

# iCAM7100S SERIES HARDWARE GUIDE

ADVANCED MULTIFACTOR BIOMETRIC IRIS READER

VERSION 1.0

IrisAccess®



iCAM7111S-U1T (Titanium Color)

iCAM7101S (Black Color)

|                                    |                               |                                  |
|------------------------------------|-------------------------------|----------------------------------|
| <b>DUAL IRIS</b>                   | <b>FACE CAMERA</b>            | <b>4.3" LCD<br/>(7100S only)</b> |
| <b>CONTACTLESS<br/>CARD READER</b> | <b>ISO/ANSI<br/>COMPLIANT</b> | <b>EASY<br/>INSTALLATION</b>     |

- Fully automatic dual iris capture
- Simple non-intrusive, non-contact user interface
- Integrated megapixel face camera with LED flash
- ISO/ANSI compliant iris and face images
- 4.3" color touch screen LCD
- Integrated contactless smart card reader [optional]
- Surface mount plate included; Recess mounting kit [optional]



## Packing List

### What's in the Box

- iCAM7 series
- Hardware Guide
- L wrench

### Required Equipment (not included)

#### Power Source

- 12-24 VDC +/- 10% / Minimum 24W (12VDC @ 2AMPS)  
(Measured at iCAM unit)
- Uninterruptable Power Supply (strongly recommended)

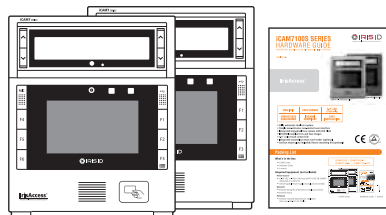
#### Network

- Ethernet Wiring → CAT5e Ethernet Cabling (or better)
- Ethernet Switch

#### Software

- Software required depending on Application  
(See [www.irisid.com](http://www.irisid.com) for details)

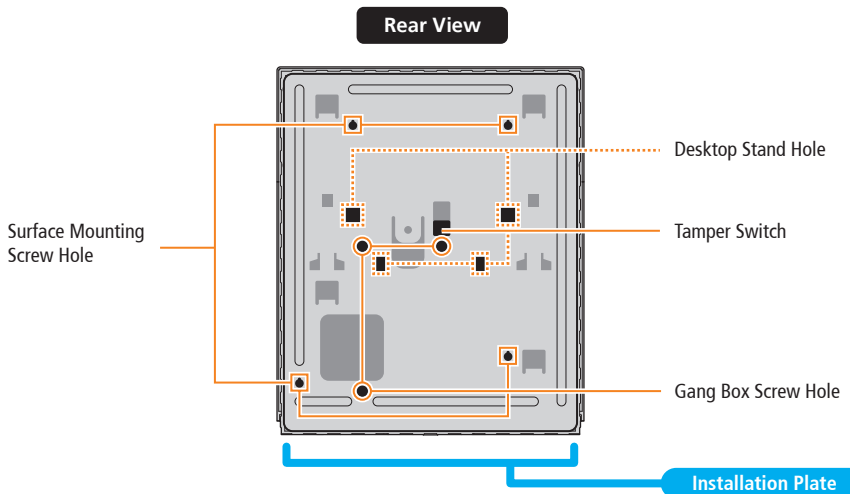
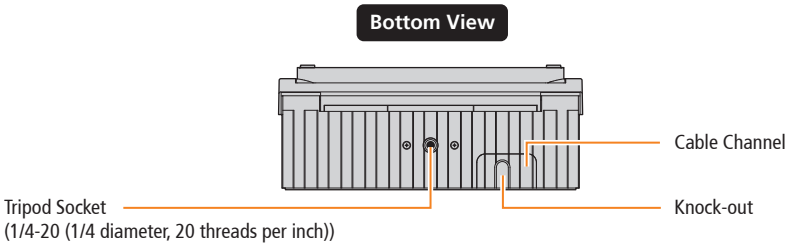
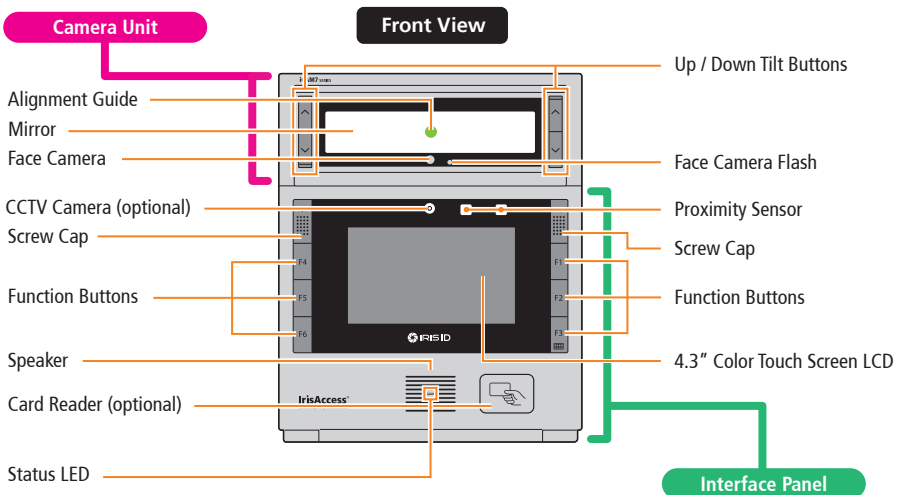
iCAM7101S / iCAM7101S-T  
iCAM7111S-U1 / iCAM7111S-U1T



iCAM7 series

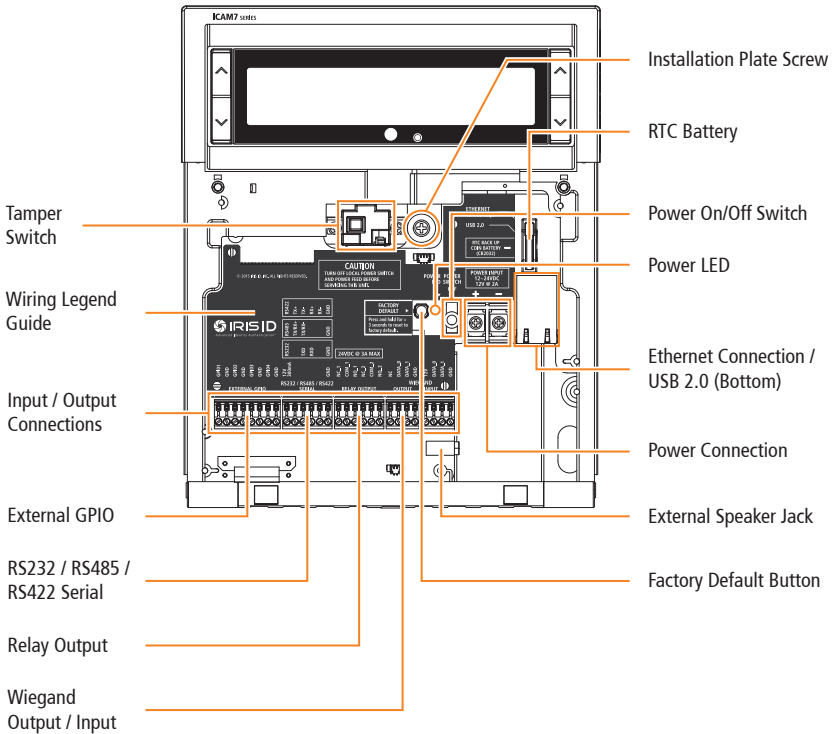
Hardware Guide L wrench

# Hardware Information



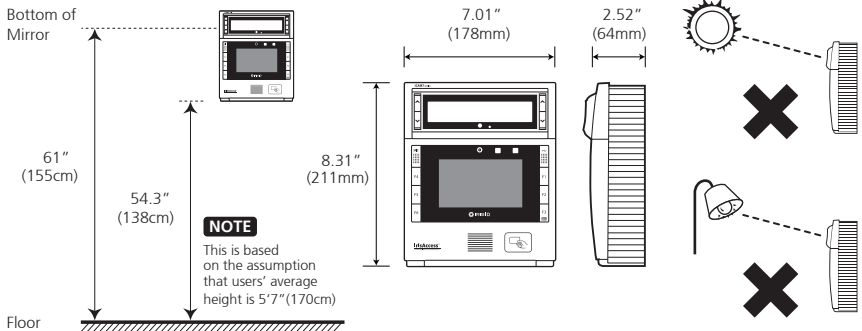
# Hardware Information

Inside



# Installation Guidelines

## 1. Recommended Mounting Information



- The recommended mounting height for the iCAM7 series is 138cm (54.3inches) from the floor to the bottom of the unit. This mounting height can be adjusted to accommodate the height of the average user at the installed location.
- High amounts of ambient light must be avoided. Intense light sources such as sunlight or halogen lamps may reduce the image capture performance of the iCAM which may result in an increased "failure to acquire" rate.
- The iCAM was designed for indoor use only. This device is not weatherproof and must not be exposed to precipitation or extreme temperatures. If it is required to use this product in an outdoor or extreme environment, a 3rd Party enclosure may be used to protect the unit from exposure to dust, moisture, and extreme temperatures. See [www.irisid.com](http://www.irisid.com) - Support & Service for more information. Installation in a extreme environment without proper protection may cause permanent damage and void the warranty.

## 2. General Wiring Requirements

The iCAM7 series requires at least the following wires:

- Ethernet network wiring to connect with the network switch for communication.

**NOTE** For systems consisting of only the iCAM and a computer, an Ethernet cross-over cable may be used.

**IMPORTANT:** IT IS RECOMMENDED THAT THE IRISACCESS SYSTEM BE PLACED ON A PRIVATE NETWORK SEPARATE FROM GENERAL CORPORATE OR PUBLIC ACCESS. SYSTEM PERFORMANCE AND STABILITY MAY BE AFFECTED DEPENDING ON AMOUNT OF GENERAL NETWORK TRAFFIC.

- Power Adapter: The optional power adapter (iCAM7-PWR) can be used as the power source of the iCAM used for enrollment or other "non-installed" applications. The wires of the adapter should not be extended. If the power source is beyond the length of the power adapter then an external power source and wiring should be used. Be sure to observe the polarity of the adapter wires to the power screw terminals on the iCAM main board.

OR

- Power and Wiring: For permanent installation it is recommended to use an external power supply and wiring.

- Power Supply: 12-24VDC +/- 10% - Minimum 24 Watts (24VDC @ 1AMP).

- Power Wiring: The recommended wire gauge for the ICU power is 18AWG (1.0 mm) wire.

**NOTE** Use of a stable power supply and proper gauge wire is required. The wire length voltage drop must be accounted for in order to maintain the correct power at the ICU7000-2 unit. For wire lengths over 30 feet (9 meters) or if thinner gauge wire is being used (more than 18AWG) then it is required that a 24VDC power supply be used to overcome the wire length voltage drop. A 24VDC supply with 18AWG (1.0 mm) wire will allow for a distance of up to 200 feet (61 meters).

**IMPORTANT: IT IS RECOMMENDED TO SUPPLY THE CORRECT AMOUNT OF POWER TO THIS UNIT. AN OVER OR UNDER VOLTAGE APPLIED TO THIS PRODUCT MAY CAUSE PERMANENT DAMAGE AND VOID THE WARRANTY.**

## iCAM Installation

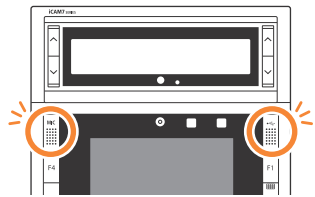
### iCAM7 series Mounting & Stand Solutions

The iCAM7 series unit can be fitted to a surface mount (available out-of-the-box), recess mount (with optional recess mounting kit), or optional desktop stand.

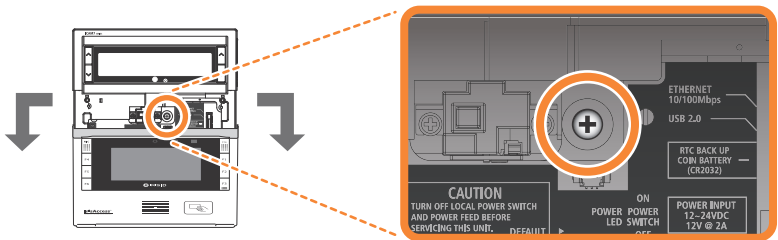
### Surface Mounting

The iCAM can be surface mounted with standard equipment provided with the contents of your unit. Review the following procedure for instruction on how to surface mount your iCAM7 series unit.

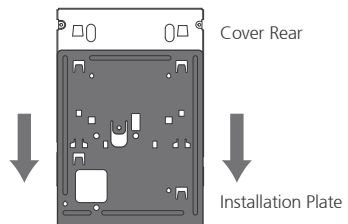
- 1 Open each cap at both sides of unit, and loosen the captive screws (with included L wrench) to release the interface panel.  
(Left : MIC / Screw Cap.  
Right : USB Connector / Screw Cap)



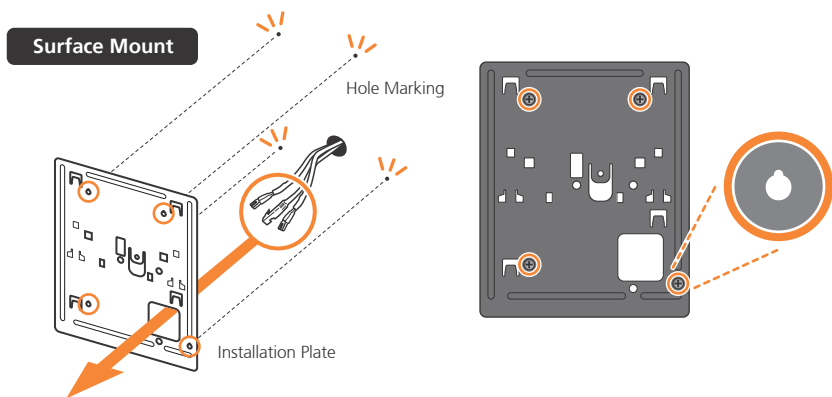
- 2 After opening the interface panel, loosen the screw. Unscrew the installation plate screw to separate from the installation plate.



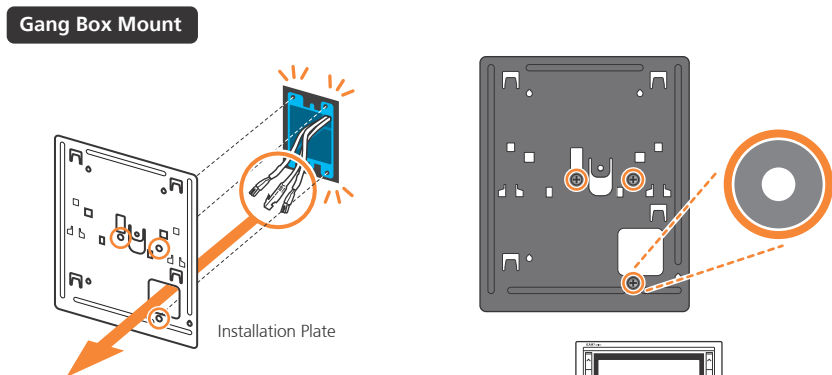
- 3 Separate the installation plate by sliding the plate downward.



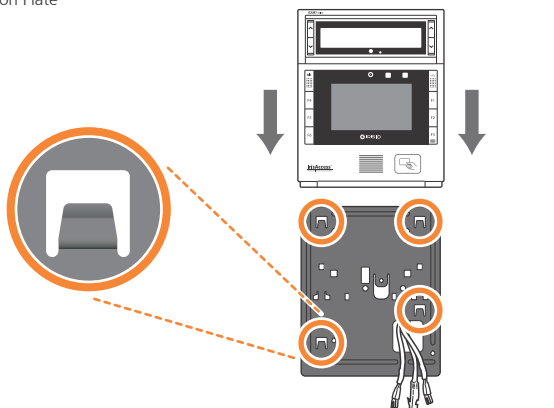
- 4** Place the installation plate on the desired wall and screw into wall. Feed any needed wiring through the installation plate hole (i.e.: Power, Ethernet, etc). Attach the installation plate to the wall surface using the appropriate fastener (recommended #10 screws) and anchors for the wall material. Another option is to mount and fasten the installation plate to a previously installed electrical gang box.



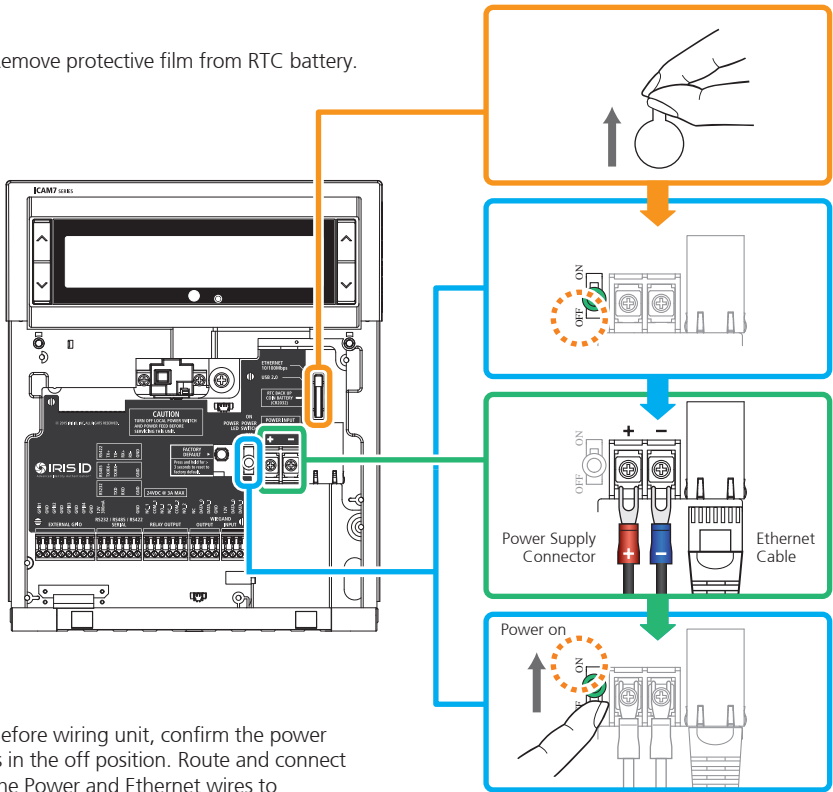
OR



- 5** Slide the iCAM7 series into the installation plate and fasten the installation plate with a screw.



- 6 Remove protective film from RTC battery.

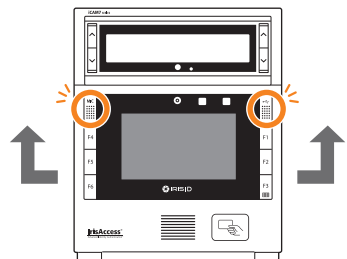


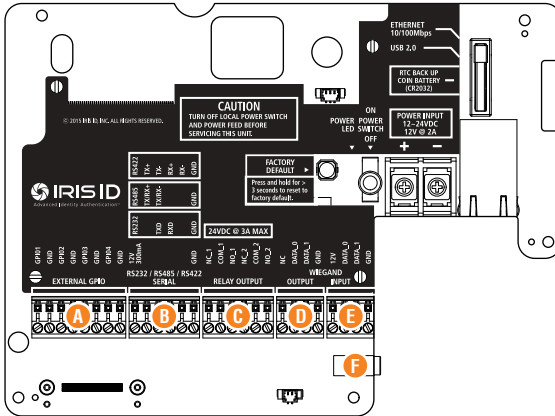
- 7 Before wiring unit, confirm the power is in the off position. Route and connect the Power and Ethernet wires to iCAM7 series.

**NOTE** If connecting any other wiring such as Wiegand, GPIO to the iCAM, review the following section “Wire Connection Details” before closing interface panel and fastening screws.

- 8 Turn on power source and switch the power switch of the iCAM7 series unit to the ON position.

- 9 After wiring the unit and switching it to the ON position, close the interface panel and fasten the screws. (with screw caps placed back into closed position).



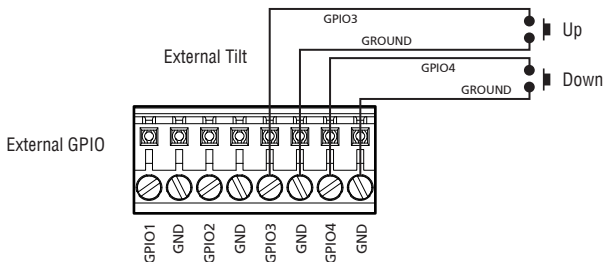


## A External GPIO

GPIO3 and 4 can be used to control the tilt position of the tilt unit of an iCAM7 series. Use GPIO3 and GND for up tilting. Use GPIO4 and GND for down tilting.

GPIO Specifications:

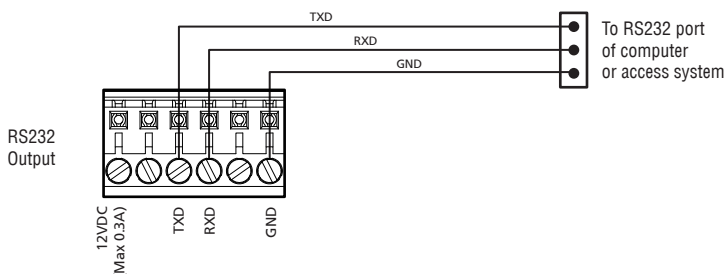
- For output, the GPIO can provide 5VDC @ 20mA.
- For Input, the GPIO is selectable between active High & active Low.
- Assignment of GPIO is handled through Software





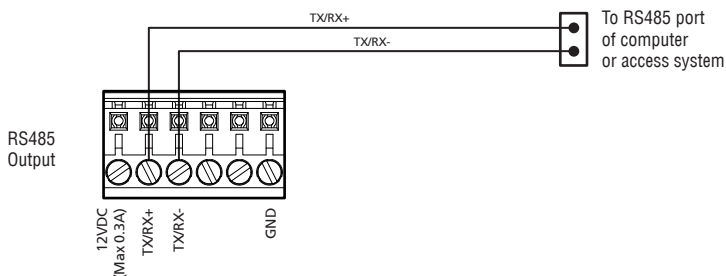
## B RS232 Output

RS232 serial communication port for connection with an access panel or to other computer equipment. When configured, the Card ID associated with the user is output from the RS232 output port upon a successful identification.



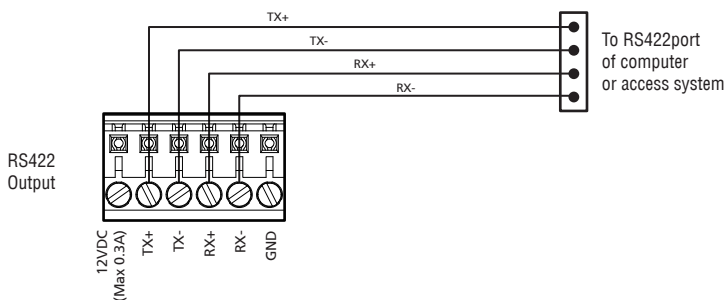
## RS485 Output

RS485 serial communication port for connection with an access panel or to other computer equipment. When configured, the Card ID associated with the user is output from the RS485 output port upon a successful identification.



## RS422 Output

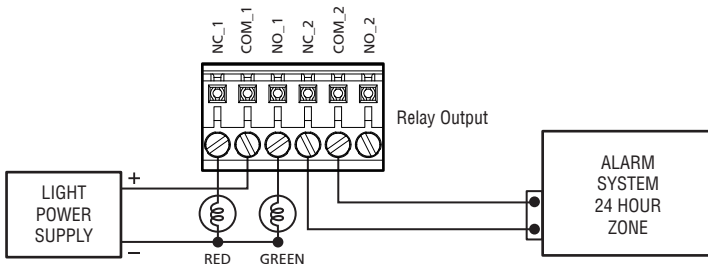
RS422 serial communication port for connection with an access panel or to other computer equipment. When configured, the Card ID associated with the user is output from the RS422 output port upon a successful identification.



## C Relay Output

**IMPORTANT:** ONLY KNOWLEDGEABLE PROFESSIONAL INSTALLERS SHOULD BE USED TO INSTALL ALL ELECTRONIC ENTRY/EXIT LOCKING DEVICES. DIRECT CONNECTION OF ELECTRONIC ENTRY/EXIT LOCKING DEVICES SHOULDN'T BE MADE FROM THE RELAY OUTPUTS ON THE ICAM. IT IS THE RESPONSIBILITY OF THE INSTALLER TO ASSURE THAT THE INSTALLATION IS PERFORMED IN ACCORDANCE WITH ALL COUNTRY/STATE/ LOCAL FIRE AND SAFETY REGULATIONS AND THAT ANY 3RD PARTY PRODUCTS USED WILL NOT CREATE A HAZARD.

Two independent dry contact relays. The purpose and the duration of the relays are defined by the controlling software. Typically, Relay\_1 (NC\_1, COM\_1, NO\_1) is triggered upon user acceptance (access granted). The diagram shows Relay\_1 connected to indicators which changes from Red to Green for an accepted user. Relay\_2 (NC\_2, COM\_2, NO\_2) is typically used to indicate iCAM tamper. In this diagram the relay is activated when the iCAM tamper switch is triggered. The maximum electrical rating for the relay is 3A at 24VDC.



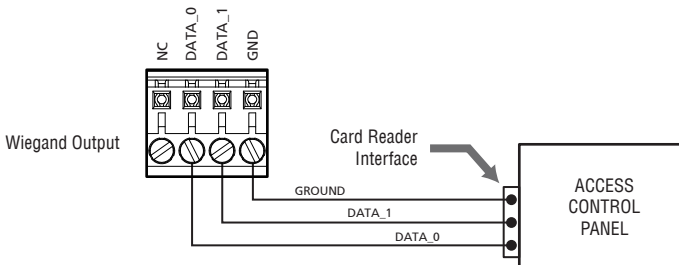
## D Wiegand Output

The Wiegand Output from the iCAM7 series camera unit can be used with 3rd party devices capable of receiving Wiegand data. This Wiegand output emulates a typical Access Control Card Reader. Configuration of this output is provided through software.

See the associated image for general wiring of Wiegand Output to an Access Control Panel.

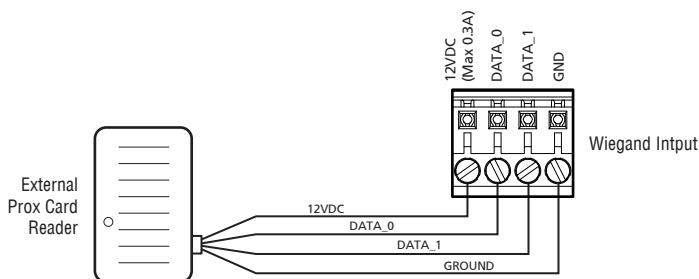
Wiegand Specifications:

- Wiegand output uses 3 wire interface (Data0, Data1, and Ground),
- Maximum wire length from iCAM to Access Control Panel is 500feet (152m).



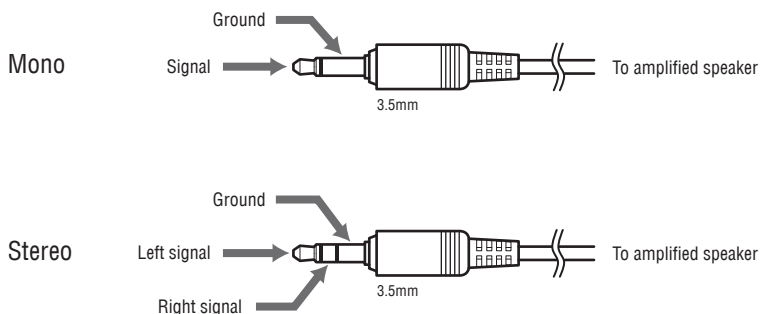
## E Wiegand Input

Wiegand input is available on the iCAM for connection from 3rd party proximity card readers. This connection can provide 12VDC and a maximum 300mA current to a proximity card reader.



## F External Speaker Out

Allows for connection of an external amplified speaker. This port provides mono or stereo (single channel) audio of voice prompts and other unit sounds. Both the internal and external speakers can operate concurrently.



The iCAM 7 Series camera contains a configuration interface called the iCAM Configuration. This configuration interface allows the installer to setup the iCAM's IP Address, IrisServer connection, and other configuration options.

## How to access the iCAM Configuration interface

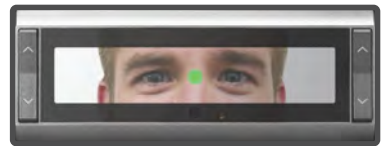
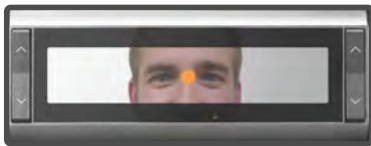
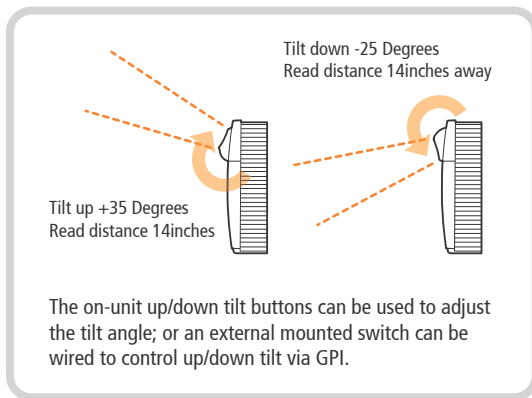
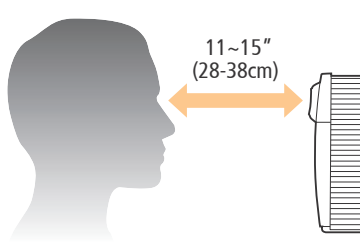
From a PC with an internet browser connected to the network (that the iCAM7 series unit is connected to), type the IP address of the iCAM. For example, if the IP address of an iCAM is 192.168.5.100 (default IP), you would access the configuration web interface by typing <http://192.168.5.100> from an internet browser.

To login, the **User ID** required when prompted is **iCAM7000**. The **Password** is **iris7000**. The system is case sensitive when entering in your login credentials.

Once you have connected to the iCAM Configuration Interface - settings, information, and options become available to further configure your system. Additional documentation for setup and configuration can be found at:

<http://www.irisid.com/productdocumentation>

# How to Operate



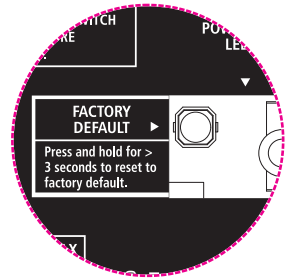
- iCAM activates when user approaches or when card is presented.
- Picture capture range is 11~15 inches (28-38cm) away.
- Self or auto/set height adjustment.
- Placing dot over the bridge of nose, easily helps alignment.
- Orange ● turns to green ● when user is at correct distance.
- Visual indication is amplified with friendly audio prompts.
- Right and left irides are acquired.
- A face picture can also be captured.

● Green dot = In range    ● Orange dot = Out of range

# Restoring The Unit to Factory Default

## Factory Default Button

The Factory Default Button can be used to restore the settings of the iCAM 7 Series to factory default. This button is located inside of the unit next to the power switch (see image), and can be used in two different ways:



| Factory Default Button Function        | Procedure  |
|--|--|
| Reset IP Address and Login Credentials | <ul style="list-style-type: none"><li>• Unit Power is ON</li><li>• Press and Hold the Factory Default Button for more than 3 seconds.</li><li>• Unit will beep when the default process has started.</li><li>• The iCAM IP Address will be reset to <b>192.168.5.100</b>, The Username to <b>iCAM7000</b>, and the password to <b>iris7000</b>.</li></ul>  |
| Reset all settings and reload software | <ul style="list-style-type: none"><li>• Power Unit OFF</li><li>• Press and Hold the Factory Default Button (FDB)</li><li>• While still holding the FDB, Turn ON the unit power</li><li>• Keep the FDB held in for at least 10 seconds.</li><li>• Stop holding the FDB</li><li>• Do not turn off the power to the unit or remove the network connection for at least 10 minutes (the unit will reboot several times on its own during the software reload process).</li><li>• When complete the iCAM will have reloaded the software and reset IP Addresses and log-in credentials to the defaults.</li></ul> |

# Memo

Serial Number:

Unit IP Address:

Installation Date:

Option 3 Iris Server IP:

Option 3 Security ID:

Note:

# General Information

The iCAM7 series multifactor iris biometric reader contains a high-speed multi-sensor optical system which provides ISO compliant iris images. The iCAM7 series also contains a color face camera, an intuitive user interface, a built-in iris biometric template creation and matching processor, and an optional integrated card reader. The iCAM7100 series unit includes a touch-screen LCD display and 6 function keys to visual feedback to the user and allow for user input. Input and Output interfaces of the iCAM7 series units include Wiegand, Serial, and Relay.

|                                      |  |
|--------------------------------------|--|
| Dimension (W x H x D)                | 7.01" x 8.31" x 2.52" (178mm x 211mm x 64mm)   |
| Weight                               | 3.5lbs (1.6kg)   |
| Power Input / Consumption            | 12-24VDC, 2.0 Amps @ 12VDC / 24W   |
| Status LED                           | Multi Color - Red, Green, Blue, Amber for status and alarm indication                                  |
| Iris Operating Range Indicator       | Dual Color - Orange (out of range), Green (in range)   |
| Voice Indication                     | English and Korean standard, other languages available   |
| Iris Capture Range                   | 11"~15" (28cm ~ 38cm)  |
| User Input                           | Six user definable Function keys   |
| Touch Screen LCD                     | 4.3" diagonal (480 x 272 pixels)   |
| Pin Pad                              | Pop-up on screen pin pad   |
| Flash                                | High output LED flash for face capture   |
| Face Image Camera                    | Face camera CMOS - SMP   |
| Relays x 2                           | Control for user defined operations  |
| Operating Temperature                | 32°F~113°F (0°C~45°C)  |
| Storage Temperature                  | -4°F~203°F (-20°C~95°C)  |
| Humidity                             | Up to 90% non-condensing   |
| Iris & Face Camera Rotation Angle    | +35°/25°   |
| Communications                       | Ethernet (LAN, WAN), RS232 / RS485 / RS422   |
| Inputs / Outputs                     | Embedded Card Reader (Optional), Wiegand In, Wiegand Out, Dry Contact Relay x 2, Programmable GPIO x 4 |
| Equipment Supplied with iCAM7 series | Instruction Manual - Hardware Guide  |

# Technical Support

Additional information and technical assistance is available on the Iris ID Systems support web site at [www.irisid.com](http://www.irisid.com). Click on Support & Service then Technical Support.



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formerly  **LG IRIS**

