

Introduction


Ingenico’s iPP300 secure electronic payment devices include the iPP320 and the iPP350. Each device consists of the following:

- 2.7” graphical monochrome LCD display (iPP320)
- 2.7” TFT color QVGA display (iPP350)
- Bi-directional magnetic stripe reader
- Smart card reader
- ADA-friendly keypad
- PIN privacy shield (optional – in box or available as a field install)
- Integrated contactless card reader (optional – installed at time of purchase or available as a field upgrade)

For details on these features, see the *Specifications* section in this document.

Contactless Card Reader

If the integrated contactless card reader module is to be field installed at a future date, your device provider will provide instructions regarding hardware installation as well as any required software downloads/upgrades.



For the contactless card reader function to work properly, no metallic adapter or hood should be used on or around the installed device and, particularly do not use a locally added metallic PIN privacy shield or cradle. Using a metallic adapter on or near the device can severely degrade the contactless performance. Metal can cause electromagnetic field interference which can negatively impact the contactless function.


Device Installation

The installation procedure includes:

- Selecting the device location
- Connecting the device
- Connecting a power supply (if required)
- Attaching the PIN privacy shield (if desired)

Each step is described in the sections that follow.

Box Contents




Carefully inspect the carton and contents for any shipping damage. If the device is damaged, file a claim immediately with the shipping company and notify your device provider.

- Remove the contents from the box. You should have:
 - iPP300 device
 - This guide
 - Connection cable or i3070 cable adapter
 - Power supply (if required)
 - PIN privacy shield (optional)
 - 3 screws (optional)
 - Application User Guide (optional)
- Save the carton and packing material for repackaging or moving/shipping the device in the future.

Selecting the Device Location

The iPP300 may be mounted on a flat surface or customer stand (recommended). Ingenico recommends physically securing the device to avoid theft. For additional anti-theft security, attach a Kensington Locking cable (or similar device) to the key lock slot on the left side of the device.

Power may be provided from a host Point of Sale (POS) 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.




Do not place the iPP300 on a PC monitor, adjacent to an electronically active security tag deactivation system, or near other sources of magnetic fields.

The iPP300 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 a security tag. If the iPP300 is placed too close to the system’s pad, or placed above the pad, malfunctions may occur.
- A passive system is a permanent magnet type that does not send out a signal. This type does not affect the iPP300.

Connecting the Device



Do not connect a power cord to the iPP300 device until instructed to do so.


Use the provided cable or cable adapter to connect your device. If using an i3070 cable adapter, existing i3070 communication cables can be used.

- Place the iPP300 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.
- If provided with a cable adapter, go to step 5.
- If provided with a cable, pull the handle up on the device connection side (HDMI connector end) of the cable.
- Place the cable connector in the port and push firmly in place.



Figure 1: Cable placed in iPP300 port

- If using a cable adapter, place the cable connector in the port and push firmly in place.
- Connect the interface cable to the adapter port.
- If provided, use 2 of the screws to secure cable (or adapter) to the base of the iPP300.
- If using a cable, push the handle on the cable down to secure the cable in place.
- Connect the other end of the cable into the POS or PC as appropriate (see Table 1, Table 2, and Table 3).
- Remove the protective film from the graphical display screen.



The use of screws is optional. When using the iPP300 without a contactless card reader or SAMs, there are no screw related operational security issues.

Table 1: iPP300 Connection Types	
Connection Type	Description
ETHERNET	8-pin RJ45. Use to connect Ethernet 10/100 BASE-T.

Connection Type	Description
USB	USB 2.0 Host high speed. 5V, 500mA max. Supports peripheral USB devices.
RS-232	9-pin MiniDIN9 port. Use to connect RS-232 and USB 2.0 full speed device. Use this port to connect host devices (POS or PC) directly. The iPP300 receives power through this connection. For this device to be USB-IF compliant, only use the approved USB cable from Ingenico.
Power Supply	Some cables have a power supply input plug at the far end of the cable (away from the iPP300). Do not plug in the Power Supply until you are instructed to do so.


See Table 2 and Table 3 for a list of iPP300 cables and adapters.

Cables

Table 2 and Table 3 list the most commonly used North American iPP300 Cables and Cable Adapters.

Table 2: Commonly used iPP300 Cables		
Part #	Type	Description
296 100 041 or 296 114 811	RS-232	2 meters long (requires Power Supply part #: 179 901 469)
296 107 514	RS-232	5 meters long (requires Power Supply part #: 179 901 469)
296 100 039	USB	2 meters long (Power derived from Host/PC)
296 106 335	Ethernet	2 meters long (requires Power Supply part #: 179 901 469)


Table 3: iPP300 Cable Adapters and other Common Accessories	
Part #	Description
296 100 053	i3070 RS-232/USB Adapter
296 100 055	i3070 Ethernet Adapter
296 111 328	PIN privacy shield (optional)
296 100 036 AE	Contactless card reader (if factory installed)
296 114 618	Contactless card reader module in box (for field installation)
179 901 469	Power Supply Unit (used in North America)



To avoid accidental damage, secure cables and power cords.

Connecting a Power Supply

A separate Ingenico DC power supply (part #: 179 901 469) is required when connecting the iPP300 device via Ethernet and 5 meter length RS-232 cables. If the device is powered from a POS, power may be provided via USB (Power over USB is 5V, 500mA).



Connect the cable to the iPP300’s port before connecting the device to power. Only use the power supply provided by Ingenico.

- If your device came with a power supply, plug the power supply connector into the jack on the interface cable.



Figure 2: Sample Cable Connection

- Plug the power supply into a power outlet.
- The iPP300 will self initialize when power is applied.

Attaching the PIN Privacy Shield (optional)

A PIN privacy shield may be provided for optional use. To attach the PIN privacy shield, do the following:

- Align the ends of the PIN privacy shield notches to the slots on the outside of the bottom of the keypad (near the red [Cancel] key and the green [Enter] key).
- Insert the PIN privacy shield’s bottom notches into the device’s slots.
- Push the PIN privacy shield down onto the device to secure it.

Operations

Powering On

After you apply power to the iPP300 device, the device is ready for use. The iPP300 device may be left on indefinitely, or may be disconnected from power as necessary.

Restarting the Device

To restart the device, press the yellow [Clear] key and [#..] simultaneously. Alternatively, disconnect and reconnect the device’s power source.

Swiping a Magnetic Stripe Card



The iPP300 device’s magnetic stripe reader reads debit, credit, and all standard magnetic stripe cards. When the application prompts for a magnetic stripe card, the magnetic stripe logo on the top upper right side of the device illuminates. Be sure the magnetic stripe side of the card is facing toward the iPP300 graphical display screen. Slide the card in either direction. For best results, slide the card in a continuous motion.

Smart ‘Chip’ Card Reader



When the application prompts for a smart card, the smart card logos illuminate. Insert the smart card into the slot on the front of the device with the chip facing up and towards the slot. Green lights on top of 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.

Contactless Card Reader (optional)



The iPP300 contactless card 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 top of the device when the contactless card has been read.

Troubleshooting

Magnetic Card Reader Does Not Work Properly

1. Slide the card through the reader as described in *Swiping a Magnetic Stripe Card*.
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:
 - a. If your host device (POS) has a magnetic stripe reader, try swiping the card there.
 - b. If you have another working iPP300 device, try swiping the card there.
6. If there is still a problem, contact your internal Help Desk.

No Information Visible on Screen

1. Make sure that the iPP300 cable connector is fully inserted into the back of the device.
2. Restart the device (see *Restarting the Device* above).
3. Unplug the device and examine the connector’s pins. If there are any pins that are bent, replace with a new cable or cable adapter.
4. If you have another working iPP300 device, swap the devices to determine if the problem is with the device, cable, POS, PC, or power supply.
5. Reset the host by turning it off and back on again.

Specifications

Processors: Main Processor: RISC 32-bit ARM9, 450 MIPS.
Integrated Crypto Processor: RISC 32-bit ARM7, 50 MIPS.
Operating System (OS): Telium 2 with HTML GUI.
Display: iPP320: graphical monochrome LCD, resolution of 128 x 64. iPP350: graphical active 2.7” TFT color QVGA, resolution of 320 x 240 with 4096 colors.
Memory: 16 MB SDRAM, 128 MB Flash. External: μSD supporting up to 8 GB.
Keypad: 19 keys including four (4) function keys; raised markings, ADA-friendly. White backlit.
SAMs: 3 SAM slots.
Buzzer: 65 dB at 1 meter.
Communications: HOST port: RS-232, USB, Ethernet (TCP/IP).
Dimensions (without PIN privacy shield): 6.3” x 3.3” x 1.6” (168 mm x 83 mm x 41 mm)
Weight (without PIN privacy shield and cable): 9.5 oz (269 g).
Face Plate Standard Color: Ingenico gray.
Magnetic Stripe Card Reader: Bi-directional magnetic stripe card reader, triple track. Magnetic Stripe logo illuminates.
Smart Card Reader: EMV L1 and L2 certified – meets EMV levels 1.0 - 4.0 specifications. Complies with IS 7816 - 1/2/3. Smart card icons illuminate.
Contactless: Integrated contactless card reader (optional). Supports ISO 1443 A/B, MIFARE Classic, MIFARE Desfire.
Power: Powered USB (5V 500 mA). Unit can also be powered from a RS-232 or Ethernet cable with appropriate power supply (see Cables).
Safety: UL/CSA 60951-1
Security: PCI PTS 2.x and Interac (Canada).
RFID: IC and FCC: Part 15B and Part 15C.

Environmental Requirements

- The device is designed to operate in the following environment:
- Operating temperature of 41°F to 113°F (+5°C to +45°C)
 - Operating humidity of 85% RH (non-condensing) at 131°F (+55°C)
 - Storage temperature of -4°F to 158°F (-20°C to +70°C)
 - Storage humidity of 85% RH at 131°F (+55°C)



Any liquid spill on or around the keymat or cover must be removed immediately.

More Information

For more information on cleaning, troubleshooting, operating the device, features, specifications, and accessories, please contact your equipment’s supplier’s technical support services.

Security

Your device fulfills current applicable PCI PED security requirements. Physical (anti-theft) security can be enhanced by the use of a Kensington Locking cable (or similar device) attached to the key lock slot.



You are strongly advised to ensure that privileged access to your device is only granted to staff that have been independently verified as being trustworthy.

Security Assurance

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

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 card reader areas.
2. Ensure 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.

Alert Irruption!

1. Your iPP300 device detects any tampered state.
2. In this state the device will repeatedly flash the message “Alert Irruption!” and further use of the device will not be possible. If you observe the “Alert Irruption!” message, you should contact your helpdesk immediately.

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 opening) during customer PIN entry.



NEVER ask the customer to divulge their PIN. Customers should be advised to ensure that they are not being overlooked when entering their PIN.

Lithium Battery

The IPP3X0-01TXXXXX is fitted with a lithium battery which is not accessible to the user. Only a qualified technician may be authorized to open the unit and change this component.

Customer Service

If you experience trouble with your iPP300 device, or if it requires repair, contact the appropriate customer service center:

24-Hour North American Customer Support:

Tel: +1.888.900.8221
Fax: +1.905.795.9343
Email: customersfirst.us@ingenico.com

Customer Service Centers:

In the U.S.A.

6195 Shiloh Road, Suite D
Alpharetta, GA 30005

Canada

6520 Gottardo Court
Mississauga, Ontario, L5T 2A2

Compliance

US Federal Communications Commission Warning

FCC standard compliance marking certifies that the product stipulated here: IPP3X0-01TXXXXX conforms to the following harmonized standards: part 15 subpart B of the FCC rules. This class (B) digital apparatus complies with Canadian ICES-003.



Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on, the user is encouraged to try to correct interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Industry Canada Warning

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

iPP300 Installation and Quick Reference Guide

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iPP300



iPP320 (with optional PIN Privacy Shield)



iPP350 (without PIN Privacy Shield)

Installation and Quick Reference Guide



DIV350783 Rev C

