11. General Information

Dimension (W x H x D)	8.66" x 9.65" x 2.0" (220mm x 245mm x 51mm)
Weight	3.0lbs (1.4kg)
Power Input / Consumption	12-24VDC, 2.0 Amps @ 12VDC / 24W
Indication	External Green LED for Power Indication
Operating Temperature	32°F ~ 122°F (0°C ~ 50°C)
Storage Temperature	-4°F ~ 203°F (-20°C ~ 95°C)
Humidity	0 ~ 95% Non-condensing
Communications	Ethernet (LAN, WAN)
Inputs / Outputs	Wiegand Out, Dry Contact Relay x 2, Programmable GPIO x 4, RS422
Certifications	CE, FCC, KCC, UL294

12. Technical Support

Additional information and technical assistance is available on the Iris ID support web site at www.irisid.com/supportservices
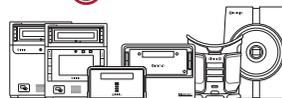
IRIS ID

Iris ID Systems, Inc.

7 Clarke Drive, Cranbury, NJ 08512, USA
Tel. 609-819-IRIS(4747) Fax. 609-819-4736

www.irisid.com

formerly **LG IRIS**

Printed in Korea

ICU7000
HARDWARE GUIDE
IDENTITY CONTROLLER

IRIS ID
Advanced Identity Authentication™

VERSION 1.0

IrisAccess®
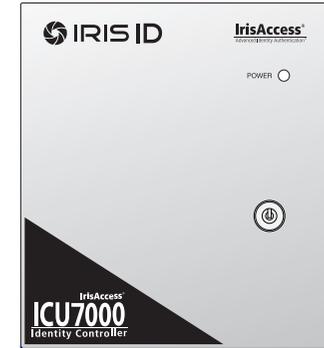
ISO/ANSI COMPLIANT	EASY INSTALLATION

- **Supports all iCAM7000 Series Camera unit(s)**
- **Easy Installation**
- **Surface Mount Integration**

CE

1. Packing List

What's in the Box

- ICU7000 - Identity Controller Unit
- Power Adapter
    - Input: 100-240VAC @ 1.0AMP 50/60Hz
    - Output: 12VDC – 2.5AMPS
- Power Cable (110 VDC)
- Grommet
- Keys (x2)
- Hardware Guide

Required Equipment (not included)

Hardware Components
- iCAM7000 Series Camera unit (sold separately)
- Windows Compatible computer (Refer to the iData EAC Software Manual for details)
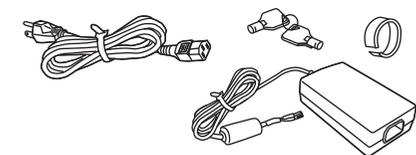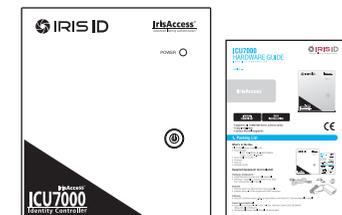
Network
- Ethernet Switch (an Ethernet Hub is not acceptable)
- Ethernet Wiring – CAT5e or better with RJ45 connectors

Software
- iData EAC Software version 3.06.x or above (Refer to the iData EAC Software Manual for details)
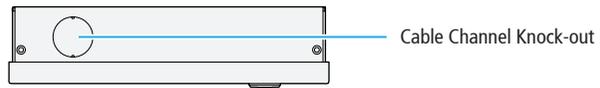
Power Source (optional)
- External power source - 12–24 VDC +/- 10% / Minimum 24W (12VDC @ 2AMPS) (Measured at ICU7000 unit)
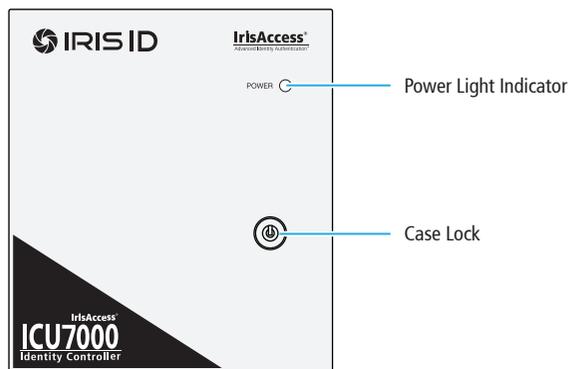- Uninterruptible Power Supply (strongly recommended)

2. Hardware Information

Top View

Cable Channel Knock-out

Front View

IRIS ID
IrisAccess®
Advanced Identity Authentication™

POWER — Power Light Indicator

Case Lock

IrisAccess®
ICU7000
Identity Controller

Bottom View

Cable Channel Knock-out

Side View

Air Vent

Model Serial Number Label
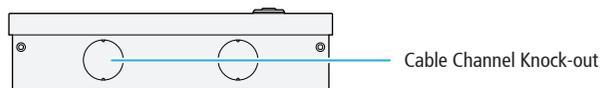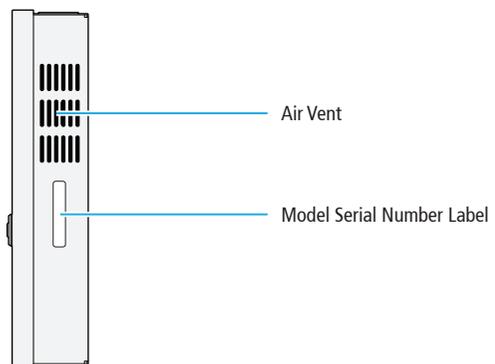
10. Memo

Serial Number:

ICU7000 Unit IP Address:

IrisServer IP Address:

iCAM7000 IP Address:

Channel 1 Security ID:

Note:

9. Fuse Replacement

The ICU7000 contains a replaceable fuse which protects the unit(s) from excessive current consumption. In the event that the ICU7000 unit will not power on, a fuse replacement may be necessary.

CAUTION: FUSE REPLACEMENT SHOULD BE PERFORMED WITHOUT POWER CONNECTED TO THE UNIT.

TIP The fuse can be tested by checking the continuity across both sides of fuse with a multi-meter. If no continuity is measured, the fuse must be replaced.
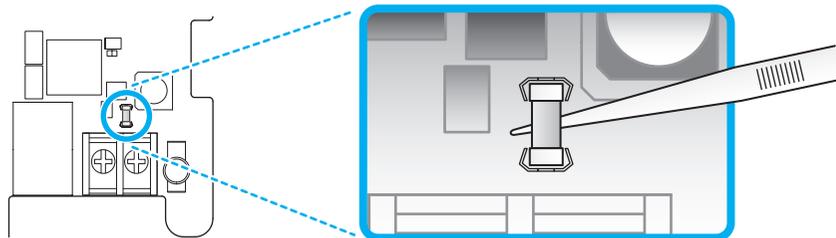
NOTE An additional replacement fuse is included on the main board of the ICU unit below the input and output connections.

How to Replace the Fuse
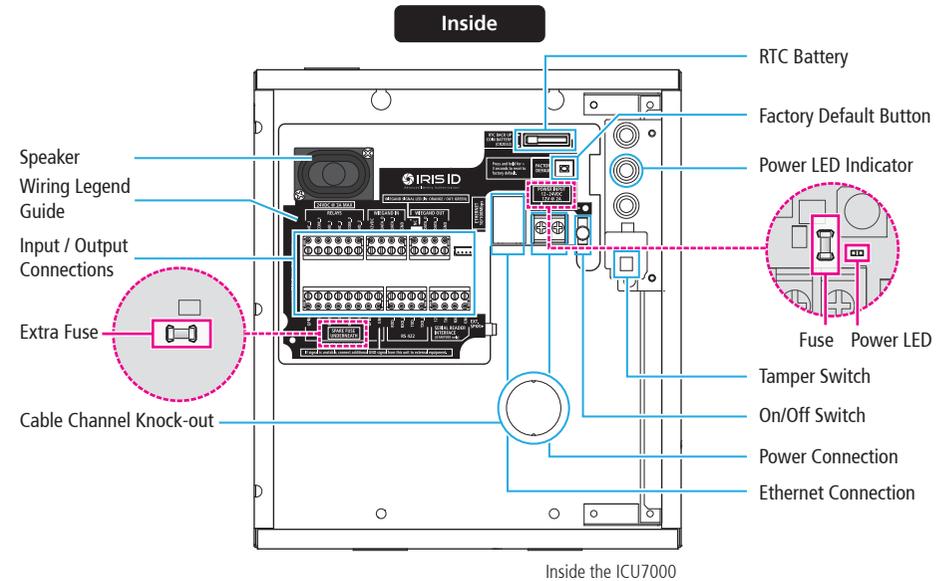
1 Remove the screws to release the Wiring Legend Guide.

Extra Fuse
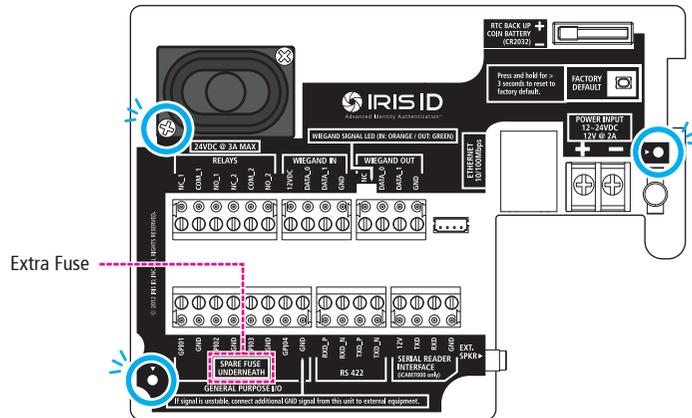
2 Use tweezers, and replace the Fuse.

Fuse Specification

Manufacturer	Littlefuse
Part No.	0451 004. MRL
Ampere Rating	4A

3. Inside ICU7000

Inside

RTC Battery

Factory Default Button

Power LED Indicator

Speaker

Wiring Legend Guide

Input / Output Connections

Extra Fuse

Fuse   Power LED

Cable Channel Knock-out

Tamper Switch

On/Off Switch

Power Connection

Ethernet Connection

Inside the ICU7000

4. Installation Guidelines

• The ICU7000 should be installed in a location that will discourage tampering with the unit, but is easily accessible for maintenance (such as a locked room, utility closet, or other secure locations), preferably within the restricted area.

• This installation location requires power and a network communication to the IrisServer and iCAM7000 series unit(s).
If used with an access control panel, the ICU can reside close to the access panel.

• This installation location requires that the ICU be placed in the same physical building as the iCAM unit that it will be controlling.

• All system components including the Ethernet network should be powered through an Uninterruptible Power Supply (UPS) whenever possible. The UPS should provide power line filtering as well as power back-up operation.

• The ICU7000 is designed for surface mounting only.

• Each IrisAccess® system component on the Ethernet network system must have a unique assigned IP Address.

General Wiring Requirements

The ICU7000 unit requires at least the following wires:

■ Ethernet network wiring to connect with the network switch for communication.
NOTE For systems consisting of only the ICU and an iCAM, 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 Wiring: The minimum recommended wire gauge used for power is 16AWG (1.0mm²)

■ Power Requirements: 12-24VDC +/- 10% / Minimum 24W (12VDC @ 2AMPS)
NOTE 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 power at the ICU7000 unit (with ICU7000 connected). For example; with a 12VDC source and 16AWG (1.0mm2) copper wire, the maximum distance is 71.5 Feet (21 Meters). If a longer power wire distance is required, it is recommended that a 24VDC power source be used. Voltages within the range of 12VDC and 24VDC are acceptable as long as 24W of power is supplied to each ICU7000 unit. (e.g. 12VDC @ 2AMPS = 24Watts OR 24VDC @ 1AMP = 24Watts).

> **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.

5. Installation

Mounting

1. Using the key(s) provided, unlock the enclosure.

2. Determine the point of entry into the enclosure for each cable. Remove the appropriate 2.8cm (1.1") knockouts or if a knockout is not available at the desired location, drill holes using a hole punch commonly used for penetrating steel enclosures. Protect internal electronics from metal filings.

3. Install the supplied wire grommet or another connector to protect the wires.

4. Hold the enclosure in the desired location on the mounting surface using it as a template; mark the location of installation holes. There are two types of screw holes, the diameter of one type is 10m (0.39 inch) and the other type is 5mm (0.20 inch).

5. Drill or punch holes in the mounting surface on the marks.

6. Insert the cables into the enclosure.

7. Mount the enclosure on the wall using appropriate hardware.
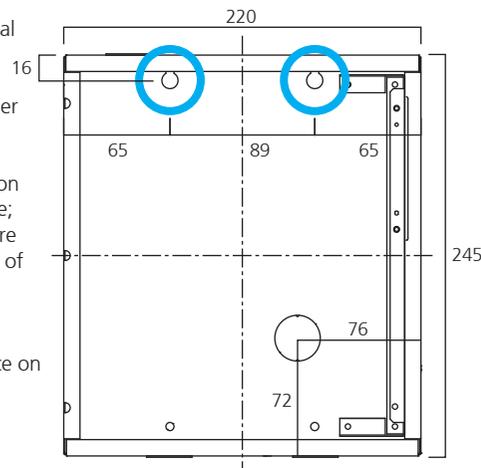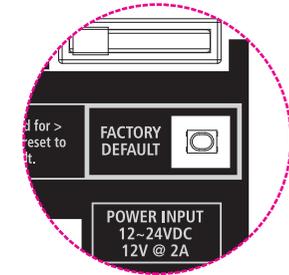
NOTE The ICU7000 is designed for surface mounting only.

8. Restoring The Unit to Factory Default

Factory Default Button

The Factory Default Button can be used to restore settings of the ICU7000 to factory default. This button is located inside of the unit below the RTC battery (see image), and can be used in to different ways:

1. IP ADDRESS DEFAULT - Resets the IP Address to Factory Default

NOTE Default IP Address = 192.168.5.100, Subnet Mask = 255.255.255.0.

• Hold the factory default button down for at least 3 seconds while the unit is already powered-on to reset the unit IP address information back to the default settings.

2. FACTORY DEFAULT - Resets All Settings to Factory Default

NOTE Any information, uploaded information (including firmware updates) to the unit that may have been performed prior to this reset function may be cleared. All settings will be factory restored to the default level.

• While powering on the ICU7000 unit, hold the factory default button down for at least 5 seconds to restore the entire unit back to all factory default settings.

D 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.

RXD_P
RXD_N
TXD_P
TXD_N

To RS422 port of computer or access system

RS422 Output

RXD_P RXD_N TXD_P TXD_N
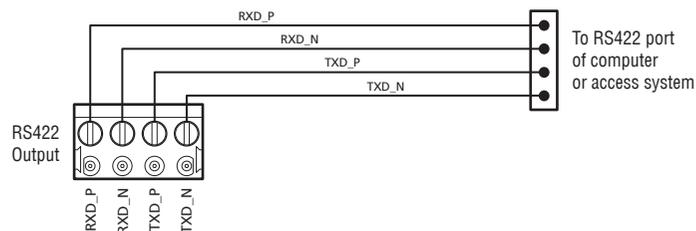
E External Speaker Out

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

Ground

Signal

3.5mm

To amplified speaker
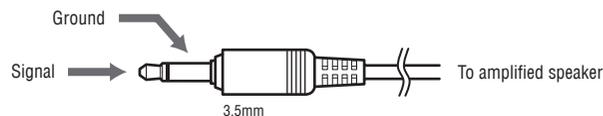
7. ICU Configuration

ICU7000 contains an internal configuration interface Called ICU7000 Configuration. This ICU specific interface allows installers to perform configuration and options to the ICU7000 unit.

How to access the ICU7000 Configuration interface

From a PC with an internet browser connected to the network (that the ICU7000 unit is connected to), type the IP address of the ICU7000. For example, if the IP address of an ICU7000 is 192.1698.5.200 (default IP), you would access the configuration web interface by typing http://192.168.5.200 from an internet browser.

NOTE   The IP address of the ICU7000 can be audibly announced by pressing the Factory Default button twice consecutively (located on the ICU main board).

IMPORTANT: IF THE BUTTON IS HELD DOWN CONTINUOUSLY FOR 3 OR MORE SECONDS, THE ICU7000 IP ADDRESS WILL BE RESET TO THE FACTORY DEFAULT IP (192.168.5.200).

To login, the **User ID** required when prompted is **ICU7000**. 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://irisid.com/productdocumentation

Power Connection

• The included power adapter is auto switching from 110VAC~240VAC 50/60Hz and includes an IEC60320 C13 to NEMA 5 mains power cable.

• If the local AC power outlets are not the NEMA 5 "US" type, then a local type power cable with a C13 power connection must be purchased and used for installation.

IMPORTANT: A PROTECTIVE BATTERY TAB IS INCLUDED WITH THE RTC BATTERY. PLEASE REMOVE TAB TO ENSURE PROPER FUNCTIONALITY.
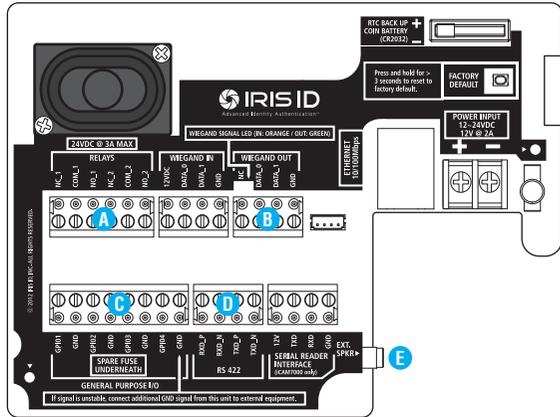
Ethernet Connection

• An Ethernet network connection is required between the ICU and the IrisServer computer when performing a New Installation, Upgrade, or Configuration of the ICU software. This Ethernet connection should remain at least until the ICU configuration is completed.

• For direct connection between the ICU7000 and iCAM7000 series camera unit, an Ethernet cross-over cable can be used. In an installation (after configuration) that requires system monitoring and enrollment/permission user modification, a constant Ethernet connection from the ICU is required to the network containing the IrisServer and iCAMs. The ICUs Ethernet connector is located near the bottom right corner of the ICUs main board.

Ethernet Connection
CAT5/RJ45
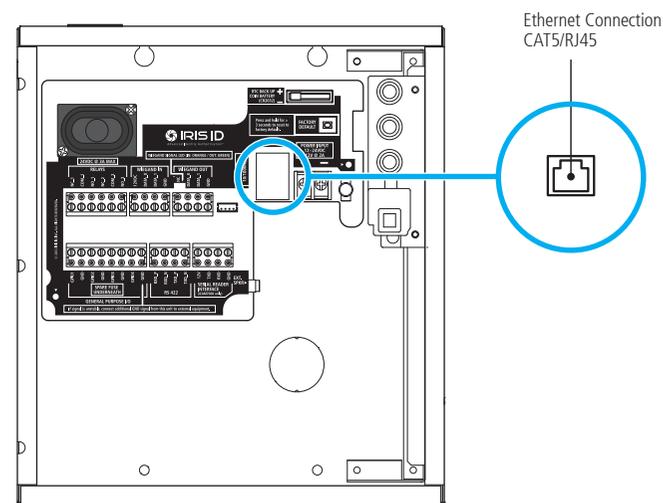
NOTE   The maximum wire length of an Ethernet CAT5 wire is 100 meters (328 feet) between the ICU and a network switch or computer.

NOTE   Wiegand output is available from either the ICU7000 or an iCAM7000 camera unit.

6. Wire Connection Details

A 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 available for use. 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.
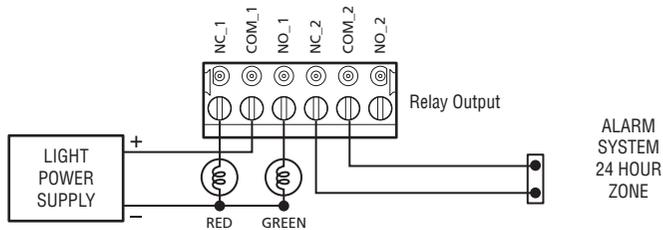

B Wiegand Output

The Wiegand Output from the ICU7000 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).
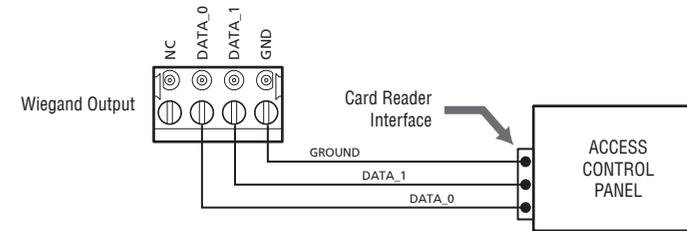
C External GPIO

GPIO1 through 4 are available to receive input from external switches or devices. Some examples of GPIO functionality are shown below:

Access Panel response using GPIO:
• The Access panel can trigger through the GPIO the appropriate voice response and transaction event to be reported. These responses include user acceptance or rejection by the third party access control panel.

iCAM Activate:
• iCAM activate allows the operation of the iCAM to be enabled ONLY when the GPI is in an enable state. This will activate the iCAM until the input is released.

NOTE For additional details and information on the external GPIO functionality, please refer to the Iris ID website at: http://irisid.com/productdocumentation.

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.