



IrisTime™ iT100 Series

User Manual

IRIS TIME™ iT100 SERIES – USER MANUAL

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1. Purpose and Audience

The purpose of this document is to provide information on the iT100 device. This manual provides information on the device hardware, installation, operation, and options of the iT100 device along with its internal software. Installation and setup of a basic system will be covered with reference to other documents which provide additional detailed instructions on the specific process. Read this document before attempting to install, configure, expand, run, or modify the product that has been provided from Iris ID.

This document is intended for professional installers who have experience with computer networking (Ethernet & TCP/IP), low voltage wiring, general system integration, and common computer operating systems. Knowledge of basic access control system integration may also be needed depending on the system integration requirements.

1.1 Reference Documentation

- IrisTime™ Management System (iTMS) User Manual
- IrisTime™ iT100 SDK User Manual
- iT100 Quick Start Guide

All other relevant documents are included with the software package in which this device will be used. Additional reference, amendments and updated documentation material may become available directly from the <http://www.IrisID.com> website. Check this site for updated information, frequently asked questions, and other information on the use of this product.

2. iT100 Introduction

2.1 IrisTime™ / iT100 System Options

iT100 is an advanced multi-biometric authentication device capable of performing iris and facial recognition. Use of iT100 can be performed in multiple ways. These includes:

- **Standalone** – An independent iT100 device, functioning as a self-contained system.
- **iTMS - IrisTime™ Management System** - allows for network-based connection of multiple iT100 devices, allowing for shared user information, centralized configuration capability, as well as multiple devices maintenance including software updating. iTMS allows for user data backup and sharing transaction records with external systems.
- **iT100 Rest API** – iT100 can be connected to via the Rest API which allows for configuration, operation, and log file access from an external system.
- **iT100 Software Development Kit** - Used for development of on-device applications and external communication to the device. This functionality allows developers to create custom software solutions for the iT100 device as well as control of the iT100 devices from custom external software/systems.

2.2 Device Features

Features include:

- Auto Focus Cameras
- Large Iris & Face Capture Volume
- Automatic Camera Tilt
- Fast Iris and Face Recognition Speed (<1sec)
- Face Detection, Tracking, and Recognition
- Countermeasures
- User-based Authentication Mode
- Device Discovery, Authentication, and Activation
- Public Key Infrastructure (PKI) support
- Encryption Domain
- Large LCD display (7")
- On Device Operation capable through Touch Screen
- REST API
- Custom 3rd-Party App support & iT100 SDK (Android)



The iT100 is designed and developed mainly for the *Time & Attendance* market with additional physical access control capabilities.

2.3 Operation Modes

Two available modes of operation will determine the functional usage of iT100. These modes are set within the application section of the iT100 settings, under *Application*. Select the mode that will be suited to the desired operation of the device. These modes are referred to as:

- **Interactive** – Typically used for Time & Attendance, where a selection on the screen is initiated by the user prior to identity verification. The device will not attempt to perform any verification before the device selection on the screen is selected by the user.
- **Continuous** – This mode is used to allow automatic detection of a user based on proximity to the device. When within range, the device will attempt to perform a verification of the user.


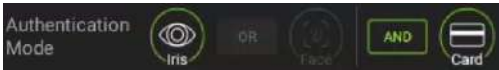


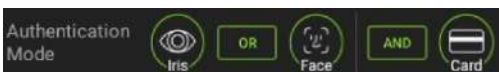

2.4 Authentication Modes





The following types of identification/verification can be selected per user when iT100 is in either interactive, or continuous mode:

- **Iris** – The user presents their open eyes to the iT100 from a distance of 20-24 inches (50-60 cm) away following the on-screen and audible feedback. Images captured are converted to secure iris templates to be matched against previously enrolled iris templates.
- **Face** – The user presents their face to the iT100 from a distance of 20-24 inches (50-60 cm) away following the on-screen and audible feedback. The face image is captured and converted to a secure face template to be matched against previously enrolled face templates.
- **Card** – The user presents a card or fob to the card reader (internal or external). The card data is read and matched to previously enrolled card data.

Note: Card modes require an attachment module which includes a card reader (ex. -AMP or -AMD) or an external card reader connected to the iT100 Wiegand Input port.

<p>Iris Only</p> 	<p>Only the user's irises will be used for matching against the list of previously enrolled iris templates. An iris biometric template match results in a successful authentication of the user.</p>
<p>Face Only</p> 	<p>Only the user's face will be used for matching against the list of previously enrolled face templates. A face biometric template match results in a successful authentication of the user.</p>
<p>Card Only</p> 	<p>The card presented to the card reader (in iT100 attachment module or external card reader) is read and the card data is matched against the list of previously enrolled cards. If matched the user's card is authorized.</p>
<p>Iris or Face</p> 	<p>If either the user's iris template(s) or their face template is matched, the user will be authenticated. This mode may be the best choice where a higher rate of matching is required and where there is a mix of users here their face or iris may be obscured or difficult to capture.</p>
<p>Iris Face Fusion Mode</p> 	<p>Fusion mode is designed to work with partially available biometric information from both modalities. Fusion mode combines iris and face biometric scores into one modal to improve the recognition accuracy. This multi-modal fusion makes the identification highly secure without sacrificing convenience (by not strictly relying on any one of the biometric modalities). Successful identification can result even if one of the modalities is poor in quality. Both biometric images are captured and are converted to templates. The match scores of these templates are calculated and if matched to a set threshold the user will be authenticated.</p>
<p>Iris and Face Mode</p> 	<p>Both the iris and face templates must match to the same user for successful authentication. This is the most secure biometric only mode.</p>

<p>Iris or Card Mode</p> 	<p>Either the user's card (to card reader) or their iris can be used for matching. If the card is presented, it is matched against the list of cards (users). If the iris image(s) are captured these are matched against the list of previously enrolled users' iris templates.</p>
<p>Iris and Card Mode</p> 	<p>The user must present both their card (to card reader) and their iris to the iT100. Both the iris and card of the same user must match for successful verification.</p>
<p>Face or Card Mode</p> 	<p>Either the user's card (to card reader) or their face can be used for matching. If the card is presented, it is matched against the list of cards (users). If the face image is captured this is matched against the list of previously enrolled users' face templates.</p>
<p>Face and Card Mode</p> 	<p>The user must present both their card (to card reader) and their face to the iT100. Both the face and card of the same user must match for successful verification.</p>
<p>Iris or Face and Card Mode</p> 	<p>The user must present either their iris or face along with their card to the iT100. Once image(s) are captured they are both converted to templates and matched against the list of previously enrolled templates of users. The user's card must also be presented and matched to the same user as the biometric. Either biometric template (iris or face) must match along with the card to the same user to be authenticated.</p>
<p>Iris Face Fusion and Card Mode</p> 	<p>The user must present their iris, face, and card to the iT100. Once image(s) are captured they are converted to templates and fusion matched against the list of previously enrolled templates of users. The user's card must also be presented and matched to the same user as the biometrics. The iris & face fusion match must be successful along with the card to the same user for authentication.</p>

<p>Iris and Face and Card Mode</p>  <p>The diagram shows 'Authentication Mode' with three icons: 'Iris', 'Face', and 'Card'. Each icon is connected to a green box containing the word 'AND', and these boxes are connected to each other, indicating that all three factors are required for authentication.</p>	<p>Iris and Face and Card mode is a 3-factor authentication mode. The user must present their iris, face, and card to the iT100. Once image(s) are captured they are both converted to templates and matched against the list of previously enrolled templates of users. The user's card must also be presented and matched to the same user as the biometrics. Both biometric templates (iris & face) must match along with the card to the same user to be authenticated.</p>
<p>Iris or Face or Card Mode</p>  <p>The diagram shows 'Authentication Mode' with three icons: 'Iris', 'Face', and 'Card'. Each icon is connected to a green box containing the word 'OR', and these boxes are connected to each other, indicating that any one of the factors can be used for authentication.</p>	<p>The user can present either their iris, their face, or their card to the iT100. The user's face or iris biometric can be presented and matched or their card alone can be matched for authentication.</p>
<p>Iris Face Fusion or Card Mode</p>  <p>The diagram shows 'Authentication Mode' with three icons: 'Iris', 'Face', and 'Card'. 'Iris' and 'Face' are connected to a green box containing the word 'FUSION'. This 'FUSION' box and the 'Card' icon are connected to a green box containing the word 'OR', indicating that either the fusion of iris and face or the card alone can be used for authentication.</p>	<p>The user must present their iris and face or their card to the iT100. Once image(s) are captured they are converted to templates and fusion matched against the list of previously enrolled templates of users. Or the user's card alone can be presented and matched. The iris & face fusion match must be successful or just the card for authentication.</p>
<p>Iris and Face or Card Mode</p>  <p>The diagram shows 'Authentication Mode' with three icons: 'Iris', 'Face', and 'Card'. 'Iris' and 'Face' are connected to a green box containing the word 'AND'. This 'AND' box and the 'Card' icon are connected to a green box containing the word 'OR', indicating that either both iris and face or the card alone can be used for authentication.</p>	<p>The user must present their iris and face, or their card to the iT100. Once both image(s) are captured they are converted to templates and matched against the list of previously enrolled templates of users. Or the user's card alone can be presented and matched. The iris & face match must be successful or just the card for authentication.</p>

3. Equipment Requirements

Included with iT100 are several necessary components required for installation and usage. Depending on the overall model package, additional items may be included.

3.1 Items included with all iT100 models.

- iT100 Camera unit
- Surface Mount Bracket
- Connector Cables
 - Power Input
 - Power Output
 - Relay
 - Serial
 - Wiegand
 - GPIO & Audio
 - Ethernet RJ45 Keystone Jack
- Scotchlok™ connectors (for optional direct Ethernet wire connection)
- Security Torx™ (T10H) L wrench (for opening the unit)
- QR_Guide – Insert with links to the Quick Start Guide and other information.

3.2 Additional items included with iT100-Axx model packages.

The iT100-AMC, iT100-AMX, iT100-AMD, iT100-AMP, and iT100-AMT models included:

- iT1-PWB = 12 VDC, 2.0 Amp, 24-Watt power supply with barrel connector.

Note: The iT1-PWB power supply is designed for use only with an iT100 which has an attachment module. This power supply model is a direct plug-in power supply (wall wart) with a barrel connector which plugs into the connector on the bottom of the iT100 attachment module. It is expected that this power supply will be used where an AC Mains power outlet is located within 5' (152 cm) of the iT100-Axx device's installation location. Extending the wire length of this power adapter may result in a low voltage condition at the device. If it is expected that a longer wire length, hidden power connection, or a direct wired power supply is required then an alternate power supply should be sourced and used.

3.3 Items not included.

The installation requirements and usage of the iT100 will determine if additional wiring and/or additional equipment is needed.

- Stand-alone operation: Only power to the iT100 is required.
 - Ethernet and other wiring optional.
 - If Ethernet wiring is used, then PoE (Power Over Ethernet) option is available instead of dedicated power wiring. See POE [section 5.3.3](#) for details.
- iTMS or external systems: Power and Ethernet are required.
 - Ethernet wiring allows for PoE (Power Over Ethernet) option instead of dedicated power wiring. See POE [section 5.3.3](#) for details.
 - Other wiring for relay, etc. is optional.

Power Supply

- **Minimum 12 VDC ± 10% / Maximum 24VDC ± 10%**
- **Minimum 24-Watt output capability (12VDC @ 2Amp or 24VDC @ 1Amp)**
- Battery backed up power supply (strongly recommended)

Note: For short distance installations (ex. Enrollment Station, Kiosk, ATM, etc.) a 12VDC power supply may be included or is available for purchase from Iris ID (see accessories). Any modification to the Iris ID power supply is not recommended. For wire distance beyond 5' (152 cm) it is recommended to use a 24VDC power supply or POE option. See [section 5.3](#) of this document.

Network

- Ethernet Wiring - CAT5e Ethernet Cabling or better
- Ethernet Switch – 100Mbps or better
OR
- Ethernet Switch with POE – If Power over Ethernet to the iT100 is desired. See POE [section 5.3.3](#) for details.
 - iT100 with Attachment Module iT1-AMX, -AMD, or -AMP.
OR
 - POE Splitter/Combiner Pair
OR
 - POE Power Converter (to 24VDC or 12VDC)

Software

- iT100 Software is built-in by default. (Software upgrade may be required)
- iTMS software or iT100 SDK optional.

Computer

- Computer required for the initial iT100 software upgrade and/or if iTMS will be used.
- Minimum Computer Specification: based on the operating system used, refer to appropriate OS guides for the minimum computer hardware specifications.
- Operating System:
 - Windows: Window 10 (32 or 64 Bit) or Server 2016 or higher
OR
 - MAC OS: macOS v10.10 (Yosemite) or higher
OR
 - Linux: RHEL v7.x and higher or Ubuntu v16.04 or higher

4. iT100 Hardware Information

The iT100 series contains a 5MP CMOS face camera, a front panel multi-color LED status indicator, voice/sound prompt indication, and internal motorized tilt adjustment.

4.1 iT100 Series - General Specifications:

Features

Dimension (W x H x D)	180mm x 137mm x 30mm (7.08" x 5.39" x 1.18")	
Weight	543g (1.2lbs)	
Type	Walk-up	
Technology	OneCAM™ Technology for Iris capturing	
Power Input / Consumption	12 - 24 VDC (auto - +/- 500 mv ripple voltage industry standard) / Max. 30watt	
OS	Android OS v7.1	
User Interface	Self-guidance with displayed images on device LCD	
Operation	Enrollment, Recognition, Capturing (image or template) Iris Only, Face Only, Iris+Face, Iris or Face, Iris+Face Fusion	
User Capacity	Up to 10,000 users	
	Recognition Mode	User Capacity
	Iris AND Face Iris + Face Fusion Iris Only	10,000
	Iris OR Face Face Only	500 (v1.xx s/w) or 10,000 (v2.xx s/w)
	Note: Any organization that has more than 500 users is suggested to use higher accuracy recognition modes: Iris AND Face, Iris + Face Fusion, and Iris Only.	
Transactions	Log transferring to Server (iTMS or REST API) after operation. Number of transaction logs on device DB: 1,000,000 (100,000 with FaceAudit)	
Encryption	AES256	
Matching Speed	Less than 1 second	
Languages	Supports multiple languages: Arabic, Chinese (traditional & simplified), English (default), French, German, Italian, Japanese, Korean, Spanish, and Turkish.	
Tilt	Motorized/Auto (Range: -25 ~ +25 Degree)	
CPU	ARM Cortex A-53 Octa Core	
Memory	RAM: 2GB, Flash: 16GB	
Tamper	Physical switch detecting iT100 from backplate	
Algorithm	IrisCapture / DualEyeInfo™ / Countermeasure & Lens detection	
Real Time Clock	Rechargeable battery	
Capture activation	Touch Screen, TOF Proximity detection	

Connectivity	Ethernet or Wi-Fi (optional)
Certifications	CE, FCC, KC, Eye Safety, UL294, CAN/CSA C22.2
Temperature / Humidity	Operating: 0 ~ 45°C (32 ~ 113°F) Storage: -20 ~ 90°C (-4 ~ 194°F) / 90% uncondensed


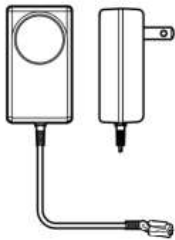
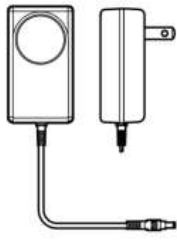
Optics

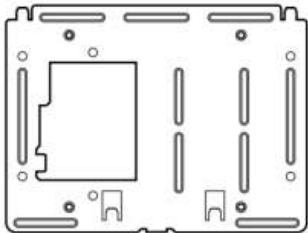
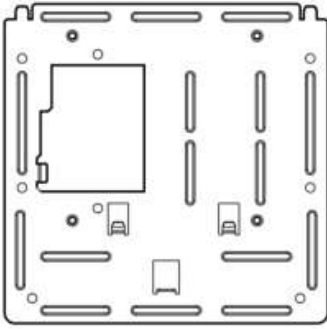
Distance Sensing	Dual Sensors for high accuracy
Iris / Face Camera	5MP B/W CMOS image Sensor / 5MP Color CMOS image Sensor
Image Resolution	ISO Compliant
Auto Focus	Iris Camera: Auto Focus Face Camera: Auto Focus
Output Image / Template	Iris Template: 512 Bytes per eye, Face Template 2,121 bytes Face Image (Preview): 480 x 640 Face Image (Streaming): 720x1280 Face Image (Capture Mode): 480x640, 960x1280, 1920x2560
Iris Capture IR LED	ANSI ISO Eye Safety certified (IEC 62471)
Iris Capture Operating Range	Iris Camera 30cm ~ 60cm (12" ~ 24")
Face Camera Operating Range	Face Camera 30cm ~ 80cm (12" ~ 30"max)



External Interfaces

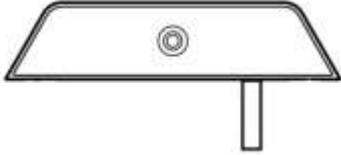
Serial	RS232 or RS485
Relay	1 Dry Contact – Normally Open and Normally Closed contacts
GPIO	2 configurable GPIOs – Active High or Low. Used for Egress, Fire Alert, Door Status, and available to application developer using the iT100 SDK.
USB	USB 2.0 Host for upload/download
Network	Wired Ethernet via Dongle, direct wiring, or optional Attachment Module. CAT5e or better. Wireless (Wi-Fi) available using optional attachment module.
Wiegand	Wiegand In/Out (up to 200 bits via pass through, up to 64-bits standard and custom Wiegand formats supported)
Speaker	Internal 27x20mm, 89dB at 1 meter. External line level audio output available via connector.

4.2 Accessories – Optional (Purchase Separately)

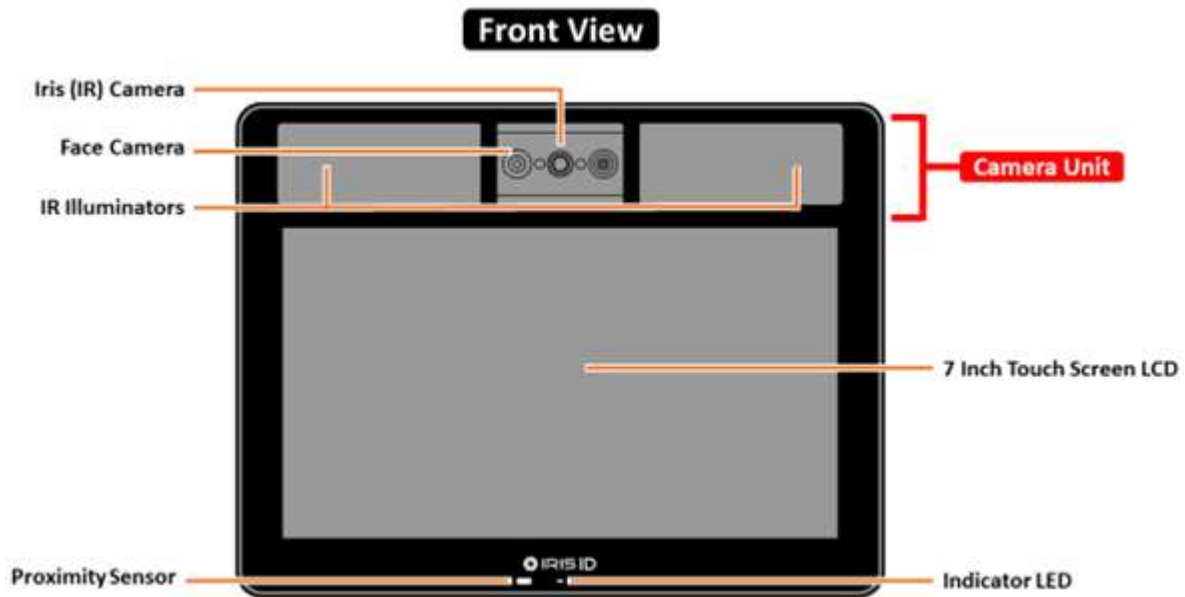
Power Adapters			
			
Part #	iT1-PWR	iT1-PWM	iT1-PWB
Input	100VAC~240VAC (50Hz~60Hz) @ 1.2A	100VAC~240VAC (50Hz~60Hz) @ 0.8A	100VAC~240VAC (50Hz~60Hz) @ 0.8A
Output	12VDC @ 2.5AMP (30 Watts)	12VDC @ 2.5 AMP (30 WATT)	12VDC @ 2.5 AMP (30 WATT)
Connector In	IEC C14 type receptacle. (Use with mains power cord with IEC C13 “kettle lead” or “PC type” plug).	NEMA 1-15 blade plug.	NEMA 1-15 blade plug.
Connector Out	2-pin iT100 power connector. The attached 152cm (60”) wire terminates in the 2-pin power connector for use with the iT100.	2-pin iT100 power connector. The attached 152cm (60”) wire terminates in the 2-pin power connector for use with the iT100.	Round barrel type power plug. For use with iT1 attachment modules. The attached 152cm (60”) wire terminates in a barrel type plug.
Style	Brick	Wall Wart	Wall Wart
Note	<i>Note: These power supplies are intended only for application where the wire distance from the power adapter to the iT100 does not exceed 152cm (60” or 5’).</i>		

Mounting Plates	
	
S (small)	iT1-LPT (large)
For iT100 devices without attachment modules. (Included with model iT100)	For iT100 devices with attachment modules (Included with model iT100-Axx)

Attachment Modules			
			
iT1-AMD	iT1-AMP	iT1-AMC	iT1-AMX
<ul style="list-style-type: none"> - DESFire/MiFARE Card Reader. - Wi-Fi Adapter. - Internal & External RJ45 Ethernet Jack. - Power Over Ethernet adapter. - External “barrel” type power jack. - External USB passthrough. 	<ul style="list-style-type: none"> - Prox (125KHz) Card Reader. - Wi-Fi Adapter. - Internal & External RJ45 Ethernet Jack. - Power Over Ethernet adapter. - External “barrel” type power jack. - External USB passthrough. 	<ul style="list-style-type: none"> - Internal & External RJ45 Ethernet Jack. - External “barrel” type power jack. - External USB passthrough. 	<ul style="list-style-type: none"> - Wi-Fi Adapter. - Internal & External RJ45 Ethernet Jack. - Power Over Ethernet adapter. - External “barrel” type power jack. - External USB passthrough.

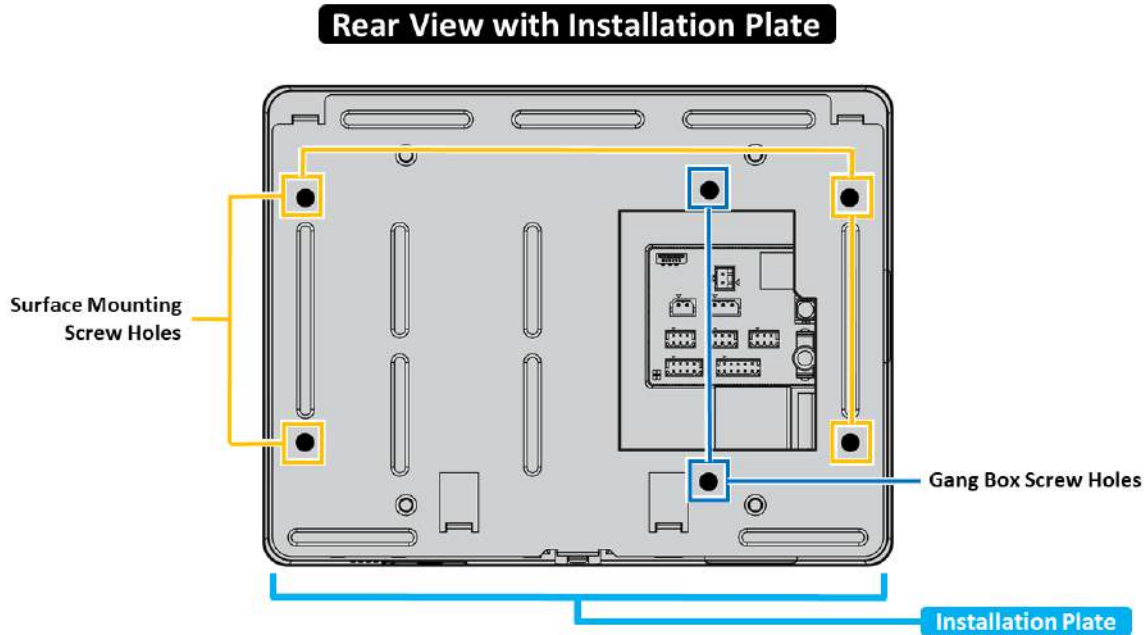
Thermal Camera Module

iT1-THM
<p>Thermal Camera Module which connects to iT100 device. Provides a measure of the user’s approximate body temperature.</p>

4.3 iT100 - Front View



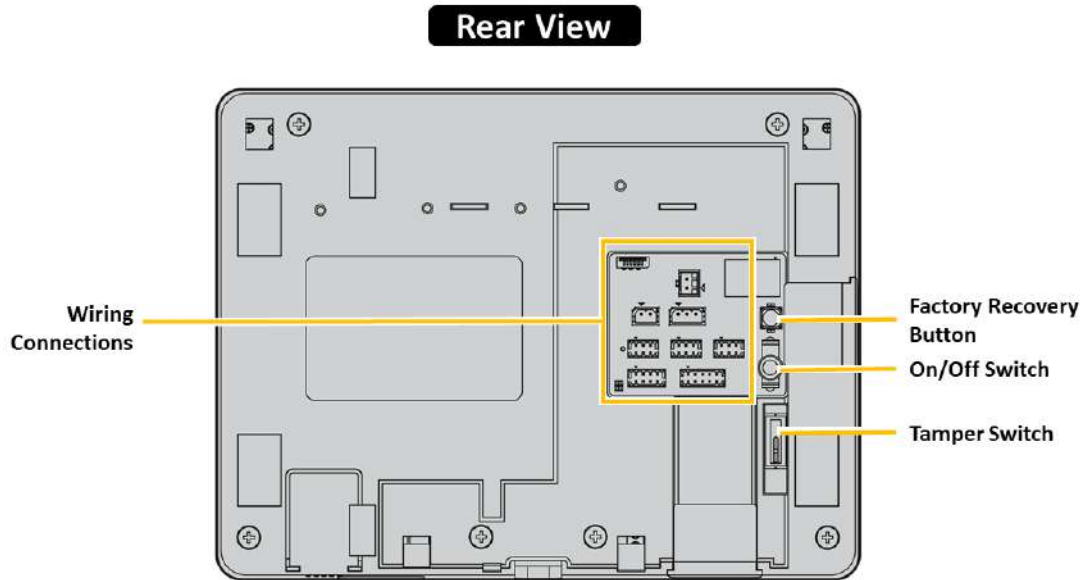
- **Camera Unit**
 - **Iris (IR) Camera** – Camera for iris image capture.
 - **IR Illuminators** – Infrared illumination for iris image enhancement.
 - **Face Camera** – 5 Megapixel color camera for face image capture.
- **Proximity Sensor** – Detects the presence of a user within a fixed distance from the iT100. The proximity sensor is primarily used to activate the capture/camera when set to automatic mode.
- **7 Inch Touch Screen LCD** – LCD touch screen panel– 1024 x 600-pixel resolution
- **Indicator LED** – Tri-Color LED indicating status.
 - Blue = Power on.
 - Amber = Booting up – device busy.
 - Green = User identification / verification is successfully.
 - Red = User identification / verification has failed.

4.4 iT100 - Rear View with Installation Plate



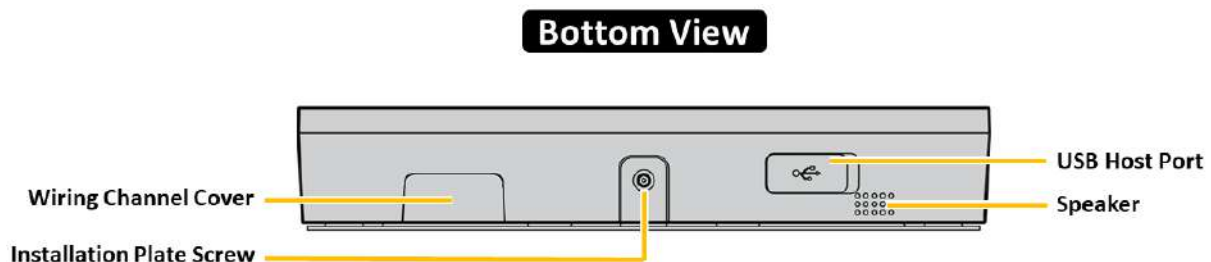
- **Installation Plate** – A removable metal plate which attaches to the back of the iT100. Typically used to perform surface mount installations by connecting the iT100 to the desired installation surface.
- **Surface Mounting Screw Holes** – for screws to connect the back plate to the surface material in which the iT100 is to be attached.
- **Gang Box Screw Hole** – Screw hole positions allowing for a unit to be directly connected/mounted onto a typical electrical gang box for installation.

4.5 iT100 - Rear View (Installation Plate Removed)



- **Wiring Connections** – Ports for connecting power, Ethernet, and other wire connections to the iT100.
- **Factory Recovery (Reset) Button** – Resets the iT100 to default settings and reinstalls the last version of software which was installed/updated. All settings and information contained within the unit are removed during this process. To perform this reset, turn Off the On/Off power switch to the device. Press and hold the Factory Reset Button in while toggling the power On/Off switch to the On position. Continue to hold for at least 10 seconds.
- **On/Off Switch** – Unit Power Switch. Toggle the switch up to power on, and down to power off the device.
- **Tamper Switch** – This switch will detect if the iT100 device is removed from the mounting (installation) back plate. When tampered, the device will stop functioning, and will record that the device has been tampered.

4.6 iT100 - Bottom View



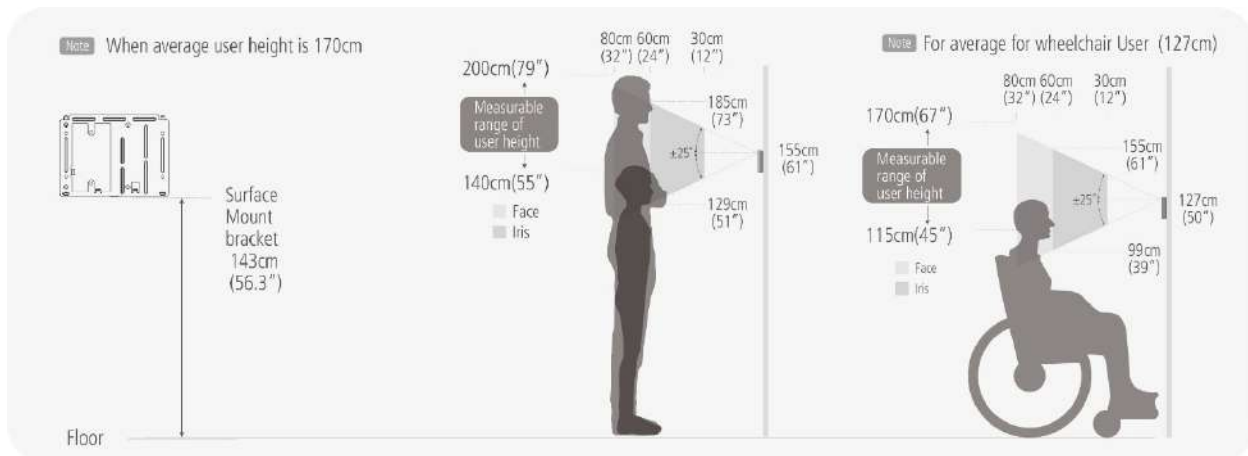
- **Installation Plate Screw** -Captive security Torx™ T-10 screw for securing the iT100 to the back plate.
- **Wiring Channel Cover** – A removable plastic cover to allow for the channeling of wires out from the bottom of the iT100. Used in installations where no space of wiring is available from the rear of the unit.
Note: A similar channel cover is also available on the left side of the iT100.
- **USB Host Port** – Universal Serial Bus 2.0 port.
- **Speaker** – Provides audible device sounds.

5. Installation Guidelines

Before installing your iT100 camera unit, review the recommended installation guidelines. These guidelines provide information on the recommended mounting information, general wiring information, and electrical/current requirements.

5.1 Mounting Height and Environment Considerations

Mounting Height:



The recommended mounting height of the iT100 can vary based on the average height of the user base. The cameras inside of the iT100 automatically pivot up or down 25° each way from the center position to accommodate the user.

- For the average user height of 170cm (5' 7" or 67") the iT100 should be mounted at a height of 143cm (56.3") from the floor to the bottom of the unit. This mounting height has the center of the iT100 camera module at 155cm (61").

- This mounting height will accommodate users who are between 140cm (4' 7" or 55") tall up to 200cm (6' 7" or 79") tall. Users taller than 200cm (6' 7" or 79") can also use the iT100 but will need to adjust the angle of their head to look down at the camera module.
- To accommodate users who are in a wheelchair or with a height lower than 140cm (4' 7") the iT100 could be mounted at a height of 115cm (45 ¼") from the floor to the bottom of the unit. This mounting height positions the center of the iT100 camera module at 127cm (50").
 - This mounting height will accommodate users where the top of their head will be at a height of 170cm (5' 7" or 67") down to 115cm (3' ¾" or 36.75").

Environment Considerations:

- 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 iT100 and result in increased "failure to acquire" rate.
- The iT100 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 device from exposure to dust, moisture, and extreme temperatures. Installation in an extreme environment without proper protection may cause permanent damage and void the warranty. Please refer to the Iris ID support knowledgebase for more information.

5.2 Mounting Options

Several options for mounting the iT100 are available. These include:

- Surface Mount with the included mounting/back plate (with or without gang box)

Additional information on mounting and installation options can be found in the [Physical Installation](#) section of this document.

5.3 General Wiring and Power Supply Requirements

The installation requirements and usage of the iT100 will determine if additional wiring and/or additional equipment is needed.

- Stand-alone operation: Only power to the iT100 is required.
 - Ethernet and other wiring optional.
 - If Ethernet wiring is used, then PoE (Power Over Ethernet) option is available instead of dedicated power wiring. See POE [section 5.3.3](#) for details.
- iTMS or external systems: Power and Ethernet is required.
 - Ethernet wiring allows for PoE (Power Over Ethernet) option instead of dedicated power wiring. See POE [section 5.3.3](#) for details.
 - Other wiring for relay, etc. is optional.

5.3.1 Power Supply and Wiring:

- **Minimum 12 VDC ± 10% / Maximum 24VDC ± 10%**
- **Minimum 24-Watt output capability (12VDC @ 2Amp or 24VDC @ 1Amp)**

Note: For short distance installations (ex. Enrollment Station, Kiosk, ATM, etc.) a 12VDC power supply may be included or is available for purchase from Iris ID (see accessories). Any modification to the Iris ID power supply is not recommended. For wire distance beyond 5' (152 cm) it is recommended to use a 24VDC power supply or POE option.

- Must comply with IEC 60950-1 standard marked Class 2, Limited Power Source (LPS).
- A shared power supply can be used if the minimum amperage rating of the supply is more than the minimum required combined amperage for all connected iT100 units. For example: Three iT100 units connected, then minimum amperage rating of power supply must be 3 AMPS or 72 Watts (24VDC @ 3AMPS = 72 Watts).
- “Daisy Chain” of power from one iT100 device to another should not be done. This will result in low power to iT100 devices further from the power supply.

Note: The acceptable power supply input to the iT100 can be between 12VDC to 24VDC. A 12VDC @ 2AMP power supply can be used if the wire distance and gauge wire used does not cause a voltage drop of more than 10% (1.2VDC). For Example: 12VDC @ 2AMP power supply with 1mm (18AWG) wire allows for maximum wire distance of 13.7m (45').

IMPORTANT: THE CORRECT AMOUNT OF POWER MUST BE SUPPLIED TO THIS UNIT. ANY OVER OR UNDER VOLTAGE APPLIED TO THIS PRODUCT MAY CAUSE PERMANENT DAMAGE AND VOID THE WARRANTY.

- Battery backup for the iT100 power supply is strongly recommended.

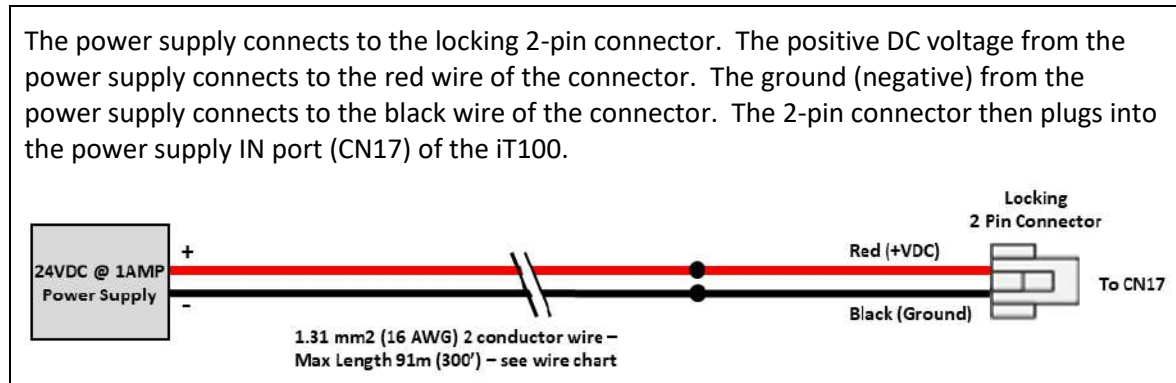
Wiring from the Power Supply to the iT100

The wire gauge, wire material, and supply voltage/amperage determine the maximum wire length allowed while still maintaining the minimum voltage required by the iT100. Listed below is the maximum wire distances based on the wire gauge and power supply used. It is always recommended to keep the wire distance 10% shorter than this maximum length to assure proper voltage at the iT100. This chart is based on the wire material being copper.

Wire Gauge (AWG)	Wire Section (mm ²)	Maximum Wire Distance: meters (feet) Vs. Power Supply Rating	
		24VDC @ 1 AMP = 24W	12VDC @ 2 AMP = 24W
16	1.31	91m (300')	22m (75')
18	0.82	57m (187')	14m (47')
20	0.52	36m (120')	9m (30')
22	0.32	24m (81')	6m (20')
24	0.20	14m (46')	3m (11')

***DISCLAIMER:** The wire distances and voltage drop calculations shown here are for general reference only. Changes in the wire gauge or material will affect the voltage drop calculation shown above. Please refer to industry standard methods for voltage drop calculations (wire

length and materials) that are required at the installation location. Refer to local safety and electrical codes for all installation requirements.



5.3.2 Ethernet Network Wiring

*** Note:** Ethernet wiring is not required when using the iT100 in stand-alone mode (although recommended for easier maintenance and software upgrades). Ethernet wiring to the iT100 is required when used with the iTMS Software and of course if POE is desired.

Wiring is needed for connection to a network switch for communication.

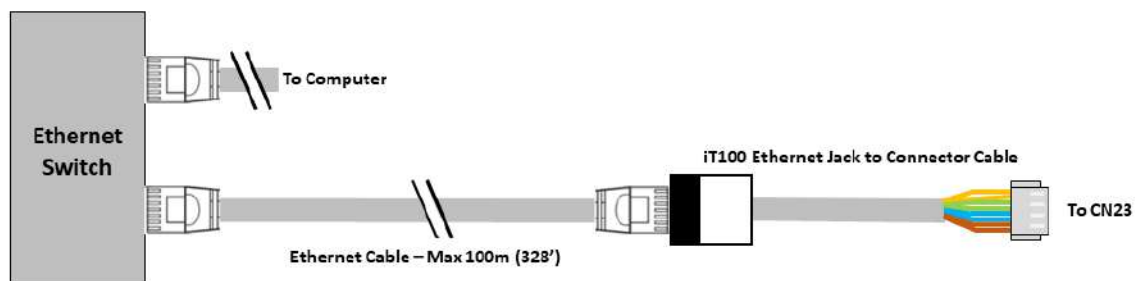
- Cable Type: CAT5e Cable or better - 8 conductor twisted pairs.
- Typically, the network cable is terminated with RJ-45 connectors.
- Direct splice to the iT100 Ethernet connector is also supported when wiring space is limited.
- Maximum Length: 100 meters (328 feet) between network devices.

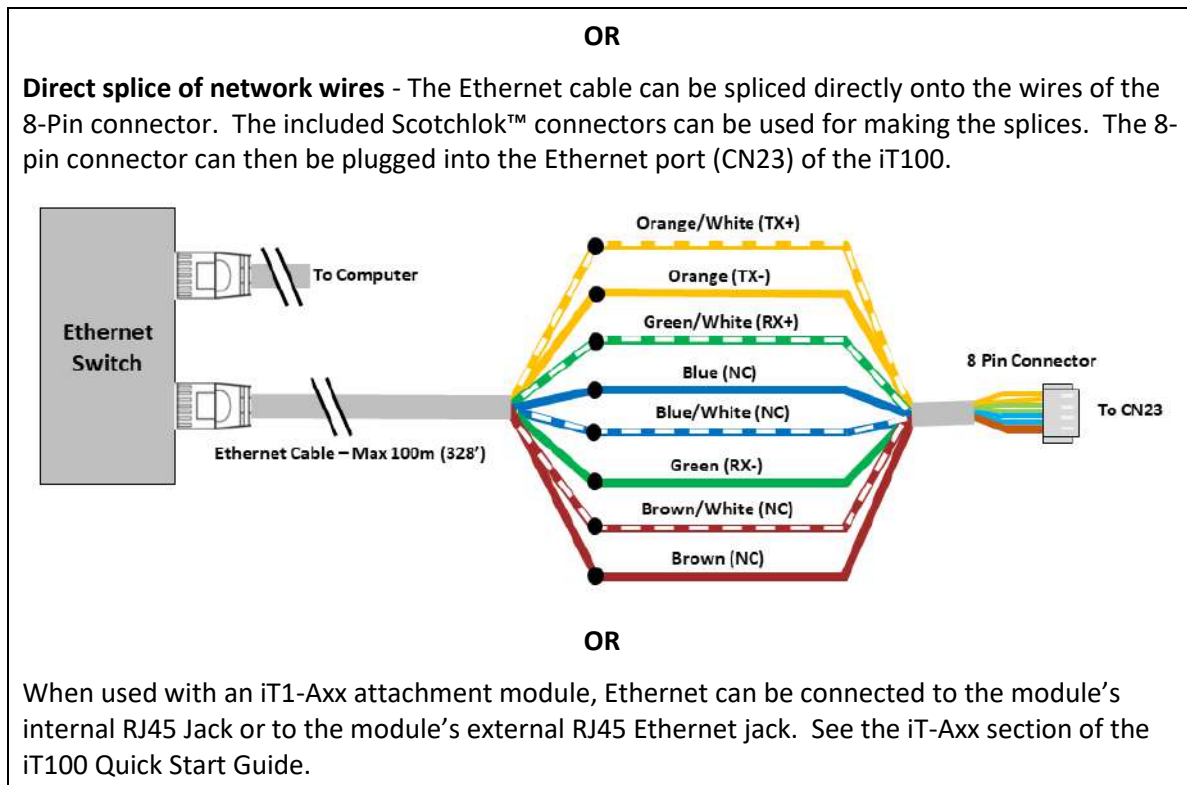
*** Note:** For systems consisting of only the iT100 and a computer, an Ethernet cross-over cable may be used.

IMPORTANT: MAXIMUM CAT-5e CABLE LENGTH MUST NOT EXCEED IEEE STANDARDS OF 100m (328')

Ethernet can connect to the iT100 several ways:

Ethernet Keystone Jack connector - The RJ45 terminated cable from the network switch plugs into the included iT100 Ethernet Jack to connector cable (a.k.a. Ethernet dongle). The 8-pin connector of this cable then plugs into the Ethernet port (CN23) of the iT100.





5.3.3 Power Over Ethernet (POE) Options:

Instead of requiring both an Ethernet and Power cable for each iT100, a Power Over Ethernet (POE) solution can be used.

Note: When using Power Over Ethernet through the optional iT100 attachment modules or by using a POE power converter, a POE+ or POE++ network switch should be used. Each iT100 typically requires 24 Watts of power for proper operation. The number of iT100 devices a network switch can support depends on the overall POE output wattage that the switch is rated for, and the overall load of devices being powered by the network switch.

There are 3 options to power the iT100 over the Ethernet wire.

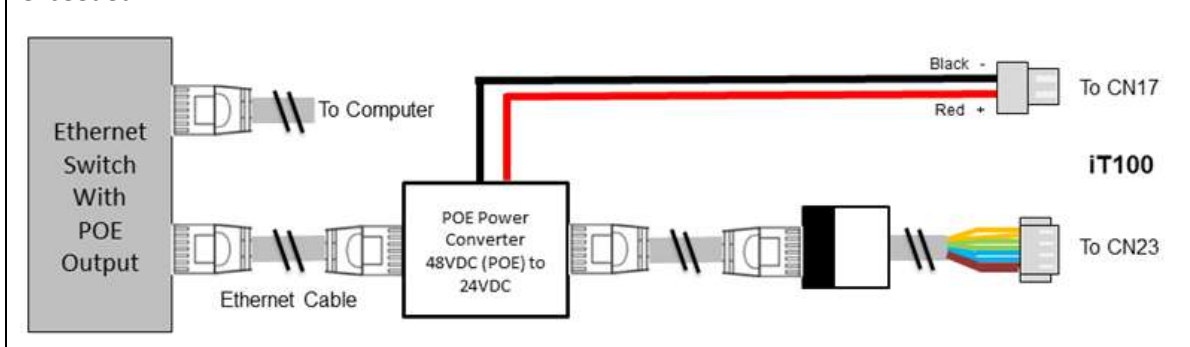
POE+ Switch to optional iT100 attachment module:

The iT100 base model does not have native POE support. However, the iT1-AMX, iT1-AMD, iT1-AMP, or iT1-AMT attachment modules add POE capability through either the external or internally connected RJ45 jack on the module. The POE source can be a POE+ or POE++ switch or an external power source injected onto the Ethernet wire through a POE injector.



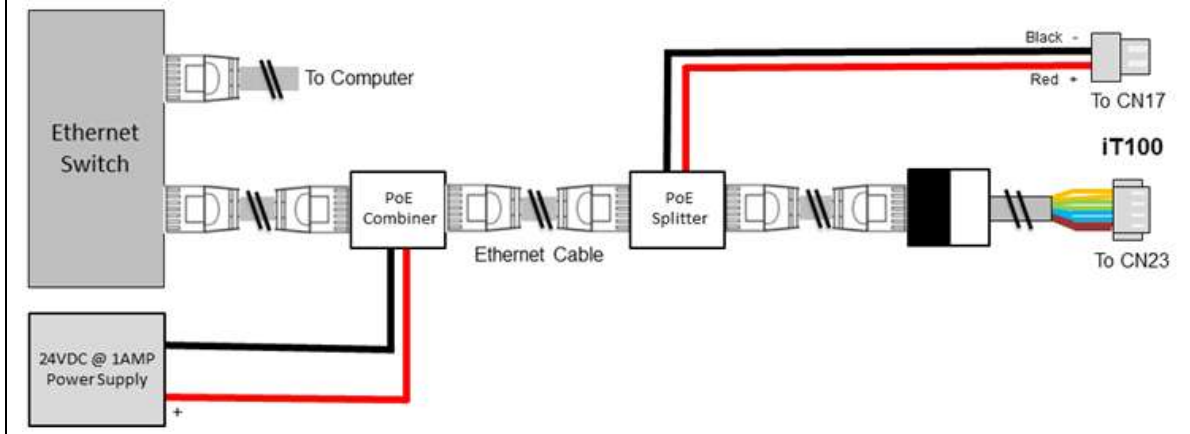
POE+ Switch and Power Convertor:

The power supplied by the POE+ Ethernet Switch is sent over the Ethernet cable to the location of the iT100. This POE power is typically 48VDC and must first be down converted to the 24VDC used by the iT100. A class 4 or better POE (POE+ or POE++) Ethernet switch is required to be able to supply the required 24 Watts of power to the iT100. If multiple iT100s are to be powered by the POE switch, it is important that the overall wattage capability of the POE switch is not exceeded.



POE and Power Supply Splitter/Combiner:

A POE Combiner adds the 24VDC from an external power supply to the unused wire pairs of the Ethernet cable. The POE Splitter then takes the 24VDC from the Ethernet cable and breaks this out to the separate Ethernet signal and power wires into the iT100. This is the lowest cost POE solution because a standard Ethernet switch is used, and the POE splitter and combiners are inexpensive.



5.3.4 Other Wiring from iT100:

Depending on the requirement of the installation, additional wiring to the iT100 may be necessary. The following are the optional inputs and outputs of the iT100 to external devices and components.

Relay Wiring (Light or Door Control):

- 1.31mm²(16 AWG) Stranded Copper Wire or better.
- 3 conductors if Commonly Opened, Commonly Closed, and the Common are all used.
- Relay wiring requirements are determined by the device/system that the relay is switching.
- Maximum Length: 152 Meters (500 Feet).

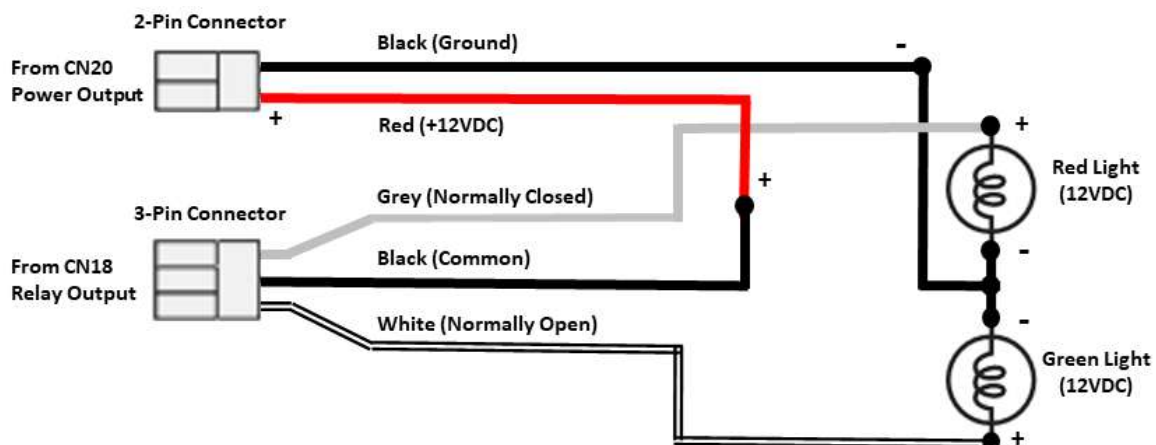
The relay of the iT100 will change states (activate) upon the successful identification/verification of a user. The duration that the relay will activate can be set in the iT100 Settings – Application screen.

- Relay is dry contact type (does not provide power)
- The maximum power rating of the relay is 72 Watts (3 Amps @ 24 VDC).

The relay is wired through a 3-pin connector which has Grey, Black, and White wires. This connector plugs into port CN18 on the back of the iT100.

Relay Controlling Lights

An example used for the relay is to control external lights (red and green) to provide visual indication when identification is successful. In this diagram, power is provided by the iT100 12VDC power output (CN20). When the iT100 is not used or if a user fails to be identified, the red light remains lit. If a user successfully identifies, the relay changes states causing the red light to turn off, and the green light to turn on for the duration set for the relay.



Relay Controlling Door

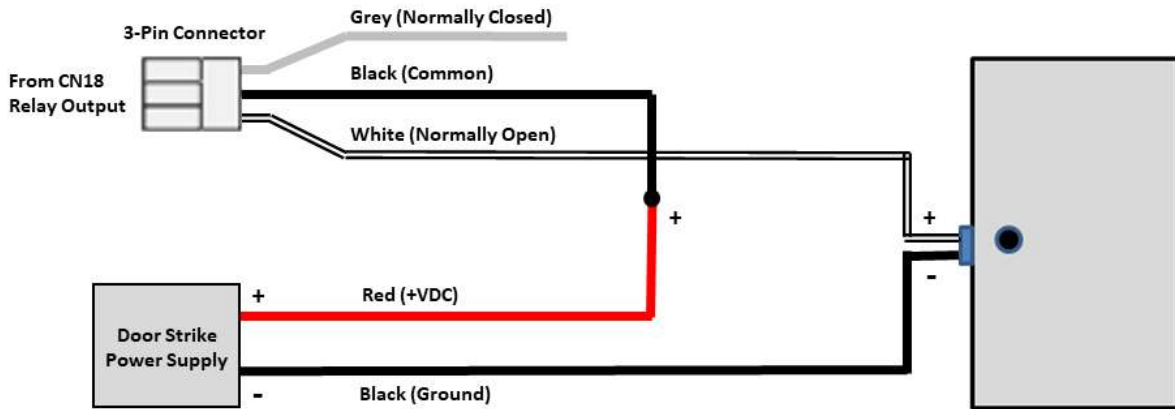
Disclaimer: Using the iT100 relay for controlling Door access should only be considered for low security applications. Implementation of the relay for door control may be a violation of UL294 or similar certification compliance.

Warning: In the wiring diagram below, power for the door circuit is provided by a separate power supply. The power output of the iT100 (CN20) is not designed to power door control circuits such as door strikes or magnetic locks. For these types of applications, a separate external power supply must be used.

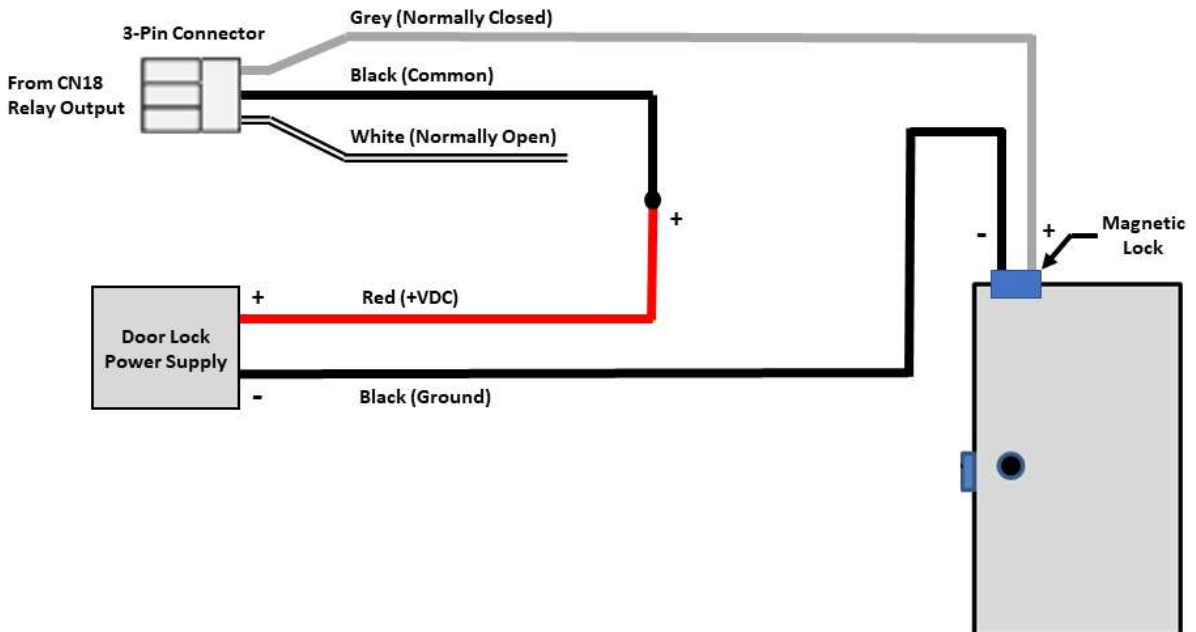
When the iT100 is not used, or if a user fails to be identified, the door strike is locked. If a user

successfully identifies, the relay changes states unlocking the door for the duration set.

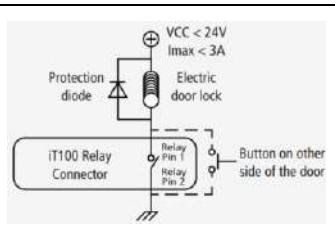
Door Strike Wiring (Normally Open)



Magnetic Lock Wiring (Normally Closed)



Inductive load management requires a protective diode to be installed parallel across the electric door strike. This protection diode will help to prolong the life of the relay contacts in the iT100.



Wiegand Wiring (to Access Control Devices):

- 1.31mm²(16 AWG) Stranded Copper Wire or better.

- 3 Conductors (Data 1, Data 0, Ground) for Wiegand Input (from external Prox card reader).
- 3 Conductors (Data 1, Data 0, Ground) for Wiegand Output (to Access Control panel).
- Maximum Length: 152 Meters (500 Feet).

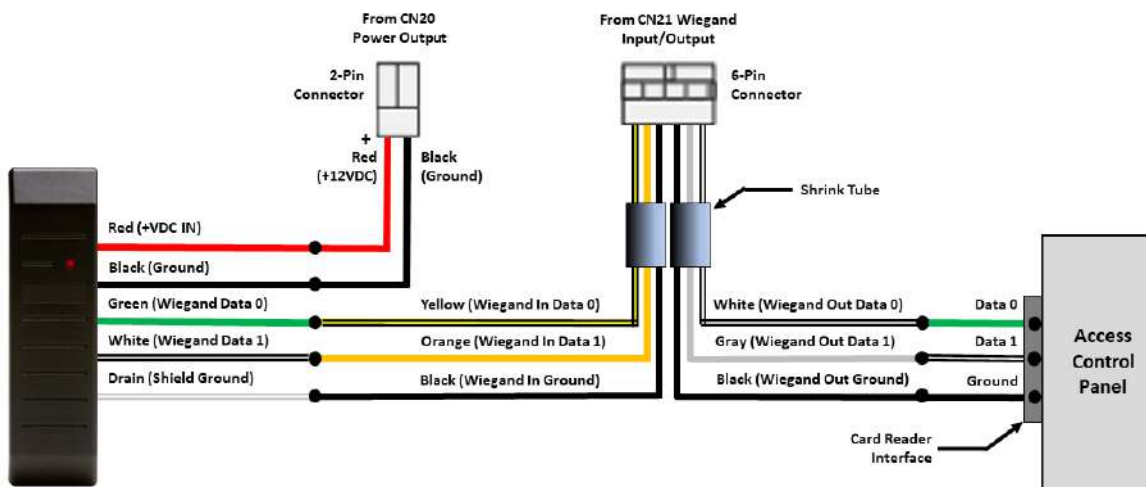
Wiegand Input and Output is provided through port CN21 on the back of the iT100 from a 6-pin connector.

Wiegand Input – Can allow for connection of a Wiegand card reader to the iT100. The card reader will allow for verification recognition modes as well as provide an easier method to enter the users' card data during enrollment.

- Wiegand Input: Yellow (Data 0), Orange (Data 1), and Black (Ground) wires.
- Power to the card reader is provided by the iT100 12VDC power output (CN20).

Wiegand Output - Provides the user's card data to an access control system for permission-based control of users' entry.

- Wiegand Output: White (Data 0), Grey (Data 1), and Black (Ground) wires.
- Wiegand Output is to be connected to the Card Reader Interface of the Access Control Panel.



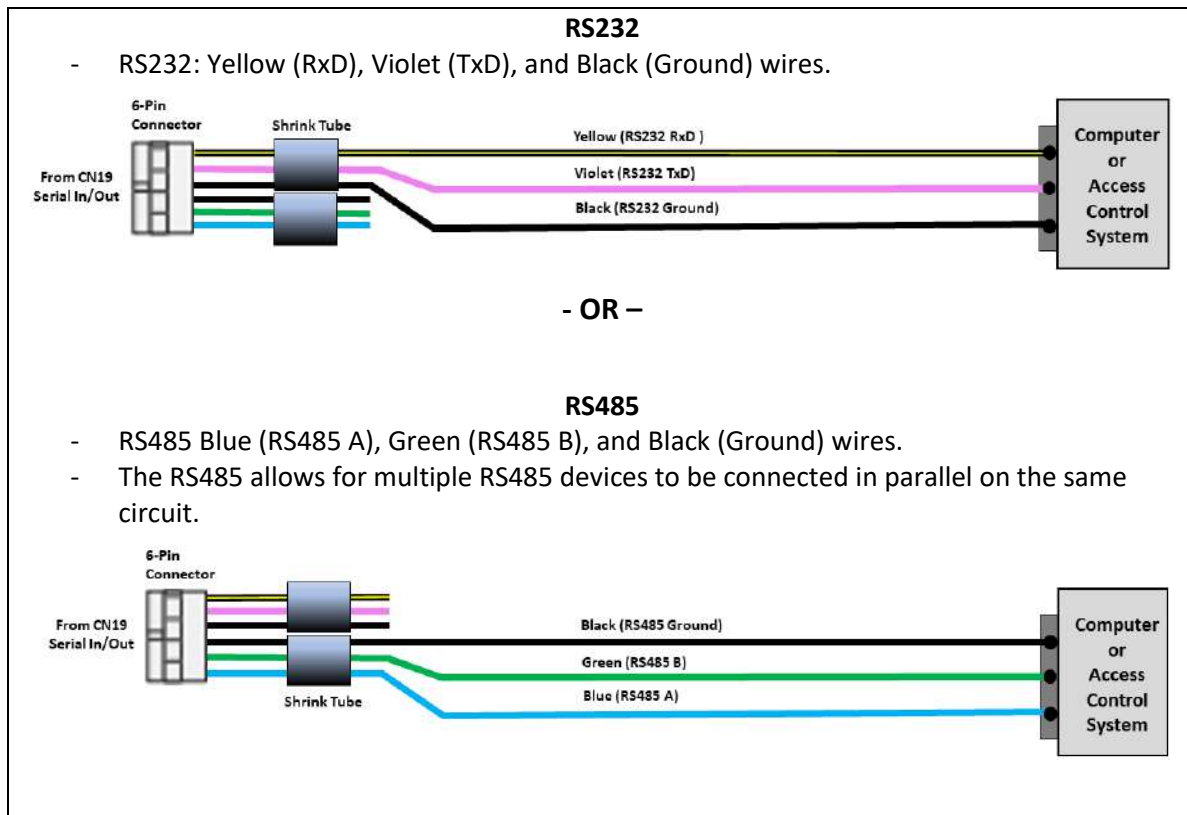
Note: Diagram shows connection of a HID Prox Pro card reader, wire color and function may differ with other card readers. Refer to the documentation of the card reader used for wiring details.

Serial Port wiring:

Note: Serial communication may not be an available option in the iT100 software version provided.

- 22 AWG (0 .33mm²) Solid Copper – Twisted Pair Wire or better.
- 3 Conductors - RS485: A, B, Ground or RS232: RxD, TxD, Ground.
- Maximum Length (RS485): 300 Meters (1000 feet)
- Maximum Length (RS232): 7.5 Meters (25 feet)

Serial communications from the iT100 to external devices and systems can be provided through port CN19 and wiring to the corresponding 6-Pin connector, allowing for either RS232 or RS485.



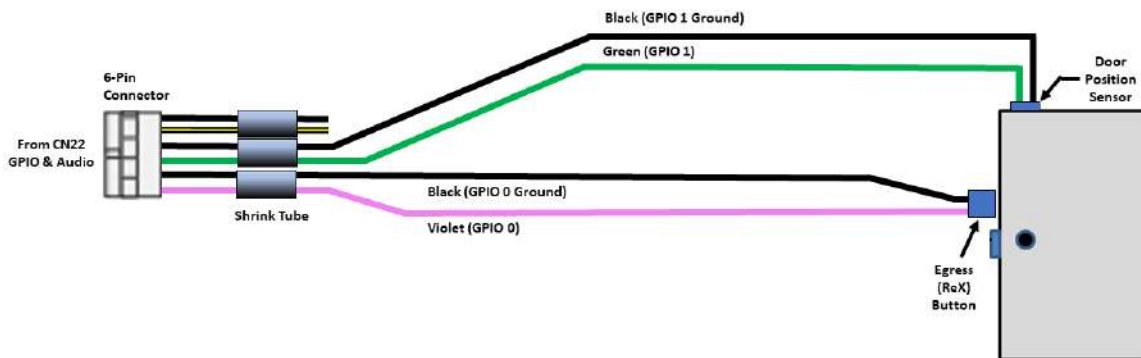
GPIO (General Purpose Input/Output) wiring:

- 16 AWG (1.31mm²) Stranded Copper Wire or better.
- 2 Conductors per GPIO (2 available) - Input, Ground.
- Maximum Length: 60 Meters (190 Feet).

Two General Purpose Input/Outputs (GPIO) are available on the iT100. The GPIO are provided through the 6-pin connector which plugs into port CN22 on the back of the iT100.

The function of the GPI is selectable between Egress (ReX – Request to Exit), Door Status, or Disabled (no GPI function). The GPIO function can also be defined in a custom software application developed using the iT100 SDK.

- GPIO 0: Violet (GPIO 0) and Black wire (GPIO 0 Ground).
- GPIO 1: Green (GPIO 1) and Black wire (GPIO 1 Ground).



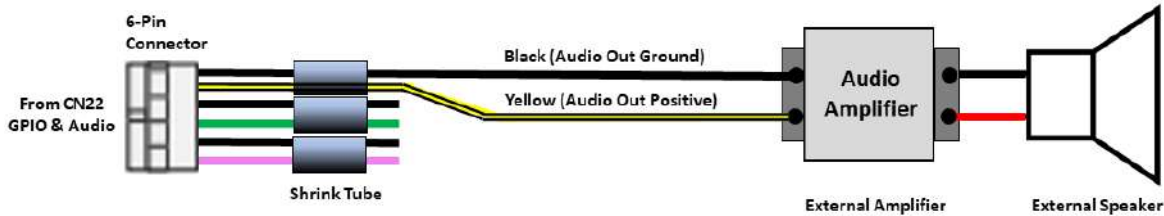
Note: This diagram shows GPI 0 being used for Egress and GPI 1 used for Door Status. The Egress button and door position sensor are placed on the inside of the door (within protected area).

Audio Output (External Speaker) wiring:

- 22 AWG (0.33mm²) Stranded Copper – Shielded Wire or better.
- 2 Conductor – Audio Line Out +, Audio Line Out –
- Maximum Length: 3 Meters (10 Feet).


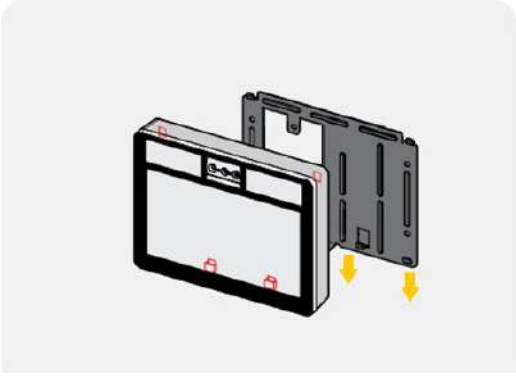
Audio from the iT100 is available externally through the 6-pin connector which plugs into port CN22 on the back of the iT100.

- Audio: Yellow (Signal - Positive) and Black (Ground - Negative) wires.
- Connects to an external audio amplifier which is then connected to external speakers.



6. iT100 Installation

6.1 Physical Installation

	<p>UNSCREW BACK PLATE</p> <p><input type="checkbox"/> Unscrew the center captive screw from the bottom of the unit with included security Torx™ L (T10-H) wrench to release the mounting back plate.</p>
	<p>REMOVE THE BACK PLATE</p> <p><input type="checkbox"/> Separate the back plate from the iT100 by sliding the plate down on the back of the device.</p>

6.2 Mounting

The iT100 can be surface mounted by using the installation plate (back plate) which is included with the unit. Instructions for iT100 installation using this surface mount back plate are available with 3 options.

SURFACE MOUNTING

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.).

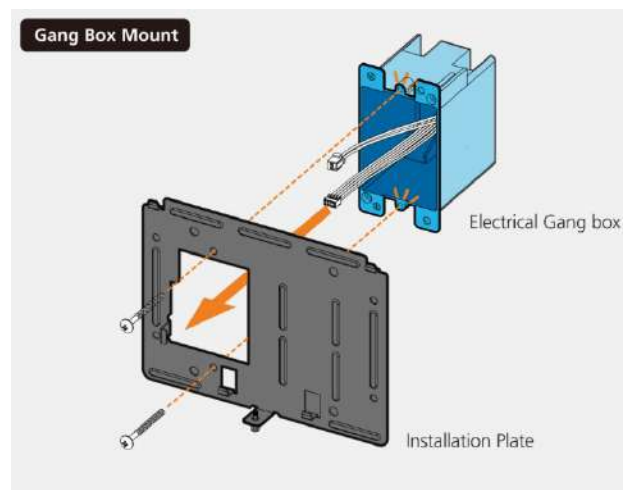
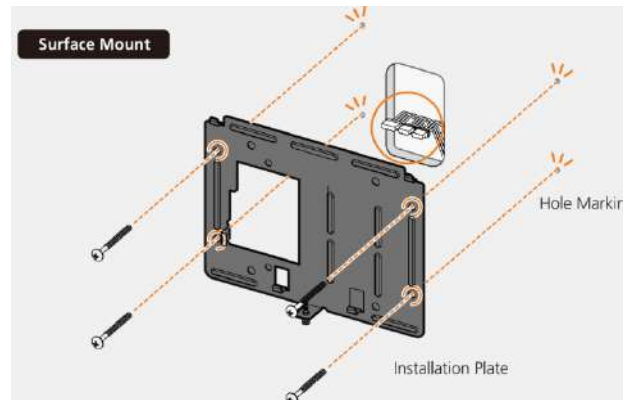
Attach the installation plate to the wall surface using the appropriate fastener and anchors for the wall material.

OR

MOUNTING w/ GANG BOX (not included)

Place the installation plate on the desired wall and screw into the electrical gang box. 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 and screws anchors for the gang box.

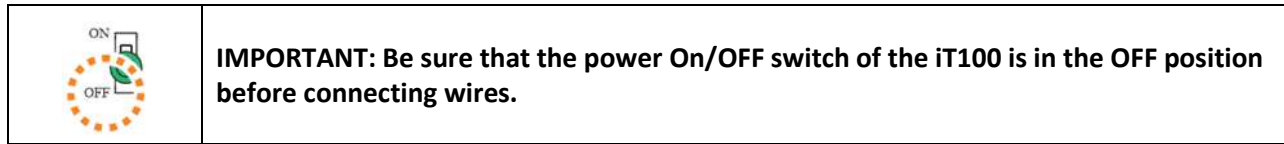


6.3 Wiring Connections

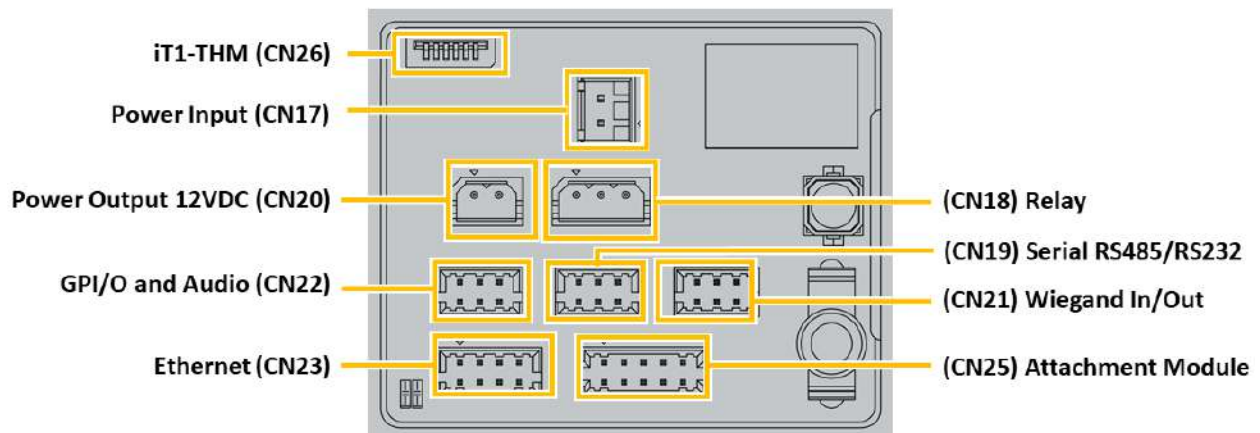
Complete the wiring and connections to the iT100 based on the necessary requirements for your installation. Make sure all wiring and connections are secure in the proper connections before completing the installation of the iT100.

IMPORTANT: Before proceeding, make sure the installer adheres to anti-static precautions, using grounding, to prevent Electrostatic Discharges (ESD).

Note: All connections of the iT100 are of SELV (Safety Electrical Low Voltage) type.



Please refer to [Section 5.3](#) of this document for detail on the power supply and wiring to external devices to the iT100. The connections on the back of the iT100 are shown in the below diagram:


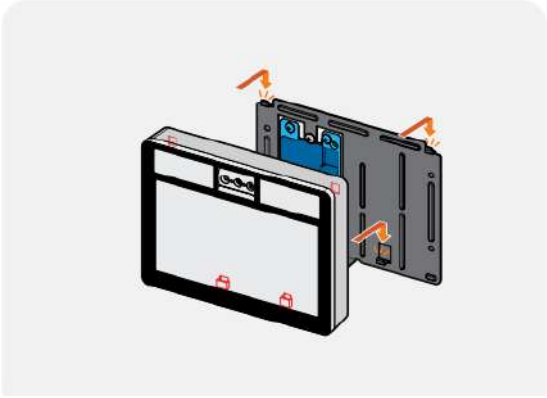


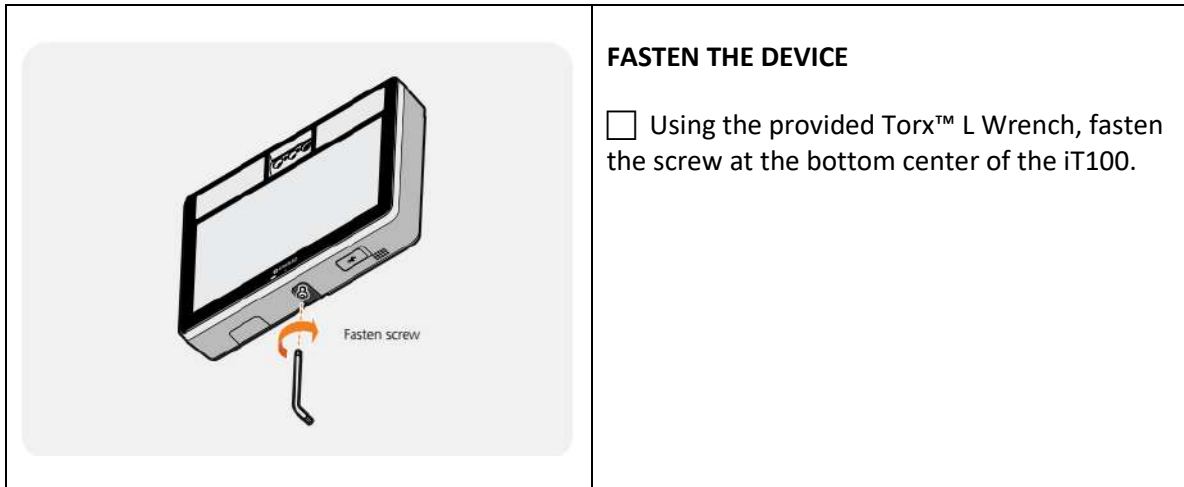
- **Power Input (CN17)** – Connection from the power supply (12VDC ~ 24VDC – 24 Watts) to the iT100. Consists of a keyed locking two pin connector.
- **Power Output (CN20)** – Provides 12VDC (@300mA max) output to devices such as card readers or lights. (Warning: This should not be used to power door control circuitry such as magnetic locks or door strike)
- **GPIO & Audio (CN22)** – Two general purpose input/outputs & Analog audio line level outputs.
- **Ethernet Connection (CN 23)** – An RJ-45 connection allowing for CAT-5e, CAT-6, CAT-6e wire connections at a speed of up to 100 Mbps.
- **Relay (CN18)** – Single relay with both the Normally Open (NO) and Normally Closed (NC) connections available.
Note: Door control using the iT100 Relay is less secure because the door control circuit could be made accessible in a non-secure area.
- **Serial RS485/RS232 (CN19)** – Serial communication to/from external devices and systems.
- **Wiegand Input & Output (CN21)** – One Wiegand input, and one Wiegand Output typically used for connection to card readers (Input) and physical access control panels (Output).
- **Attachment Module (CN25)** – For connection of the optional iT1-Axx attachment module.

- **iT1-THM (CN26)** – For connection of the optional iT1-THM thermal camera module.

6.4 Completing Device Installation

Complete the device installation process by performing the following steps.

	<p>POWER ON DEVICE</p> <p>With all connections made (Power, Ethernet wires, etc.)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Turn on the source power supply and toggle the power On/Off switch of the iT100 to the ON position.
	<p>CONNECT TO BACK PLATE</p> <ul style="list-style-type: none"> <input type="checkbox"/> Align the iT100 with the mounted back plate making sure to line up the 4 tabs located at the upper and lower portions of the unit. <p><i>IMPORTANT: Route wires and connectors into the wall cavity or the electrical gang box to prevent wires being pinched or putting too much pressure on the back of the iT100 device.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Slide the device down to lock into the backplate tabs until the bottom is flush with the metal tab of the back plate holding the security screw.



Important: Remove the protective screen cover located on the front of the iT100 before use.

7. Initial Setup of the iT100

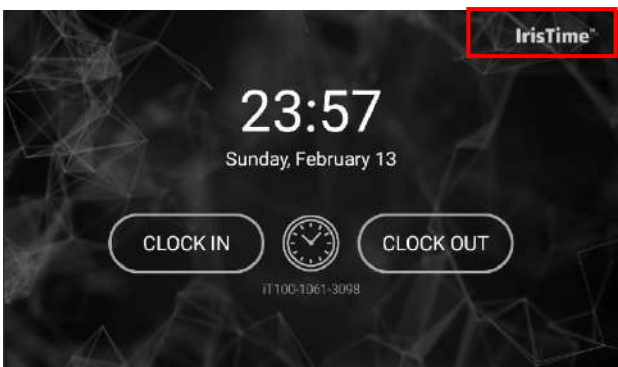
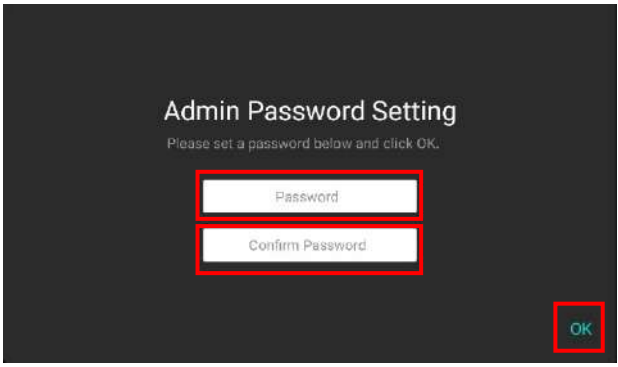
The Initial setup of the iT100 must be completed first in order to use - This is for either:

- One of the optional system modes
 - Standalone
 - iTMS - IrisTime™ Management System
 - iT100 Rest API

Or

- iT100 Software Development Kit

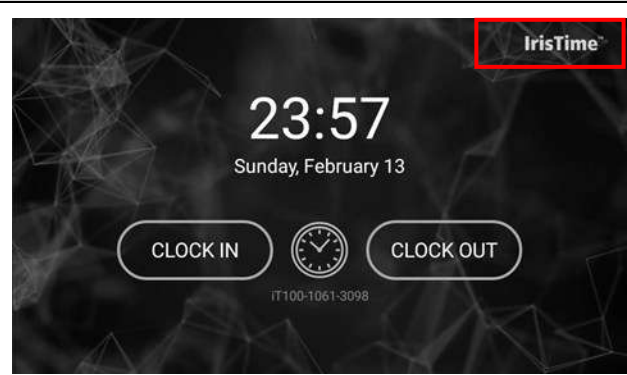
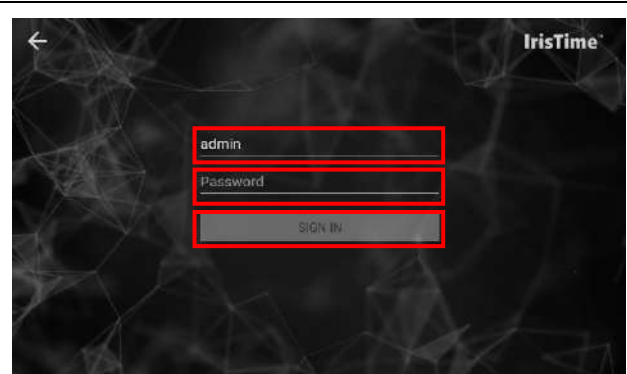
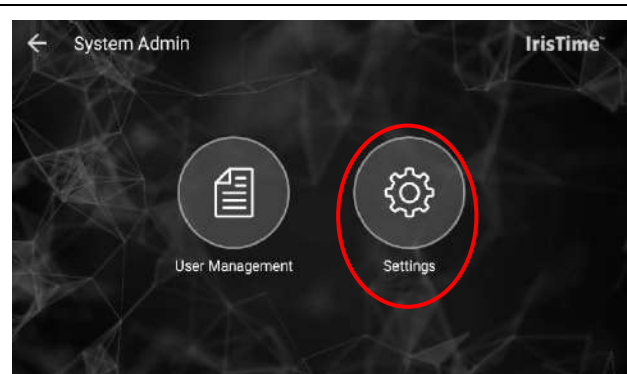
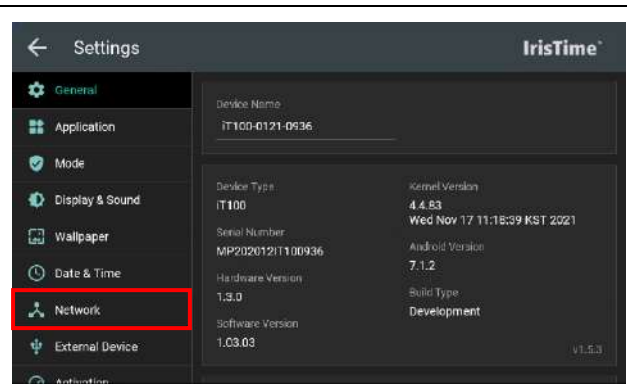
7.1 Set the Admin Password Setting

Admin Password Setting	
	<p>From the main screen, press the IrisTime logo to access the Admin Login screen.</p>
	<p>Upon the first-time use of the iT100, the Admin Password needs to be set.</p> <ul style="list-style-type: none"> • Select Password, enter the desired password, then ✓. • Select Confirm Password, enter the exact password again, then ✓. • Click OK to set the password. <p><i>Note: Password length of 4 to 40 characters can be used.</i></p>

7.2 Configure the iT100 Network Settings

Configure the IP Address and settings of the iT100 directly from your iT100 device by performing the following steps. Use of Wi-Fi Network will require the use of an iT100 attachment model which contains a wireless adapter.

Note: If there is no internet connection, or an Ethernet cable is not connected, the following error will display: "Check the network connection (cables, modem, and router)".

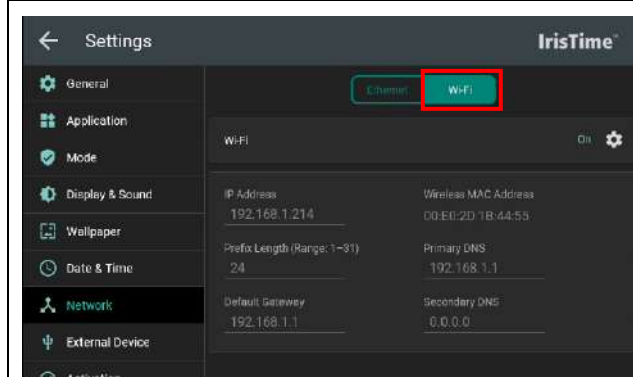
Configure Network Settings	
	<p>From the main screen, press the IrisTime™ logo to access the Admin Login screen.</p>
	<p>Select Username and Password, then enter your credentials to sign in.</p> <ul style="list-style-type: none"> • Select the Username field, enter the admin level username (default is admin). • Select the Password field, enter the password for the admin level username entered. • Click Sign In to continue with log in.
	<p>Select Settings to view the device settings.</p>
	<p>On the setting screen, press Network to view or change IP settings for the device</p>



For Ethernet (Wired) Network:

Select IP Settings as either **DHCP** (Dynamic) or **Static** (Fixed).

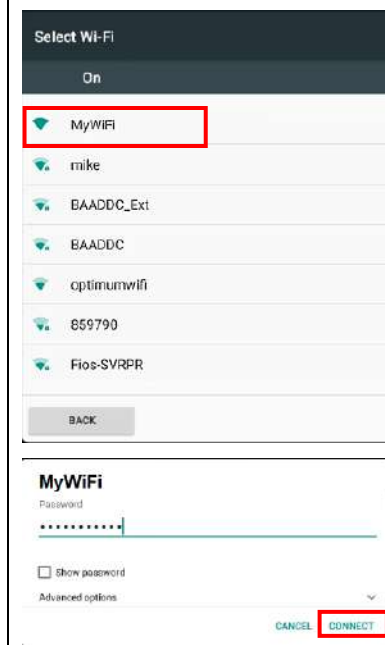
- **DHCP** automatically acquires the network setting from the DCHP server. Settings will display at the lower section of the screen.
- For **Static**, manually enter:
 - IP Address
 - Prefix Length - Range: 1-31 (CIDR Notation)
 - Primary DNS
 - Default Gateway
 - Secondary DNS



For Wi-Fi (Wireless) Network (requires attachment module with Wi-Fi Adapter):

- Select the Wi-Fi tab.
- The list of local Wi-Fi networks will be displayed.
- Select the desired Wi-Fi network by pressing the name.
- Enter the password for the network.
 - Advanced Options are available to enter Proxy (none, manual, or Proxy Auto Config) and IP Settings (DHCP or Static). This option can be seen by selecting the up arrow with the left of the Advanced Options selection and scrolling down.
- Once the correct password is entered, the connect selection will display.
- Click Connect

Note: To bring up the available local Wi-Fi network list, the gear icon (next to On) can be selected.



7.3 Device Activation

Each device needs to perform an activation process to effectively use the device. Device Activation for both stand-alone and for iTMS are covered in this section, it is important that the desired process is followed.

Note: Until the iT100 is activated, the User Management option is not available.



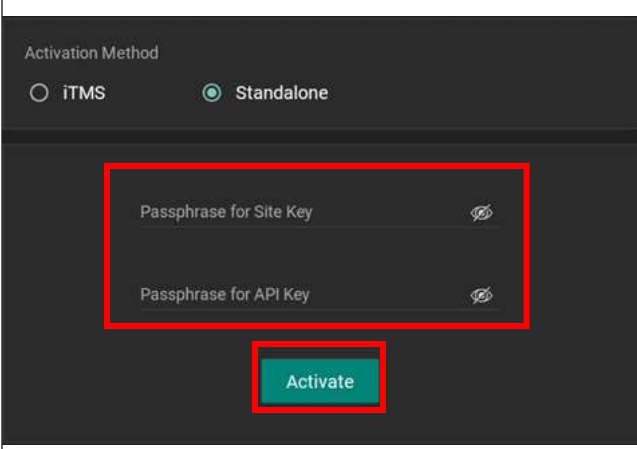
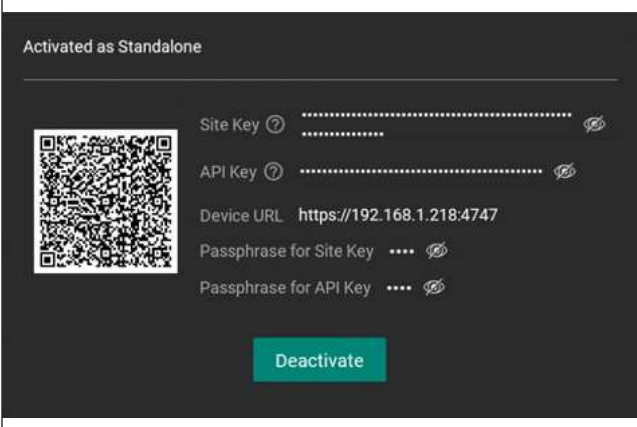
IMPORTANT: It needs to be decided if the iT100 device will be used in a “Standalone” mode or if it will be used with iTMS (IrisTime™ Management System). Changing the Activation between standalone and iTMS will clear and default the iT100 device. Data loss can occur if the iT100 is activated in “standalone” mode and used, then changed to iTMS at a later time.

If activating the iT100 to work with iTMS, it is required that the iTMS software be installed on a computer (Windows/MAC/LINUX), operational, and available via a network connection prior to activating the iT100 devices.

For installation, setup, and operation of the iTMS software please refer to the “IrisTime Management System (iTMS) User Manual”.

Standalone Device Activation


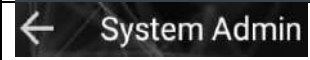
Device Activation (Standalone)	
	<p>The device activation menu can be found at the bottom of the left navigation menu.</p> <ul style="list-style-type: none"> Click “Activation” on Navigation Menu.
	<p>There are two ways to activate the iT100 device:</p> <ul style="list-style-type: none"> iTMS (Managed Mode) Standalone <p>This section describes the standalone mode. Refer to the IrisTime™ Management System (iTMS) User Manual for iTMS management mode instruction.</p> <ul style="list-style-type: none"> Click Standalone.

	<p>The device activation requires two independent passphrases—the Site Key and the API Key.</p> <p>The Site Key is an encryption key for biometric template encryptions and the API Key is a token to authenticate the HTTPS Requests.</p> <ul style="list-style-type: none"> • Enter strings that you can memorize and click the Activate button.
	<p>Now the device is activated.</p> <p>Once the device is activated you can now:</p> <ul style="list-style-type: none"> • Update iT100 software • Enroll Administrator’s biometrics • User Management <ul style="list-style-type: none"> ○ Enroll Users ○ Manage Users

iTMS Device Activation

For details of how to activate the iT100 for use with iTMS, refer to the “IrisTime Management System (iTMS) User Manual”.

Exit Back to Main Screen

	<p>Press on the Settings back arrow</p>
	<p>Press on the System Admin back arrow</p>

8. Update the iT100 Software

It is recommended that the iT100 device software is updated to the latest version to ensure that the latest features and enhancements are available.

IMPORTANT: Starting from iT100 Software v2.x, iT100 supports a new facial recognition algorithm. Old and new algorithms use different face templates and they are not compatible. Thus, when iT100 is upgraded to v2.x, face templates are regenerated using the enrolled face images. The new templates are automatically regenerated during the upgrade process, as long as the users' face images are available in the internal database of the iT100. Otherwise, the users' face biometric should be re-enrolled.

IMPORTANT: The iT100 software comes in a production version and a development version. Typically, the iT100 device will contain the production version of software. However, note that if the device contains the development version of software and it is upgraded using the production version, this cannot be reversed without the device being returned to Iris ID. If this device is being used for software development purposes, please be sure to upgrade the device only with the development version of software.

Note: The iT100 will be inoperable and unavailable to users for several minutes when the actual firmware and software update is being applied to the device.

The current software version on the iT100 can be determined in the [Settings – General](#) screen on the device.

There are multiple ways to update the software of the iT100 device.










<p>Using the iT100 Software Update utility.</p> <ul style="list-style-type: none"> • Applies the update to the iT100 through the network connection using a utility. • Typically used when iT100 is used in stand-alone mode. 	<p>This process is described in Appendix A of this document.</p>
<p>File on USB Flash Drive.</p> <ul style="list-style-type: none"> • Applies the update from a file on a USB flash drive inserted into the iT100. • Typically used when iT100 is used in stand-alone mode. 	<p>Refer to the Settings – General – System Updates section of this document.</p>
<p>Using the iTMS Application.</p> <ul style="list-style-type: none"> • Applies the update via the iTMS application. • Requires iTMS software and the iT100 activated to iTMS. 	<p>Refer to the IrisTime® Management System (iTMS) User Manual, in the Devices section.</p>

<p>Using the “App Update” feature in iT100.</p> <ul style="list-style-type: none">• Applies the update via Internet connection. Connect to a URL containing the signed .ipk file to download into the iT100 device.• Used primarily for applying 3rd party applications onto the iT100 device.	<p>Refer to the Settings – Application – App Update section of this document.</p>
<p>Update using the iT100 Rest API.</p> <ul style="list-style-type: none">• Applies the update via network connection using a REST API Method.• Typically used by 3rd party application developers for applying software.	<p>Refer to the iT100 REST API. https://api.irisid.com</p>


9. Device Configuration Settings

The device settings are accessible by the following:


1. From the iT100 main screen, press the **IrisTime™** logo
2. Select **ID & Password**, and enter credentials to sign in
3. Press **Settings** to enter the device configuration settings screen.

 General	<ul style="list-style-type: none"> • Device Name • Device Information • Open-Source Licenses • System Updates • Reboot • Factory Reset
 Application	<ul style="list-style-type: none"> • Relay Settings • GPIO • Administrator Mode Timeout • Result Auto-Dismiss Timer Interval • Position Guide • Enrollment Precaution Guide • Voice Announce • App Update
 Mode	<ul style="list-style-type: none"> • Operation Mode • Admin Login Type • Authentication Mode • Countermeasure • Mask Detect • Save Audit Face Image
 Display & Sound	<ul style="list-style-type: none"> • Language • Display (Brightness) • Sound • Manage (on screen) Keyboard
 Wallpaper	<ul style="list-style-type: none"> • Wallpaper <ul style="list-style-type: none"> ○ Movies ○ Images
 Date & Time	<ul style="list-style-type: none"> • Date & Time
 Network	<ul style="list-style-type: none"> • Ethernet Network • Wi-Fi Network (requires attachment module)
 External Device	<ul style="list-style-type: none"> • Card Reader (internal with attachment module) • Thermal Camera (Thermal camera attachment required)
 Activation	<ul style="list-style-type: none"> • Standalone • iTMS • Deactivation


9.1 General – Device Name

 General	
Device Name iT100-	Device Name – This field allows for the name of the device to be edited. The Device Name is displayed on the main screen as well as in all logs and references in iTMS (if used).

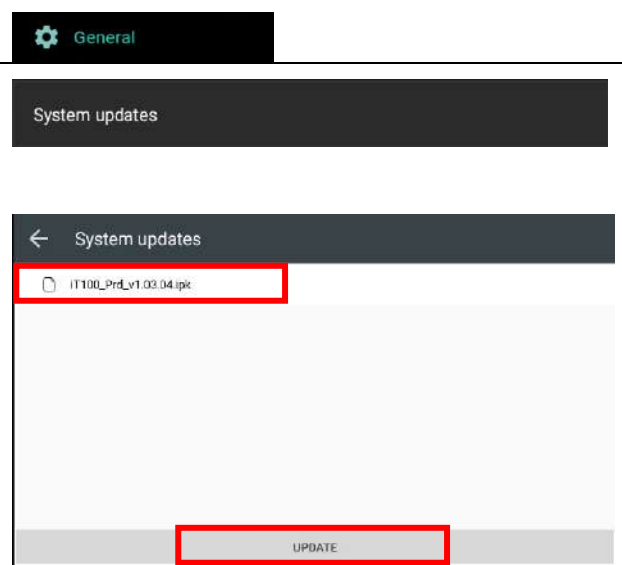
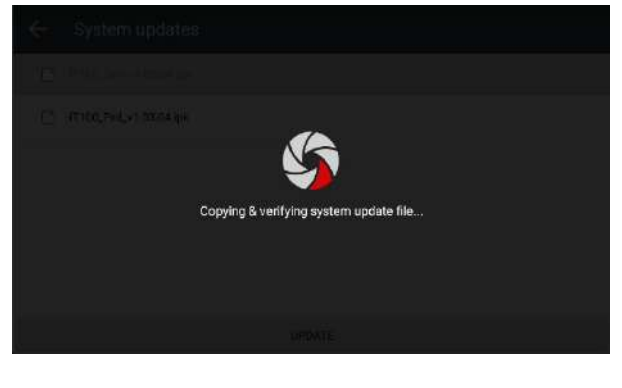
9.2 General – Device Information

 General																	
<table border="0"> <tr> <td>Device Type</td> <td>Kernel Version</td> </tr> <tr> <td>IT100</td> <td>4.4.83</td> </tr> <tr> <td>Serial Number</td> <td>Tue Jan 25 13:39:40 KST 2022</td> </tr> <tr> <td>IT100</td> <td>Android Version</td> </tr> <tr> <td>Hardware Version</td> <td>7.1.2</td> </tr> <tr> <td>1.3.0</td> <td>Build Type</td> </tr> <tr> <td>Software Version</td> <td>Development</td> </tr> <tr> <td>1.03.04</td> <td></td> </tr> </table>	Device Type	Kernel Version	IT100	4.4.83	Serial Number	Tue Jan 25 13:39:40 KST 2022	IT100	Android Version	Hardware Version	7.1.2	1.3.0	Build Type	Software Version	Development	1.03.04		Device Type – The model type. Kernel Version – Version and date of OS Kernel. Serial Number – The unique device identifier assigned during manufacture. Android Version – The version of the iT100 OS. Hardware version – Indicates the device version. Software Version – iT100 software version. Build Type – Production (Standard) or Developer (SDK). Interface Version (Bottom left corner).
Device Type	Kernel Version																
IT100	4.4.83																
Serial Number	Tue Jan 25 13:39:40 KST 2022																
IT100	Android Version																
Hardware Version	7.1.2																
1.3.0	Build Type																
Software Version	Development																
1.03.04																	


9.3 General – Open Source Licenses

 General	
Open Source Licenses	Open Source Licenses – Press to view all of the open source licenses used in the iT100 software and firmware.


9.4 General – System Updates

 	<p>System Updates – Press to perform system updates via USB port of the iT100.</p> <ul style="list-style-type: none"> • Place the iT100 software update file on the root of a USB flash drive (.ipk file extension). • Insert the USB flash drive into the USB port at the bottom of the iT100 (open rubber cap covering the USB port). • Press “System updates” item under the general settings menu. • Press on the .ipk file name to select the file to use for update. • Press “Update” to update the iT100 using the selected file. • Press “OK” to confirm “...you want to update...”. • The upload and verify of the file will take place. • Within a minute the LCD of the iT100 will display the warning message “Updating... Do not turn off. Please wait.” <p><i>Important: Do not remove power or attempt any changes to the iT100 during this time.</i></p> <ul style="list-style-type: none"> • Once the update is complete, the iT100 will resume normal operation. • Remove the USB flash drive from the iT100 and close the rubber cap over the USB port.
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
9.5 General – Reboot

	<p>Reboot – Press to initiate a warm Reboot of iT100.</p>
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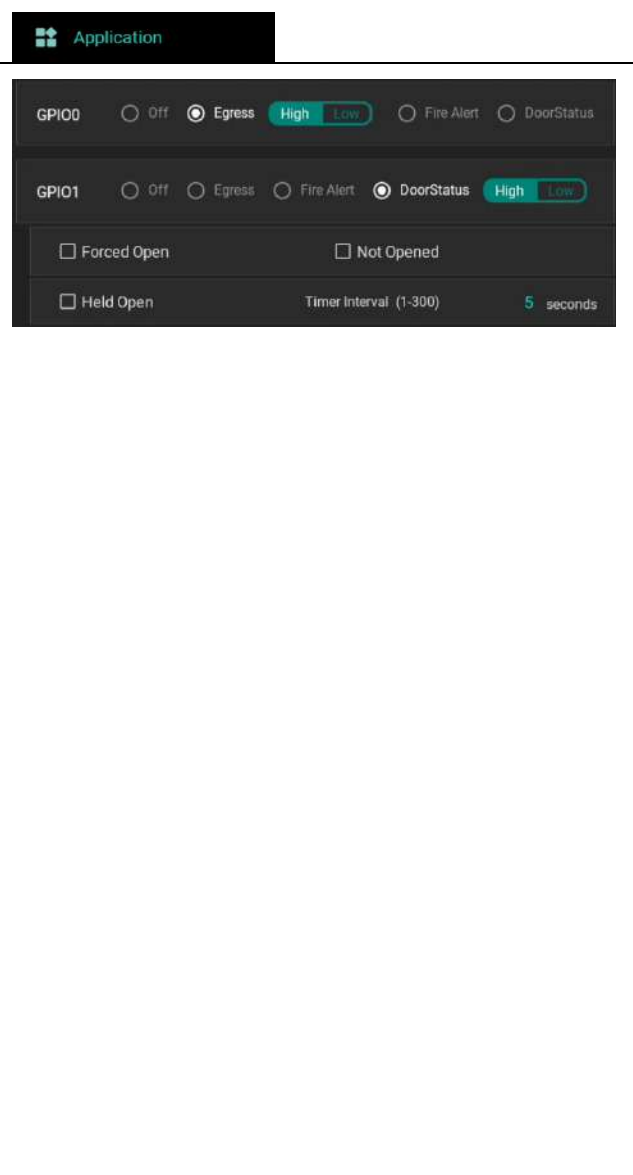
9.6 General – Factory Reset

 General	
<div data-bbox="191 415 792 485" style="background-color: #333; color: white; padding: 5px;">Factory Reset</div>	<p>Factory Reset – Resets the device to the factory default settings and reloads software.</p> <ul style="list-style-type: none"> • Values in device configuration are initialized. <ul style="list-style-type: none"> ◦ recognition mode, relay option, sound volume, LCD brightness, etc. • User data is deleted. • OS settings are changed to default values. • Volume is changed to 11 (default). • Network configuration is changed to DHCP. • Language setting is set to English. • Time zone is changed to GMT+00:00. • Time format is changed to 24-hour format. • NTP server is changed to “time.google.com”. • Automatic date and time is on. • Wi-Fi is off. • Wallpaper changes to default. • All settings of the default launcher will be removed. • Custom (3rd party) applications are not deleted.

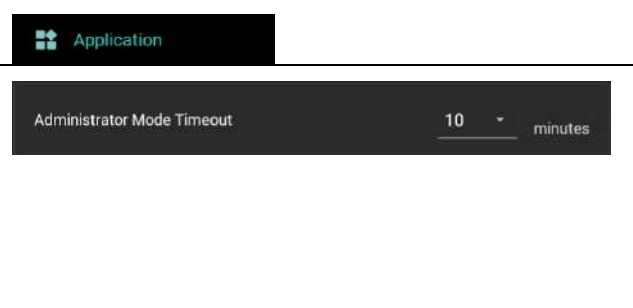
9.7 Application – Relay

 Application	
<div data-bbox="191 1333 792 1451" style="background-color: #333; color: white; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> Relay On  </div> <div style="display: flex; justify-content: space-between;"> Timer Interval (1-75) 1 seconds </div> </div>	<p>Relay – Internal dry contact relay of the iT100 which is triggered upon a successful user authorization or GPI egress event. The relay connection is CN18 (3-Pin).</p> <ul style="list-style-type: none"> • On / Off – Enable or Disable of the iT100 Relay. • Time Interval – The amount of time (seconds) in which the iT100 relay will change state after being triggered. Time intervals of 1 to 75 seconds can be entered.



9.8 Application – GPIO

	<p>General Purpose Inputs – For the connection of button, motion sensor, or contact sensors. 2 GPIOs are available (0 & 1). GPIO connection is CN22 (6-Pin). Both GPIO have the operation selection of:</p> <ul style="list-style-type: none"> • Off – GPIO is disabled. • Egress – Push Button or Motion Sensor is connected to GPI for triggering the relay when a user’s request to exit. Typically for when the relay is used for door control. <ul style="list-style-type: none"> ○ High / Low – Active state of GPI • Fire Alert – Typically used for holding the door unlocked in the event of an emergency. The Door Relay will be activated for the duration of the input being triggered (relay Time Interval is ignored). <ul style="list-style-type: none"> ○ High / Low – Active state of GPI • DoorStatus – Typically a sensor is connected to GPI to detect the position of the door. <ul style="list-style-type: none"> ○ High / Low – Active state of GPI ○ Forced Open – Door opened without authorization. ○ Not Opened – Door was not opened after authorization. ○ Held Open – Door was held open after authorization for more than set timer interval. ○ Timer Interval – The length of time allowed for the “Held Door” condition before event triggered.
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9.9 Application – Administrator Mode Timeout

	<p>Administrator Mode Timeout – The administrator (Settings & User Management) screen of iT100 will automatically close if there is no activity on these screens for the set timeout.</p> <ul style="list-style-type: none"> • Timeout Interval, selectable between 1 to 10 minutes.
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9.10 Application – Result Auto-dismiss Timer Interval

 Application	
	<p>Result Auto-dismiss Timer Interval – The amount of time that the results dialog box from an authentication attempt will display.</p> <ul style="list-style-type: none"> Interval selectable between 1 to 10 seconds.


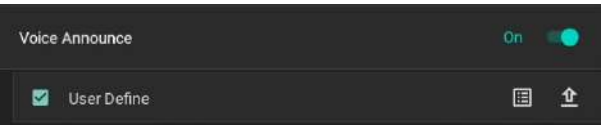
9.11 Application – Position Guide

 Application	
	<p>Position Guide – When enabled, the user will receive visual and audio guidance for positioning of their face and irises to the iT100 device.</p>


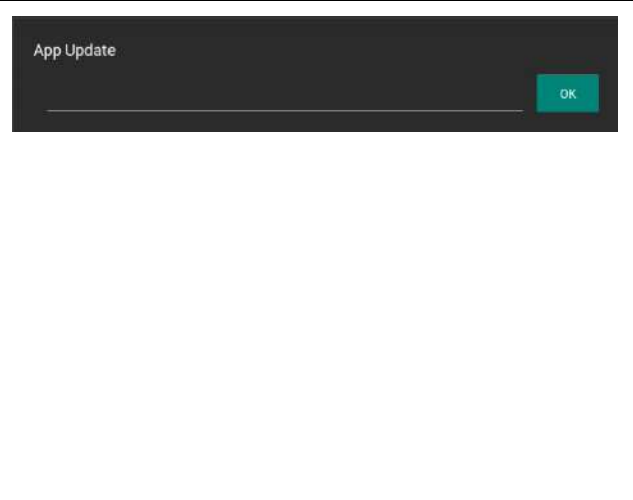
9.12 Application – Enrollment Precaution Guide

 Application	
	<p>Enrollment Precaution Guide – When enabled, additional enrollment guides will be displayed (ex. Remove Glasses & Face Mask) during the biometric enrollment process.</p>

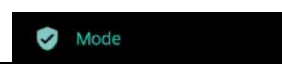
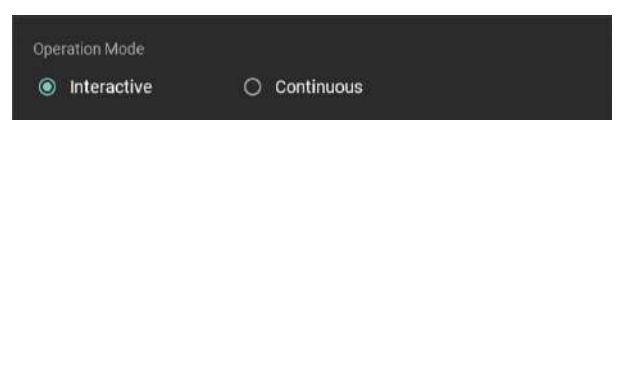
9.13 Application – Voice Announce

 Application	
	<p>Voice Announce – When enabled, the iT100 will provide voice announcements. The option to upload custom voice files is available.</p> <ul style="list-style-type: none"> On / Off – Enable / Disable. User Define – Upload voice file from USB. <p>For details on creating and uploading custom voice announcement, refer to Appendix B of this Manual.</p>

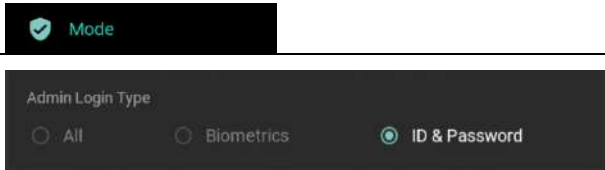
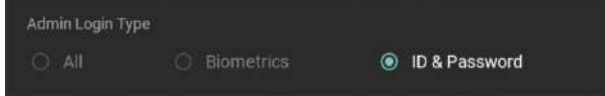
9.14 Application – App Update

	
	<p>App Update – Enter the URL of the location where the custom iT100 application is to be downloaded from. This URL must contain a signed .ipk file.</p> <p>Enter the URL and click OK. Enter the ID and Password for the site. Click OK</p> <p>Iris ID provides a URL for download of the latest version of iT100 production version of software. URL = https://dm.irisid.com:7979 ID: sys-update Password: V6qxHayM</p>


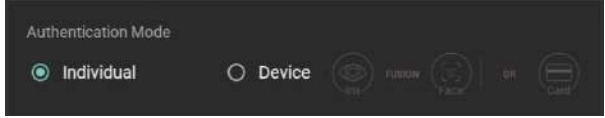
9.15 Mode – Operation Mode

	
	<p>Operation Mode:</p> <ul style="list-style-type: none"> • Interactive Mode (default) – The user is required to make a selection on the touch screen of the device before the biometric identification/verification process begins. • Continuous Mode – The user biometric capture and identification/verification process begins once the proximity sensor detects a person in front of the iT100. No contact with the device is required.


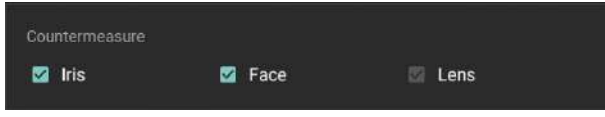
9.16 Mode – Admin Login Type

	
	<p>Admin Login Type:</p> <ul style="list-style-type: none"> • All – The admin can either use their Biometric or their ID & Password to access the User Management or Settings in the iT100. • Biometrics – The admin can only use their biometrics (face or iris) to access the User Management or Settings in the iT100. • ID & Password (Default) – The admin can only use their ID & Password to access the User Management or Settings in the iT100.


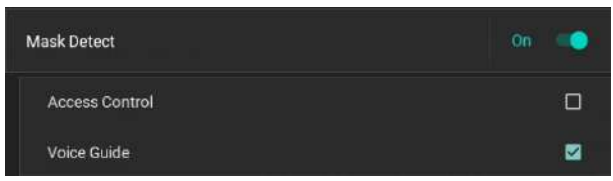
9.17 Mode – Authentication Mode

	
	<p>Authentication Mode:</p> <ul style="list-style-type: none"> • Individual (default) – The iT100 will authenticate users based on the authentication mode selected in the user's record. • Device – All users will be authenticated using the authentication mode define here. For explanation of authentication modes, view the "Authentication Modes" section of this document.



9.18 Mode – Countermeasure

	
	<p>Countermeasure – When selected, all users' biometrics presented will receive additional checks for authenticity.</p> <ul style="list-style-type: none"> • Iris – Iris biometric checked. • Face - Face biometric checked. • Lens (currently not available)



9.19 Mode – Mask Detect

	
	<p>Mask Detect – When enabled the iT100 will determine if the user is wearing a face mask. If enabled and the user is not wearing a face mask, then the following actions can be carried out.</p> <ul style="list-style-type: none"> • Access Control – When selected, even after a successful authentication, if the user does not have a mask on they will be denied access. • Voice Guide – If it is detected that the users is not wearing a facemask, the announcement of “please wear a face mask is made” reminding the user to put on their facemask before entry.



9.20 Mode – Save Audit Face Image

	
	<p>Save Audit Face Image – When enabled a picture is taken using the face camera at the time of the transaction. This picture is stored within the transaction data. The following selections are available:</p> <ul style="list-style-type: none"> • All – A picture is taken during all transactions. • Success – A picture is taken only during successful match transactions. • Failed – A picture is taken only during failed match transactions. • Unauthorized – A picture is taken if the user is matched but does not have authorization. • Except for Card-only – A picture is taken for all transactions except for those made with a card while in a card only access mode (ex. Card Only, Iris OR Card, Iris & Face OR Card, etc.).


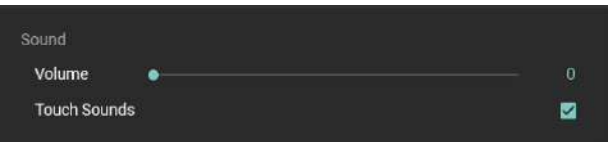
9.21 Display & Sound - Language

																							
	<p>Language – Select the on-screen text and voice prompt language from the dropdown box.</p> <table border="1"> <tr><td>English</td><td>- English</td></tr> <tr><td>한국어</td><td>- Korean</td></tr> <tr><td>Türkçe</td><td>- Turkish</td></tr> <tr><td>العربية</td><td>- Arabic</td></tr> <tr><td>中文 (繁體)</td><td>- Chinese (Traditional)</td></tr> <tr><td>中文 (简体)</td><td>- Chinese (Simplified)</td></tr> <tr><td>日本語</td><td>- Japanese</td></tr> <tr><td>Français</td><td>- French</td></tr> <tr><td>Deutsch</td><td>- German</td></tr> <tr><td>Español</td><td>- Spanish</td></tr> <tr><td>italiano</td><td>- Italian</td></tr> </table>	English	- English	한국어	- Korean	Türkçe	- Turkish	العربية	- Arabic	中文 (繁體)	- Chinese (Traditional)	中文 (简体)	- Chinese (Simplified)	日本語	- Japanese	Français	- French	Deutsch	- German	Español	- Spanish	italiano	- Italian
English	- English																						
한국어	- Korean																						
Türkçe	- Turkish																						
العربية	- Arabic																						
中文 (繁體)	- Chinese (Traditional)																						
中文 (简体)	- Chinese (Simplified)																						
日本語	- Japanese																						
Français	- French																						
Deutsch	- German																						
Español	- Spanish																						
italiano	- Italian																						

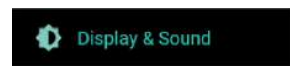
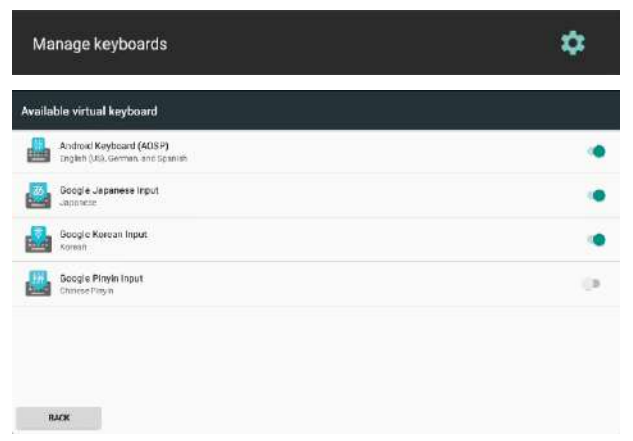
9.22 Display & Sound - Display

	
	<p>Brightness – Sets the brightness of iT100 LCD display, slide bar 0 (dim) up to 255 (brightest).</p>


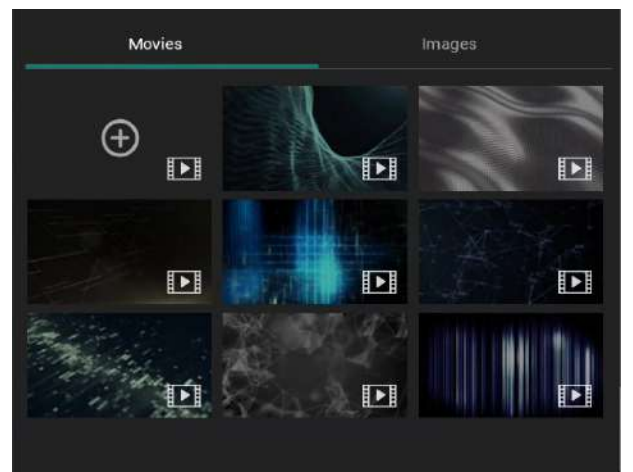
9.23 Display & Sound - Sound

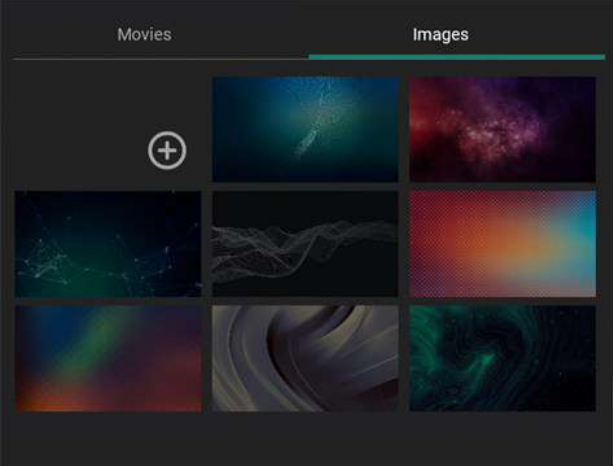
	
	<p>Volume – Adjust the sound volume level of the iT100. Slide bar from 0 (mute) up to 15 (loudest).</p> <ul style="list-style-type: none"> • Touch Sound – Enabled by default, sound is provided for each touch to the LCD screen. If volume is set to 0 (mute) touch sounds will persist.

9.24 Display & Sound – Manage keyboards

	
	<p>Manage Keyboards – enable/disable available on-screen keyboards.</p> <p>Press on the gear icon to display keyboards. Press toggle switch icon to enable/disable.</p> <ul style="list-style-type: none"> • Android Keyboard (AOSP) – for English (US), German, and Spanish languages input. • Google Japanese Input – for Japanese language keyboard input. • Google Korean Input – for Korean language keyboard input. • Google Pinyin Input – for Chinese Pinyin input.

9.25 Wallpaper

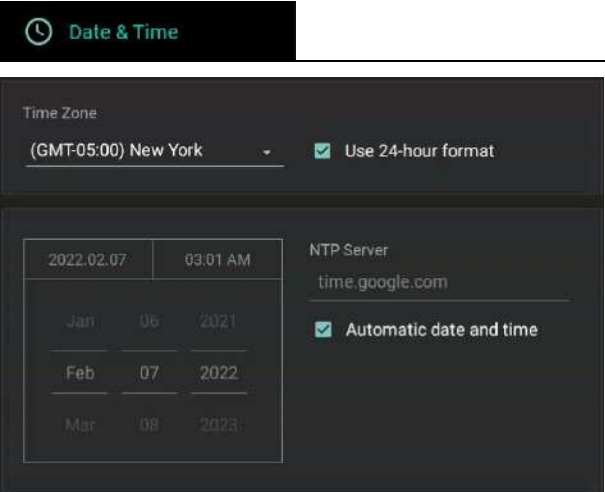
	
	<p>Movies – Select a video or animated wallpaper for the iT100 LCD screen.</p> <ul style="list-style-type: none"> • Select from the 8 built-in animated backgrounds. Tap on to select (highlighted border around selected) • Add – A video (movie) including sound can be added as wallpaper to the iT100. <ul style="list-style-type: none"> • Place the video file (.mp4) file on the root of a USB flash drive. • Insert the USB flash drive into the USB port at the bottom of the iT100 (open rubber cap covering the USB port). • Double press the + symbol under the “Movies” tab. • Press on the desired .mp4 file to select. • The file will download into the iT100 and display as a selection. • Tap on the video preview to select (highlighted border around selected).



Images –Select static image to display in the background on LCD screen.

- Select from the 8 built-in image backgrounds. Tap on to select (highlighted border around selected)
- Add – A picture can be added as wallpaper to the iT100.
 - Place the image file (.jpg) file on the root of a USB flash drive.
 - Insert the USB flash drive into the USB port at the bottom of the iT100 (open rubber cap covering the USB port).
 - Double press the + symbol under the “Images” tab.
 - Press on the desired .jpg file to select.
 - The file will download into the iT100 and display as a selection.
 - Tap on the image preview to select (highlighted border around selected).

9.26 Date & Time



Time Zone – Select the time zone in which the iT100 will be used. (Offset from GMT)


Use 24-hour format – (Enabled by default) Disable this setting for 12-hour time.

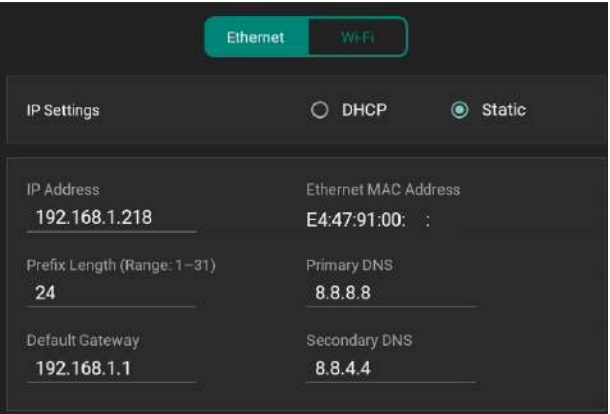
NTP Server – URL of the Network Time Protocol server for automatic time synchronization. (Default is ‘time.google.com’)

Automatic date and time – Selected by default, this enables the use of the NTP to receive automatic time and date settings.

Manually enter date and time – Enter the time and date setting manually (month, day, year, and time).

9.27 Network

 Network



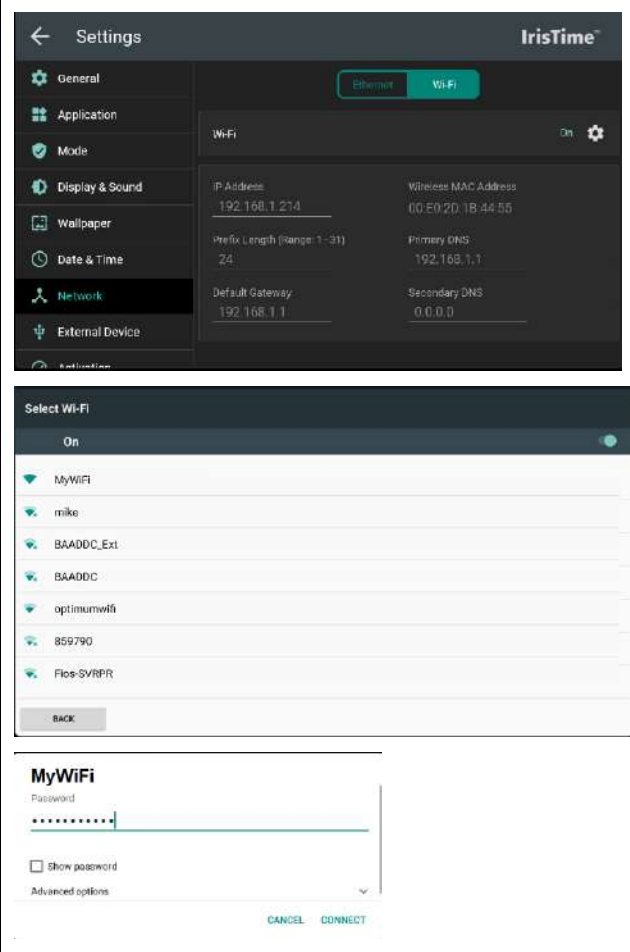
IP Settings	
<input type="radio"/> DHCP <input checked="" type="radio"/> Static	
IP Address	Ethernet MAC Address
192.168.1.218	E4:47:91:00: :
Prefix Length (Range: 1-31)	Primary DNS
24	8.8.8.8
Default Gateway	Secondary DNS
192.168.1.1	8.8.4.4

For Ethernet (Wired) Network:
Select IP Settings as either **DHCP** (Dynamic) or **Static** (Fixed).

- **DHCP** automatically acquires the network setting from the DHCP server. Settings will display in the lower section of the screen.
- For **Static**, manually enter:
 - IP Address
 - Prefix Length - Range: 1-31 (CIDR Notation)
 - Primary DNS
 - Default Gateway
 - Secondary DNS

Ethernet MAC Address – is the unique MAC Address of the device.

Note: If there is no internet connection, or an Ethernet cable is not connected, the following error will display: "There is no Internet connection. Check the network connection (cables, modem, and router)".



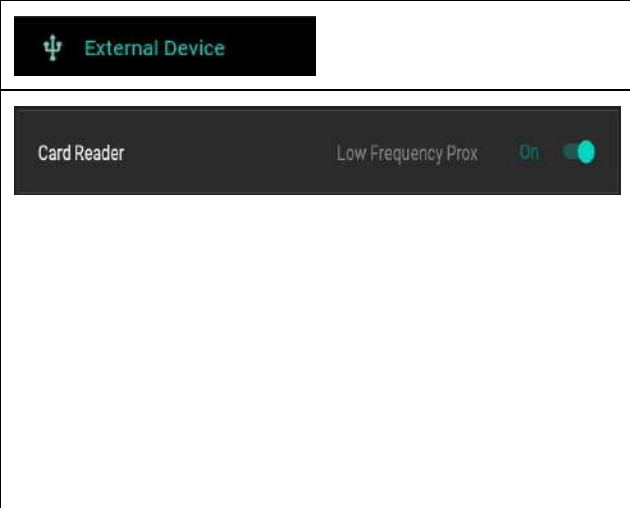
For Wi-Fi (Wireless) Network (requires attachment module with Wi-Fi Adapter):

- Select the Wi-Fi tab.
- The list of local Wi-Fi networks will be displayed.
- Select the desired Wi-Fi network by pressing the name.
- Enter the password for the network.
 - Advanced Options are available to enter Proxy (none, manual, or Proxy Auto Config) and IP Settings (DHCP or Static). This option can be seen by selecting the up arrow with the left of the Advanced Options selection and scrolling down.
- Once the correct password is entered, the connect selection will display.
- Click Connect

Note: To bring up the available local Wi-Fi network list, the gear icon (next to “On”) can be selected.

Wireless MAC Address – is the unique MAC Address of the wireless adapter in the iT100 attachment module.

9.28 External Devices – Card Reader



The iT100 must have an attachment module with a built-in card reader in order to enable it.

Card Reader – On /Off toggle



- Reader Types:
 - Low Frequency Prox – for reading 125KHz cards, such as the HID Prox Pro II
 - MiFARE / DESFire – for reading MiFARE or DESFIRE cards (CSN only)

9.29 External Devices – Thermal Camera

External Device													
<div style="background-color: #333; color: #fff; padding: 5px;"> ⌵ External Device </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Thermal Camera</td> <td style="text-align: right; padding: 5px;">On ●</td> </tr> <tr> <td style="padding: 5px;">Temperature Unit</td> <td style="text-align: right; padding: 5px;">°F</td> </tr> <tr> <td style="padding: 5px;">Threshold Value</td> <td style="text-align: right; padding: 5px;">99.5</td> </tr> <tr> <td style="padding: 5px;">Temperature Correction</td> <td style="text-align: right; padding: 5px;">0.0</td> </tr> <tr> <td style="padding: 5px;">Temperature Alarm</td> <td style="text-align: right; padding: 5px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 5px;">Access Control</td> <td style="text-align: right; padding: 5px;"><input type="checkbox"/></td> </tr> </table>	Thermal Camera	On ●	Temperature Unit	°F	Threshold Value	99.5	Temperature Correction	0.0	Temperature Alarm	<input checked="" type="checkbox"/>	Access Control	<input type="checkbox"/>	<p>The iT100 must have a Thermal Camera module attached in order to enable it.</p> <p>Thermal Camera – On / Off toggle</p> <ul style="list-style-type: none"> • Temperature Unit – Celsius or Fahrenheit • Threshold Value – The temperature (at or above) in which an alert will trigger. • Temperature Correction – Adjustment of temperature reading (degrees). • Temperature Alarm – When enabled, if the temperature of the user is at or higher than the Threshold Value, an audio alert at the iT100 will sound. • Access Control - When enabled, if the temperature of the user is at or higher than the Threshold Value, the user will be denied access (no relay or Wiegand output).
Thermal Camera	On ●												
Temperature Unit	°F												
Threshold Value	99.5												
Temperature Correction	0.0												
Temperature Alarm	<input checked="" type="checkbox"/>												
Access Control	<input type="checkbox"/>												

9.30 Activation – Standalone

More information on Device Activation can be found in [Section 7.3](#) of this document.

 Activation	
<p>Activation Method</p> <p><input checked="" type="radio"/> iTMS <input type="radio"/> Standalone</p> <ul style="list-style-type: none"> • Standalone <p>Activation Method</p> <p><input type="radio"/> iTMS <input checked="" type="radio"/> Standalone</p> <p>Passphrase for Site Key <input type="password"/></p> <p>Passphrase for API Key <input type="password"/></p> <p>Activate</p>	<p>Activation Method</p> <p>iTMS – Activates the iT100 for use with the IrisTime Management System (iTMS) software. (Described in next section)</p> <p>Standalone – Activates the iT100 in a “standalone” where the iT100 operates independently. (Input and output can still be achieved using REST API methods).</p> <ul style="list-style-type: none"> • Passphrase for Site Key – Installer entered character string used for Site key creation. Site key is used for securing the data on the iT100. • Passphrase for API Key – installer entered character string used for API key creation. API key is used to secure API requests to the iT100. • Activate – Activates the iT100 in standalone mode using the entered passphrases. <ul style="list-style-type: none"> ○ When activated the screen with change to “Activated as Standalone”
<ul style="list-style-type: none"> • Activated as Standalone <p>Activated as Standalone</p> <p> Site Key <input type="password"/></p> <p>API Key <input type="password"/></p> <p>Device URL https://192.168.1.218:4747</p> <p>Passphrase for Site Key <input type="password"/></p> <p>Passphrase for API Key <input type="password"/></p> <p>Deactivate</p>	

9.31 Activation – iTMS

More information on Device Activation can be found in [Section 7.3](#) of this document.

✓
Activation

Activation Method

iTMS Standalone

- iTMS**

Mode

Auto Manual

IP Address

192.168.1.249 : 5001

Check in iTMS

- Check in iTMS**

	DEVICE NAME	IP ADDRESS	STATUS	AVAILABILITY
<input checked="" type="checkbox"/>	iT100-1061-3098	192.168.1.218	Authenticated	Online

ACTIONS

- Apply Configuration
- Import Configuration
- Activate Device
- Update Software
- Reboot Device
- Delete Device

- Activated by iTMS**

Activated by iTMS

Site Key ?

API Key ?

Device URL https://192.168.1.218.4747

Passphrase for Site Key ..

Passphrase for API Key ..

Deactivate

Activation Method

iTMS – Activates the iT100 for use with the IrisTime Management System (iTMS) software.

- Auto** – Searches the network and active iTMS.
 - IP Address and port of found iTMS displays. (Default port 5001)
- Manual** – Allows for manual entry of IP Address of the iTMS to connect to.
 - IP Address and port (Default 5001) of iTMS.

Check in iTMS – Authenticates the iT100 with the iTMS software. When successful, the iT100 will display in iT100 with status of Authenticated.

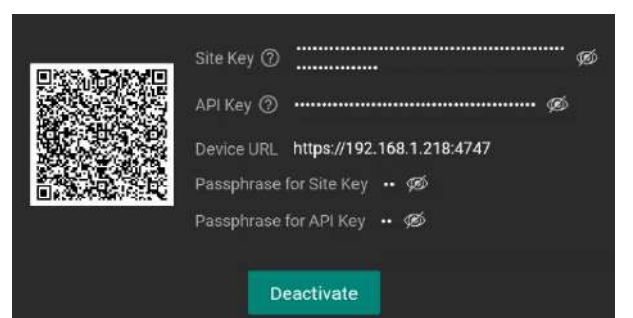
To activate iT100 in iTMS.

- Select the check box to left of the iT100 device(s) with “Authenticated” status.
- In the ACTIONS menu select “Active Device”
- When successful the device status changes to “Activated”.

When successfully activated with iTMS the Activation screen on the iT100 changes to that shown as “Activated by iTMS”.

9.32 Activation – Deactivate

Deactivation should only be performed if switching the iT100 between standalone and iTMS mode or if it is desired to clear the iT100.

 <p>Deactivate</p> <p>Are you sure you want to deactivate this device? If you deactivate the device, you will permanently lose all the data stored in this device.</p> <p>CANCEL OK</p>	<p><i>Warning: Deactivation deletes the current admin password, and will change settings (such as recognition mode, relay options, volume, etc.) to factory default values. All user data will be deleted.</i></p> <p>Deactivate – Press on “Deactivate” to immediately deactivate the iT100 from its current mode of activation.</p> <p>An acknowledgement dialog box will display, select “OK” to continue with deactivation.</p>
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10. User Management

Enrollment of users into the system using the iT100 can be performed directly from the stand-alone application in the device. This application will control the functions of the camera, collect images, create templates, and allow entry of the user’s information into a database.

User enrollment and management when using iTMS:

When using the iTMS software (not a stand-alone iT100), you can perform additional enrollment and user management functions from the iTMS application directly. However, enrollment still requires an iT100 to perform the biometric image captures, or to update image captures for a user.


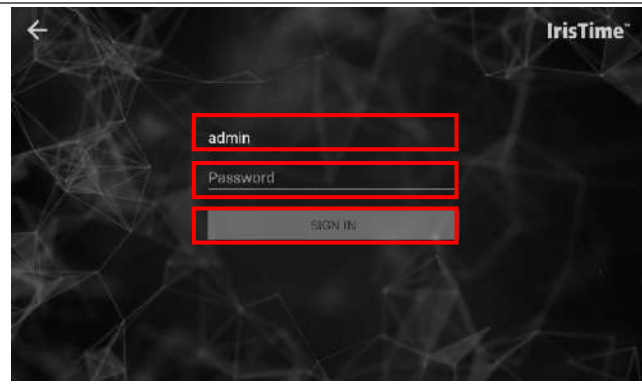
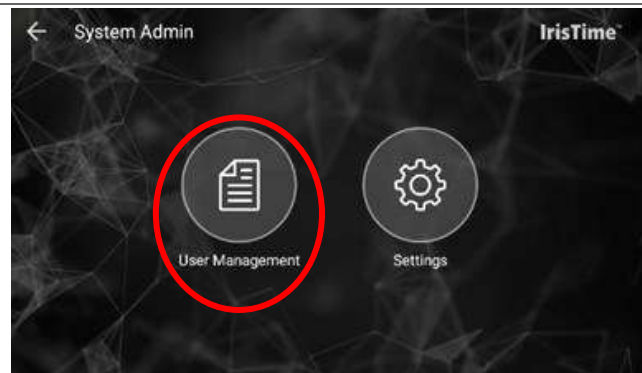
Enrollment can be performed from any iT100 device that has been activated on the system. Once enrollment has been performed on the device, it will update iTMS and all other iT100 units that are active and connected on the system. Refer to the “IrisTime™ Management System (iTMS) User Manual” for additional information on User Management when using iTMS and the available SDK.

Users must be enrolled in the system before they are able to perform any verification. The iT100 allows for very customizable biometric enrollment settings for individual users. Each user can have individualized authentication modes. The User Authentication Mode is not a property of the device. The

administrator can change the individual user's authentication mode without re-enrolling user biometrics. Perform the steps in this section to enroll a user.

Note: To enroll the user's biometric data, the user needs to be physically at the iT100 device.

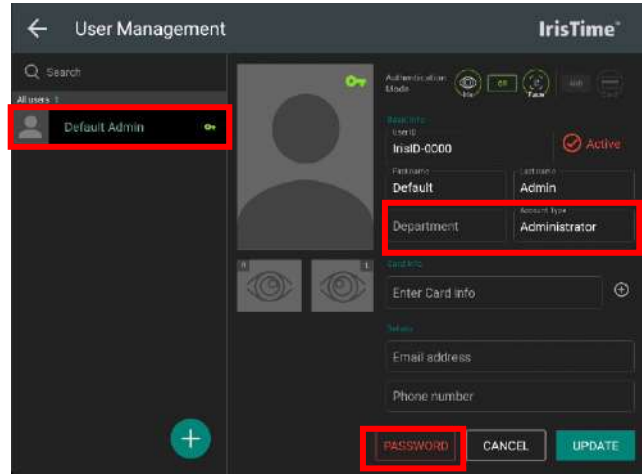
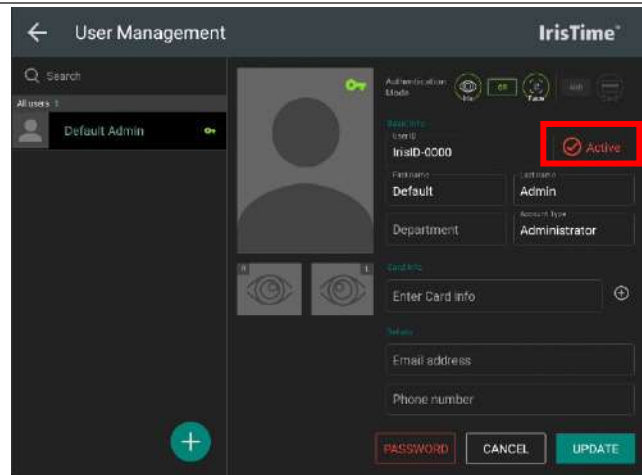
10.1 Logging into User Management

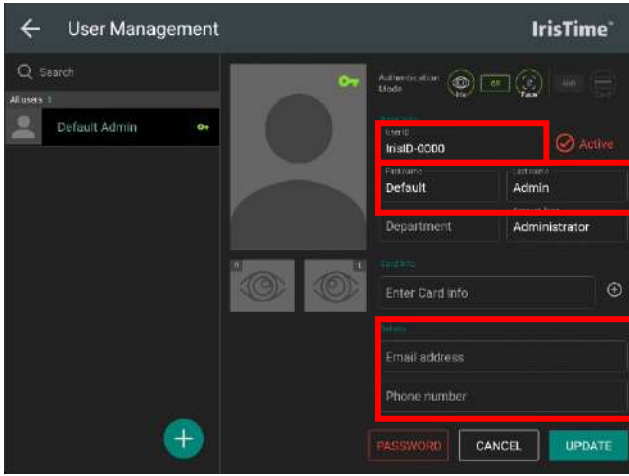
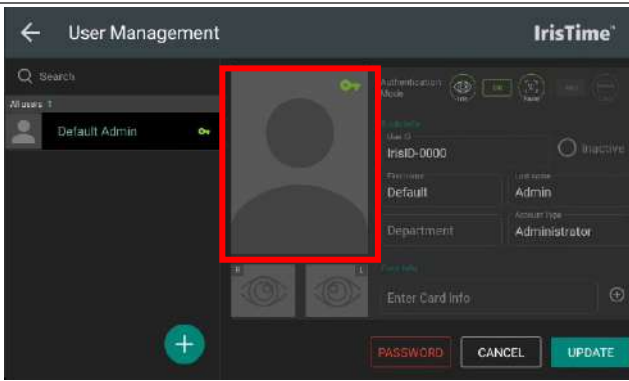
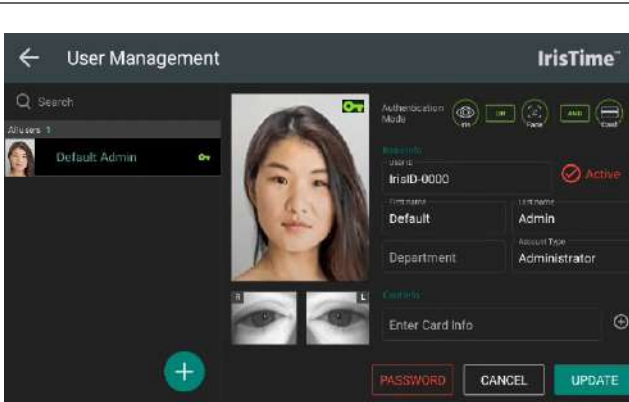
	<p>From the main screen, press the IrisTime™ logo to access the Admin Login screen.</p>
	<p>Select Username and Password, then enter your credentials to sign in.</p> <ul style="list-style-type: none"> • Select the Username field, enter the admin level username (default is admin). • Select the Password field, enter the password for the admin level username entered. • Click Sign In to continue with log in.
	<ul style="list-style-type: none"> • Click the User Management button from the System admin page.

10.2 Setup the Default Admin account

The default Admin account is the user who has full access to the iT100 settings and user management. This account is where the password for access to the settings and user management screens.

IMPORTANT: If the Default Admin account password is forgotten and the biometrics cannot be matched, then the only option is to factory recover the device. The result of the factory reset is that all user and configuration data will be lost.

	<p>Select Default Admin to view the default administrator account.</p> <p>Password – This password is the one which was set during the initial Admin Login on the iT100. When in standalone mode this password controls access to the iT100 Admin Login.</p> <p><i>Note: When used with iTMS the Admin Login is determined by the iTMS password.</i></p> <p>Department – This is part of the policy settings of iTMS, in standalone mode this is not used.</p> <p>Account Type – This is the type of account for the logical security of the iT100. When in standalone mode, this will always be Administrator for the Admin account.</p> <p><i>Note: There is only one Administrator account for each iT100 or per iTMS system.</i></p>
	<p>Select Default Admin to view the default administrator account.</p> <p>Active / Inactive - Status of the default admin account. (This is different than for the user accounts)</p> <ul style="list-style-type: none"> • Active – The admin is active in terms that their biometrics can be used for logging into the Admin Screens and use of the iT100. • Inactive – The admin account is inactive for use of the enrolled biometrics or use of the iT100 for identification/verification. The Admin account password can still be used for access to the Admin screens of iT100.

	<p>User ID - The unique identifier of the user's record. This is a required field and must be unique for all other User ID in the system.</p> <p>First Name and Last Name</p> <ul style="list-style-type: none"> • First Name of the user. • Last Name of the user. <p><i>Note: Although the name of the user for the Default Admin is changed, the login Username to the iT100 Admin Login will remain as "admin".</i></p> <p>Email Address</p> <ul style="list-style-type: none"> • Email address of the user (optional). <ul style="list-style-type: none"> ○ For information purposes only <p>Phone Number</p> <ul style="list-style-type: none"> • Phone number of the user (optional). <ul style="list-style-type: none"> ○ For information purposes only
	<p>Adding the biometric(s) of the Administrator allows for a biometric only login to the Admin Login screen.</p> <p>To enroll the biometrics for the Default Admin account. (For details and tips on how to enroll biometrics see Section 10.5)</p> <ul style="list-style-type: none"> • Press and hold the face placeholder for 2 seconds and you will see a pop-up window. • Click "OK", the iT100 will start capturing biometrics.
	<p>Once the biometrics are successfully captured, it will show the face picture and the iris image thumbnails.</p> <p><i>Note: The warning of "Capture failed" indicates that the biometrics captured are not good quality. Recapture of the biometric image will be required with eyes opened wider.</i></p> <p><i>Note: The iris image thumbnails are only good for visual inspection.</i></p>

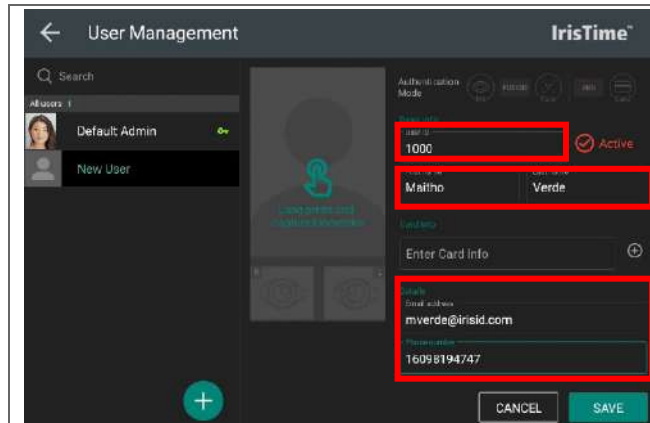
- Select the Admin’s Authentication Mode by clicking the Iris, Operation, Face, Operation, and Card icons to enable or change each item. (see [Section 2.4](#) for the discription of Authentication Modes)
- Card Info can be added to the administrator, follow [Section 10.4](#) for more information.
- Click “UPDATE” to save all changes for the administrator user.

10.3 Adding / Enrolling Users

Add/Enroll a new user by clicking the + symbol in the circle.

Active / Inactive - Status of user account.

- Active – The user account is active in terms that their biometrics and card can be used with the iT100.
- Inactive – The user account is disabled in that the biometrics or card associated with the user will not be identified/verified.



User ID - The unique identifier of the user's record. This is a required field and must be unique for all other User ID in the system.

First Name and Last Name

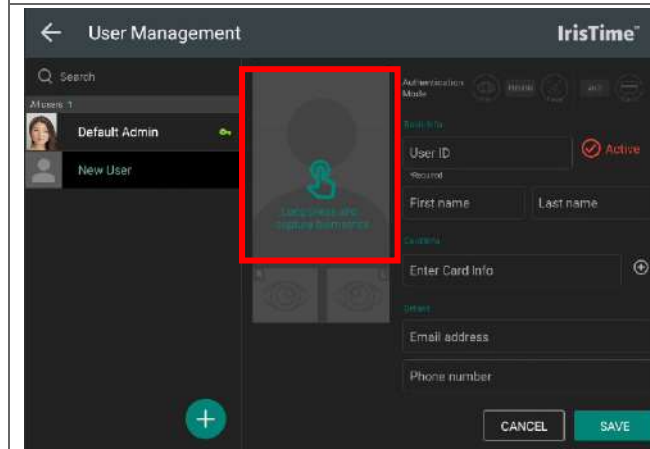
- First Name of the user.
- Last Name of the user.

Email Address

- Email address of the user (optional).
 - For information purposes only

Phone Number

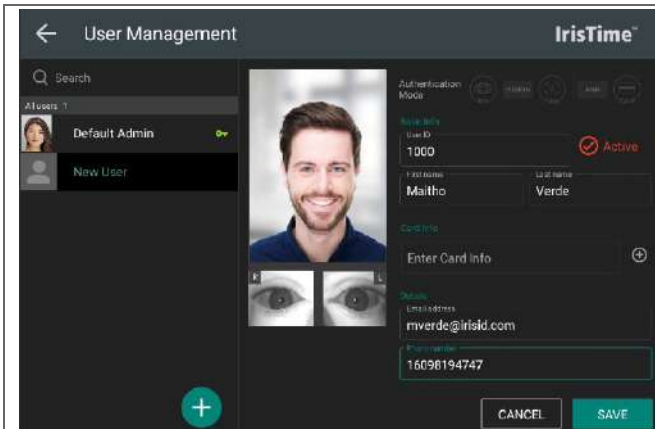
- Phone number of the user (optional).
 - For information purposes only



Adding the biometric(s) for the user.

To enroll the biometrics for the user account. (For details and tips on how to enroll biometrics see [Section 10.5](#))

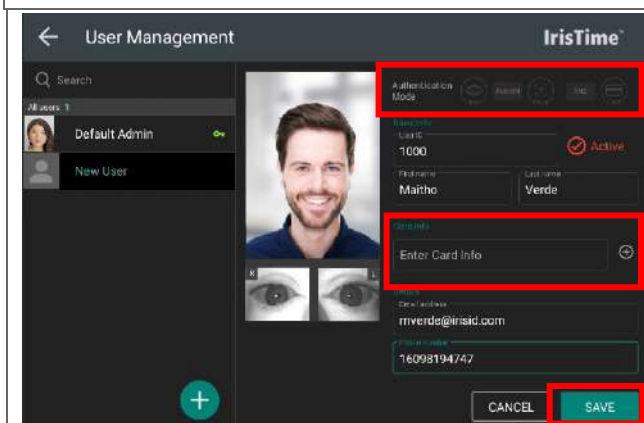
- Press and hold the face placeholder for 2 seconds and you will see a pop-up window.
- Click "OK", the iT100 will start capturing biometrics.



Once the biometrics are successfully captured, it will show the face picture and the iris image thumbnails.

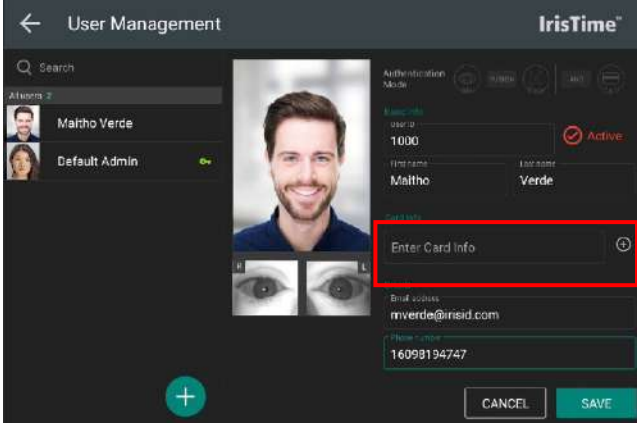
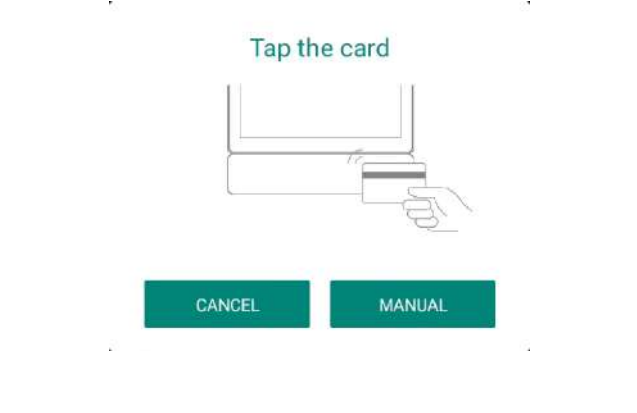
Note: The warning of “Capture failed” indicates that the biometrics captured are not good quality. Recapture of the biometric image will be required with eyes opened wider.

Note: The iris image thumbnails are only good for visual inspection.



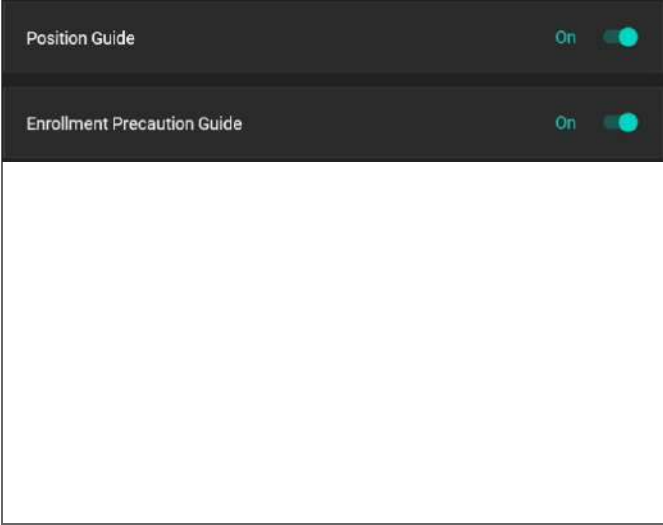

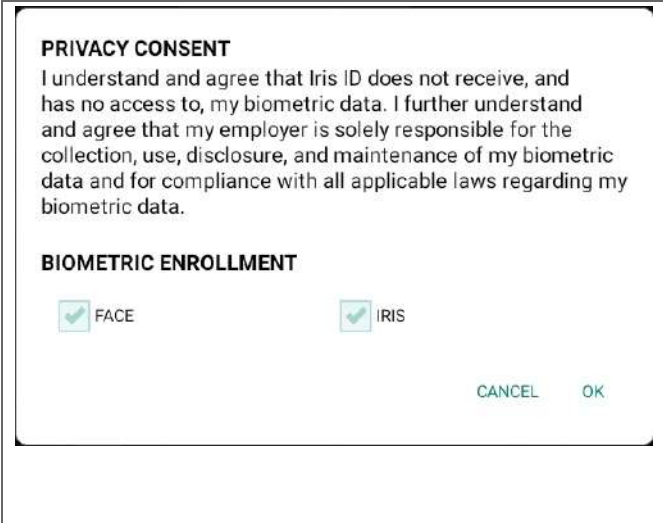
- Select the Admin’s Authentication Mode by clicking the Iris, Operation, Face, Operation, and Card icons to enable or change each item. (see [Section 2.4](#) for the discription of Authentication Modes)
- Card Info can be added to the administrator, forllow [Section 10.4](#) for more information.
- Select “SAVE” to save the user’s information and biometrics.


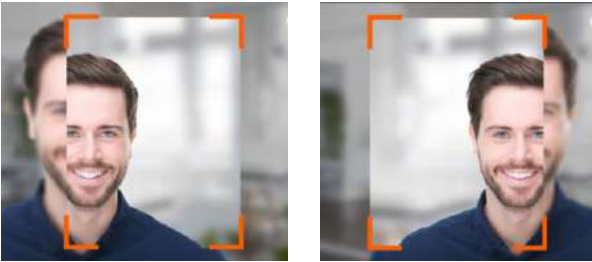
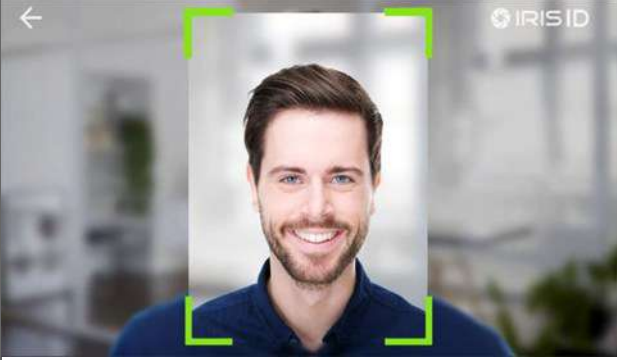
10.4 User's Card Information

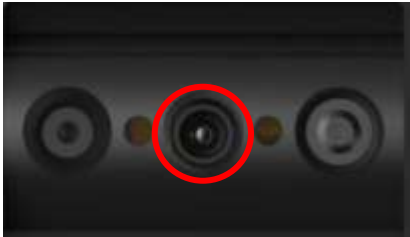

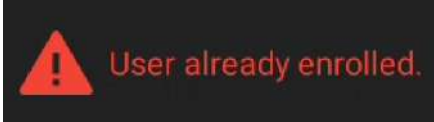
	<h3>Card Info</h3> <p>Each user can have multiple cards associated with their record.</p> <p>Card info is used for:</p> <ul style="list-style-type: none"> • Wiegand output • Card verification <p>Note: In a biometric authentication mode only the first Card Info entry is used for Wiegand output.</p> <p>Tap the “+” sign next to the “Enter Card Info” field to associate the user with a card.</p>
	<h3>“Tap the card” entry</h3> <p>Tap the Card – Allow for the card data to be captured from the card present to either the internal (attachment module) or external (via Wiegand Input) card reader.</p> <p>The card data will be captured and if the data is in a recognized format (listed in manual input section), the data from the card will be parsed into the decimal Card ID and Facility Code.</p>

<div data-bbox="332 304 673 609"> <p>Card Format</p> <p>26-Bit HID Standard(H10301)</p> <p>Card ID (*)</p> <p>Enter Card ID</p> <p>Facility Code</p> <p>1</p> <p>CANCEL ENROLLMENT</p> </div> <div data-bbox="332 682 673 987"> <p>Card Format</p> <p>26-Bit HID Standard(H10301)</p> <p>32-Bit CSN(CSN Only)</p> <p>35-Bit HID Corporate 1000</p> <p>37-Bit HID Standard(H10304)</p> <p>48-Bit HID Corporate 1000</p> <p>CANCEL ENROLLMENT</p> </div>	<p>Manual entry – Press the “Manual” button</p> <p>Manual – Allow for the decimal card data (Card ID & Facility Code) to be entered and the Card Format selected.</p> <ul style="list-style-type: none"> • Card Format – Select from the drop-down box the Wiegand format of the card. <ul style="list-style-type: none"> ○ 26-Bit HID (H10301) ○ 32-Bit CSN ○ 35-Bit HID Corp 1000 ○ 37-Bit HID (H10304) ○ 48-Bit HID Corp 1000 <p><i>Note: Additional and custom card formats are available when used with iTMS.</i></p> <ul style="list-style-type: none"> • Card ID – The Card ID which will be output to the access control panel. • Facility Code – The facility in which the card can be used or an additional identifier of the card. Not used in all formats (if the format selected does not support facility code then this field will not be shown). <p>Enrollment (button) – Enters the Card information into the user’s record.</p>
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10.5 Biometric Enrollment

 <p>Position Guide On <input checked="" type="checkbox"/></p> <p>Enrollment Precaution Guide On <input checked="" type="checkbox"/></p>	<p>To assist the user with biometric enrollment, there is an optional Position Guide and Enrollment Precaution Guide. These can be enabled in Settings – Application.</p> <p>Position Guide – When enabled, the user will receive visual and audio guidance for positioning of their face and irises to the iT100 device.</p> <p>Enrollment Precaution Guide – When enabled, additional enrollment guides will be displayed (ex. Remove Glasses & Face Mask) during the biometric enrollment process.</p>
 <p>Long press and hold to capture biometrics</p>	<p>Enrollment of biometrics is started by a long press and hold on the face picture placeholder for 2 seconds.</p>
 <p>PRIVACY CONSENT I understand and agree that Iris ID does not receive, and has no access to, my biometric data. I further understand and agree that my employer is solely responsible for the collection, use, disclosure, and maintenance of my biometric data and for compliance with all applicable laws regarding my biometric data.</p> <p>BIOMETRIC ENROLLMENT</p> <p><input checked="" type="checkbox"/> FACE <input checked="" type="checkbox"/> IRIS</p> <p>CANCEL OK</p>	<p>A pop-up window will display the Privacy Consent message.</p> <p>Note: Biometric Enrollment performed will be for both the Face and the Irises of the user.</p> <p>If the user agrees to the consent, press on “OK”. Otherwise press on “Cancel” to abort the biometric enrollment process.</p>

<p>Please remove your glasses or face mask</p> 	<p>For Face & Iris biometric enrollment, the user should remove their glasses and face mask. This allows the iT100 camera to capture the most biometric data possible.</p> <p><i>Warning: Poor quality enrollments due to glasses or face masks being worn during enrollment can result in false rejection or false acceptance of users.</i></p> <p>If the Enrollment Precaution Guide is on the pop up shown to the left will display to remind the user to remove their glasses and face mask for proper enrollment.</p> <p>Click “OK” or wait 2 seconds, the iT100 will start capturing biometrics.</p>
<p>Move Right Move Left</p> 	<p>The enrollee must stand in front of the iT100 device, positioning their entire face within the bracketed area shown on the LCD screen.</p> <p>If the position Guide is enabled, the user will be prompted to move either right or left depending on the user’s location.</p> <p>The enrollee should center their face within the guide box. The iT100 will automatically adjust for the user’s height position by tilting the camera assembly.</p>
	<p>The enrollee distance from the iT100 is guided by the color of the brackets surrounding the guide box.</p> <ul style="list-style-type: none"> • Orange color corner brackets indicate that the user is positioned either too close or too far from the camera. • Green color corner brackets indicate that the user is within the proper operating range and the capture process will automatically take place.

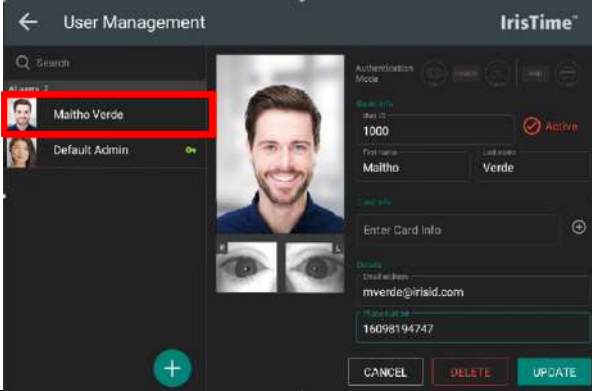
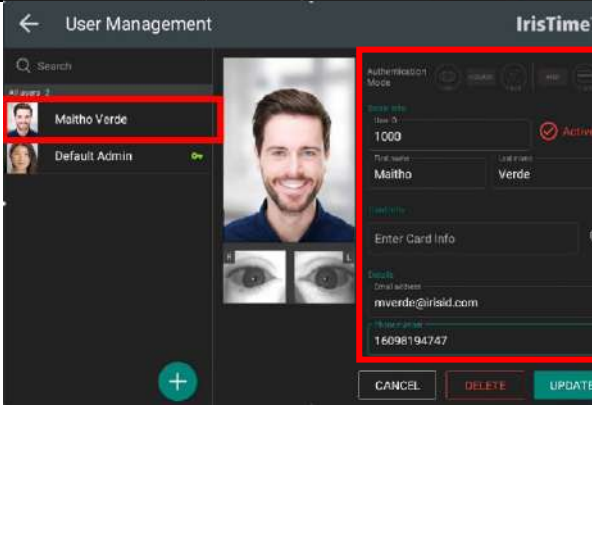
	<p>For the best iris enrollment, the enrollee should look at the small round mirror at the center of the camera assembly at the top center of the iT100 device during the image capture process.</p> <p>The enrollees should also open their eyes as wide as possible.</p>
	<p>If “Verified fail” or other error messages are displayed, the capture of biometrics failed. This could be caused by one of the following:</p> <ul style="list-style-type: none"> • Users need to open their eyes wider. • Users need to look at camera module instead of LCD screen during iris capture. • Capture process timed out (User not positioned properly or moved out of capture range). • Poor image quality. • User movement too fast or great during capture process.
	<p>The error “User already enrolled” indicates that the biometric is already enrolled in the system under another user record.</p>

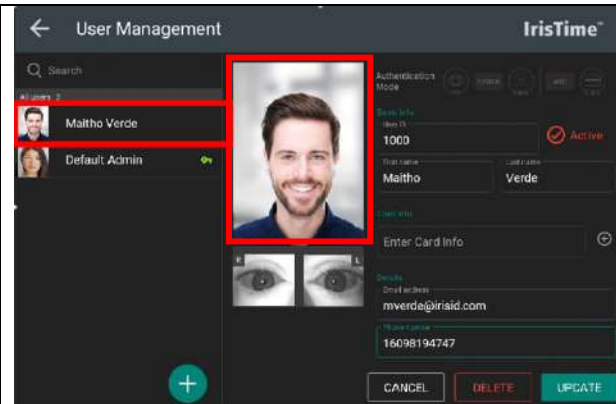
10.6 Manage Existing Users

The User Management screen of the iT100 provides existing user information, and settings that can be modified.

If using iTMS

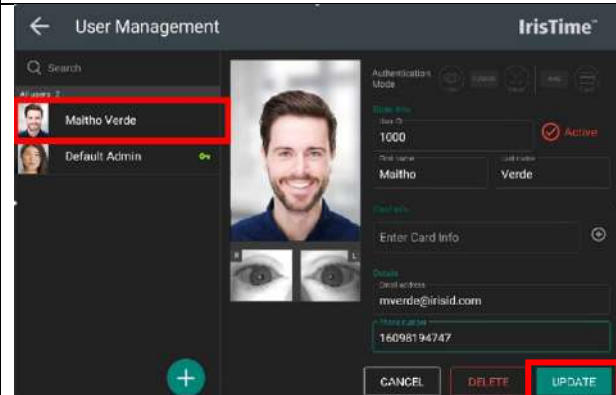
When new users are added using iTMS, the iris/face images have not yet been captured. Biometric data needs to be acquired using an iT100 device. Perform the following steps to complete the user enrollment.

	<p>You may modify the record of an enrolled user if they are listed on the left side of the User Management screen.</p> <p>Select the user to modify.</p> <p>You can see the details of the record by clicking the name on the navigation menu.</p>
	<p>Possible modifications to the user record include:</p> <ul style="list-style-type: none"> • User's Authentication Mode • Change User ID • Activate / Deactivate user • Change or Delete First Name • Change or Delete Last Name • Add, Change, or Delete Card Information • Change or Delete Email Address • Change or Delete Phone Number <p><i>These changes can be made by pressing on the text box and entering the new value. Or clearing the value in the text box to delete.</i></p>



The biometrics can be changed (or added) by:

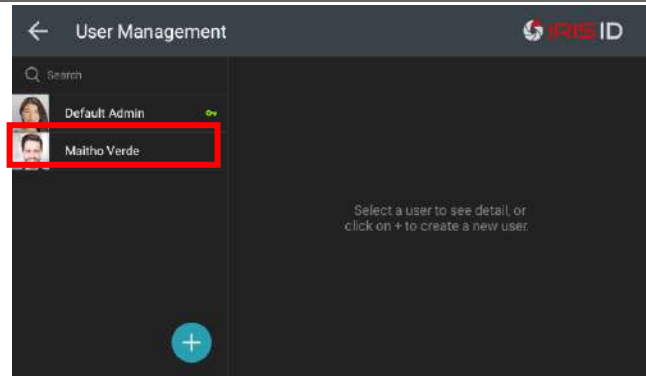
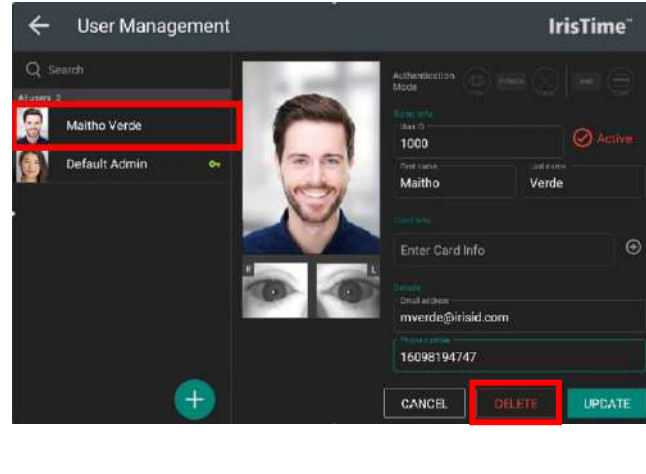
- Press and hold the face image for 2 seconds. A message will display asking if you want to change the biometrics.
- Select “OK”, then the iT100 will immediately start the capture process.



After modifying any of the information:

- Click “UPDATE” to apply the changes.

10.7 Deleting a User



Delete User	
 <p>The screenshot shows the 'User Management' screen with a list of users. The user 'Maitho Verde' is highlighted with a red box. The screen also shows a search bar, a back arrow, and a plus sign at the bottom.</p>	<p>The entire user record can be deleted:</p> <ul style="list-style-type: none"> • Select the user to delete from the left column of the User Management screen.
 <p>The screenshot shows the user detail screen for 'Maitho Verde'. The 'DELETE' button is highlighted with a red box. The screen displays user information such as 'Authentication Mode', 'Card ID', 'First Name', 'Last Name', 'Enter Card Info', 'Email address', and 'Phone number'. There are also 'CANCEL', 'DELETE', and 'UPDATE' buttons at the bottom.</p>	<ul style="list-style-type: none"> • In the user record press on the “Delete” button. <p>A message will display confirming that you want to delete the user.</p> <ul style="list-style-type: none"> • Select “Delete”, the user will be immediately deleted from the device/system.

11. User Identification / Verification

11.1 Interactive Mode

When the iT100 is set for Operation Mode “Interactive” (Settings / Application), the biometric capture process will not begin until the user selects either the “**CLOCK IN**” or “**CLOCK OUT**” button on the LCD.

CLOCK IN refers to a user starting a work shift, whereas CLOCK OUT is selected when a user is ending a work shift.

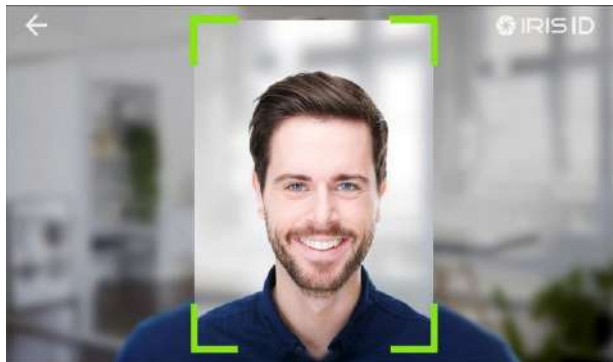
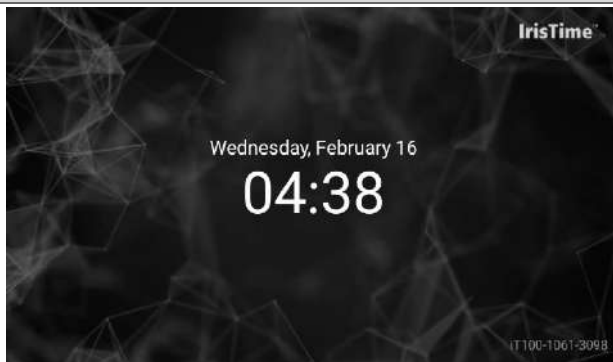
User Recognition Interactive	
	<ul style="list-style-type: none"> • Press the “CLOCK IN” or “CLOCK OUT” button. It will start user authentication.
	<p>Once a user is in the operating range, a green bracket will be displayed at the corners of the face image, indicating the user is in the operating range. An orange bracket indicates that the user is out of range.</p>
	<p>The camera will capture the biometric images and perform the identification/verification process.</p>
	<p>If Mask Detect (Section 9.19) “voice guide” is enabled, the user will be prompted to “Please wear a face mask” if none is detected. If “Access Control” is enabled, then the user will be rejected unit a face mask is detected on the user.</p>
	<p>If Thermal Camera (Section 9.29) “Temperature Alarm” is enabled and the user’s temperature is at or above the set threshold, an audible alert is sounded from the iT100. If “Access Control” for the thermal camera is enabled, then the user will be rejected.</p>

11.2 Continuous Mode

When the iT100 is set for the Operation Mode “Continuous” (Settings / Application), the biometric capture process will begin as soon as the user is detected by the proximity sensor in the iT100.

In this mode, no physical contact with iT100 is required.

User Recognition Continuous



- User approaches the iT100. When in range the LCD will display the live video image of the user.

Once a user is in the operating range, a green bracket will be displayed at the corners of the face image, indicating the user is in the operating range. An orange bracket indicates that the user is out of range.

The camera will capture the biometric images and perform the identification/verification process.

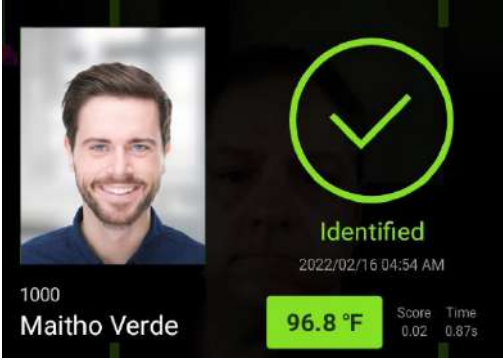

If Mask Detect ([Section 9.19](#)) “voice guide” is enabled, the user will be prompted to “Please wear a face mask” if none is detected. If “Access Control” is enabled, then the user will be rejected unit a face mask is detected on the user.

If Thermal Camera ([Section 9.29](#)) “Temperature Alarm” is enabled and the user’s temperature is at or above the set threshold, an audible alert is sounded from the iT100. If “Access Control” for the thermal camera is enabled, then the user will be rejected.

11.3 Identification Results

When the user's biometrics or card (depending on recognition mode selected) are captured, the results screen will display.

The results screen will automatically close after the time interval set in "Result Auto-dismiss Timer Interval" in Settings > Application. No physical contact with the iT100 is required to clear the result screen.

User Recognition Results	
	<p>Identified</p> <p>If the user's biometrics and/or card are matched, the results screen displays with the enrollment picture, User ID, and name.</p> <p>The date and time of the identification, along with the match score and match speed are displayed.</p> <p>If equipped with a thermal camera, the user's temperature is also displayed.</p>
	<p>Identification Failed</p> <p>If the identification process has failed, the message of "Identification Failed" will display.</p> <p>Possible reasons for failure:</p> <ul style="list-style-type: none"> • Biometric capture is of poor quality. • User is not properly aligned in the capture area. • User's eyes are not fully open (when iris biometric is required). • The biometrics and/or card are not matched. <p>The images from the failed capture attempt will be displayed, along with the date and time of the identification. The match score and match speed are displayed.</p> <p>If equipped with a thermal camera, the user's temperature is also displayed.</p>

12. Glossary of Terms

This section provides reference terminology and definitions for iT100 IrisTime™ and applicable software.

iT100 Application – Each iT100 ships with the Iris ID standard application installed. This is a basic application for enrollment and identification. Clock in and clock out functions are available in the Interactive mode. A Continuous mode is also available.

Administrator – User which can access setting of the iT100 or the iTMS.

API Key – The API Key is the AES Key which provides for encryption of communication from iTMS to iT100 devices. This key is system generated when iT100 is initially authenticated to iTMS.

Application Signing – Iris ID hosts a service to the developer to sign their application. APK signing is required to load 3rd party applications into iT100 using iTMS or rest API's.

Audit Trail – iTMS records operations performed in iTMS.

Authentication Mode – Each user can be assigned Iris only, Iris + Face (fusion), Face Only, Card, PIN, etc.

Developer Unit - Special Load of iT100 firmware to allow developers to create and test their application on an iT100.

Fusion Matching – Verification of combined face and iris biometrics.

iT100 SDK – Application Development SDK. Requires an iT100 Development unit. Includes sample application Source code. APK signing is required for APK loading into production units.

iT100 Service – Each iT100 has an “authentication service” running inside. The iT100 application communicates with this service to perform enrollment and matching for face and iris within the device. When using iTMS the enrollments performed on any iT100 are automatically populated to all of the other iT100's connected to that particular iTMS.

iT100 Operation Modes – Continuous – Users are authenticated automatically as they approach the iT100. Interactive mode requires the user to touch the screen, present a Card, or token, etc.

iTMS – IrisTime™ Management System – Web Based PC application to administer multiple iT100 devices.

iTMS Rest API's – Commands which can be used by other applications to communicate with an iTMS instance.

Passphrase – This entry in the Settings menu of iTMS is used to automatically generate the Site Key which is applied.

Production (Software Build Type) – Can run the Iris ID standard application, or an application developed by a 3rd party. Third party applications must be signed by the Iris ID server. Production Built Type can only be upgraded to a newer version of “Production” software.

Development (Software Build Type) – Can be used for on device application development when used with the iT100 SDK. This version can also run the Iris ID standard application, or an application developed by a 3rd party. Third party applications must be signed by the Iris ID server. Development Build Type can be upgraded using newer versions of “Development” software to maintain the ability to develop software or changed to “Production” software.

Score – Face, Iris, and Fusion scores are the inverse value of the match with the stored biometric template. Scores range from 0.00 (100% match) to 1.00 (0% match). The iris and face scores are directly related to the comparison of the captured image/template with that of the stored template. The fusion score is a combination of the iris and face image/template score, but it may have a score of 1.00 although either the face or iris scores are not 1.00. Iris score has more of a determination of the fusion score than that of the face score. The threshold for a good quality match is a score of 0.30 or lower.

Site Key – The site key is the AES key which encrypts the template and user data inside the iT100.

13. Frequently Asked Questions (FAQ)

Find answers to commonly asked questions.

Question

Can a backup of the iT100 user information (database) be accessed or exported?

Answer

Backup of user information can be performed by using the IrisTime™ Management System (iTMS), or through use of the iT100 REST API.

Question

If using iTMS, can new enrollments be performed without direct interaction with an iT100?

Answer

When using the iTMS software (not a stand-alone iT100), you can perform additional enrollment and user management functions from the iTMS application directly. However, enrollment or update of the user’s biometric images (face and/or irises) still requires an iT100.

Question

With the iT100 in stand-alone mode, if the Admin password is unknown what is the option to access the Setting of the device?

Answer

If the Admin password is unknown, then the only option is to perform a factory reset of the device (hold the factory reset button on back of iT100 while powering on). This factory reset will erase all user data and configuration setting on the iT100.

Question

I enrolled the user (in stand-alone mode) but when they recognize at the iT100 no Wiegand output is provided from the iT100 device to my access control panel. I have checked the wiring from the iT100 to the Access Panel and this is correct (Per [Section 5.3.4](#) of this document)

Answer

For Wiegand output the user must have Card Info enrolled. See [Section 10.4](#) of this document for the details on how to add Card Info to the user's record (in stand-alone mode).

14. Technical Support

Additional information and technical assistance are available on the Iris ID System's support web site at www.irisid.com, click on Support then Knowledge Base.

Appendix A: Update the iT100 Software (stand-alone mode only)

It may be necessary to update the iT100 camera software to ensure that the device contains the latest features and fixes.

IMPORTANT: The following process only needs to be performed if the iT100 will be used in stand-alone mode (no iTMS Software being used). When used with iTMS the device software upgrade process is performed from iTMS.

This process requires that the iT100 setup has been completed for network and stand-alone activation.

Note: The iT100 will be inoperable and unavailable to users for several minutes when the actual firmware and software update is being applied into the device.

Download the iT100 Update Utility

A version of the iT100 Update Utility is available for different operating systems. The desired utility can be download from the following links.

OS	Download Path
Windows	http://www.irisid.com/dl/iT100/iT100Update_W.zip
macOS	http://www.irisid.com/dl/iT100/iT100Update_M.zip
LINUX (Red Hat)	http://www.irisid.com/dl/iT100/iT100Update_R.zip
LINUX (other)	http://www.irisid.com/dl/iT100/iT100Update_L.zip

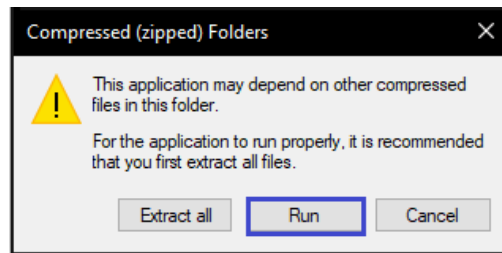
Download the Latest iT100 Software Version

IMPORTANT: The iT100 software comes in a production version and a development version. Typically, the iT100 device contains the production version of software. However, note that if the device contains the development version of software and it is upgraded using the production version, this cannot be reversed without the device being returned to Iris ID. If this device is being used for software development purposes, please be sure to upgrade the device only with the development version of software.

Software Type	Download Path
Production	http://www.irisid.com/dl/iT100/iT100_PRD.zip
Development	http://www.irisid.com/dl/iT100/iT100_DEV.zip

Install the iT100 Update Utility (Windows version shown)

1. Unzip the iT100 Firmware Installer Application
2. Double Click on IT100 Software Update Application .exe file
3. If prompted, select **Run**



The iT100 Software Update Application Icon will be added to the desktop.



Using the iT100 Software Update

1. Double click on the icon to open the application.



2. Click **START**

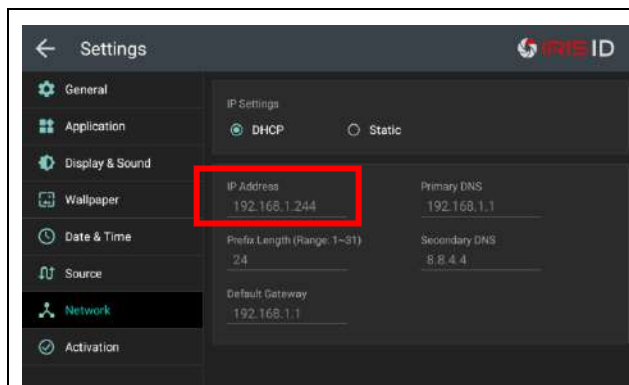


3. On the Devices screen, click on '+ ADD DEVICE'



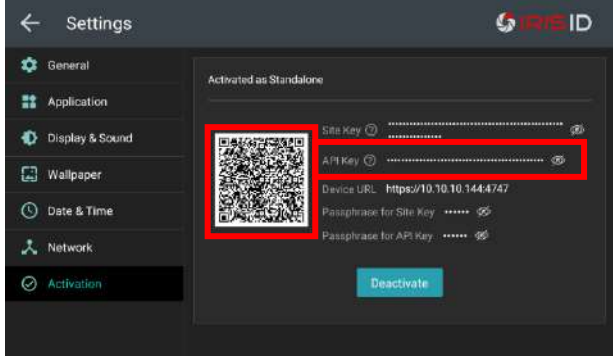
4. Enter the IP Address and API Key of the iT100 that you want to upgrade.


How to locate your IP Address



The IP Address of the iT100 can be determined by navigating to the settings menu of the iT100 device and selecting "**Network**".

How to locate your API Key



The API Key can be found in the settings menu of the iT100 device by selecting 'Activation' and clicking on the  icon next to the 'API Key' field.

Another option for copying the API Key is to read the QR Code on the Activation Screen using a smart phone with QR Code reading capabilities. This QR Code contains the API Key which when decoded and sent as a text document, can be sent to the computer used for upgrading the iT100.

Copy the API Key from the QR Code text, between the double quotation marks.

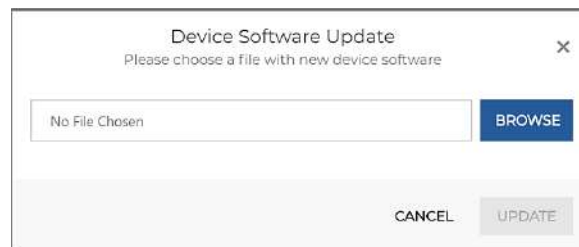
Click on the API KEY text box of the upgrade application and use CTRL+V to paste.

5. Click **ADD**
6. Repeat steps 6 through 8 for each additional iT100 that you want to upgrade.

Devices + ADD DEVICE ACTIONS

<input checked="" type="checkbox"/>	DEVICE NAME	IP ADDRESS	DEVICE TYPE	SERIAL NUMBER	SOFTWARE VERSION	PROGRESS
<input checked="" type="checkbox"/>	iT100-0030-0103	192.168.1.166	iT100	MP202003ID000103	1.1.8	

7. Click on the check box next to each iT100 that you want to upgrade or to select all, click on the check box next to "DEVICE NAME" in the header.
8. Once all the iT100 devices desired are selected click on the 'ACTIONS' button and select 'Update Software' in the drop-down list.

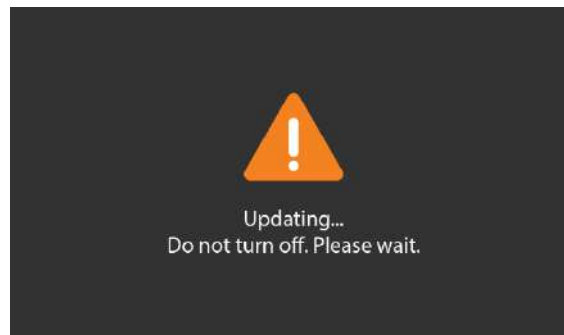


9. The 'Device Software Update' dialog will appear. Enter the path in where the firmware files are located or click on 'Browse' to navigate to the file location. (Select the .ipk file.)

10. Click on 'Update'.

The Progress Bar will fill in showing the status of the firmware update file uploading into the iT100. The file transfer is completed "Updated" will show under 'Progress' in the upgrade application.

IMPORTANT: The 'Progress' in the upgrade application only shows the status for the firmware upload to the iT100. The iT100 device still needs to complete the firmware updating process on the device. During this time, the iT100 will be inoperable and will display the following screen on its LCD screen.



Update of the firmware on the device is completed once the normal screen is displayed on the device.

11. Successful upgrade of the device can be verified by going into the settings menu of the iT100 device, selecting 'General', and viewing the 'Software Version'.

Appendix B: Creating and Uploading Custom Voice Announcements

The iT100 contains voice announcements to help guide the user with the operation of the iT100. There are voice files for the 11 languages which the iT100 supports. The language selection in the iT100 Settings > Display & Sound menu selects the voice announcement language along with the on-screen text.

Custom voice announcements can also be recorded and uploaded to the iT100 for each of the languages.

Each language contains 7 voice announcements files, one for each of the corresponding conditions. See the table below for the list of default voice announcement, the condition in which it is triggered, and the filename.

Creating Voice Announcement Files

Each voice file needs to be recorded in .mp3 format (minimum of 128 kbps recommended).

The filename for each voice announcement must be as shown in the below table. The language under which the voice announcement file is active is designated by the language abbreviation used in the last part of the filename (after the last underscore). For example, the voice file name “user_recog_success_en.mp3” is the voice announcement for when identification is successful when the language selection is English.

Language	Abbreviation
English	en
Korean	ko
Turkish	tr
Arabic	ar
Chinese (Traditional)	zh-rCH
Chinese (Simplified)	zh-rTW
Japanese	ja
French	fr
German	de
Spanish	es
Italian	it

Default Sound/Prompt (English)	Condition	File Name
“You have been identified”	Identification was successful	user_recog_success_xx.mp3
“You are not identified”	Identification failed	user_recog_fail_xx.mp3
“Please move back”	User is too close to camera	user_move_back_xx.mp3
“Please move closer”	User is too far from camera	user_move_closer_xx.mp3

“Center your face in the guide box”	User face is not detected	user_move_guidebox_xx.mp3
“Please move left”	User is not centered (too far right)	user_move_left_xx.mp3
“Please move right”	User is not centered (too far left)	user_move_right_xx.mp3

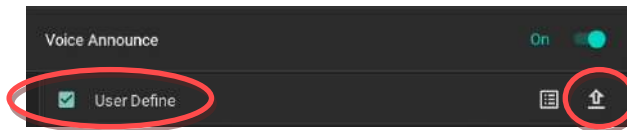
Uploading the Voice Announcement Files to the iT100.

The voice announcement files can be uploaded to the iT100 by placing the recorded voice files on a USB storage drive and connecting it to the USB port at the bottom of the device. The voice files are to be placed in the root directory of the USB drive to be recognized by the device.

1. Insert the USB Drive into the USB connector on the bottom of the iT100.
2. Log into the Settings of the iT100 and select the Application menu item.



3. Enable Voice Announcement by selecting the slider to “On”.
4. Press on “Voice Announcement” to show the “User Define” option.
5. Check mark next to “User Define” and select the up arrow.



6. The list of .mp3 voice files on the USB drive will display.



7. Select the check mark box next to each voice filename you want to upload to the iT100.
8. Press OK to perform upload. A small message will show “Upload Completed” and the checkmarks next to the files will deselect.
9. The custom voice announcement files are now uploaded to the iT100 and will announce when the corresponding language is selected and the condition for the announcement occurs.