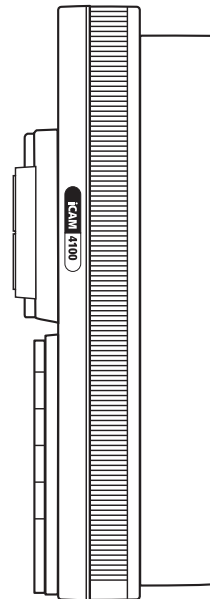
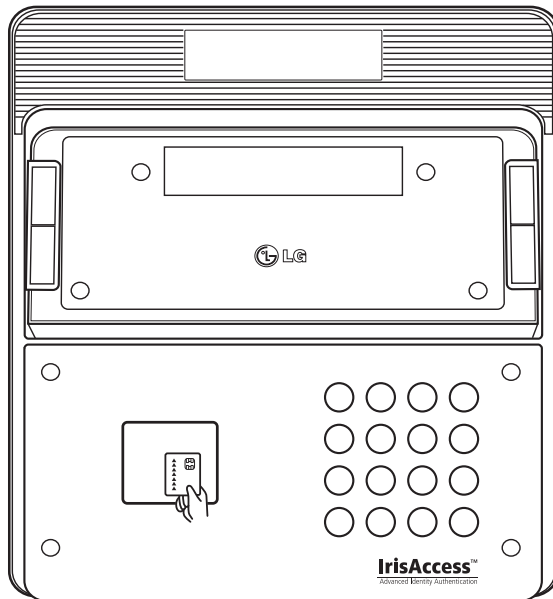


# iCAM 4100

## Quick Start Guide



FOR MODEL NUMBERS:

- iCAM4100
- iCAM4100R
- iCAM4101
- iCAM4101R
- iCAM4110-E1
- iCAM4110R-E1
- iCAM4110-H1
- iCAM4110R-H1
- iCAM4111-E1
- iCAM4111R-E1
- iCAM4111-H1
- iCAM4111R-H1

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LG IrisAccess™ 4000: iCAM4100 Quick Start Guide

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Document Number: DV002Q502 (07/07)

# 1

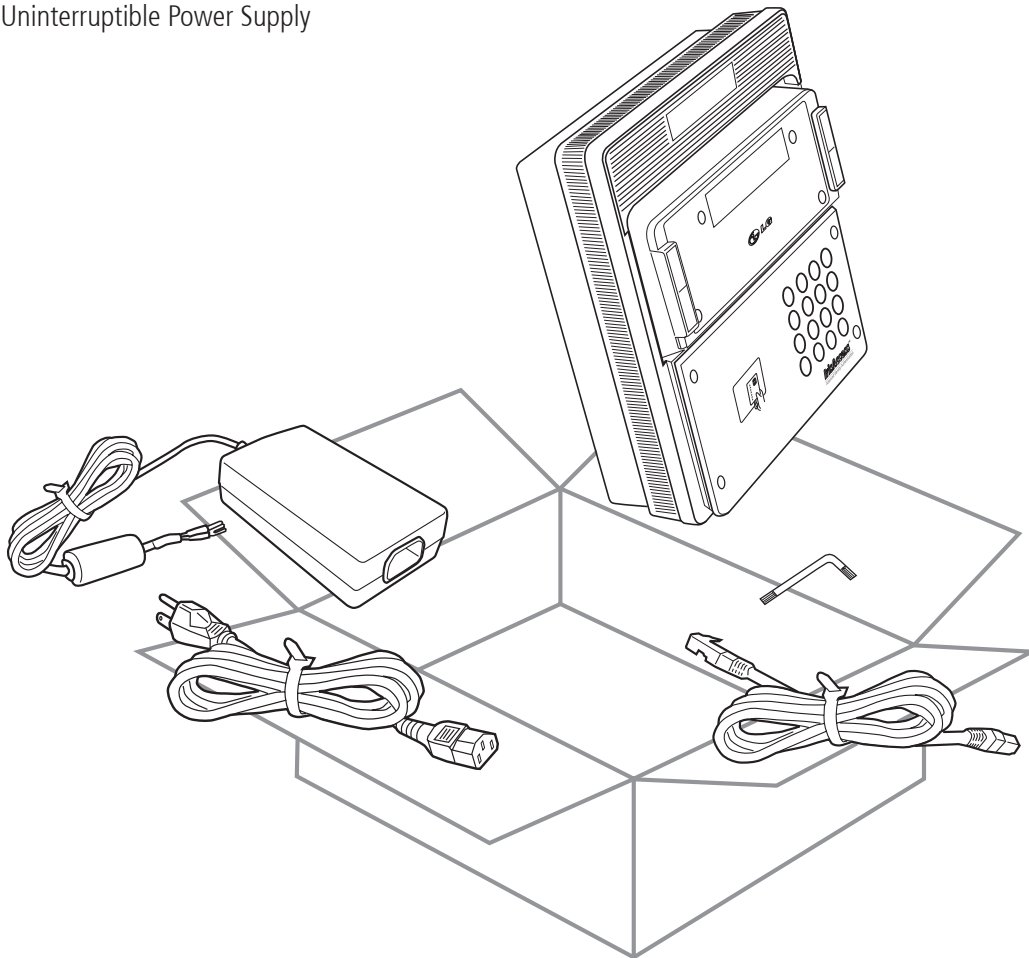
## Packing List

### What's in the box

- iCAM4100 - IrisCamera
- Power Adapter
  - Input: 110~240V AC - 1.5AMP 50/60Hz
  - Output: 12V DC - 5.0AMP
- Power Cable for 110V
- CAT5 Ethernet Cable
- Quick Start Guide
- Security Screw Wrench

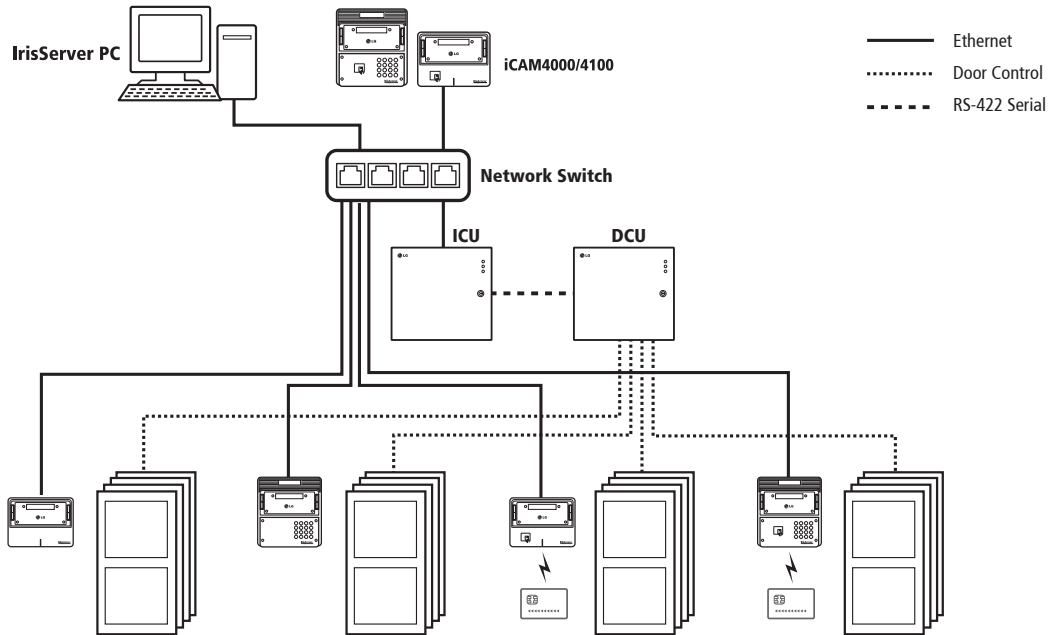
### Required Equipment (not included with iCAM4100)

- Server Computer (refer to the Hardware Manual for details)
- Ethernet Switch
- Ethernet Wiring
- Uninterruptible Power Supply



# 2

## iCAM4100 in the IrisAccess System



The iCAM4100 is a two-eye iris camera used to capture the iris images of the user. The iCAM includes an alignment indicator behind the mirror and voice prompts to assist the user. A Vacuum Fluorescent Display (VFD) displays system time, date, and user guidance. When used in a typical access control application, the iCAM is placed near the secured portal to provide user identification. The optional keypad can be used for a PIN verification mode.

The iCAM can be used in enrollment mode using the IrisEnroll application (included with EAC software) or recognition mode when it is configured for use with an ICU. The iCAM can not easily be switched between enrollment and recognition modes once configured.

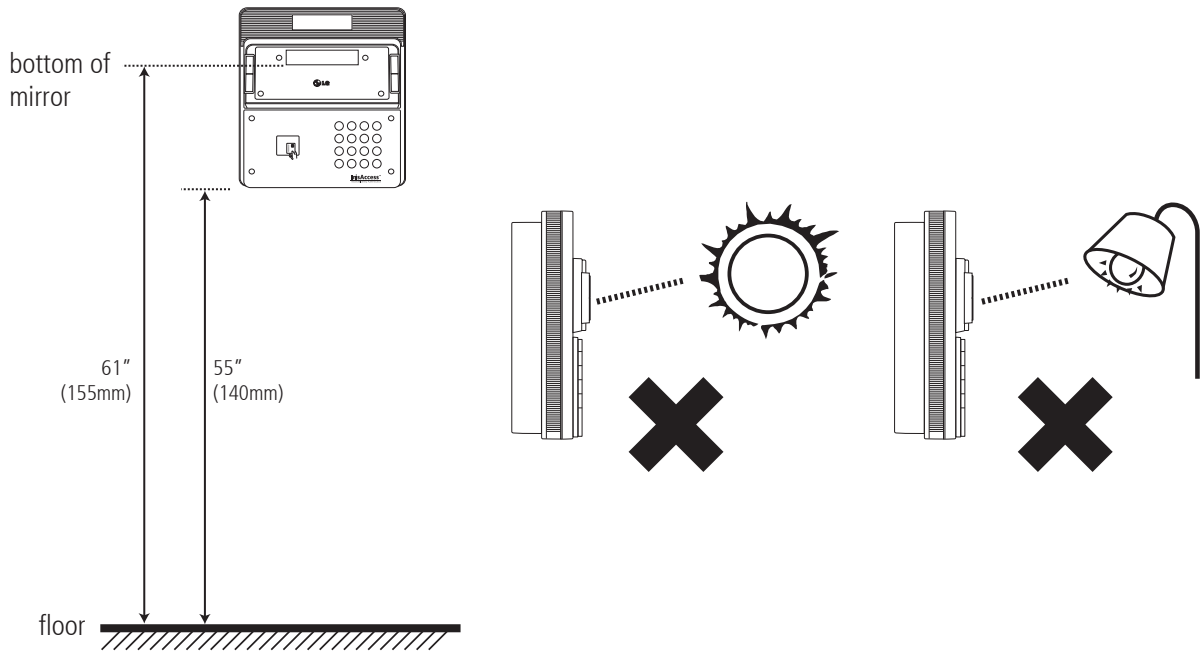
The iCAM can be wall mounted or used with an optional desk-top stand.

### iCAM4100 Model Variations

	VFD	RoHS compliant	Keypad	Smartcard Reader	
				HID iClass	IE Smart-ID
iCAM4100	●				
iCAM4100R	●	●			
iCAM4101	●		●		
iCAM4101R	●	●	●		
iCAM4110-H1	●			●	
iCAM4110R-H1	●	●		●	
iCAM4110-E1	●				●
iCAM4110R-E1	●	●			●
iCAM4111-H1	●		●	●	
iCAM4111R-H1	●	●	●	●	
iCAM4111-E1	●		●		●
iCAM4111R-E1	●	●	●		●

# 3

## Installation Requirements



- The recommended mounting height for the iCAM4100 is 140cm (55 inches) from the floor to the bottom of the unit. This mounting height can be adjusted to accommodate the average user height 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](http://www.lgiris.com) – Support & Service for more information.
- All system components including the Ethernet network 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 on the Ethernet network system must have a unique manually assigned IP address.

The iCAM4100 requires at least the following wires:

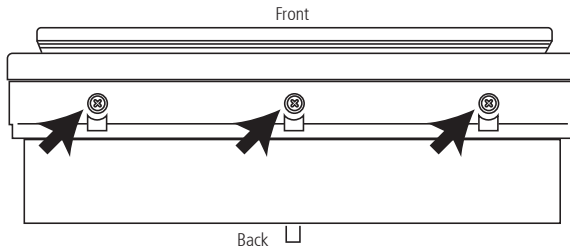
- Ethernet network wiring to connect with the network switch to communicate to the IrisServer or an ICU.
  - \* Note: For systems consisting of only an IrisServer and iCAM may use an Ethernet crossover cable to connect the iCAM directly to the IrisServer computer.
- Power (12VDC +/-10% and 2.5Amps MAX)

**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.**

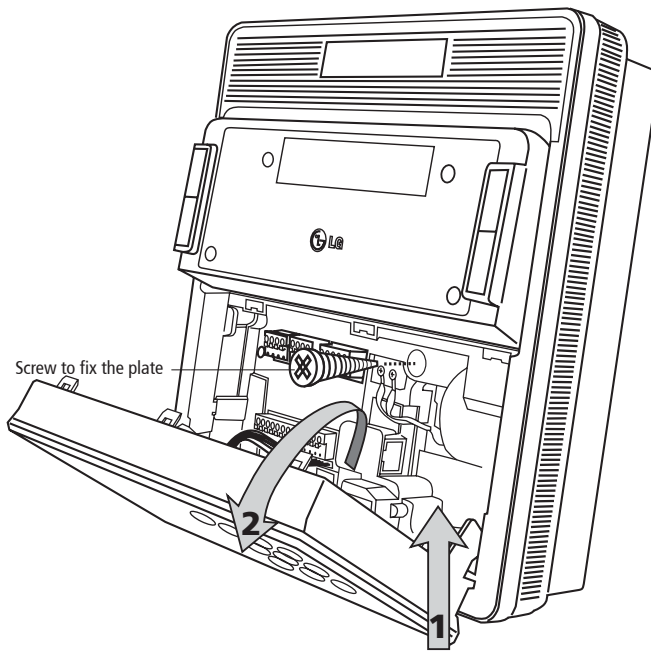
# 4

## iCAM4100 Installation

1. Remove the three security screws (use included security bit wrench) from the bottom of the iCAM.



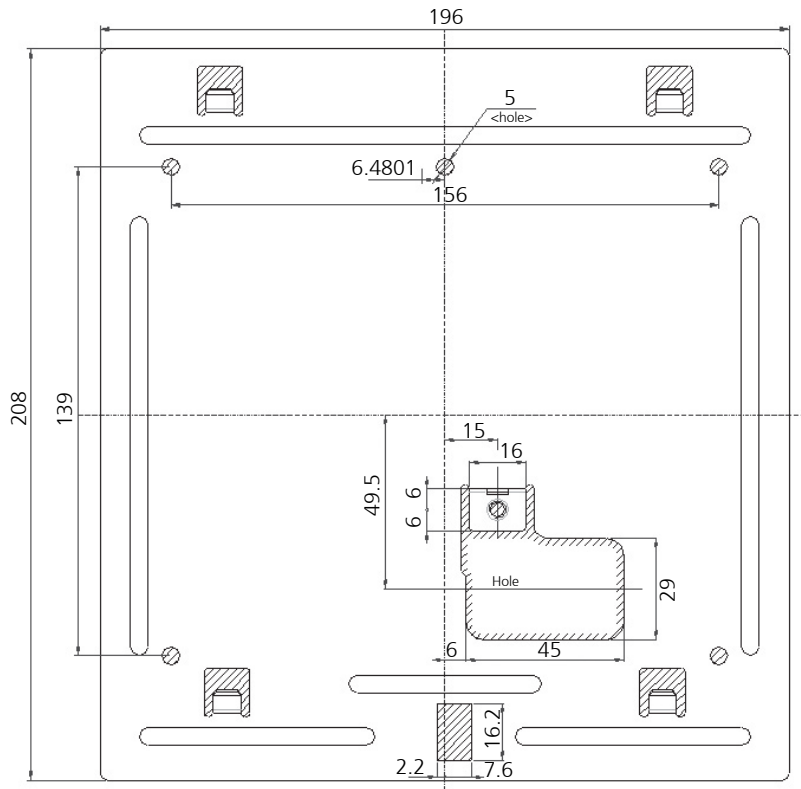
2. While gently pulling the cover upward, pull forward simultaneously.



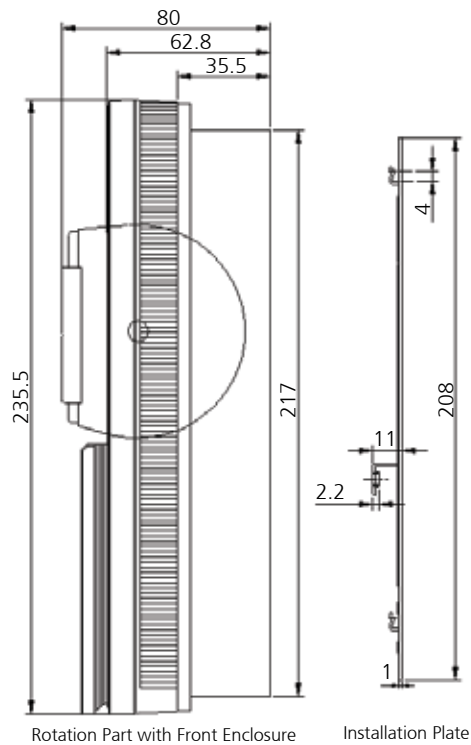
3. Unscrew the installation plate screw and slide the body of iCAM4100 upward to separate from the installation plate.
4. Position the installation plate on the desired wall near the secured door and mark the holes as the figure below illustrates. The recommended height from the floor to bottom of unit is 140cm (55"), however installation height can be adjusted depending on average height of users.
5. 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

## iCAM4100 Installation (cont'd)



Dimensions and Screw Holes in the Installation Plate (mm unit)



Rotation Part with Front Enclosure

Installation Plate

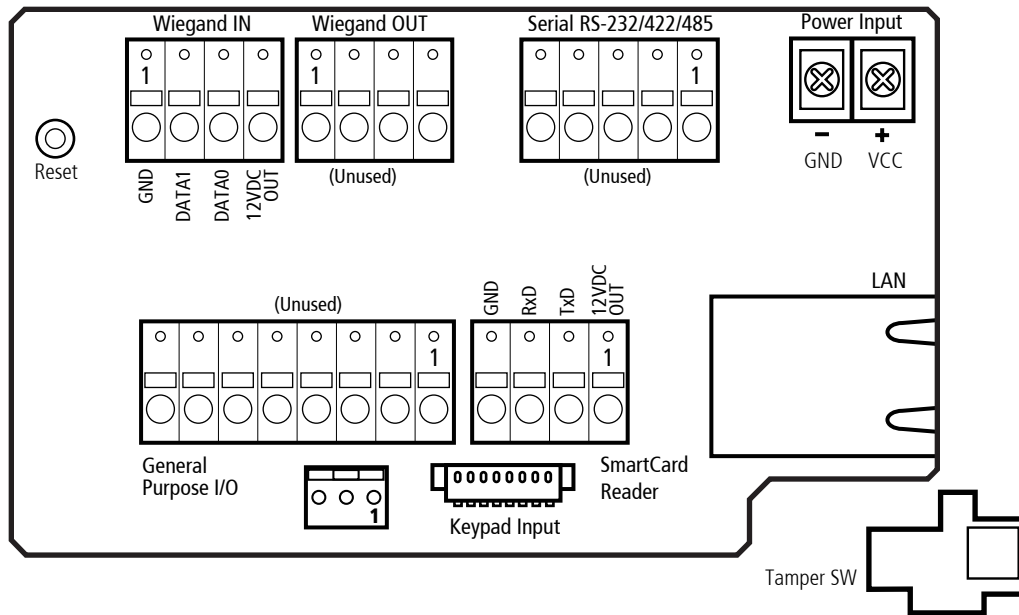
Dimensions of iCAM4100 (mm unit)

# 6

## iCAM4100 Installation (cont'd)

- Route the power line, network line, and other necessary cables through the installation plate hole.
- Using the appropriate fasteners for the material in which the iCAM will be mounted, secure the installation plate.
- Slide the iCAM4100 body into the installation plate and fasten it with the retaining screw.
- Attach the wires from the 12VDC power supply to the screw terminal connections. The +12VDC (white wire) power connects to the + (positive) terminal, whereas the 12VDC ground (black wire) connects to the – (negative) terminal.

\* Note: If it is required to extend the length of the wires from the power adapter to the iCAM, refer to the [www.lgiris.com](http://www.lgiris.com) support web site for details.



- Connect the CAT5/RJ45 network wire into the LAN port of the iCAM. Make sure that the RJ45 connector locks securely into the LAN port.
- Wiegand device such as proximity card reader and smart card readers may be connected to the iCAM through the Smart Card or Wiegand In connections. Refer to the 4000 Hardware Manual for connection details. (Note: Only the smart card [serial] and Wiegand input interfaces are active with the current iCAM versions.)

\* Note: The iCAM4110-H1, iCAM4111-H1 and the iCAM4110-E1, iCAM4111-E1 are supplied with a smart card reader already wired and installed.

- Close the front cover and gently slide the cover downwards. Fasten with front cover using the three security screws.

\* 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.

# 7

## iCAM4100 Configuration

### Changing the IP Address of the iCAM

\* **Note:** The IP Address of each iCAM must be changed individually. Do not connect more than one un-configured iCAM to the network at any one time to avoid IP Address conflicts. Any computer with a web browser which supports graphics (ex. Internet Explorer) can be used to configure the iCAM4000/4100.

1. Set the computer to the static IP of 192.168.5.1 - subnet 255.255.255.0
2. Open the web browser and enter http://192.168.5.100 in the address bar then press ENTER. The iCAM login screen will appear.
3. Enter the default Username: **iCAM4000** and Password: **iris4000** (both are case sensitive)

The screenshot shows the 'iCAM 4000/4100 Configuration' web interface. At the top, there are logos for 'LG Advanced Identity Authentication' and 'IrisAccess™ Advanced Identity Authentication'. The main heading is 'iCAM 4000/4100 Configuration'. On the left, there is an illustration of two iCAM devices. On the right, under the heading 'Administrator Login', there are two input fields: 'Username:' and 'Password:'. Below these fields are two buttons: 'Login' and 'Cancel'. At the bottom left, there is a small text block: 'version 3.03 copyright © 2007 LG Electronics USA, Inc. Iris Technology Division. All rights reserved.'

4. The iCAM Configuration Main Menu will appear.

The screenshot shows the 'iCAM 4000/4100 Configuration' web interface's main menu. At the top, there are logos for 'LG Advanced Identity Authentication' and 'IrisAccess™ Advanced Identity Authentication'. The main heading is 'iCAM 4000/4100 Configuration'. On the left, there is an illustration of two iCAM devices. On the right, there is a list of menu items, each preceded by a red circular arrow icon: 'Change Username/Password', 'Configuration Settings', 'SmartCard Configuration', 'Network Settings', 'iCAM Software Update', 'iCAM WebConfig Update', 'Voice Message Update', and 'Reboot'. At the bottom left, there is a small text block: 'version 3.03 copyright © 2007 LG Electronics USA, Inc. Iris Technology Division. All rights reserved.'



# 8

## iCAM4100 Configuration (cont'd)

5. Select Network Settings.

The screenshot shows the 'iCAM 4000/4100 Configuration' window with the 'Network Settings' tab selected. The fields are as follows:

Field	Value
IP Address:	192.168.5.100
Subnet Mask:	255.255.255.0
Broadcast Address:	192.168.5.255
Default Gateway:	192.168.5.254

Buttons: OK, Clear, Back to Main

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6. Enter the new IP address for the iCAM (default = 192.168.5.100)
7. Enter the new Subnet Mask for the iCAM (default = 255.255.255.0)
8. Enter the new Broadcast Address for the iCAM (default = 192.168.5.255)
9. Enter the new Default Gateway for the iCAM. (default = 192.168.5.254)
10. Click OK to save changes and to open network settings verify screen.

If the new iCAM IP address is still on the same subnet as the computer:

- after 10 seconds the web browser will resolve to the new IP address and the login screen will appear again.

If the new iCAM IP Address is on a different subnet:

- the web browser will display the standard "The page cannot be displayed" message.

To test the IP Address change, perform a ping to the new IP Address.

1. Click on Start (in the Windows task bar)
2. Select Run
3. Type cmd
4. Press Enter
5. At the command prompt type: ping <new IP> (ex. ping 192.168.5.120)
6. Close the command prompt window.

### If changing the IP Address to multiple iCAMs

\* Note: After each iCAM configuration the arp cache on the computer must be deleted.

1. Click on Start (in the Windows task bar)
2. Select Run
3. Type cmd
4. Press Enter
5. At the command prompt type: arp -d
6. Close the command prompt window.
7. Connect the next iCAM to be configured on the network and perform the configuration to the next iCAM.

# 9

## iCAM4100 Configuration (cont'd)

### Once all iCAMs have been configured

Once all iCAMs have been configured, the computer IP Address can then be changed back to its original IP Address or to the new IP Address as required to communicate to the rest of the IrisAccess™ system.

### SmartCard Integration

- The iCAM4010-E1 and iCAM4010R-E1 have a built-in Integrated Engineering Smart ID smart card reader, and the iCAM4010-H1 and iCAM4010R-H1 have a built-in HID iClass smart card reader.
- The only configuration to the iCAM for smart card support is to enter an “Air-link” Encryption key or Application key. This key is used to lock / unlock access to the smart card data. Once changed the iCAM will write all cards with this key (enrollment) and will only be able to read cards with this key (verification).
- To configure the smart card key; log into the iCAM configuration interface (see “Changing the IP Address of the iCAM” in section 6).
- From the main menu select “SmartCard Configuration”.

The screenshot displays the 'iCAM 4000/4100 Configuration' web interface. At the top, there are logos for 'LG Advanced Identity Authentication' and 'IrisAccess™ Advanced Identity Authentication'. The main heading is 'iCAM 4000/4100 Configuration', followed by a sub-heading 'SmartCard Configuration'. The configuration fields include: 'Serial Port' set to 'Serial-Port-2', 'SmartCard Type' set to 'HID iClass', and 'Application Key (hexadecimal)' represented by a masked input field with a 'Set to Default' button next to it. At the bottom, there are 'OK', 'Clear', and 'Back to Main' buttons. A footer contains the text: 'version 2.03 copyright © 2007 LG Electronics USA, Inc. Iris Technology Division. All rights reserved.'

- Leave the “Serial Port” selection as Serial-Port-2.
- Select the “Smart Card Type”; HID iClass (iCAM4010-H1), MIFARE, or Smart ID (iCAM4010-E1).
- Enter the Application Key (Air-Link Key) in Hexadecimal format.
- \* **Note: “Set to Default” will reset the Application Key to the HID iClass default.**
- OK must be clicked for the changes to be entered.
- To complete the smart card integration in the IrisAccess system, the IrisServer, IrisEnroll software and ICUs must be configured. Refer to the 4000 Smart Card Integration document located on the EAC software CD for more information.



# Technical Support

## Technical Support

Additional information and Technical assistance is available on the LG Electronics – Iris Technology Division's support web site at [www.lgiris.com](http://www.lgiris.com), click on **Support & Service** then **Technical Support**.

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