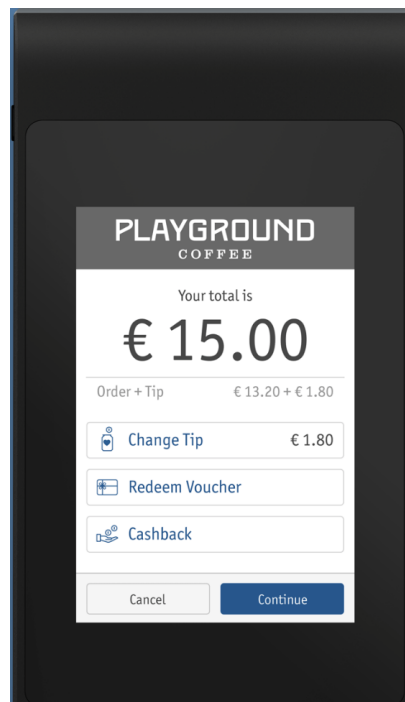# enfore PayPad User Manual

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Declarations

Warranties

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Takemark

PayPad is a registered trademark of enfore, AG.

Manual Version

Edition	Date	
1.0	Dec 04, 2017	

enfore

# enfore PayPad User Manual   1

1. Product Introduction

1.1 Overview

PayPad is a secure mobile point-of-sale (POS) device that uses closed device architecture. In addition to standard POS features, PayPad also gives you:
- Smartphone compatible payment options
- Advanced business features
- Multiple Receipt options

For detailed description of the features, please see following chapters.

Top View
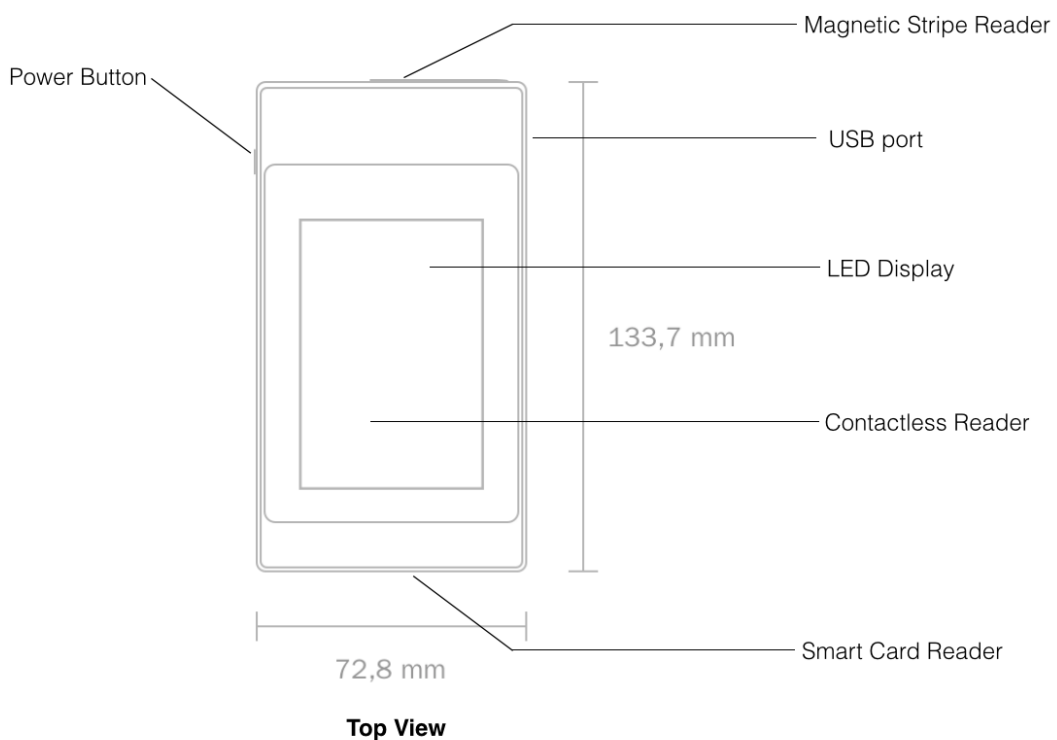
1.2 What's in the Box

- 3.5" enfore PayPad
- Power Adapter 100-240V AC
- USB Cable

2. Instructions

PayPad is designed to be usable when it is taken out of the box. There are no extra assembly or installation steps needed. Simply take the device and follow the instruction below for using it.

2.1 Power On/Off

Use Power Button for the following functions.
- On/Off operation: hold the button for more than 2 seconds. This toggles the device from absolute lower power consumption mode to operational mode.
- Standby/Wake up: tap the button for less than 1 second. This toggles between active mode and TFT Off mode or changes from PowerSave mode/Sleep mode to active mode.
- Reset: hold the button for more than 5 seconds. The device will be restarted by a hardware reset.

2.2 Performing Payment Transaction

A. Payment Transaction via Manual Amount Input
- [Place holder]

B. Payment Transaction via enfore Backend
- [Place holder]

C. Smart Card
- Select Smart Card payment option on the screen
- [Picture place holder]
- Insert Smart Card into the Smart Card Reader port at the bottom of the device with the chip facing upward
- [Picture place holder]
- Wait until the transaction is finished with an indication on the display
- [Picture place holder]

D. Contactless/NFC Card
- Select Contactless/NFC payment option on the screen
- [Picture place holder]
- Place Contactless/NFC card above the device with approximately 2-3cm distance to the display with the chip facing upward
- [Picture place holder]
- Wait until the transaction is finished with an indication on the display
- [Picture place holder]

E. Magnetic Stripe Card
- Select Magnetic Stripe Card payment option on the screen
- [Picture place holder]
- Firmly hold the card with the stripe facing towards the back of PayPad. Quickly swipe the card through the reader from right side of the card to the left side.
- [Picture place holder]
- Wait until the transaction is finished with an indication on the display
- [Picture place holder]

2.3 Charging & Power Supply

PayPad supports 3 kinds of power supplies: rechargeable Main Battery, Backup Battery and USB charging capability.

If a charger is plugged then the main battery gets charged and the user could operate the device but only In the case the charger delivers enough current for charging and operating. If not enough current is delivered than only the main battery gets charged until a certain level is reached and the user can operate the device again (switch to Active Mode).
If the Main Battery is dead (not chargeable anymore) then the device can operate with a plugged charger (enough current needs to delivered from the charger).

Battery status is shown on the display as below:
[Picture place holder]

2.4 Security

PayPad is a payment device that fulfills the the security requirements for different countries. For a complete list of countries, go to section Certifications & Compliance. Note that PayPad is listed on the PCI-PTS Website and certified for PTS 4.x. Details to be found online in the list.

It is strongly advised not to open the device when PayPad fails to operate in a normal state. Please send the device to an official service site for repairing. Any unauthorized repair will trigger anti-tempering switch and such device will be invalidated.

3. Specifications

3.1 WiFi

PayPad will communicate via Wifi with the respective Wifi Access Point for sending payment transactions to the payment gateway, communicate with the NumberFour Backend in the cloud and get Software Updates.

- Wifi Communication with minimum distance 10cm and up to 50 meters distance in open environment with Dasher Access Point and a minimum data transfer rate of 100Mbps @50m (11n HT40 MCS7)
- Wake-up of MCU via Wifi
- Remote Firmware updates of Wifi Chip and PayPad MCU
- Can be powered down and reset via MCU
- Can operate at the same time as the NFC antenna
- Full IPv4/IPv6 TCP/IP stack with support for DHCP, HTTP/SSL(TLS 1.2), UDP, Broadcast, Multicast, DNS, full security incl. WPA, WPA2

3.2 Microcontroller Unit (MCU)

- Application processor that runs the enfore applications
- Communication with Wifi, NFC and USB
- Processing of all contactless and contact payment transactions incl. encryption; all payment kernels are running on the MCU
- Drives the 3.5 inch screen
- Security features to comply with PCI-PTS requirements
- Remote firm- and software update

3.3 Contactless/NFC Reader

The Contactless/NFC reader is implemented with the follow payment card:
- EMVCo L1 Contactless Reading
- MasterCard Contactless
- Visa Paywave
- Amex ExpressPay
- Discover D-Pas/Zip

3.4 Magnetic Stripe Reader (MSR)

PayPad allows payments with Magnetic Stripe Cards and allows the usage of proprietary Magnetic Stripe Cards for Customer Relationship Management.
- Reading of data from 3 Tracks of a Magnetic Stripe Card
- Data to be transported securely from the Magnet Head to the MCU via meshed Cable

- The MCU chip has a build in Triple-Track Magnetic Stripe Head Interface (F2F decoder)

3.5 Smart Card Reader (SCR)

PayPad allows payments with smart cards (chip cards). The MCU provides a full Smart Card Reader interface including the analog front end and the smart card acceptor is directly connected to the MCU.
- Reading from and writing to ICC payment cards according to requirements for payments

3.6 LED Display

PayPad features a 3.5 inch color display with bonded capacitive touch screen with cover glass.
- Display 3.5" with 320 x 480 resolution and 16 bit (color: 262k)
- Power-saving Features to dim and shut off the display
- Dimming of the display based on input from a lighting sensor
- Co-existence with the NFC and Wifi antenna without disturbing each other

3.7 USB Interface

PayPad features an USB interface for charging and communication.
- Charging with standard USB (5V - 500mA)
- Charging with N4 5V charger for fast charging (5V - min. 1A)
- Communication with MCU

3.8 Endurance & Environment Resistance

PayPad has a designed lifetime of XXX years at a small merchant location. This lifetime is not under the scope of factory warranty.

- Operation Environmental Temp: -10°C to + 45°C
- Storage Temp.: -20°C to +60°C
- Operating Humidity: 5% - 95% (non-condensing)
- Device can be cleaned outer surface with moist cloth.
- Max. Drop Resist.: 100cm to concrete floor

4. Certifications & Compliance

Supported Countries	**Initial Key Markets:** Germany, USA, UK
	Europe • DACH (Germany, Austria, Switzerland) • UK • France • Spain • Italy • Benelux (Netherlands, Belgium) • Scandinavia (Denmark, Sweden, Norway) • Poland • Turkey • Russia **Americas** • USA • Canada • Brazil • Mexico • Argentina **Asia** • China (incl. Hong Kong & Taiwan) • Japan • India • Indonesia • Philippines • Malaysia • Singapore **Other** • Australia • South Africa
Certifications	CE & RED FCC CB RoHS UL

FCC Warning:
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. 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 the interference by one or more of the following measures:

o Reorient or relocate the receiving antenna.
o Increase the separation between the equipment and receiver.
o Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
o Consult the dealer or an experienced radio/TV technician for help.
Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following 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.