



beyond  
payment

## iSC250

### Operation and Product Support Guide



iSC250 Operation and Product Support Guide  
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## Notes

# Revision History

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Date	Revision	Changes
3/30	A	Initial Draft

## Notes



# 1. Introduction

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This document is intended for use by customers' management level personnel involved in planning and supervision of product installation, deployment, support, and day to day usage of the Ingenico iSC250 signature capture PIN pad. This document explains all of the product's available features, and how to install, operate, and configure the iSC250 device.



*A separate document on installing and setting up the iSC250 device, DIV350824 iSC250 Installation and Quick Reference Guide, can be supplied with each device if required. Additional technical information may be obtained from the Sales Guide and User guide. Some of the information in those documents is also consolidated here for the reader's convenience.*

The iSC250 is a high end product in a new range of multi-functional secure electronic payment devices with a broad application in a wide range of markets including retail, banking, and multi-lane retail. The iSC250 is a streamlined product with a high tech industrial design to represent the “next generation” retail PIN pad and brings together many advanced features for use in multiple-application environments.

Ingenico's iSC250 secure electronic payment device consists of the following:

- ADA style illuminated keypad
- Dual-head bi-directional magnetic stripe reader
- 4.3” color touch WQVGA screen supporting full motion video, with finger and stylus touch input
- Signature capture
- Optional integrated contactless card reader
- Smart card reader

The device supports:

- Payment information processing
- Full motion video graphics advertising

It enables the following functions:

- Customer activated/operated PIN pad
- High performance dual processors to support increased functionalities
- High reliability
- Interfaced directly with the POS
- Security for payment/PIN entry that adheres to PCI PTS 2.x standard security requirements

The iSC250 device can communicate with a host device such as a POS or PC via RS-232, Tailgate (RS-485), USB, VGA, and Ethernet. Ingenico does not support dial communications

for the iSC250 device. Peripherals such as check readers and printers can be connected to the device via the USB port.

## 1.1. Conventions Used in this Manual

The following table explains the conventions used in this manual.

**Table 1: Manual Conventions**

Convention	Use	Example
[Brackets]	Identifies the key to press on the device.	[1]
<b>Reverse Video</b>	Reverse highlights the selected menu option on the iSC250 (icon or list menus). See 4.1 Navigating Telium Manager's Submenus on page 20.	<b>TELUM MANAGER</b> CONSULT EVOL <b>INIT</b> DIAG DEL
<i>Italics</i>	Identifies referenced documents.	<i>Applname</i>



This manual uses the term POS (Point of Sale) to refer to a register.

## 1.2. Payment Types

The iSC250 device supports payment information processing. With the appropriate application software, the iSC250 device supports the following payment types:

- Credit
- Debit
- EMV
- Contactless
- Electronic Benefits Transfer (EBT)
- Gift Card and Loyalty
- WIC

The iSC250 can also act as a utility platform for electronic marketing, such as advertising and loyalty programs. In addition to payment, the device can be used for the following:

- Customer Graphics Display
- Item Scrolling
- Loyalty Programs
- Advertising
- Instant Credit

- Personal Messaging
- Cross Selling
- Electronic Couponing
- Email Address Capturing
- Customer Surveys
- Driver's License
- Videos
- Branch Automation
- Kiosk
- Price Checker (if used with bar code scanning device)
- Training
- Education

### 1.3. Device Parts Overview

---



**Figure 1: iSC250 Device Parts (front)**

**Stylus:** Use the stylus to perform signatures for credit transactions and to press buttons on the display screen.

**Optional Contactless Card Reader:** The contactless card reader may be installed to add the ability to read contactless payment cards. The customer holds the card in active zone around

the display. A series of green lights illuminate and a beep is heard to indicate a successful contactless card read.

**Graphical Display Screen:** The touch screen displays messages, captures signatures, and prompts the customer for the next action.

- To perform signatures on the screen, use the attached stylus.
- To press screen buttons, use the stylus or your finger.

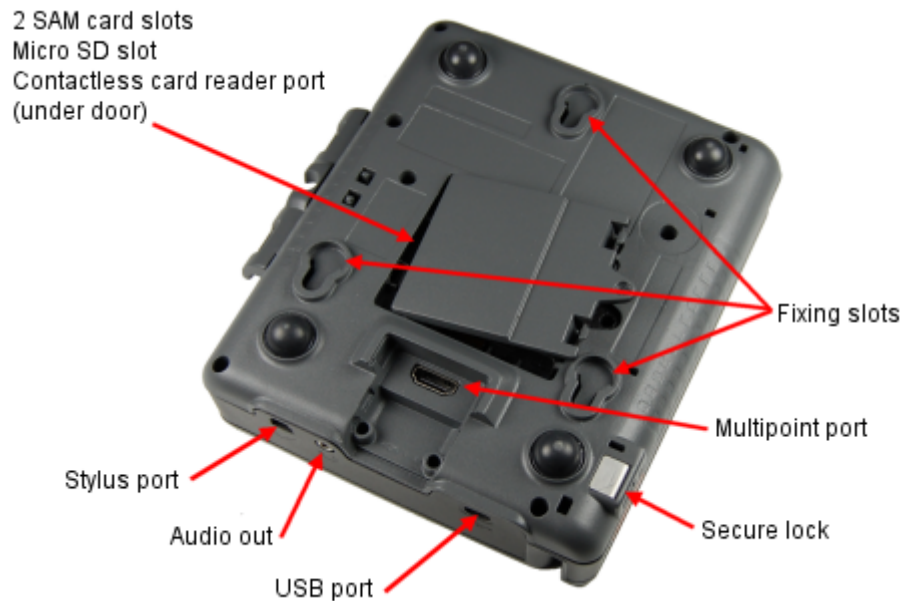
**Magnetic Stripe Reader (MSR):** The MSR is a three track, dual-head horizontal bi-directional track through which a magnetic stripe card is swiped and read.

**Keypad:** The backlit keypad features keys [0] through [9], [+], and [-] (for navigating menus), [Enter] (O), [Cancel] (X), and [Clear] (<).



**Figure 3: iSC250 Keypad**

**Smart Card Reader:** A smart card can be inserted into the smart card reader. When the application prompts for card insertion, a card may be inserted or removed.



**Figure 2: iSC250 Device Parts (back and top)**

**Multipoint port:** Use this port to connect host devices (POS or PC) directly. The iSC250 receives power through this connection. See 2.4 Connecting the Device on page 11 for more information.

**Stylus port:** Used to connect a stylus to the PIN pad. See 2.4 Connecting the Device on page 11 for more information.

**Audio out:** 3.5 mm stereo audio jack. Use to connect external speakers.

**USB port:** Supports peripheral USB devices.

**Fixing slots:** Used to mount the PIN pad to an Ingenico stand.

**Secure lock:** Prevents PIN pads from being stolen. Uses a simple and universal system with various security levels possible.

**SAM card slots:** The device comes with two security access module (SAM) slots to hold full-size SAM cards. These cards store proprietary information for use with smart card-based applications, such as loyalty or stored value. SAM use is generally not required in North America.

**Micro SD card slot:** Supports optional additional memory.

### 1.3.1. Dimensions



Length	6.6" (168 mm)
Width	5.6" (143 mm)
Height	2.0" (50 mm)
Weight	1.2 lbs (0.56 kg)

## 1.4. Applications/Integration Kits

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The following integration kits are available from your Ingenico representative. The kit allows for the integration of the applications that run on the iSC250 device to a variety of host or POS environments.

### 1.4.1. OPOS Software Integration Kit

This kit provides every component needed to allow a programmer to develop a custom application for a POS or PC host device that interfaces with an iSC250 using OPOS controls. The OPOS Software Integration Kit includes the UnifiedPOS (UPOS) Interface Application (UIA) and all related utilities, files, and documentation.

### 1.4.2. Retail Based Application (RBA) Integration Kit

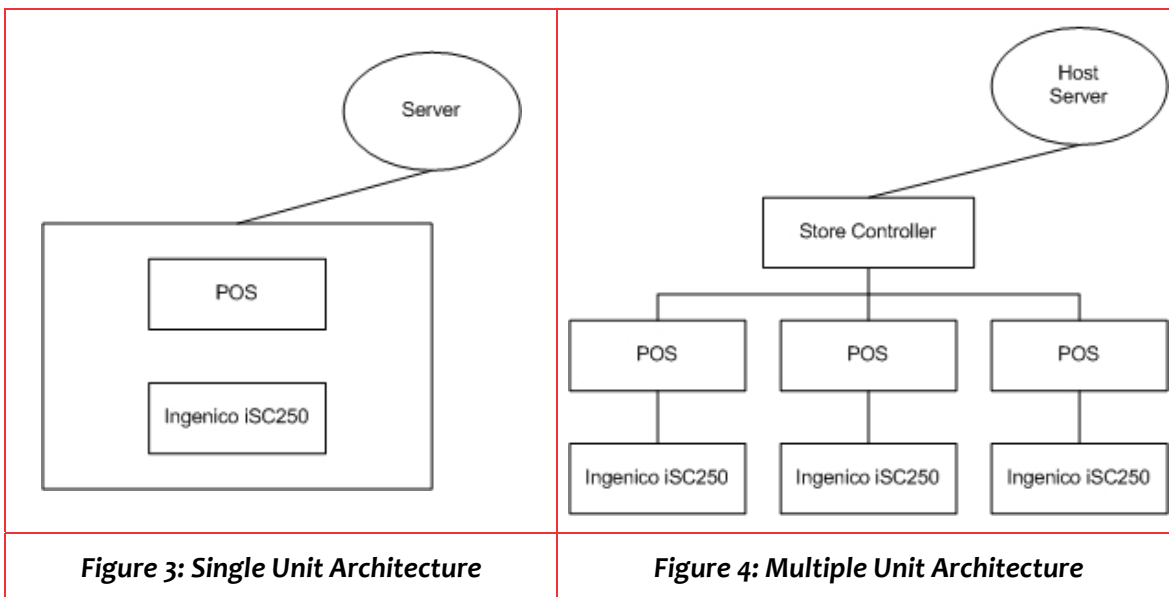
This kit provides every component needed to allow integration of a POS or PC host device with an Ingenico PIN pad equipped with the Retail Base Application. The RBA Integration Kit includes the RBA application and all related utilities, files, and documentation.

## 1.5. Architecture

This section explains the system architecture and how the unit connects to the host device.

### 1.5.1. System Architecture

The server (local or remote) sends information to the local server for Store Controller (if present), which sends it to each POS, and each POS sends it to the iSC250 device attached to it. When using Ethernet, the server can send information directly to the iSC250 device. The iSC250 device in turn sends information back through the chain. Figure 3: Single Unit Architecture and Figure 4: Multiple Unit Architecture illustrate the information flow for stores with and without a store controller.



### 1.5.2. Host Connections

The Point of Sale (POS) system, which can be comprised of the server, store controller, and host devices, communicates with the iSC250 device through an RS-232 or RS-485 serial interface, Ethernet LAN, or USB, depending on the requirements of the host device (typically a computer or POS). Data is sent using one of these interfaces over the Multipoint cable that connects the host device to the iSC250 device.

The iSC250 device can connect directly to a POS, PC, Ethernet LAN, or RS-485 LAN. Peripherals such as check readers and printers can be connected to the USB port.

The HOST Multipoint, which connects to a POS, can connect to the following protocols: RS-232, Tailgate (RS-485) protocol (North America only), Ethernet, or USB.

### 1.5.3. Downloading Application Files

LLT and the application files are installed on the server. The customer is responsible for sending the code from the server to the POS. Each POS sends the code to its iSC250 device.

## Notes



## 2. Device Installation

---

This chapter describes how to install the iSC250 device. The installation procedure includes:

- Selecting the device location
- Connecting the stylus
- Connecting the device
- Connecting a power supply
- Securing the Device

### 2.1. Box Contents

---

**⚠** Carefully inspect the shipping carton and its contents for shipping damage. If the device is damaged, file a claim immediately with the shipping company and notify Ingenico.

1. Remove the contents from the box.

The box contains the following items:

- iSC250 device
- Stylus
- Installation and Quick Reference Guide (DIV350824)

The box may also include the following optional items:

- Multipoint Cable (specific to your connectivity requirements)
- Power supply

2. Remove the protective film from the graphical display screen.
3. Save the carton and packing material for repackaging or moving the device in the future.

**Info** Additional styluses, power supplies, and cables are available from Ingenico.

### 2.2. Selecting the Device Location

---

The iSC250 device may be mounted on a flat surface, wall, or customer stand (recommended). Power may be provided from a host Point of Sale system or from an Ingenico power supply. If using an Ingenico power supply, the device must be placed close to an easily-accessible power outlet.

**Info** Ingenico recommends physically securing the device to avoid theft.

**Info** Ingenico can provide a range of attractive stands to secure your device. Please contact your representative for further details.



**Do not place the iSC250 device on a PC monitor, adjacent to an electronically active security tag deactivation system, or near other sources of magnetic fields.**

**The iSC250 device must be at least 12 inches away from an electronically active type of security tag deactivation pad. There are two types of security tag deactivation systems:**

- An electronically active system sends out a powerful and potentially disruptive signal to deactivate the security tag. If the iSC250 device is placed too close to the system's pad, or placed above the pad, malfunction may occur.**
- A passive system is a permanent magnet type that does not send out a signal. This type does not affect the iSC250 device.**



*When selecting the device location, keep in mind that you must perform daily tasks to ensure the security and compliance of your device. Refer to section 7 Security on page 31 for more information.*

## 2.3. Connecting the Stylus

---

1. With the stylus cable tab towards the bottom, insert the stylus connector into the iSC250 stylus port on the back of the iSC250.



Figure 5: Inserting the stylus connector into the stylus port

2. Place the stylus into the cradle on the left edge of the iSC250 device, or insert it upright into the hole in the cradle.



Figure 6: Stylus in the cradle



Figure 7: Stylus upright

## 2.4. Connecting the Device

---




**⚠ Do not connect power to the iSC250 device until instructed to do so.**

1. Place the iSC250 device in front of you with the bottom of the unit facing up. Be careful not to place the device on a surface where the device can be scratched or damaged.
2. If appropriate, connect a peripheral device to the appropriate available port on the rear of the device.



**Figure 8: iSC250 Peripheral Ports**

**Table 2: iSC250 Peripheral Ports**


Icon	Port	Description
	USB	USB 2.0 Host high speed. 5V, 500mA max. Supports peripheral USB devices.
	Audio out	3.5 mm stereo audio jack. Use to connect external speakers.
	Stylus	Use to connect the stylus.

3. Connect the Multipoint cable (RS-232 cable, Tailgate (RS-485) cable, Ethernet cable, USB cable, or magic box) into the iSC250 HOST Multipoint port. Connect the other end into the POS or PC as appropriate (refer to Table 3: iSC250 Multipoint Port below for more information). Refer to Appendix A Cable Options on page 39 for a list of cable options.



**Figure 9: iSC250 Multipoint Port**

**Table 3: iSC250 Multipoint Port**

Image	Port	Description
	Multipoint port	<p>Use to connect RS-232, Tailgate (RS-485), Ethernet, USB, Universal cable, or Magic box.</p> <p>Use this port to connect host devices (POS or PC) directly. The iSC250 receives power through this connection.</p> <p><b>⚠ For this device to be USB-IF compliant, only use the approved USB cable from Ingenico.</b></p>

## 2.5. Connecting a Power Supply

A separate Ingenico DC power supply (ALI0081A) is required when connecting the iSC250 device via RS-232, USB (5V), and Ethernet. When the device is powered from a POS, power may be provided via a USB (12V or 24V) or RS-485 cable. For more information on power, refer to section 9.4 Physical Characteristics on page 36. For information on Ingenico power supply cables and part numbers, refer to Appendix **Error! Reference source not found. Error! Reference source not found.** on page **Error! Bookmark not defined..**

**⚠ Connect the cable to the Multipoint port before connecting the device to power. Only use the power supply provided by Ingenico.**

1. If your device came with a power supply, plug the power supply connector into the jack on the Multipoint cable (refer to Appendix **Error! Reference source not found. Error! Reference source not found.** on page **Error! Bookmark not defined.** for more information).



**Figure 10: Connecting a Power Supply**

2. Plug the power supply into a power outlet.

**⚠ To avoid accidental damage, secure cables and power cords.**

3. The iSC250 initializes when power is applied.

## 2.6. Securing the Device

### 2.6.1. Anti-theft system

To address the issues of unsecured devices being stolen and illegally modified in the field, the iSC250 PIN pad features an optional anti-theft system. The Kensington lock mechanism is simple and universal, with key or code lock options available.

1. Secure the loop end of the cable to a permanent structure near the device.
2. Insert the cable into the secure lock port.
3. Lock the cable to the device using the key provided or by scrambling the number code.



**Figure 11: Kensington anti-theft key lock**

## **2.6.2. Additional Security**

The iSC 250 has the optional use of screws for additional security. Screws can be used to secure the Multipoint cable and the access door. The iSC250 uses standard M2.5 x8 screws.

### **2.6.2.1. Securing the Multipoint Cable**

1. Place the iSC250 device in front of you with the bottom of the unit facing up. Be careful not to place the device on a surface where the device can be scratched or damaged.
2. The Multipoint cable should be connected to the back of the PIN pad. See 2.4 Connecting the Device on page 11 for more information.
3. Screw in two standard M2.5 x8 screws on either side of the Multipoint cable.



**Figure 12: Securing the Multipoint port**

#### 2.6.2.2. Securing the Access Door

1. Place the iSC250 device in front of you with the bottom of the unit facing up. Be careful not to place the device on a surface where the device can be scratched or damaged.
2. Ensure that the access door is securely closed.
3. Screw in one standard M2.5 x8 screw on the access door.



**Figure 13: Securing the access door**

## 2.7. Disconnecting the Device

**⚠ You must first disconnect the power to prevent damage to the device.**

1. Disconnect power from the iSC250 device.



2. Place the iSC250 device in front of you with the bottom of the unit facing up. Be careful not to place the device on a surface where the graphical display screen can be scratched or damaged.
3. If you have secured the cable with screws, carefully remove the two screws from either side of the Multipoint cable.
4. Carefully pull out the Multipoint cable using the loop.



**Figure 14: Removing the Multipoint Cable**



## 3. Operations

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### 3.1. Powering On

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After you apply power to the iSC250 device, the device is ready for use. The iSC250 device may be left on indefinitely, or may be disconnected from power as necessary.

### 3.2. Restarting the Device

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To restart the device, press [Clear] and [-] simultaneously. Alternatively, disconnect and reconnect the device's power source.

### 3.3. Swiping a Magnetic Stripe Card

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The iSC250 device's magnetic stripe reader (MSR) reads debit, credit, and all standard magnetic stripe cards. Slide the card in either direction. For best results, slide the card in a continuous motion. There are two MSR heads facilitating card swipe with the stripe to the front or back and in any direction.



**Figure 15: Swiping a Magnetic Swipe Card**

### 3.4. Signature Handling

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The iSC250 device can capture an electronic image of a customer's signature for transactions that require a signature and transmit it to the POS.

A signature box displays on the screen for transactions requiring a customer signature. The electronic stylus attached to the device must be used for signatures. Use a normal signing position to sign on the iSC250 device.



**Figure 16: Using the stylus to sign an iSC250**

### 3.5. Contactless Card Reader (optional)

---

The iSC250 contactless reader reads contactless payment cards. Hold the contactless payment card close to the active zone around the display. A series of green lights illuminate above the display when the contactless card has been read.



**Figure 17: Using a Contactless Payment Card**

### 3.6. Smart Card Reader

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When the application prompts for a smart card, insert the smart card into the slot on the front of the device with the chip facing up and towards the slot.



**Figure 18: Inserting a Smart Card**

## 4. Telium Manager Overview

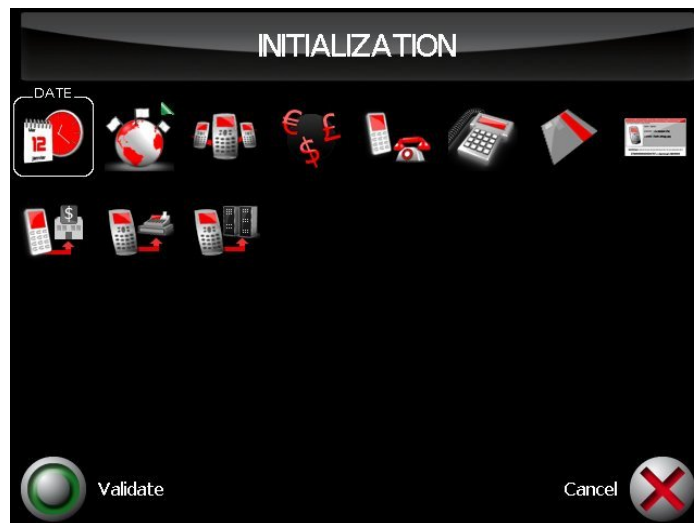
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**⚠** Ingenico recommends only accessing menus that are detailed in this guide.

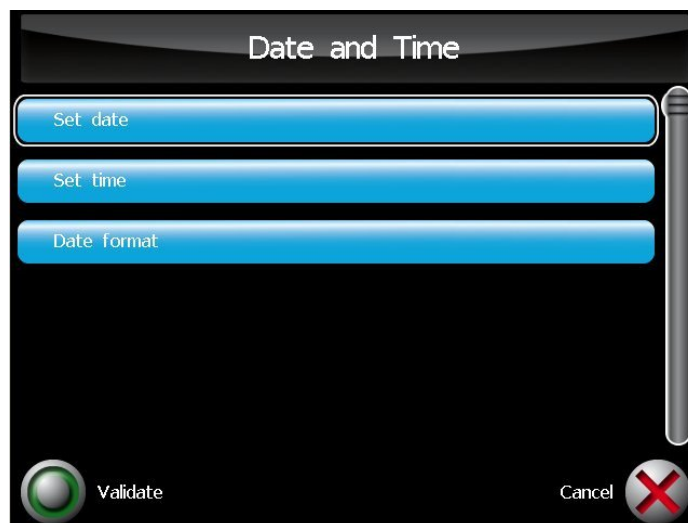
### 4.1. Navigating Telium Manager's Submenus

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When navigating Telium Manager's menus, the current menu name displays on the first line, and the menu options appear on subsequent lines. Some menus have icons that display the menu options (see Figure 19: Menu containing icons) while other menus have lists with the menu options (see Figure 20: Menu containing a list).



**Figure 19: Menu containing icons**



**Figure 20: Menu containing a list**

The following table lists the keys used to scroll through and select menu options:

**Table 4: Device Key Descriptions**

USA Keys	Action
+	In menus containing icons: Scroll to the right one item In menus containing a list: Scroll up one item.
-	In menus containing icons: Scroll to the left one item In menus containing a list: Scroll down one item.
Enter O	Initiate selected menu option.
Clear <	(Correct or Backspace) Sometimes goes to the last menu viewed. In data entry screens, when pressed when first enter screen clears entire entry. When begin data entry, acts as a backspace key.
Cancel X	(Cancel) Sometimes returns to the previous menu. Sometimes returns to menus viewed earlier. Sometimes exits Telium Manager.

Navigate options in a menu by:

- Using the keys: [+] and [-].
- Tapping the desired option with the stylus or your finger.

When you navigate to the desired option:

- In a menu containing icons, the option will be outlined in a white square and the name of the option will display (see Figure 19: Menu containing icons).
- In a menu containing a list, the option will be outlined in a white box (see Figure 20: Menu containing a list).
  - The last option selected will have the top right corner folded down.

After navigating to the desired option, select the option from a menu by:

- Pressing [Enter].
- Tapping the desired option twice with the stylus or your finger.
- Tapping the Validate icon in the bottom left corner of the display with the stylus or your finger.

To navigate away from a screen or cancel your selection, you can:

- Press [Cancel].
- Tap the Cancel icon on the bottom right corner of the display with the stylus or your finger.

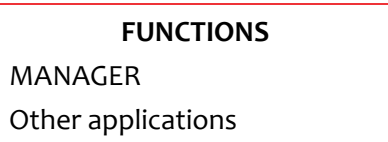
## 4.2. Accessing Telium Manager

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To access Telium Manager:

- At the Startup/splash screen, press [2], [6], [3], [4], [+], to view the FUNCTIONS menu.

The FUNCTIONS menu displays an icon for Telium Manager and the icons of any applications in the device:



Select MANAGER to go to the TELIUM MANAGER.



## 4.3. Telium Manager Menu Options

---

The TELIUM MANAGER menu contains the following menu options:

- **CONSULT** – This menu is reserved for Ingenico use only and is not discussed in this document.
- **EVOL** – This menu is reserved for Ingenico use only and is not discussed in this document.
- **INIT** – This menu allows you to set the device's date, time, date format, MSR track, and Ethernet settings. Refer to the following sections for more information.
- **DIAG** – This menu is reserved for Ingenico use only and is not discussed in this document.
- **DEL** – This menu is reserved for Ingenico use only and is not discussed in this document.

### 4.3.1. Setting the Date and Time

### 4.3.2. Setting the Date

To set the date, do the following:

TELUM MANAGER	INITIALIZATION	INITIALIZATION	Date and time
CONSULT	PARAM	DATE	Set date
EVOL	HARDWARE	LANGUAGE	Set time
INIT	RESET	NO TERM	Date format
DIAG	LOCK	CURRENCY	
DEL	HEADER	PABX	
	BUZZER	CLESS	
		SWIPE	
		S / N	
		NETWORK	
		CASH	
		TMS	

The current date displays at the top of the screen. Type the new date in the correct format in the box. Press **Validate** or [Enter].

### 4.3.3. Setting the Time

To set the time, do the following:

TELUM MANAGER	INITIALIZATION	INITIALIZATION	Date and time
CONSULT	PARAM	DATE	Set date
EVOL	HARDWARE	LANGUAGE	Set time
INIT	RESET	NO TERM	Date format
DIAG	LOCK	CURRENCY	
DEL	HEADER	PABX	
	BUZZER	CLESS	
		SWIPE	
		S / N	
		NETWORK	
		CASH	
		TMS	

The current time displays at the top of the screen. Type the new time in the correct format in the box. Press **Validate** or [Enter].

#### 4.3.4. Setting the Date Format

To set the date format, do the following:

TELUM MANAGER	INITIALIZATION	INITIALIZATION	Date and time
CONSULT	PARAM	DATE	Set date
EVOL	HARDWARE	LANGUAGE	Set time
INIT	RESET	NO TERM	Date format
DIAG	LOCK	CURRENCY	
DEL	HEADER	PABX	
	BUZZER	CLESS	
		SWIPE	
		S / N	
		NETWORK	
		CASH	
		TMS	

Date format
DD/MM/YYYY
MM/DD/YYYY
YYYY/MM/DD
DD.MM.YYYY

Select the new date format and press **Validate** or [Enter].

#### 4.4. Setting the MSR Track

To set the MSR track, do the following:

TELUM MANAGER	INITIALIZATION	INITIALIZATION	Swipe
CONSULT	PARAM	DATE	ISO2
EVOL	HARDWARE	LANGUAGE	ISO2 + ISO1
INIT	RESET	NO TERM	ISO2 + ISO3
DIAG	LOCK	CURRENCY	ISO1 + ISO2 + ISO3
DEL	HEADER	PABX	
	BUZZER	CLESS	
		SWIPE	
		S / N	
		NETWORK	
		CASH	
		TMS	

Select the new MSR tracks and press **Validate** or [Enter].



## 4.5. Configuring Ethernet Settings

To set the device up for Ethernet, navigate to the Ethernet Setup menu as described below.

 Ask your network provider for IP Address information.

TELIUM MANAGER	INITIALIZATION	CONFIGURATION
CONSULT	PARAM	<b>ETHERNET</b>
EVOL	<b>HARDWARE</b>	DISPLAY
<b>INIT</b>	RESET	
DIAG	LOCK	
DEL	HEADER	
	BUZZER	

After ETHERNET is selected in the CONFIGURATION menu, the following menu displays:

Ethernet Setup
<b>Boot Proto</b>
IP Address
Subnet Mask
Gateway
DNS 1
DNS 2
Speed
Ping
Print
Save
Quit
Reload Setup
Reset Conf.


From the Ethernet Setup menu, configure the Boot Proto, IP Address, and Subnet Mask.

#### 4.5.1. Defining the Boot Proto

Select whether you want a static or dynamic IP (DHCP) address. If you select DHCP, skip to section 4.5.3 Defining the Subnet Mask on page 27.

Ethernet Setup	Boot Proto
Boot Proto	Static Address
IP Address	DHCP
Subnet Mask	
Gateway	
DNS 1	
DNS 2	

#### 4.5.2. Defining the IP Address

 If you selected DHCP in the Boot Proto menu, you do not need to set your IP Address.

The IP address identifies the device on the network. Enter the IP address and press [Enter] or select **Validate**. The previous IP address displays at the top of the screen. The periods shown below will automatically display.

Ethernet Setup	IP Address
Boot Proto	XXX.XXX.X.X
IP Address	
Subnet Mask	123.456.7.890
Gateway	
DNS 1	
DNS 2	

### 4.5.3. Defining the Subnet Mask

The subnet mask masks the IP address and is unique for your network. Enter the Subnet Mask and press [Enter] or select **Validate**. The previous Subnet Mask displays at the top of the screen. The periods shown below will automatically display.

Ethernet Setup	Subnet Mask	
Boot Proto	XXX.XXX.XXX.X	
IP Address		
Subnet Mask	123.456.789.0	
Gateway		
DNS 1		
DNS 2		
Speed		
Ping		
Print		
Save		
Quit		
Reload Setup		
Reset Conf.		

### 4.5.4. Saving Ethernet Settings

After you finish setting your Ethernet settings, select **Save** in the Ethernet Setup menu to save your changes. The device will automatically reboot.

Ethernet Setup
DNS 1
DNS 2
Speed
Ping
Print
Save



When you exit an Ethernet Setup menu option after making changes, a **Save ?** screen will display as shown below. If you select Yes, the device will automatically reboot.

Save ?
Yes
No

## 5. Downloading Applications

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Download applications using the downloading tool or using a USB flash drive.

### 5.1. Downloading Tool

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The downloading tool utilizes commands within UPOS and RBA to download files from the POS to the iSC250. These files may include the operating system (OS), Telium Manager, applications, configurations, and forms.

The iSC250 comes preloaded with an application. Refer to the Developer or User Guide document provided in the Integration Kit for more information about using the Downloading Tool.

### 5.2. USB Download

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To download using USB, first power up the Telium device. Follow the procedure below to download payment applications, operating system upgrades, or key injection files using USB. The files to be downloaded must first be signed by Ingenico.



*Ingenico will provide you with a USB flash drive containing the files to download.*

To download using a USB flash drive, do the following:

1. After powering on your PIN pad, the Idle Screen displays.
2. Connect the USB flash drive to the USB port.
3. Restart the device by simultaneously pressing the yellow [Clear] key and [-] until the device beeps.
4. Hold [4] while the device restarts, until “USB MASS STORAGE” displays on the screen. “USB MASS STORAGE” displays for 2 seconds.
5. Use [8] to scroll down the list and use [2] to scroll up the list. Select the application to download and press [Enter].



*Ingenico should have provided the name of the application to you.*

6. The application downloads and the device automatically reboots.
7. The first application prompt or menu for the application displays. Carefully disconnect the USB flash drive from the USB port.

## Notes

## 6. Troubleshooting

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This chapter covers basic troubleshooting. If the solutions listed do not solve the problem, call your internal Help Desk or the Ingenico Help Desk number listed on the front inside cover of this manual.

### 6.1. Magnetic Card Reader Does Not Work Properly

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1. Slide the card through the reader (as described in 3.3 Swiping a Magnetic Stripe Card on page 17).
2. Swipe the card at a faster or slower steady speed.
3. Swipe the card in a different direction.
4. Inspect the magnetic stripe on the card to make sure it is not scratched or badly worn.
5. To determine if the problem is with the card:
  - If your host device has a magnetic stripe reader, try swiping the card there.
  - If you have another working iSC250 device, try swiping the card there.
6. If there is still a problem, contact your internal Help Desk.

### 6.2. No Information is Visible on Screen

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1. Make sure the iSC250 Multipoint cable is fully inserted into the back of the device.
  2. Restart the device (see 3.2 Restarting the Device on page 17).
  3. If you have another working iSC250 device, swap the devices to determine if the problem is with the device, cable, POS, or power supply.
  4. Replace the Multipoint cable.
  5. Reset the host by turning it off and back on again.
- ▲ Changes or modifications to this device not expressly approved by Ingenico will void the warranty.**

## 7. Security

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The iSC250 device conforms with current applicable PCI PTS 2.x security requirements.

### 7.1. Security Assurance

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Perform the following tasks daily to ensure the security and compliance of your device:

#### 7.1.1. Checking the Device's Integrity

Ensure that no attempts have been made to tamper with the device, using the following method:

1. Check that there is NO external damage to the device, particularly around the keypad, display, and reader areas.
2. Check that the keypad is firmly in place.
3. Ensure that there are NO additional cables protruding from the device or associated equipment.
4. Check that there are NO holes drilled into the device's housing.

#### 7.1.2. Alert Irruption!

Your iSC250 device detects any “tampered state”. In this state the PIN pad will repeatedly flash the message “Alert Irruption!” and further use of the PIN pad will not be possible. If you observe the “Alert Irruption!” message, you should contact the PIN pad helpdesk immediately.

#### 7.1.3. Checking the Installation Site

1. Ensure that there are NO security cameras focusing on the device.
  2. Ensure that there are NO objects close by in which cameras could be hidden.
  3. Ensure that the device CANNOT be observed from outside (any window or door) during PIN entry.
- ⚠ NEVER ask the customer to divulge their PIN code. Customers should be advised to ensure that they are not being overlooked when entering their PIN.**

## Notes



## 8. Cleaning

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### 8.1. Cleaning the Magnetic Stripe Reader




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If the magnetic stripe reader (MSR) head is dirty, it can be cleaned using a card swipe cleaner for the magnetic heads on POS devices (order from your Ingenico representative: part number CM00969 for a pack of 10 cards). Do not use tissues, wipes moistened with soap or moisturizer, or other cleaning fluids, as they may damage the MSR head.

### 8.2. Cleaning the Device

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To clean the device, follow these instructions:

1. To prevent damage to the device and to avoid electric shock, unplug the power supply before cleaning the device.
  2. To remove dust from the device, wipe with a dry cloth.
-  **Do not spray or pour any liquid directly onto the device. If you allow any liquid to enter inside the case, serious damage to the device may result.**
  -  **Do not use abrasive cleaners; they could destroy the plastic and cause serious damage to the device.**
  -  **Any liquid spill must be removed immediately.**

## Notes

## 9. Specifications

### 9.1. Hardware

<b>Processors</b>	Main Processor: RISC 32-bit ARM9 processor, 450 MIPS Integrated Crypto Processor: RISC 32-bit ARM7 processor, 50 MIPS
<b>Operating System</b>	Telium 2 with HTML GUI
<b>Display</b>	<ul style="list-style-type: none"><li>• Graphical active color glare-resistant TFT LCD 4.3" display</li><li>• Full 16 bit color WQVGA LCD graphical multimedia with 65K colors</li><li>• Resolution of 480 x 272</li></ul>
<b>Signature Capture</b>	Electrostatic signature capture and a glass screen.
<b>Digitizer</b>	Electrostatic stylus digitizer. Attached inkless non-mechanical electronic stylus.
<b>Memory</b>	Standard: 64 MB SDRAM, 128 MB Flash NAND Optional: Up to 2GB micro SDRAM
<b>Keypad</b>	15 keys; raised symbols enhance usability for visually impaired customers. Backlit.
<b>SAMs</b>	2 SAM slots.
<b>Video</b>	Full video capability. All format conversion is supported through the Integration Kit.
<b>Audio</b>	Internal Mono Speaker. Optional internal stereo speakers with rear audio output jack.
<b>Communications</b>	Standard communication methods: Multipoint port: RS-232, Tailgate (RS-485), USB, and Ethernet (TCP/IP) Optional µSD slot, USB Host, audio jack.
<b>Magnetic Stripe Card Reader</b>	Bi-directional magnetic stripe card reader, triple track, 2 heads.
<b>Smart Card Reader</b>	Optional. EMV L1 approved.
<b>Contactless Card Reader</b>	Optional. Integrated contactless card reader.

### 9.2. Software Applications

<b>Integration Kits</b>	OPOS Software Integration Kit RBA Integration Kit
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<b>Support</b>	Supports credit, debit, EBT, signature capture, customer graphics display, and contactless card reader.
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### 9.3. Regulations

<b>Certifications</b>	UL 60950; FCC Part 15 Class B and C, CEC, USB-IF, PCI PTS 2.x compliant.				
<b>Security</b>	<p>PCI PTS 2.x compliant; DES and Triple DES PIN encryption; DUKPT and Master/Session key management; Code authentication provides secure application code loading.</p> <p>PCI Security Standards Council:  <a href="https://www.pcisecuritystandards.org/security_standards/ped/index.shtml">https://www.pcisecuritystandards.org/security_standards/ped/index.shtml</a></p>				
<b>PCI PTS Certification Validation</b>	<p>Please note that the model number used to identify an iSC250 product cannot be used to identify the PCI PTS certification status on the PCI PTS website.</p> <p>The number they use is the hardware reference number and is shown in the table below:</p> <table border="1"> <thead> <tr> <th>Device</th><th>PCI Reference Number</th></tr> </thead> <tbody> <tr> <td>iSC2xx</td><td>ISC2xx-01Txxxxx</td></tr> </tbody> </table>	Device	PCI Reference Number	iSC2xx	ISC2xx-01Txxxxx
Device	PCI Reference Number				
iSC2xx	ISC2xx-01Txxxxx				
<b>ANSI Standards</b>	<ul style="list-style-type: none"> <li>• INCITS 92-1981 (R2003) Data Encryption Algorithm (DEA)</li> <li>• X9.24 Key Management</li> <li>• X9.8-1 PIN Entry</li> <li>• ISO 16609 Banking, Message Authentication</li> <li>• X9.65 Triple DEA</li> </ul>				

### 9.4. Physical Characteristics

<b>Color</b>	Ingenico black. Optional customer branding.
<b>Weight</b>	1.2 lbs (0.56 kg)
<b>Dimensions</b>	<p>Length: 6.6" (168 mm)</p> <p>Width: 5.6" (143 mm)</p> <p>Height: 2.0" (50 mm)</p>
<b>Power</b>	<p>Unit can be powered from Powered USB (12V), Powered Ethernet, SDL with RS485 connection, and standalone cable.</p> <p>For information on Ingenico power supply cables and part numbers, refer to Appendix C.1 Power Supply on page 43. For information on USB cables, refer to Appendix A.3 USB Cable Options on page 39.</p>

## 9.5. Environmental Requirements

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<b>Temperature</b>	<ul style="list-style-type: none"><li>• Operating: 41°F to 104°F (+5°C to +40°C )</li><li>• Storage: -4°F to 158°F (-20°C to +70°C)</li></ul>
<b>Humidity</b>	<ul style="list-style-type: none"><li>• Operating: 10% to 90% RH non-condensing</li><li>• Storage: 5% to 90% RH non-condensing</li></ul>
<b>Ambient Light</b>	<ul style="list-style-type: none"><li>• Operation in artificial light</li><li>• Operation in indirect sunlight</li></ul>

## Notes

## A. Cable Options

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### A.1. RS-232 Cables

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Part Number	Description
296 114 811	Cable Power and RS232 2m
296 114 928	Cable Power and RS232 5m
296 120 666	Cable Power and RS232 Spiral cable

### A.2. Tailgate (RS-485) Cable Options

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Part Number	Description
296 111 865	IBM Tailgate

### A.3. USB Cable Options

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Part Number	Description
296 111 170	Cable Power and USB type A 2m
296 114 303	Cable Power and USB type A 4m
296 116 381	Cable Powered USB 12V 5m

### A.4. Ethernet Cable Options

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Part Number	Description
296 114 829	Cable Power and Ethernet 2m
296 100 040	Cable Powered Ethernet 2m 802.3af

### A.5. Universal Cable Options

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Part Number	Description
296 122 537	Cable Power and Sub D 15 Pts VGA 2.50 M extended
296 122 524	Cable Power and Sub D 15 Pts VGA 2 M

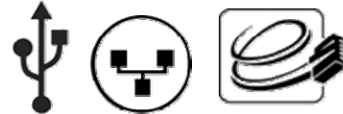
## Notes



## B. Communication

### B.1. Single cable power and interface connector

- The iSC250 is equipped with a newly designed “heavy duty” connector. This Multipoint connector is similar to the now common HDMI connector. It has the capability of being attached using screws for additional security if required.
- This Multipoint connector allows multiple connections: RS232, USB Ethernet, etc. Just add the right cable required by your new or existing infrastructure at the Point of Sale.
- Factory optional POE (Power over Ethernet) and RS485 (“Tailgate”).



#### B.1.1. USB Slave

Electronic interface	USB slave conform USB2.0 full speed
Mechanical interface	Tough Multipoint connector
Logical interface	12 Mbps max USB device Class cdc acm or HID mode report
Power	12 Volts

#### B.1.2. Serial Port

Electronic interface	RS232 Simplified
Number of wires	RX, TX, GND
Mechanical interface	Tough Multipoint connector
Logical Interface	115,200 bps max Software set Framing

#### B.1.3. Serial Port RS485

Electronic interface	RS 485 standard
Mechanical interface	Tough Multipoint connector
Logical interface	187,500 bps max
Power	Possible with SDL cable

### B.1.4. Ethernet

Mechanical interface	Tough Multipoint connector
Logical interface	Compatible 10Mbps and 100 Mbps
Power	POE following IEEE 802.3 AF

## B.2. Other Connectivity

- USB host: is an advantage when there is a need to drive devices such as a bar code scanner, printer, or external reader, and allows iSC250 to be deployed in a wide variety of kiosk-type applications.
- The consumer accessible headphone jack allows for audio prompting (for disabled access) and other multimedia applications (for example, product selection and listening to samples of movies or songs).



### B.2.1. USB host

Electronic interface	USB slave conform USB2.0 high speed
Mechanical interface	Tough mini USB connector or through Multipoint connector via a specific cable
Logical interface	480Mbps max

### B.2.2. Audio jack

Electronic interface	Stereo output
Mechanical interface	3.5mm audio jack at the rear of the product

## C. Additional Parts

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### C.1. Power Supply

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Part Number	Description
AL10081A	N. American 2-prong plug, 110-240 volt, 2 amp

### C.2. Extra Stylus

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Part Number	Description
295008105	Spare stylus

## Notes