

VTAP100-USB mobile pass NFC reader in compact case



The VTAP100 from Dot Origin can selectively read and decrypt NFC pass data from iPhone or Android devices, and transfer this data to a connected system. It can also read unique IDs and secure encoded data from many RFID and NFC cards and tags, including MIFARE Classic and DESFire.

The VTAP100 reader can be used in many environments, including retail loyalty, cashless payment, gym check-in, and sports ticketing. The VTAP100 remains logically separate from any payment mechanism. This simplifies data and security considerations, and the human interaction. It does not support EMV payments, but can be used for stored value and points redemption applications.

VTAP100 has been designed to support a smooth transition from plastic to mobile NFC passes so, alongside mobile passes, the VTAP100 will also read popular contactless RFID or NFC smartcards and tags, to support mixed-use applications. It is fully certified by both Apple and Google to work with their respective VAS and Smart Tap protocols, supporting automatic pass selection on iOS, as well as on-board decryption.

A USB connection from any PC is used to configure the VTAP100, by editing simple text files. Keys can be easily updated but cannot be extracted from the device. The configuration can be locked, so that the device is password protected or read-only in general use.

The VTAP100-USB can output pass data over USB in the same way as a mag-stripe, barcode or QR code scanner. This can be a keyboard emulation or over a virtual COM port interface. This makes it possible to add the VTAP100 to existing systems

without software changes, to update an established card or ticket experience, to one where passes are wholly electronic.

The VTAP100-USB is supplied in a compact desktop case with a captive USB cable. We can supply customised front labels for a small additional fee, typically for orders of 100 or more units.

This is all you need to get started with mobile NFC pass reading, as it includes access to create demonstration mobile passes, so that you can test your application. For production purposes you will need to use a third-party pass provider, or integrate directly with Apple and Google.

Includes a **free** license for Dot Origin's popular Read-a-Card software on request - ideal for customers wanting to integrate with web or desktop applications without using keyboard emulation.

Other versions of VTAP100 are available, for example the VTAP100-PAC-W has a Wiegand interface for access control and turnstiles, and the VTAP100-OEM is a pre-certified PCB module available to integrators, providing both USB and RS-232 serial connectivity. Please contact us to discuss availability of these options.

Mobile NFC pass reader with USB connection, compatible with Apple VAS and Google Pay Smart Tap, neatly presented in a compact case with captive USB cable

To buy, visit:

<https://www.smartcardfocus.com/shop/ilp/id~954/p/index.shtml>

This Product Briefing has been produced by Dot Origin Ltd, the smart card experts behind SmartcardFocus.com. If you have a query email sales@smartcardfocus.com or call us on +44 (0)1428 685250.

Technical Specifications

Dimensions: CC case - 97mm x 49mm x 40mm (3.8in x 1.9in x 1.6in); Other options on request

Front label: CC case - 41mm x 57mm (1.61in x 2.24in) with 2mm (0.08in) radius corners

Power Supply: 5V DC via USB interface (typ. 110mA, max 150mA)

Mounting options: CC case - 2 x mounting holes in base plate, 1 x security screw fixing front part

Weight: In CC case: 44g (1.6oz)

Operating Temperature: -25 to +70°C (-13 to 158°F)

Operating Humidity: 0-95% RH (non-condensing)

NFC Interface

Frequency/standards: 13.56MHz, ISO 14443 and ISO 18092

Mobile pass compatibility:

- Apple Wallet NFC passes (VAS protocol - classed as a VAS-only device)
- Google Wallet NFC passes (Smart Tap protocol)
- Pass auto-selection, including full Apple ECP compliance for iOS wake-up
- Selective field extraction & decryption of pass data
- Mobile device type detection and inclusion
- Multiple simultaneous pass IDs, enrolment URL and STUID capture, where supported on mobile OS

Card/tag compatibility:

- MIFARE Ultralight, Classic, DESFire, NFC Types 1..4;
- UID/CSN reading as standard on all card types;
- Secure data reading on MIFARE Classic as standard, others on request;
- NFC tag reading on Type 2 and 4 (Ultralight/NTAG and DESFire/HCE)

Read range: Typically 25mm (1in) depending on environment and phone/card/tag antenna

Pass IDs: Up to 6 x Apple merchant IDs and 6 x Google collector IDs

ECC key slots: 6 total (shared between Apple & Google merchant IDs)

USB Interface

USB device types (can enable/disable as required):

- USB Mass storage (for easy configuration, key loading & firmware updates);
- Human interface device(standard barcode reader/keyboard emulation);
- USB Virtual COM port (includes active, passive and file transfer modes)

Connector: Captive USB cable

Operating system support: Full support on Windows, Linux, OSX; support for keyboard emulation and virtual COM device types on Android; most other operating systems support keyboard emulation

Other features

Operator feedback: Buzzer and RGB LEDs (configurable default colour + automatic card and pass read beep)

Field configurable: Yes, using configuration files, and with password and hardware-based lock

Field upgradeable: Yes, using encrypted firmware file and secure bootloader, and factory reset feature

Hardware security: Cryptographic co-processor with secure hardware-based key storage

Encryption algorithms: ECDH, NIST P-256, ECDSA, HMAC SHA-256, AES-128 CTR, AES-256 GCM, ANSI-X9.63-KDF and HKDF according to RFC5869 using HMAC-SHA256

Compliance / Certification

Apple VAS, Google SmartTap, UKCA, CE, FCC, RoHS

24-month limited hardware warranty

Manufacturer's part number: VTAP100-USB-CC