



beyond
payment

iSC350

Operation and Product Support Guide



iSC350 Operation and Product Support Guide
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Revisions

Date	Revision	Changes
3/30/11	B	Section 1.4 Applications/Integration Kits and section 9.2 Software Applications: Removed POS for .NET and JPOS Integration Kits as options. Section 1.5.3 Downloading Application Files: Replace section to say that the device will come preloaded.

Notes

1. Introduction

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 iSC350 signature capture PIN pad. This document explains all of the product's available features, and how to install, operate, and configure the iSC350 device.



A separate document on installing and setting up the iSC350 device, DIV350773 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 iSC350 is the 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 iSC350 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 iSC350 secure electronic payment device consists of the following:

- ADA style keypad
- Dual-head illuminated bi-directional magnetic stripe reader
- 5.7” color touch full VGA screen supporting full motion video, with finger and stylus touch input
- Signature capture
- Optional integrated contactless card reader
- Optional backlit smart card reader
- Branded faceplate

The device supports:

- Payment information processing
- Full motion video graphics advertising

It enables the following functions:

- Customer activated/operated terminal
- 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 iSC350 device can communicate with a host device such as a POS or PC via RS-232, Tailgate (RS-485), USB, and Ethernet. Ingenico does not support Dial communications for the iSC350 device. Peripherals such as check readers and printers can be connected to the device via the appropriate 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]
Reverse Video	Reverse highlights the selected menu option on the iSC350 (icon or list menus). See 4.1 Navigating Telium Manager's Submenus on page 17.	TELIUM MANAGER CONSULT EVOL INIT 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 iSC350 device supports payment information processing. With the appropriate application software, the iSC350 device supports the following payment types:

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

The iSC350 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: iSC350 Device Parts (front)

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

Integrated Contactless Card Reader: The contactless card reader may be integrated 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.

Branded Faceplate: Customizable faceplate.

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 finger.

Magnetic Stripe Reader (MSR): The MSR is a three track, dual-head illuminated 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: iSC350 Keypad

Smart Card Reader: A smart card can be inserted into the smart card reader. When the application prompts for card insertion and the smart card reader slot lights up, a card may be inserted or removed. When the smart card reader is not in use, the light remains off.

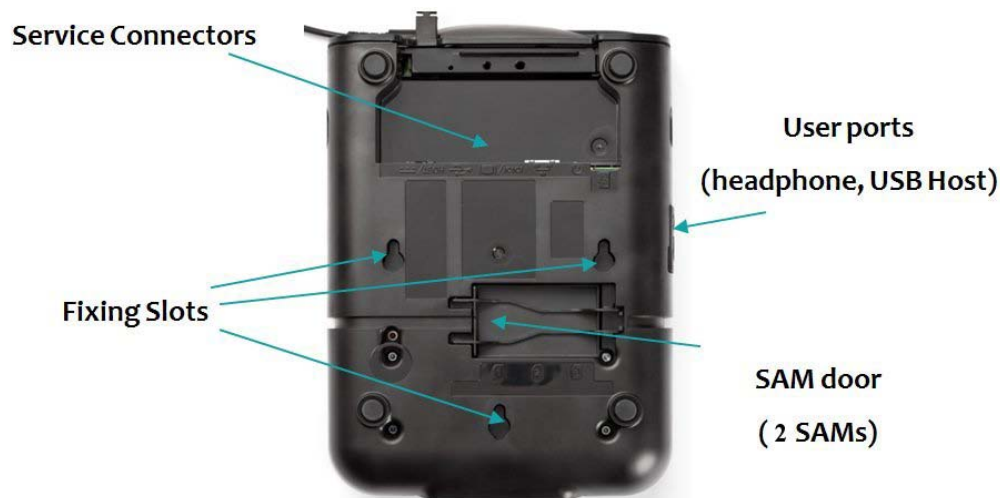


Figure 2: iSC350 Device Parts (back and side)

Service Connectors (Communication Ports): The communications available on each port depend on your device's configuration. See 2.5 Connecting the Device on page 11 for more information.

User Ports (Side Ports): A USB port and audio jack are available, depending on your device's configuration. See 2.5 Connecting the Device on page 11 for more information.

Fixing Slots: Used to mount the terminal to an Ingenico stand.

SAM door: 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.

1.3.1. Dimensional Overview



Length	9.45" (240 mm)
Width	6.69" (170 mm)
Height	2.40" (61 mm)
Weight	2.1 lbs (0.94 kg)

1.4. Applications/Integration Kits

The following integration kits are available from your Ingenico representative. The kit allows for the integration of the applications that run on the iSC350 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 that interfaces with an iSC350 using OPOS. The OPOS Software Integration Kit integrates the UnifiedPOS (UPOS) Interface Application (UIA) and contains programs, files, and all necessary manuals.

1.4.2. Retail Based Application (RBA) Integration Kit

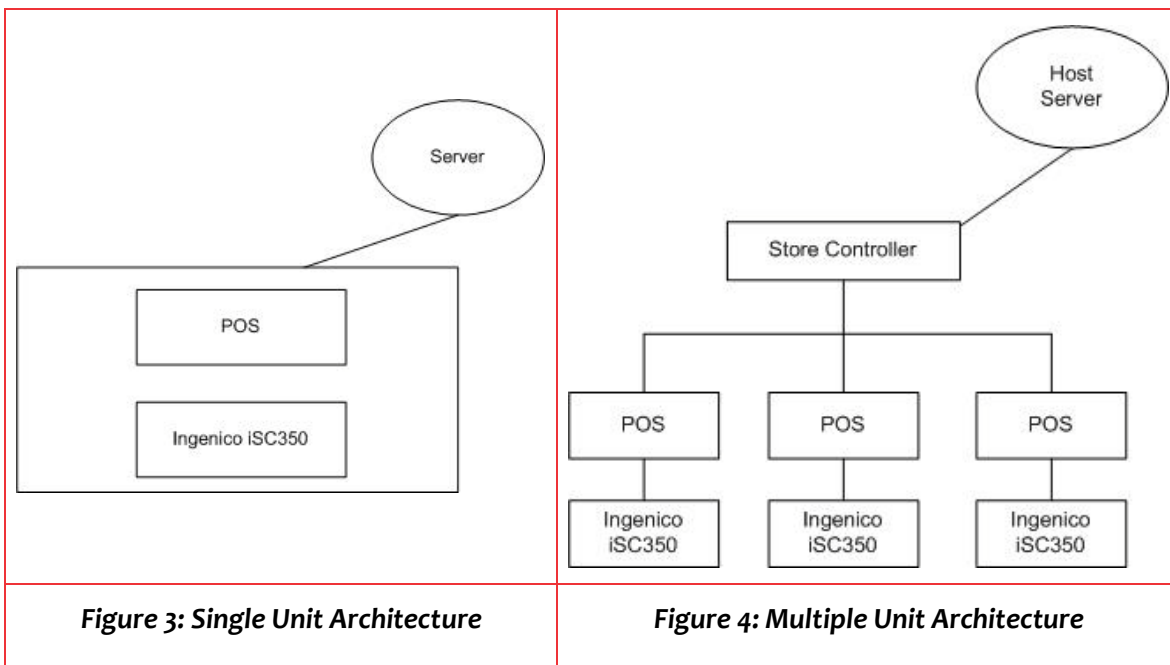
This kit allows for the connection of the iSC350 to a POS or PC for communicating, downloading a program and/or parameters, and using LLT.

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 iSC350 device attached to it. When using Ethernet, the server can send information directly to the iSC350 device. The iSC350 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 iSC350 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 a cable that connects the host device to the iSC350 device.

The iSC350 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 appropriate port (see your Ingenico representative for more information).

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

The E-NET port (Ethernet 10/100 BASE-T) is available on all configurations.

1.5.3. Downloading Application Files

The device is preloaded with an application. For information on updating the device's software, refer to the Developer or User Guide document provided in the Integration Kit.

Notes

2. Device Installation

This chapter describes how to install the iSC350 device. The installation procedure includes:

- Selecting the device location
- Loosening the cable retention bar
- Connecting the stylus
- Connecting the device
- Securing the cable retention bar
- Connecting a power supply

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:

- iSC350 device (with attached cable retention bar)
- Stylus
- Installation and Quick Reference Guide (DIV350773)

The box may also include the following optional items:

- 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 iSC350 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.



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



Do not place the iSC350 device on a PC monitor, adjacent to an electronically active security tag deactivation system, or near other sources of magnetic fields.

The iSC350 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 iSC350 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 iSC350 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 29 for more information.

2.3. Loosening the Cable Retention Bar

Before connecting cables to the iSC350, you must loosen the cable retention bar from the back of the device. To do this, turn the thumbscrew counterclockwise and lift the cable retention bar up and away from the device.



Figure 5: Unscrewing the Thumbscrew

2.4. Connecting the Stylus

1. With the stylus cable tab towards the bottom, insert the stylus connector into the iSC350 stylus port on the back of the iSC350, beneath the stylus cradle.



Figure 6: Inserting the stylus connector into the stylus port

2. Place the stylus into the cradle on the top edge of the iSC350 device, or insert it upright into the hole in the cradle.



Figure 7: Stylus in the cradle



Figure 8: Stylus upright

2.5. Connecting the Device

⚠ Do not connect power to the iSC350 device until instructed to do so.

1. Place the iSC350 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.

3. Connect the interface cable (RS-232 cable, Tailgate (RS-485) cable, or USB cable) into the iSC350 HOST port or connect the Ethernet cable to the Ethernet port. Connect the other end into the POS or PC as appropriate (refer to Table 2: iSC350 Communication Ports below for more information). Refer to Appendix A Cable Options on page 37 for a list of cable options.



Figure 9: iSC350 Communication Ports

Table 2: iSC350 Communication Ports






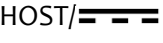


Icon	Port	Description
	SD RAM slot	Insert micro SD cards with a capacity of up to 32 GB to extend the memory of the iSC350.
	AUDIO Out	3.5 mm stereo audio jack. Use to connect external speakers.
	ETHERNET	8-pin RJ45. Use to connect Ethernet 10/100 BASE-T.
	VGA	16-pin AVX connector that provides VGA output, an extra RS232 port, and a 5V power out.
	USB	USB 2.0 Host high speed. 5V, 500mA max. Supports peripheral USB devices.
	HOST PORT	<p>9-pin MiniDIN9 port. Use to connect RS-232, Tailgate (RS-485), and USB 2.0 full speed device.</p> <p>Use this port to connect host devices (POS or PC) directly. The iSC350 receives power through this connection.</p> <p>⚠ For this device to be USB-IF compliant, only use the approved USB cable from Ingenico.</p>



Figure 10: iSC350 Side Ports

Table 3: iSC350 Side Ports

Icon	Port	Description
	AUDIO OUT	The consumer's side-accessible headphone jack allows for audio prompting and other multimedia applications.
	USB	Side USB Port. USB 2.0 Host high speed. 5V, 500mA max. Use to manually load secure applications and files, obtaining diagnostic information, or for any secure local data transfer under the control of the terminal applications.

2.5.1. Securing the Cable Retention Bar

The cable retention bar prevents the device's cables from becoming loosened or damaged. After all of the cables are connected to the device, secure the cable retention bar to the back of the device.

1. Lower the cable retention bar into place on the iSC350, aligning the cables in the cable slots on the cable retention bar.
2. Turn the thumbscrew clockwise until tightened.

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

2.6. Connecting a Power Supply

A separate Ingenico DC power supply (ALI0081A) is required when connecting the iSC350 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 34. For information on Ingenico power supply cables and part numbers, refer to Appendix C Power Supply on page 41.

⚠ Connect the cable to the HOST 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 host interface cable (refer to Appendix C Power Supply on page 41 for more information).



Figure 11: Connecting a Power Supply

2. Plug the power supply into a power outlet.

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

3. The iSC350 initializes when power is applied.

2.7. Disconnecting the Device

⚠ Power must first be disconnected to prevent damage to the device.

1. Disconnect power from the iSC350 device.
2. Place the iSC350 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. To loosen the cable retention bar see section 2.3 Loosening the Cable Retention Bar on page 10.
4. Carefully pull out cables.
5. To replace the cable retention bar see section 2.5.1 Securing the Cable Retention Bar on page 13.

3. Operations

3.1. Powering On

After you apply power to the iSC350 device, the device is ready for use. The iSC350 device may be left on indefinitely, or may be disconnected from power as necessary.

3.2. Restarting the Device

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

3.3. Swiping a Magnetic Stripe Card

The iSC350 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 12: Swiping a Magnetic Swipe Card

3.4. Signature Handling

The iSC350 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 iSC350 device.



Figure 13: Using the stylus to sign an iSC350

3.5. Contactless Card Reader (optional)

The iSC350 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 on the display when the contactless card has been read.



Figure 14: Using a Contactless Payment Card

3.6. Smart Card Reader

When the application prompts for a smart card, the smart card slot reader illuminates. Insert the smart card into the slot on the front of the device with the chip facing up and towards the slot. Green LEDs in the smart card reader slot, under software control, can prompt the cardholder when to insert or remove a card. If PIN entry is required, the keypad can also be programmed to illuminate under application control.



Figure 15: Inserting a Smart Card

4. Telium Manager Overview

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

4.1. Navigating Telium Manager's Submenus

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 16: Menu containing icons) while other menus have lists with the menu options (see Figure 17: Menu containing a list).



Figure 16: Menu containing icons

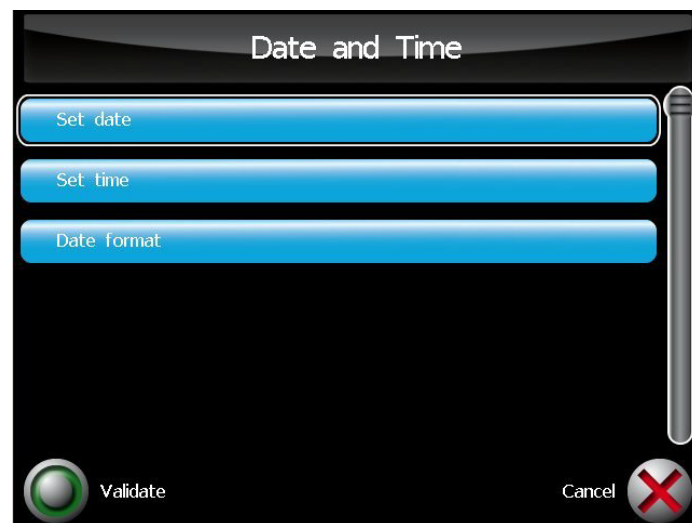


Figure 17: Menu containing a list

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.

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 16: Menu containing icons).
- In a menu containing a list, the option will be outlined in a white box (see Figure 17: Menu containing a list).
 - The last option selected will have the top right part of the box 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. Telium Manager

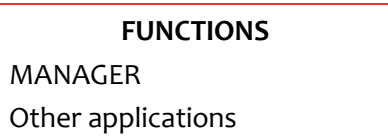
Use the Telium Manager to set the device's Ethernet settings.

4.2.1. Accessing Telium Manager

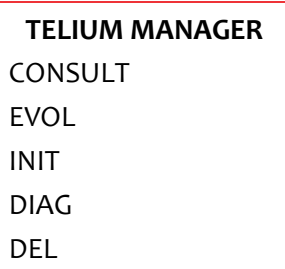
To access Telium Manager:

- At the Startup/splash screen, press [2], [6], [3], [4], [Enter], [+], 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.



4.2.2. 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.

4.2.3. Setting the Date and Time

4.2.3.1. 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	LOCK	PABX	Date format
DIAG	HEADER	SWIPE	
DEL	BUZZER	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].

4.2.3.2. 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	LOCK	PABX	Date format
DIAG	HEADER	SWIPE	
DEL	BUZZER	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].

4.2.3.3. 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	LOCK	PABX	Date format
DIAG	HEADER	SWIPE	
DEL	BUZZER	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].

4.2.4. 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	LOCK	PABX	ISO2 + ISO3
DIAG	HEADER	SWIPE	ISO1 + ISO2 + ISO3
DEL	BUZZER	TMS	

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

4.2.5. 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.

TELUM MANAGER	INITIALIZATION	CONFIGURATION
CONSULT	PARAM	ETHERNET
EVOL	HARDWARE	BATTERY
INIT	LOCK	DISPLAY
DIAG	HEADER	
DEL	BUZZER	

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

Ethernet Setup
Boot Proto
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.

4.2.5.1. Defining the Boot Proto

Select whether you want a static or dynamic IP (DHCP) address. If you select DHCP, skip to section 4.2.5.3 Defining the Subnet Mask on page 23.

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

4.2.5.2. 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	

4.2.5.3. 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.		

4.2.5.4. 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



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

Save ?
Yes
No

5. Downloading Applications

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

5.1. Downloading Tool

The downloading tool utilizes commands within UPOS and RBA to download files from the POS to the iSC350. These files may include the operating system (OS), Telium Manager, applications, configurations, and forms.

5.2. USB Download

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 terminal, 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

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. Key Check Values

6.1.1. Finding the Key Check Value: Special Keys

To find the key check value of special keys, do the following:

FUNCTIONS	TSA	KEY CHECK VALUE
MANAGER	0 – TERMINAL SERIAL #	0 – SPECIAL KEYS
TSA	1 - SECRET AREA	1 – MASTER/SESSION
Other applications	2 – SECURE DATA KEYS	
	3 – KEY CHECK VALUE	
	4 – DUKPT KSN	

6.1.2. Finding the Key Check Value: Master/Session Keys

To find the key check value of master and session keys, do the following:

FUNCTIONS	TSA	KEY CHECK VALUE
MANAGER	0 – TERMINAL SERIAL #	0 – SPECIAL KEYS
TSA	1 - SECRET AREA	1 – MASTER/SESSION
Other applications	2 – SECURE DATA KEYS	
	3 – KEY CHECK VALUE	
	4 – DUKPT KSN	

6.1.3. Finding the Key Check Value: DUKPT KSN

To find the DUKPT KSN, do the following:

FUNCTIONS	TSA
MANAGER	0 – TERMINAL SERIAL #
TSA	1 - SECRET AREA
Other applications	2 – SECURE DATA KEYS
	3 – KEY CHECK VALUE
	4 – DUKPT KSN

6.2. Magnetic Card Reader Does Not Work Properly

1. Slide the card through the reader as described in 3.3 Swiping a Magnetic Stripe Card on page 15).
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 iSC350 device, try swiping the card there.
6. If there is still a problem, contact your internal Help Desk.

6.3. No Information is Visible on Screen

1. Make sure the iSC350 host cable connector is fully inserted into the back of the device.
 2. Restart the device (see 3.2 Restarting the Device on page 15).
 3. If you are using the HOST port, unplug the device and examine the connector's pins. If there are any pins that are bent, replace with a new cable.
 4. If you have another working iSC350 device, swap the devices to determine if the problem is with the device, cable, POS, or power supply.
 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

The iSC350 device conforms with current applicable PCI PTS 2.x security requirements.

7.1. Security Assurance

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. 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 iSC350 device detects any “tampered state”. In this state the terminal will repeatedly flash the message “Alert Irruption!” and further use of the terminal will not be possible. If you observe the “Alert Irruption!” message, you should contact the terminal helpdesk immediately.

7.1.3. Checking the Installation Side

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

8.1. Cleaning the Magnetic Stripe Reader

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

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

Processors:	Main Processor: RISC 32-bit ARM9 processor, 450 MIPS Integrated Crypto Processor: RISC 32-bit ARM7 processor, 50 MIPS
Operating System	Telium 2 with HTML GUI
Display:	<ul style="list-style-type: none">• Graphical active color glare-resistant TFT LCD 5.7" display• Full 18 bit color VGA LCD graphical multimedia with 262K colors• Resolution of 640 x 480
Signature Capture	Electrostatic signature capture and a glass screen.
Digitizer:	Electrostatic stylus digitizer. Attached inkless non-mechanical electronic stylus.
Memory:	Standard: 128 MB SDRAM, 128 MB Flash NAND
Keypad:	15 keys; raised symbols enhance usability for visually impaired customers. Backlit.
SAMs:	2 SAM slots.
Video	Full video capability. All format conversion is supported through the Integration Kit.
Audio	Internal Mono Speaker. Optional internal stereo speakers with side and rear audio output jacks.
Communications:	Standard communication methods: HOST port: RS-232, Tailgate (RS-485) protocol, USB, and USB HOST Ethernet port: Ethernet (TCP/IP) Optional µSD slot, audio jack, external VGA, second RS232.
Communications (side)	USB Host. Optional audio jack.
Magnetic Stripe Card Reader	Bi-directional horizontal magnetic stripe card reader, triple track, 2 heads, backlit.
Smart Card Reader	Optional. EMV L1 approved, backlit.
Contactless Card Reader	Optional integrated contactless card reader.

9.2. Software Applications

Integration Kits	OPOS Software Integration Kit RBA Integration Kit
Support:	Supports credit, debit, EBT, signature capture, customer graphics display, and contactless card reader.

9.3. Regulations

Certifications:	UL 60950; FCC Part 15 Class B and C, CEC, USB-IF, PCI PTS 2.x compliant.				
Security:	PCI PTS 2.x compliant; DES and Triple DES PIN encryption; DUKPT and Master/Session key management; Code authentication provides secure application code loading. PCI Security Standards Council: https://www.pcisecuritystandards.org/security_standards/ped/index.shtml				
PCI PTS Certification Validation	<p>Please note that the model number used to identify an iSC350 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><tr><th>Device</th><th>PCI Reference Number</th></tr><tr><td>iSC3xx</td><td>ISC3xx-01Txxxxx</td></tr></table>	Device	PCI Reference Number	iSC3xx	ISC3xx-01Txxxxx
Device	PCI Reference Number				
iSC3xx	ISC3xx-01Txxxxx				
ANSI Standards	<ul style="list-style-type: none">• INCITS 92-1981 (R2003) Data Encryption Algorithm (DEA)• X9.24 Key Management• X9.8-1 PIN Entry• ISO 16609 Banking, Message Authentication• X9.65 Triple DEA				

9.4. Physical Characteristics

Color:	Ingenico black. Optional customer branding.
Weight:	2.1 lbs (0.94 kg)
Dimensions:	Length: 9.45" (240 mm) Width: 6.69" (170 mm) Height: 2.40" (61 mm)

Power:	<p>Unit can be powered from a POS, Powered USB (12V or 24V), and standalone power supply.</p> <p>For information on Ingenico power supply cables and part numbers, refer to Appendix C Power Supply on page 41. For information on USB cables, refer to Appendix A.3 USB Cable Options on page 37.</p>
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9.5. Environmental Requirements

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

Notes

A. Cable Options

A.1. RS-232 Cables

Part Number	Description
295008241	Cable Power and RS232 3m iSC350

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

Part Number	Description
295008147	Cable Power and RS485 sdi Tailgate 3m iSC350

A.3. USB Cable Options

Part Number	Description
295008233AB	Cable Power and USB 5V 3m iSC350
295008212	Cable Powered USB 12V 3m iSC350
295008220	Cable Powered USB 24V 3m iSC350

A.4. Ethernet Cable Options

Part Number	Description
CAB0199	10 ft. RJ45, NTKW cable, 350 MHz (Ethernet)
CAB0200	15 ft. RJ45, NTKW cable, 350 MHz (Ethernet)

Notes

B. Communication

B.1. External Links

On the iSC350, there are 6 external connectors located on the back of the device and 2 located on the right side for easy access by the end user.

B.1.1. Port 1

Electronic interface	Power supply input, USB 2.0 device full speed, RS485 Tailgate, RS232 (Tx, Rx)
Mechanical interface	MiniDIN 9cets

B.1.2. Port 2

	USB Port
Electronic interface	USB 2.0 Host high speed. 5 V 500 mA max
Mechanical interface	Type A USB connector on the back of the device.

B.1.3. Port 3



Electronic interface	External VGA (analog output + synchro) for an external display monitor RS232 (Tx, Rx, Rts, Cts) 5 V supply output (500 mA is available on this output if the total current on the 2 USB host supply is less than 500 mA)
Mechanical interface	16 pins AVX series

B.1.4. Port 4

Electronic interface	Ethernet 10/100 BaseT
Mechanical interface	RJ45 modular jack 10/100 BaseT 8pin with Network presence and activity LEDs.

B.1.5. Port 5

This is a 3.5 mm stereo audio jack. Use this connector to connect external speakers.

B.1.6. Port 6

A memory extension of 32 GB is available via a μ SD slot.

B.1.7. Port 7



Electronic interface	USB 2.0 Host high speed. 5 V 500 mA max
Mechanical interface	Type A USB connector on the left side

B.1.8. Port 8 (Headphone Jack)



Headphone Jack

USB Host Port

The consumer accessible headphone jack allows for audio prompting and other multimedia applications.

C. Power Supply

Part Number	Description
AL10081A	N. American 2-prong plug, 110-240 volt, 2 amp (the power supply and power cord are in two separate bags)

Notes

D. Extra Stylus

Part Number	Description
295008105	Spare stylus

Notes