

IDTECH[®]

Value through Innovation

User Manual BTPay Mini





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FCC Regulatory Compliance

Notices Class B Equipment

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 instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. This device complies with part 15 of the FCC rules. Operation is subject to two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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 and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into 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.

Changes or modifications to the ViVOPay BTPay Mini not expressly approved by ViVOTech could void the user's authority to operate the ViVOPay BTPay Mini.

RF exposure:

- To comply with the FCC RF exposure compliance requirements, this device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

Cautions and Warnings




	Caution: The ViVOPay BTPay Mini should be mounted 1-2 feet away from other ViVOPay BTPay Mini.
	Caution: Danger of Explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.
	Warning: Avoid close proximity to radio transmitters which may reduce the ability of the reader.

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1 Overview

The ViVOPay® BTPay Mini supports card swipe, contact and contactless payment information processing and authorization at mobile devices.

The unit can accept a variety of contactless credit cards, contactless key Fobs.

ViVOPay BTPay Mini supports the following contactless payment applications in the latest release of firmware:

- PayPass ISO/IEC
- PayPass Magstripe
- PayPass MChip
- PayPass MXI
- RBS Application (M/Flex)
- VisaWave
- qVSDC/MSD
- American Express – ExpressPay
- Discover Zip
- ViVOWallet
- ViVONFC
- Mifare ePurse

This document assumes that users are familiar with their mobile systems and all related functions.

Features

The ViVOPay BTPay Mini supports the following transaction types:

- Contactless RF devices such as ISO 14443 Type A and Type B, and Mifare devices

1.1 Additional Features

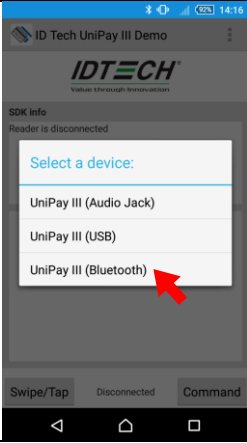
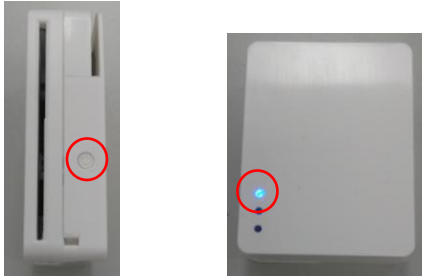

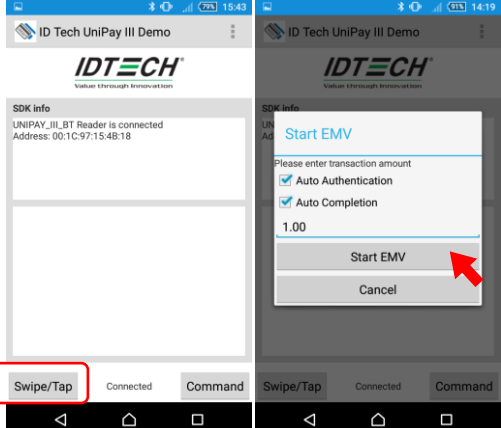
- Contactless: Accepts transactions from consumers using ISO/IEC 14443 Type A and B or NFC cards and key fobs.
- Speed: Enables quick transactions improving store productivity and operational efficiencies.
- Implementations: Mobile devices.
- Consumer Intuitive: Equipped with LEDs and sound to provide visual and audible cues to enable smooth and seamless transactions.
- Secure: Provides highly secure transactions whether financial, pre-paid, loyalty, or gift.

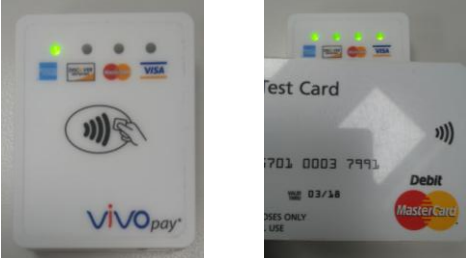
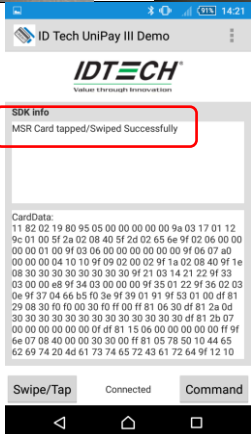
1.2 ViVOpay BTPay Mini Specifications

Hardware	
MTBF	200,000 hrs.
NFC Frequency Range	13.56 MHz +/- 0.01%
Bluetooth Frequency Range	2402 ~ 2480 MHz
Transmitter Modulation	ISO/IEC 14443A/B and ISO/IEC 18092 ,Bluetooth 4.1 Low Energy
NFC Modulation	ASK(Modulation)
Bluetooth Modulation	GFSK
NFC Antenna type	Loop Antenna
Bluetooth Antenna type	CHIP Antenna
Typical Read Range	4-6 cm (1.5 to 2.3 inches)
Physical Dimensions	
Height	19 mm (0.75 inches)
Width	49 mm (1.93 inches)
Depth	64 mm (2.52 inches)
Environmental	
Operating Temperature	0° C to 55° C (32° F to 131° F)
Storage Temperature	-20° C to 60° C (-4° F to 140° F)
Cold and Heat Shock	-20° C to 60° C (-4° F to 140° F) within 25 hrs.
Operating Humidity	5% to 95% non-condensing
Electrical	
Reader Input Voltage	3.7VDC; MAX 0.4A ; 1.48 Watts

1.3 Installing ViVOpay BTPay Mini

This section describes how to install the ViVOpay BTPay Mini on a mobile devices.

<p>Launch the transaction APP and get into the main payment screen, select UniPayIII(Bluetooth) to scan the BTPay Mini.</p>	
<p>Power on BTPay Mini with power button, Blue LED will flash and trying to pair mobile host.</p>	
<p>When the app pair the BTPay Mini, the app status will show "Connected".</p>	
<p>Select "Swipe/Tap" button, Enter the total amount of the transaction then press "Start EMV".</p>	

<p>When BTPay Mini is ready to tap card, the first Green LED will be solid. Tap the card on BTPay Mini, if reading card success, all four LEDs will blink once with one long beep; if reading card failure, only two short beeps be sounded.</p>	
<p>Once approval, the app will show “MSR Card tapped/Swiped Successfully” to complete the transaction.</p>	

2 Firmware Upgrade

The BTPay Mini can be upgraded using either the serial or USB interfaces.

2.1 Preparation

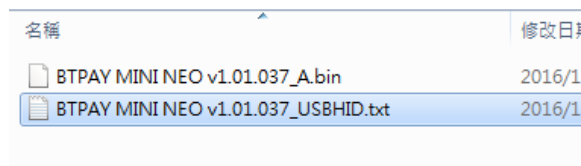
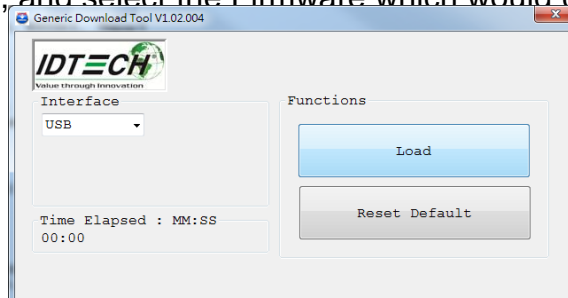
To update the new firmware you will need:

- PC with available serial or USB port
- BTPay Mini unit
- USB to Micro USB B type cable
- BTPay Mini firmware update tool
- Firmware file for the desired firmware

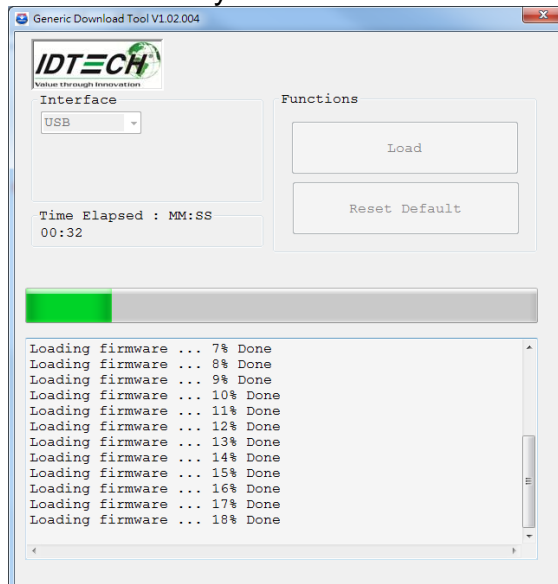
2.2 Procedure

1. Copy the BTPay Mini update tool and firmware on the PC.
2. Plug in the micro-USB B type cable to BTPay Mini, connect the USB cable to PC USB port.
3. There should be no beep, and all four LEDs blink once.
4. Launch the BTPay Mini firmware update tool.

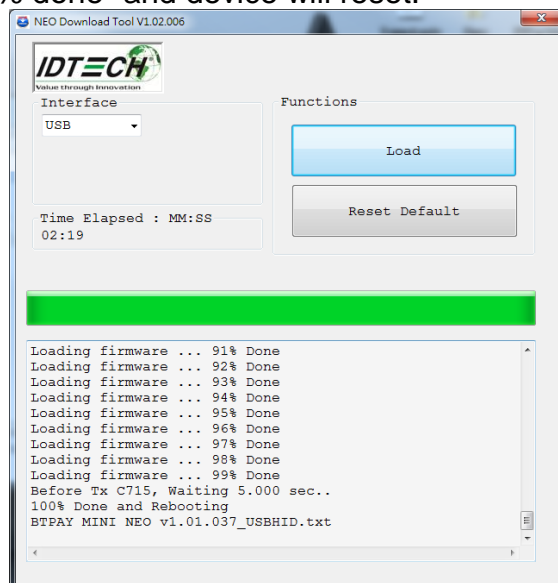
5. Click "Load", and select the Firmware which would download.



6. It will download automatically.



7. Display "100% done" and device will reset.



3 ViVOPay BTPay Mini Troubleshooting

The ViVOPay BTPay Mini is reliable and easy to troubleshoot.

Symptom	Possible Cause	Remedy
General Issues		
ViVOPay BTPay Mini does not appear to be powered on (no LEDs light).	<ul style="list-style-type: none"> • ViVOPay BTPay Mini no power. 	Check battery status. <ul style="list-style-type: none"> • Ensure power level is correct. • Charging the battery via USB cable
Reading Cards/Fobs/Phones		
LEDs do not light and beeper is not properly audible when Card/Fob/Phone is presented	<ul style="list-style-type: none"> • Wrong firmware (contact your local support representative). 	Present card/fob/phone closer to the ViVOPay BTPay Mini, and ensure it is parallel to the face of the ViVOPay BTPay Mini. <ul style="list-style-type: none"> • Ensure the card/fob is valid/current . • Check to see if card/fob/phone is damaged. • Ensure phone cover is correctly attached to phone. • Ensure correct firmware is loaded on ViVOPay BTPay Mini (local support representative only).

4 Glossary

Electronic Cash Register (ECR)

The combination of a traditional cash register and a POS terminal, often PC-based.

ExpressPay from American Express

American Express contactless payment product that utilizes contactless technology.

Firmware

Software that is embedded in a hardware device that allows reading and executing the software, but does not allow modification, e.g., writing or deleting data by an end user.

Example: Firmware is a computer program in a read-only memory (ROM) integrated circuit chip. A hardware configuration is usually used to represent the software.

Example: Firmware is a program embedded in an erasable programmable read-only memory (EPROM) chip, which program may be modified by special external hardware, but not by an application program.

Fob

A key chain device or other non-standard credit card sized form factor that has an embedded radio frequency (RF) chip.

MasterCard PayPass

MasterCard's contactless payment product that utilizes contactless technology.

MTBF

Mean time between failure. MTBF is the average time a device will function before a failure.

NFC

Near Field Communications.

NFC Phone

Near Field Communications (NFC) phone. A technology where RFID chips are embedded in the back cover of a cell phone, such as the Nokia 3220, that enables communication with contactless readers to make credit payments.

POS

Point of Sale.

Point of Sale (POS)

Refers to terminals used in retail stores with a magnetic stripe reader, keyboard, display and auto dialer modem or IP connection, connected to the telephone/internet network and used for on-line credit/debit authorization. Can also be connected to a host computer, which handles all transaction processing including item price look-up, data collection, and credit/debit authorization.

Proximity Payments

Payment method utilizing contactless technology such as RF, Infrared (IrDA) or Near Field Communications (NFC).

Radio Frequency (RF)

Any frequency that corresponds to radio signals, including those used by cellular telephones and wireless networks.







RF Reader

The Point of Sale device that receives the RF transmission from a card, fob or NFC phone.

Visa Contactless

Visa's contactless payment product that utilizes contactless technology.

Symbols explanations

	EMV Contactless Symbol
	ExpressPay from American Express
	Visa Contactless
	MasterCard PayPass
	Discover network.
	The symbol of the crossed out wheeled bin indicates that the product (electrical and electronic equipment) should not be placed in municipal waste. Please check local regulations for disposal of electronic products.

5 Customer Support

Contact your local support representative for all support questions.