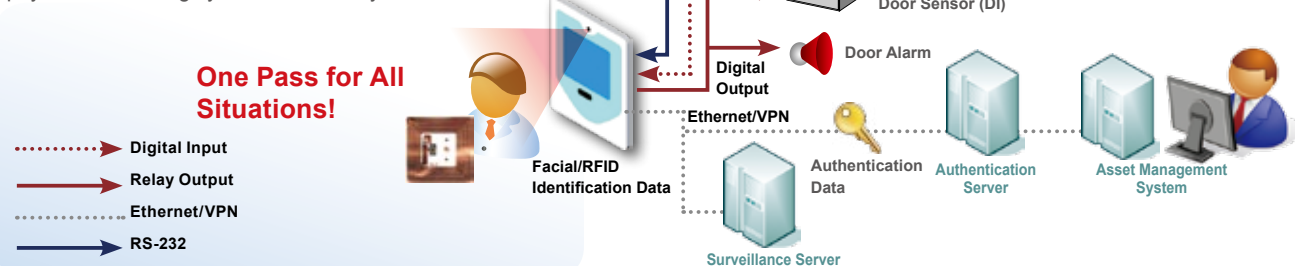
## EM Application Access Control

When a user is identified by RFID sensor, their personal access information will be automatically stored and backed up on the surveillance server. At the same time, identification data will be sent to the back-end system for processing. Authentication server will confirm with a valid list and feedback the result via Ethernet.



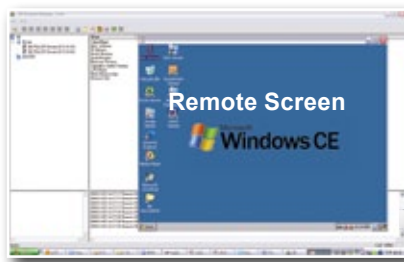
## Mifare Application Restrict Assets

What is MIFARE®?  
MIFARE is a contact-less smart card technology owned by Philips. MIFARE technology is based on ISO 14443A and operates at a frequency of 13.56 MHz. Its application segments range from identification, access control, payment and billing systems, and many more.



## Remote Management Tool

IEI RMT allows remote management of several ACT terminals at the same time via a network. You can quickly access distributed ACT terminals from anywhere in the world and control/resolve issues remotely!



### IEI RMT Tool

Input the IP address range on the Internet, the management system will automatically scan the distributed ACT terminals in the desired range.

## Web-based Configurator

Allows users to access ACT-457A and modify the settings on a web browser interface anytime, anywhere without installing any applications. It makes management of ACT-457A easy and convenient for IT administrators and reduces your system maintenance costs.



### System Setting

User can recall system information and set up Ethernet and Wireless parameters using the system setting menu. The remote restart option allows users to restart the system when any abnormal circumstance occurs and a restart procedure is needed.



## Runtime DEMO

ACT Runtime Demo is a pre-installed application which introduces the functions of the ACT-457A to new users.



### 300K Pixel CMOS Camera

In the video camera window, user can preview video output. The Capture and Open function enable user to capture preview image, save as bitmap file and open.



### Access Control by Smart Card or Exit Button

On the home automation page, user can open the magnetic door by pressing the exit button or read a sample RFID card.



### Member Login

User can test the RFID reading function on the member login page. When a sample card is read, the application will identify and display personnel information on the screen. User can edit the valid XML member list file with PC-based utility included on the ACT-457A.

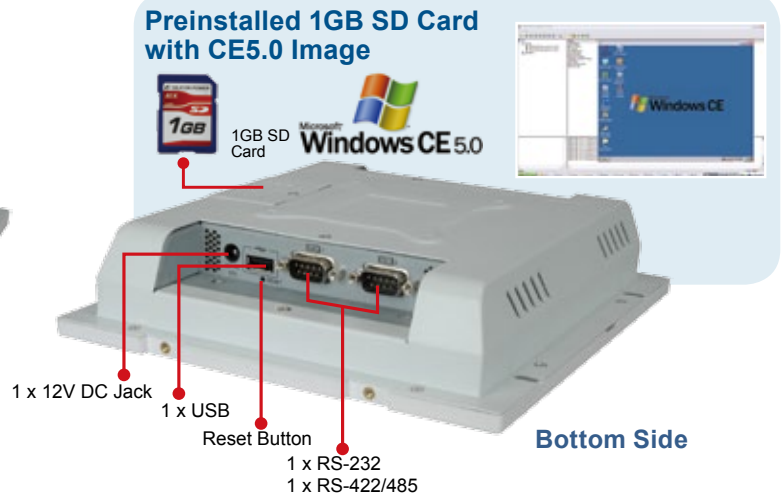
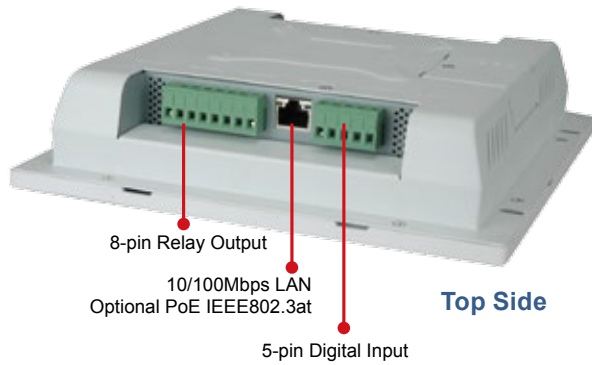


### Alarm

Pressing the light button enables the on-screen lights. (Shown: the access door alarm is activated)



I/O Interface

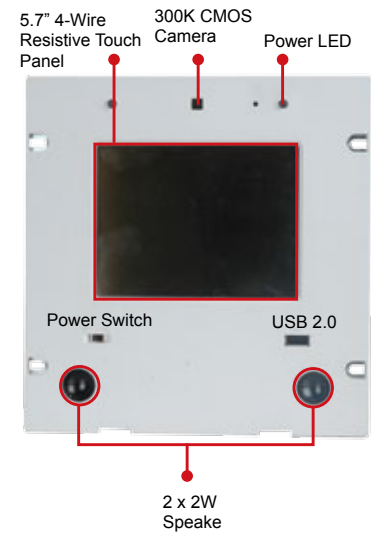
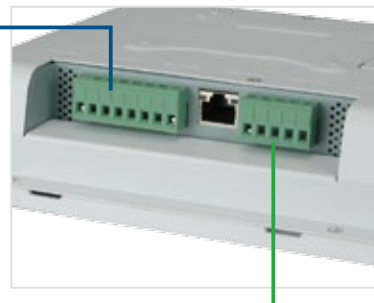


Digital Input/Relay Output Pin Definition

Relay Output

Pin	Assignment
1	+12V
2	Ground
3	Relay Output-1 (For Electronic Lock Common)
4	Relay Output-1 (For Electronic Lock Normal Close)
5	Relay Output-1 (For Electronic Lock Normal Open)
6	Relay Output-2 (For Alarm Normal Open)
7	Relay Output-2 (For Alarm Normal Close)
8	Relay Output-2 (For Alarm Common)

**2 Relay Output**

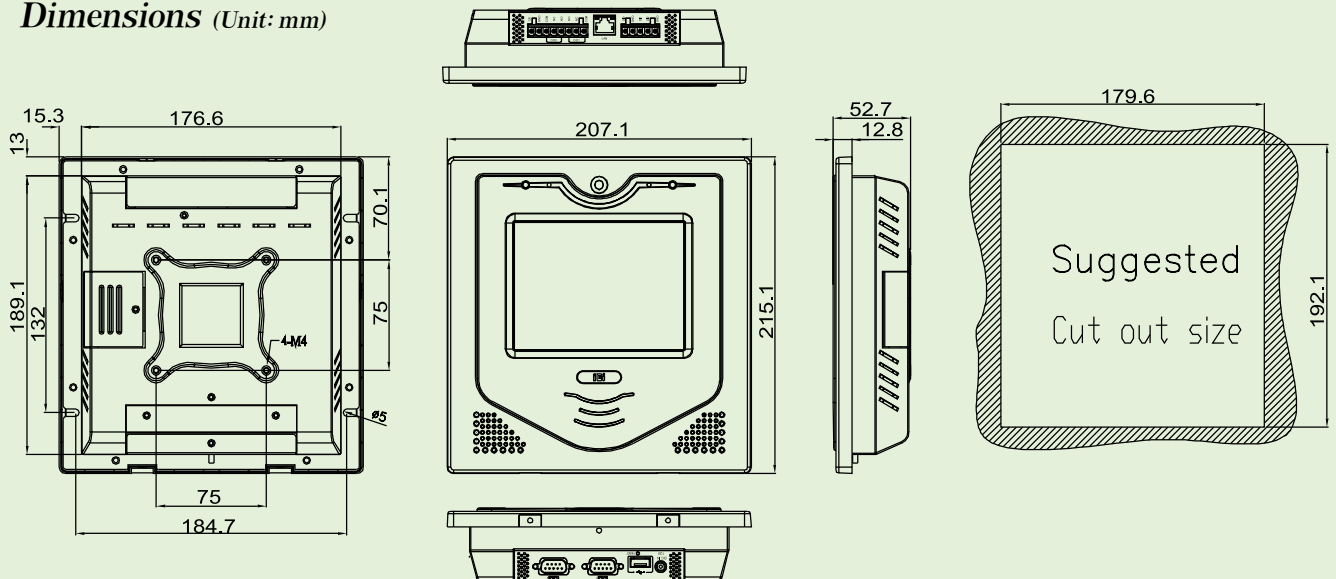


Digital Signal Input

Pin	Assignment
1	Digital Signal Input-1 (For Exit Button)
2	Ground
3	Digital Signal Input-2 (For Door Sensor)
4	Ground
5	Ground

ACT-457A

Dimensions (Unit: mm)



## Specifications


<b>Model</b>	<b>ACT-457A-1250</b>				
Display	LCD Size	5.7"	RFID Module	Working Frequency	EM 125KHz and MIFARE 13.56MHz
	Max. Resolution	640 x 480		Reading Range	1~3 cm (Under 13.56MHz)/ 5 cm (Under 125KHz)
	Brightness (cd/m <sup>2</sup> )	400	Drive Bay	SSD	SD Card
	Contrast Ratio	300 : 1	Other Features	Watchdog Timer	Software programmable supports 1~255 sec. System reset
	LCD Color	262K		Audio	AMP 2W + 2W
	Pixel Pitch (mm)	0.06(H) x 0.18(V)		Extension	Webcam & Mic Function
	Viewing Angle (H-V)	140°/100°	Physical	LED Function	1 x Power ON/OFF LED on Front Panel
	Backlight MTBF (hrs)	50000 (LED Backlight)		Construction Material	ABS + PC Plastic front frame
Motherboard	CPU	Alchemy™ AU1250 500MHz		Mounting	Panel, Wall, VESA 75mm x 75mm
	Bootloader Storage	2MB		Front Panel Color	Blue & White
	RAM	256MB DDR2 SDRAM	Net Weight	0.7Kg	
	OS/Program Storage	1GB SD card for WIN CE 5.0 OS and user's Program	Dimensions (WxHxD) (mm)	215 x 207 x 52.7	
I/O Ports	1 x RS-232 COM port		Environment	Operation Temperature (°C)	-10°C ~60°C
	1 x RS-422/485 COM port			Storage Temperature (°C)	-20°C ~70°C
	1 x RJ-45 for 10/100Mbps Ethernet with PoE			IP Level	IP64
	2 x USB 2.0			EMC	CE, FCC
	1 x Power jack		Power over Ethernet	Optional IEEE 802.3at (via RJ45 10/100Mbps LAN)	
	1 x Reset button			Touch Screen	Resistive Type 4-Wire
	1 x 5-pin terminal block for signal input		Power Adapter	63000-FSP040DGAA1106-RS	
	2 x Digital Input *			Power: 40W	
	3 x GND			Input: 90VAC~264VAC, 50/60Hz	
	1 x 8-pin terminal block for relay output		Power Requirement	12V DC-IN	
2 x Relay (one NC and one NO contacts for Alarm, one NC and one NO contacts for Lock)		Power Consumption	9W , Maximum 21W (include Max 12V@1A internal Power output)		
1 x 12V 1A max. output (for door control)					
1 x GND					

\*Low level(0): 2V MAX., High level (1): +4~+50V

## Relay Specifications

Contact Rating	12A 120VAC, 10A 240VAC, 10A 28VDC
Max. switching voltage	240VAC, 60VDC
Max. switching current	12A
Min. switching load	10mA 5VDC

## Ordering Information

Model	Description
ACT-457A-1250/T-R/POE/R10 	5.7" 400cd/m <sup>2</sup> VGA fanless panel PC with Alchemy™ AU1250 500MHz, touch screen, 0.3 megapixel camera, MIFARE & EM RFID module, door control, IEEE802.3at PoE, 256MB DDR2, RoHS

## Packing List

Item	P/N	Q'ty	Specifications
Self Drill Oval Head Screw	44233-030081-RS	4	M3*8 ;T24
Power Cord	32000-000002-RS	1	1830MM; European Power Cord
Power Adapter	63000-FSP040DGAA1106-RS (40W Power Adapter)	1	VAC: 90V~264V; 40W; 1500MM
Touch Pen	43125-0002C0-00-RS	1	
One Key Recovery CD		1	
Utility CD			

### Utility CD includes:

- ACT-457A User Manual
- ACT-457A DEMO AP (w/ source code)
- ACT-457A SDK
  - IEI MIPS Windows® CE standard SDK
  - Record application development guide
  - Camera application development guide
  - DI/DO application development guide
  - RFID configuration guide
- IEI Utilities
  - ACT Remote Management Tool
  - ACT Web-based Configurator



\*Preinstalled 1 GB SD card with CE5.0 image