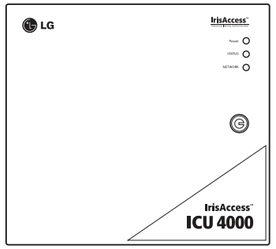
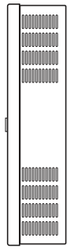
ICU4000R Hardware Guide version 1.00



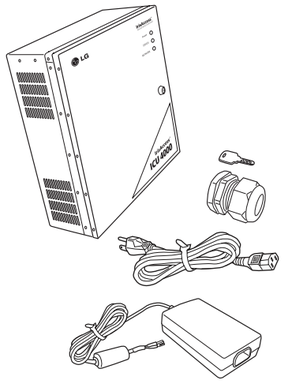


ICU4000 Model Variations

	Includes WIB4000
ICU4000R	●
ICU4000R-W	●

Packing List

What's in the box
- ICU4000R series - Identity Controller
- Power Adapter
  Input: 110~240V AC - 1.5AMP 50/60Hz
  Output: 19V DC - 4.74AMP
- Power Cable for 110V (IEC60320 C5 "Clover Leaf" to NEMA 5 "US")
- CAT5/RJ45 Ethernet Cable
- ICU4000 series Serial Configuration Cable
- Grommet
- Keys
- Hardware Guide



Required Equipment (not included with ICU4000R)
- Iris Camera (iCAM)
- Uninterruptible Power Supply
- A C5 "Clover Leaf" to local mains power cable if local AC power connector is not the NEMA5 "US" type.
- Server Computer (refer to the Software Manual for details)
- Ethernet Switch (an Ethernet Hub is not acceptable)
- Ethernet Wiring - CAT5 or better with RJ45 connectors

Inside ICU4000R

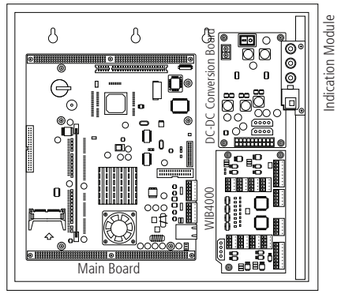
- **Main Board:** Controls all functions of the ICU4000R. Ethernet connects to the ICU main board through LAN Connection. The WIB or DCU4000 connects to main board through main board CH1 and CH2.

- **DC-DC Conversion Board:** Takes the 19VDC output from the included power supply and converts to 12 and 5 volts needed.

- **Indication Module:** Contains ICU status indication LEDs and Tamper switch.
  Power LED - Green = ICU Power On
  Status LED - Red = ICU not operational or in process of boot up, Green = ICU operation normal
  Network LED - Red = ICU does not detect network, Green = ICU detects network connection.

- **Hard Disk Drive (not shown):** Stores the ICUs Operating System and local users database.

- **WIB4000R (ICU4000R-W only):** Provides Wiegand Output and General Purpose Inputs to external access control systems.



Inside the ICU4000R

Installation Guidelines

- The ICU4000R should be installed in a location that will discourage tampering with the unit, but is easily accessible for maintenance. A location such as a locked room, utility closet, or other secure locations, preferably within the protected area.

- This installation location requires at least AC power and an Ethernet connection to the Iris-Server. If used with an access control panel, the ICU can reside close to the access panel. If used with a DCU4000 the ICU must reside within 305m(1000 feet) of the DCU's installed location.

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

- The ICU4000R is designed for surface mounting only.

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

The ICU4000R requires at least the following wires:
- Power (from the included 19VDC power adapter), AC power connection near the ICU location.

IMPORTANT: USE ONLY THE POWER ADAPTER SUPPLIED WITH THIS PRODUCT. USE OF OTHER ADAPTERS WILL VOID THE WARRANTY.

- Ethernet network wiring to connect with the network switch to communicate to the IrisServer and iCAMs.

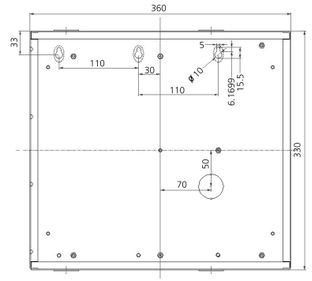
IMPORTANT: IT IS RECOMMENDED THAT THE IRISACCESS SYSTEM BE PLACED ON A PRIVATE NETWORK SEPARATE FROM GENERAL CORPORATE OR PUBLIC ACCESS. SYSTEM PERFORMANCE AND STABILITY MAY BE AFFECTED DEPENDING ON AMOUNT OF GENERAL NETWORK TRAFFIC

- Maximum wire length between ICU and network switch is 100 meters (328 feet).

- If a WIB4000R is installed in the ICU, wiring between the WIB and an access control panel (3 wire conductors per channel) is required for Wiegand communications.

Installation

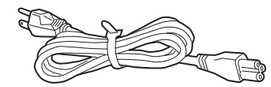
Mounting
1. Using the key provided, unlock the enclosure.
2. Determine the point of entry into the enclosure for each cable. Remove the appropriate 3.5cm (1-3/8") knockouts or if a knockout is not available at the desired location, drill holes using a hole punch commonly used for penetrating steel enclosures. 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 10mm (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 ICU4000R is designed for surface mounting only.

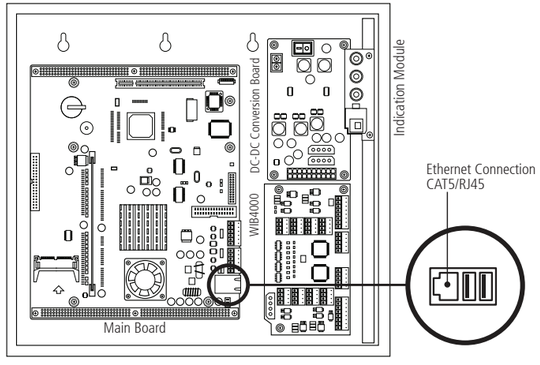
Power Connection
- The included power adapter is auto switching from 110VAC~240VAC 50/60Hz and includes an IEC60320 C5 "Clover Leaf" to NEMA 5 mains power cable.

- If the local AC power outlets are not the NEMA 5 "US" type, then a local type power cable with a C5 power connection must be purchased and used for installation.



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 ICU and computer, an Ethernet cross-over cable can be used. In a permanent installation (after configuration) a constant Ethernet connection from the ICU is required to the network containing the IrisServer and iCAMs. If using smart cards for verification, a permanent connection to the IrisServer is not required. However the network connection to the iCAMs must be constant. The ICUs Ethernet connector is located near the bottom right corner of the ICUs main board.

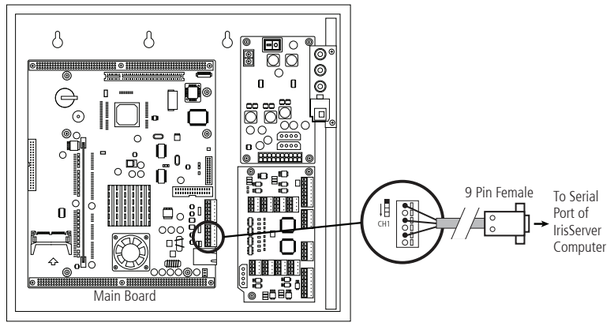


* Note: The maximum wire length of an Ethernet CAT5 wire is 100 meters (328 feet) between the ICU and a network switch or computer.

*Note: Wiegand output is available from either the iCAM, ICU with WIB board, or a DCU.

Configuration

- Before installation the ICU4000R must be configured with a static IP Address and Security IDs for each channel.
- The IP Address must be unique on the network and allow connection to the Iris Server and any iCAMs that the ICU will control.
- The Security ID is a unique 16 character string manually assigned by the installer to each channel of the ICU.
- Each Security ID must be set in the ICU configuration as well as in IrisManager / Creation
- IP and Security ID configuration is performed over a temporary RS232 serial connection between the ICU and the Iris Server computer. This connection is performed using the specialized serial cable (ICU Configuration Cable) included with the ICU4000R.



- Connect the ICU configuration cable between COM port 1 or 2 of the IrisServer computer and Serial Connection (CH1) on the ICU main board. (Remove existing connector as needed).
- Set the CH1 communication type switch on the ICU main board to the RS232 position (down).
- Use the IrisICUAdmin4000 application (new installation) to configure the ICU4000R. Refer to Software Quick Installation Guide included with the EAC software CD for more information on software install and configuration.

* Note: If the IrisServer is too far from the installed location of the ICU, the EAC software can be installed on a laptop. From the laptop IrisICUAdmin4000 can be used to set the IP Addresses and Security IDs on the ICU. Software updates and ICU configurations then can be performed over the network from the IrisServer.

ICU Input & Output

IP Addresses & SID's

- After configuration, set the CH1 communication switch on the ICU main board back to the original position: ICU4000R (DCU4000-RS422) = up, ICU4000R-W (WIB-RS232) = down
- Replace the original communication cable to the WIB or connection to the DCU.

ICU Input and Output

- The ICU4000R is available in two variations.
- ICU4000R contains no internal Input or Output capabilities and requires a DCU4000.
- Refer to the DCU4000 Quick Start Guide or the IrisAccess® 4000 Hardware Manual for more information on connecting and using a DCU4000 with the ICU.
- ICU4000R-W contains a WIB4000R board which provides Wiegand Output and General Purpose Inputs.
- See the next page in this document for more information on the WIB4000R board. relay one.

Wiegand Interface Board (WIB)

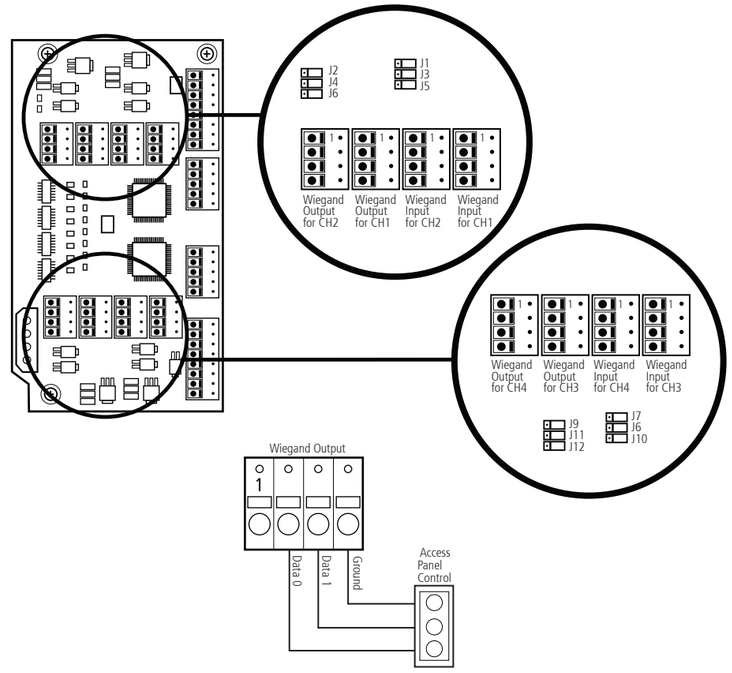
The function of the WIB4000R is to provide Wiegand Output (sends the users Card ID to Access Control Panels) and allow for general purpose input. The WIB4000R has one Wiegand Input, one Wiegand Output, and two General Purpose Inputs for each of the 4 channels.

Wiegand Inputs and Outputs

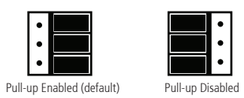
* Note: The Wiegand Input of the iCAM should be used for connection of card readers. The Wiegand
Input of the WIB4000R is unused.

Connection Details of Wiegand Output Ports:

The Wiegand output from the WIB4000R is by default pulled up to a 5VDC level on the data lines. This voltage "pull-up" can be disabled if required by moving the jumper shunts J1-J12.



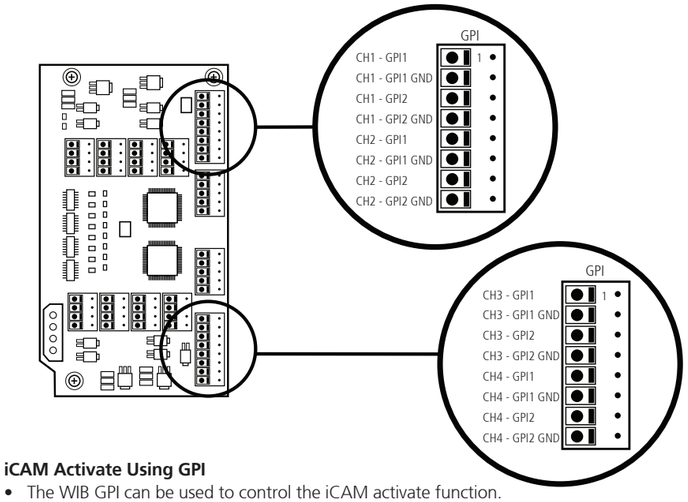
Wiegand output must be configured in the ICU using IrisICUAdmin4000. A Card ID must be entered for each user.



Wiegand out channel 1 = J1, J3, and J5
Wiegand out channel 2 = J2, J4, and J6
Wiegand out channel 3 = J7, J8, and J10
Wiegand out channel 4 = J9, J11, and J12

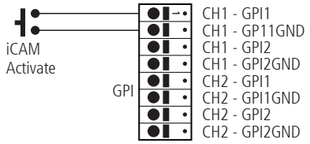
General Purpose Inputs (GPI)

Each channel of the ICU has available 2 general purpose inputs. The input functions are software selectable using IrisICUAdmin. Refer to the Users Manual for more details.



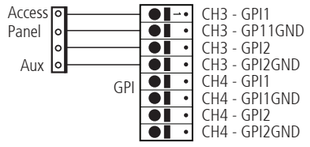
iCAM Activate Using GPI

- The WIB GPI can be used to control the iCAM activate function.
- iCAM activate allows the iCAM to be placed into a stand-by mode and activated only when the input changes state from high to low or low to high.



Access Panel Response using GPI

- Access panel response allows the appropriate voice response and transaction log to be produced or output depending on the user acceptance or rejection by the third party access control panel.
- This control from the access panel is input to the GPI of the WIB.
- In the ICU software configuration, one wire returned from the access panel can be designated for user acceptance while the other GPI is designated for user rejection.
- These inputs can be switched by an AUX relay or other output provided by the access control panel.



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.

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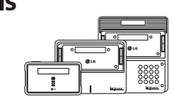

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