IrisAccess® CMS
CardiD Management System

IRIS ID

iCAM4100V Hardware Guide version 1.00
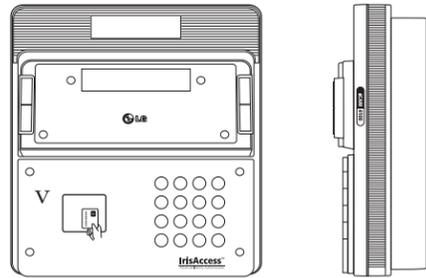
iCAM4100 Model Variations

| | VFD | RoHS Compliant | Keypad | Smartcard Reader | |
				HID iClass	IE Smart-ID
iCAM4100V	●				
iCAM4100RV	●		●		
iCAM4110V-H1	●			●	
iCAM4110RV-H1	●		●	●	
iCAM4111V-H1	●			●	●
iCAM4111RV-H1	●		●	●	●

Packing List

What's in the box
- iCAM4100V - IrisCamera
- Power Adapter
    Input: 110~240V AC - 1.5AMP 50/60Hz
    Output: 12V DC - 5.0AMP
- Power Cable for 110V
- CAT5e Ethernet Cable
- Hardware Guide
- Security Screw Wrench
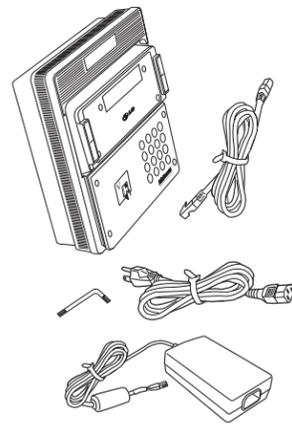
Required Equipment (not included with iCAM4100V)
- Computer (for iCAM configuration)
- Ethernet Switch (optional)
- Ethernet Wiring (for iCAM setup and configuration)
- Uninterruptible Power Supply (strongly recommended)

Installation Guidelines

- The recommended mounting height for the iCAM4100V is 155cm (61 inches) 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, this may result in an increased "failure to acquire" rate.

- The iCAM is not weatherproof and must not be exposed to precipitation or extreme temperatures. An enclosure may be used to protect the unit if required. See www.lgiris.com – Support & Service for more information.

- All system components must be powered through Uninterruptible Power Supplies (UPS). UPS must provide power line filtering as well as power back-up operation.

- Each IrisAccess® system component if on an Ethernet network system must have a statically assigned IP address.

The iCAM4100V requires at least the following wires:
- Door control or wiegand wiring (16 AWG)
- Power (12VDC +/-10% and 2.5Amps MAX)

bottom of mirror

61" (155mm) 55" (140mm)
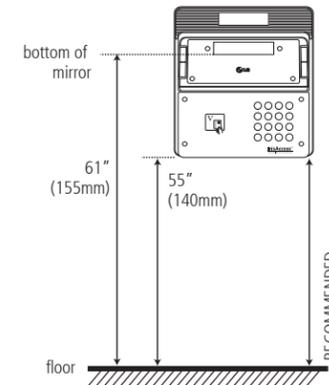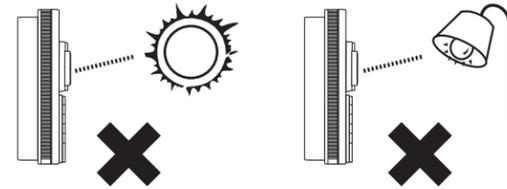
floor RECOMMENDED

> **IMPORTANT**: IT IS RECOMMENDED TO USE THE POWER ADAPTER SUPPLIED WITH THIS PRODUCT. AN OVER OR UNDER VOLTAGE APPLIED TO THIS PRODUCT MAY CAUSE PERMANENT DAMAGE AND VOID THE WARRANTY.

* Note: If not using the supplied power adapter, use of a stable power supply and proper gauge wire is required. Wire length voltage drop must be accounted for in order to maintain the correct 12VDC @ 2.5A power with the iCAM connected. (Ex. 50 feet of 16 gauge copper wire requires a supply voltage of 13VDC to provide 12VDC power at the iCAM.)

Installation

1. Remove the 3 security screws (use the security bit wrench) from the bottom of the iCAM.
2. While gently pulling the cover upward, pull forward simultaneously - Unscrew the installation screw and slide the body of the iCAM upward to separate from the installation plate.
3. Position the installation plate on the desired wall near the secured door and mark the holes as the figure illustrates. The recommended height from the floor to bottom of unit is 140cm (55"), however installation height can be adjusted depending on average height of users.
4. In case of recessed mounting, leave 6mm (1/4") of extra space above the marked hole when mounting the installation plate to allow the iCAM to slide down onto the installation plate tabs.
5. Route the power line, network line, and other necessary cables through the installation plate hole.
6. Using the appropriate fasteners for the material in which the iCAM will be mounted, securing the installation plate.
7. Slide the iCAM4100 body into the installation plate and fasten it with the retaining screw.
8. Attach the wires from the 12VDC power supply to the screw terminal connections. The +12VDC (white wire) power connects to the + (positive) terminal. The 12VDC ground (black wire) connects to the – (negative) terminal.
9. Connect the CAT5/RJ45 network wire into the LAN port (CN10) of the iCAM. Make sure the RJ45 connector locks securely into the LANport.
10. Wiegand and relay options should be connected at this time.
11. Close front cover and gently slide the iCAM downwards over the back plate. Fasten with two security screws on the bottom of the unit.
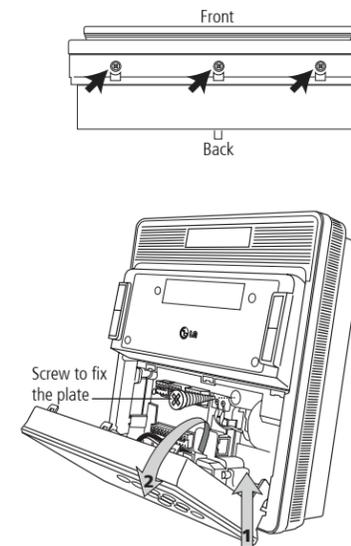
* Note: The iCAM includes two tamper switches. One switch is located on the rear of the iCAM to detect removal from the wall or enclosure from which it is installed. A second tamper switch is located behind the front plate to detect tampering with the front of the unit. During installation be sure that the rear tamper switch is in a position which can detect unit removal from the wall or enclosure. - By default, the iCAM tamper detection is disabled.

Front / Back

Screw to fix the plate

Power Supply Connector

Ethernet Cable

LAN

Tamper SW
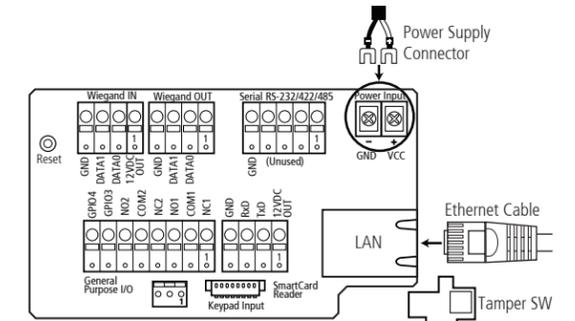
Integrated Smartcard Reader

The iCAM4100V contains an integrated smartcard reader. The card reader symbol appears on the front of the iCAM. The built-in card reader is pre-wired and enabled within the iCAM.

Type of card reader installed:
- HID iCLASS (iCLASS)

If desired, a compatible external card reader may be connected to the iCAM (See HID for compatible readers to the OEM 150 Rev B).

* Note: The baud-rate of the smartcard reader interface is set for 115k baud. If an external card reader is desired, the card reader must be set with at 115k baud for compatibility.


Smartcard Reader IF   Wiegand IN

External Card Reader
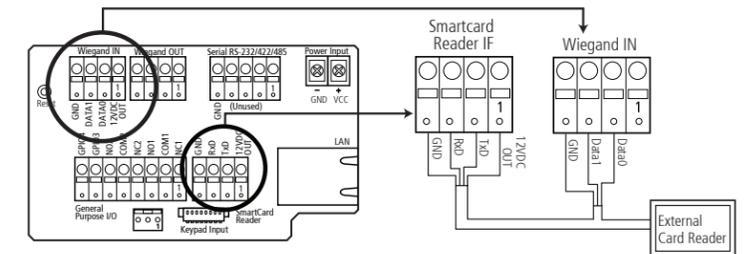
Available iCAM Wiegand Output

Wiegand Output from iCAM4100V: The Wiegand output from the iCAM4100V can be used with 3rd party devices capable of receiving Wiegand data; this output emulates a typical access control card reader. Configuration of this output is provided through the iCAM web interface. See image below for general wiring of Wiegand output to an Access Control Panel.

Wiegand Specifications:
- Wiegand output uses a 3 wire interface (Data 1, Data 0, and Ground),
- Maximum wire length from iCAM to Access Control Panel is 500 feet (152m).

Ground / Data 1 / Data 0 / Wiegand Out
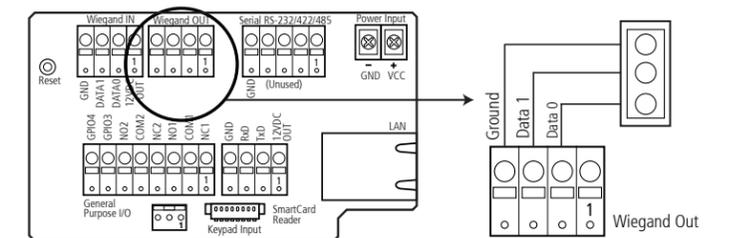
Lenel + Key Mode

When equipped with a Keypad/Pin-pad, the iCAM4100V series camera unit can be used when Lenel format has been configured. This configuration allows an 8-bit pass through where any key pressed on the pin/key-pad immediately and unconditionally will be transferred to the access panel. Detailed configuration settings for this option can be found in section 9.3 "Configuring the iCAM4100V output" of the iData CMS User Guide.

Available Relay Outputs

Inside the iCAM there are two available dry-contact relays that can be used for purposes such as door lock control, external indicators, control of external systems, and external audible alerts (as some examples). The Relays are only triggered during a positive verification. The relay contact duration is adjustable through the relay configuration screen of the iCAM 4100V Web configuration utility.

Although the iCAM4100V does provide an output for direct door control via relay output, this is not the recommended output method used for a high security application. It is strongly recommended that the product be used in conjunction items such as a secure tamper latch, and/or ultimately an access control system to maximize the effectiveness of the iCAM.
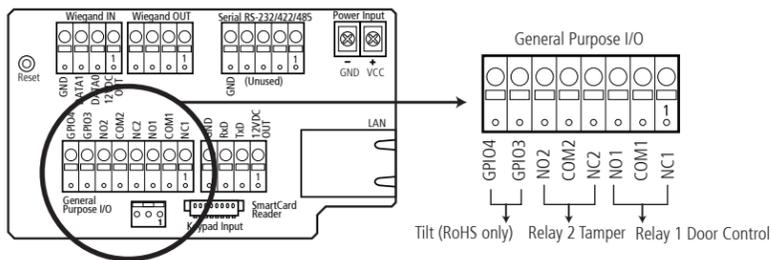
* Note: The PINs on the iCAM interface board are numbered from left to right.

iCAM Relays:
The iCAM4100V has 2 relays, with both normally opened and normally closed dry contacts available. These relays are selectable in the iCAM4100V WebConfig interface.

• Relay 1: Relay 1 changes states only when the positive verification of a user occurs. This relay would typically be used for direct door control or external notification.
• Relay 2: Relay 2 changes states only when the iCAM tamper switch is activated.

* Note: For Security purposes it is not recommended to use the iCAM relay output for direct door-lock control.
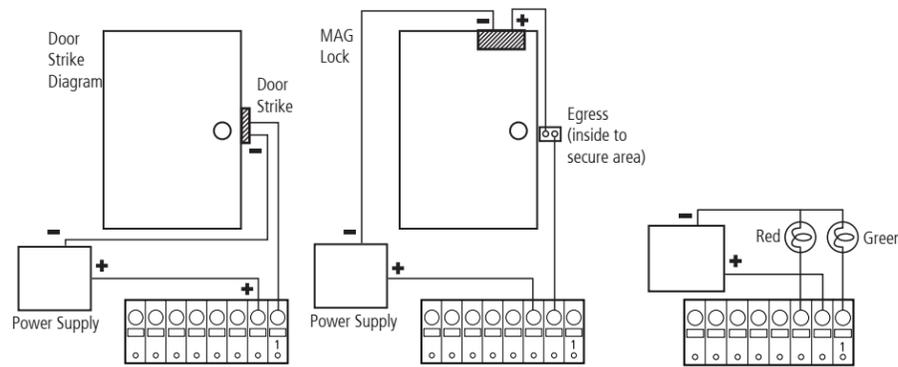
Direct Door Control Wiring:
The Door-Strike Diagram shows an example of an iCAM connected to the Negative wire from the 3rd party door strike connected to R1_NC, and the Positive wire from the 3rd Party required external power supply connecting to R1_COM connectors. (Completing the connection through to the door strike is then required as per the instructions provided by the door strike manufacturer.)

The Magnetic Lock (MAG-lock) diagram shows an example of an iCAM connected to the Negative wire from the 3rd party MAG-lock connected to R1_N.O., and the Positive wire from the 3rd Party required external power supply connecting to R1_COM connectors. (Completing the connection through to the MAG-lock is then required as per the instructions provided by the MAG-lock manufacturer.)

* Note: The diagrams in this guide are drawn to the correct connections of the RoHS compliant iCAM4100V.

Disclaimer: Only knowledgeable insured professional installers should attempt to install Magnetic locking systems with use of the iCAM. Consult with your fire Marshall and local town/county code requirements to guarantee adherence to specific local ordinances and restrictions. LG cannot be held responsible for regulatory issues, and mandated legal requirements applicable to the potential installation of any 3rd party products compatible with the iCAM.

External Indicator Light
External indication lights can be connected for a more visual indication of a users acceptance at the iCAM. The diagram shows an example of external indicator lights connected to the Negative wire from the 3rd party external power source and the positive wire of the power source connected to the common of the relay.

The Green light which is used to indicate a successful verification is connected to the N.O. connection of the relay. The red light which is used to indicate a non-verification condition remains constantly lit unless a green light condition occurs. The red light is connected to the N.C. of the relay.

Available iCAM External Tilt Control

iCAM External Tilt Control – Wiring
The GPIO connections on the iCAM4100V can be used to control the tilt position of the camera module. It is recommended that only momentary switches are used for the tilt control and that the wire length between the switches and iCAM does not exceed 15 meters (50 feet).
The external tilt switches are to be connected to the GPIO connections located on the interface board inside the iCAM. The GPIO are located on the General Purpose Input /Output port (labeled CN605).

* Note: The iCAM4100V will recall the tilt position associated with the presented card/user and will automatically adjust the tilt position from the previously used position in which the card presented was positively verified.

iCAM External Tilt Switch Operation
The External Tilt Switch allows the iCAM4100V user to remotely control the tilt operation of the iCAM camera module. This feature is useful if the iCAM is installed where the tilt switches on the face of the camera module are inaccessible or inconvenient to the user.

Up Switch: The up tilt switch is to be wired between the GND (Ground) connection (located at PIN 5 of the Serial RS232/422 port – CN607) and the GPIO3 connection (located at PIN 7 of the General Purpose I/O port (CN605)).

Down Switch: The down tilt switch is to be wired between the GND (Ground) connection (located at PIN 5 of the Serial RS232/422 port – CN607) and the GPIO4 connection (located at PIN 8 of the General Purpose I/O port (CN605)).
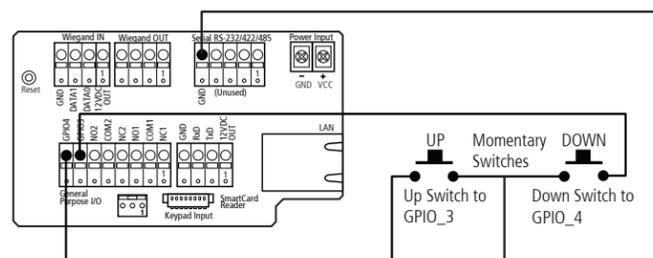
iCAM IP Settings

iCAM IP Address Configuration: To communicate over an Ethernet based network, the iCAM requires an IP address to be configured. By default factory settings of an iCAM is set to the address of 192.168.5.100 with a subnet mask of 255.255.255.0. This IP address can be changed from the iCAM web configuration screen. For details on viewing/changing an IP address of an ICAM please refer to the appropriate Guide.

IP Announcement: The current iCAM IP address can be determined using the IP announcement function. To activate this function press the right tilt button UP on the front face of the iCAM. Hold this tilt until the unit face tilts to the UP position and continue to hold for at least ten seconds. Through the internal iCAM speaker an audible IP will be announced indicating the current IP address setting programmed in the unit. This function can be enabled or disabled through the web interface if desired.

iCAM Reset: The iCAM contains a reset button located directly to the left of the Wiegand IN connector. This reset button when depressed for over 3 seconds will reset the iCAM to the factory default settings. Such settings include the IP address, and web interface login credentials.

iCAM4100V Web Configuration Utility

The iCAM4100V is capable of working in conjunction with the iData CMA software as an enrollment station and/or can be used as a stand-alone verification unit.

Selectable iCAM4100V Configuration Options
Detailed information relating to the iCAM4100V-H1 configuration and options can be found in the iData® CMS User Manual. Please refer to the User guide for more details.

General options available that can be configured or changed using the iCAM Web Configuration Utility are listed below:

• Volume   • Voice prompts   • Eye selection   • Relay configuration
• Fake eye   • Network Settings • Passwords   • Wiegand Settings
• Smart Card format (including encryption, and application Key)

iCAM4100V Specifications

Dimensions (W x H x D)	8.6" x 6.5" x 3.2" (218mm x 164mm x 80mm)
Weight	4.4 lbs (2kg)
Power Input	12DC, 2.5A
Power Consumption	30W
LED Indication	Power (blue), Operating Range (green), Out of Range (orange), Accept (green blink), Reject (orange blink)
Voice Indication	Flexible Voice Message (English: standard, Other Language: downloading available)
Operating Range	10.2" ~ 14.2" (26cm ~ 36cm)
Operating Temperature	32°F ~ 104°F (0°C ~ 40°C)
Humidity	0% to 90% non-condensing
Rotation Angle	+35° / -25°

Technical Support

Additional information and Technical assistance is available on the Iris ID System's support web site at www.irisid.com, click on Support & Service then Technical Support.

IRIS ID   formerly   **LG IRIS**

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