PAYMENT

cVEND plug flex

Terminal module for contactless payment & ticketing

- Flush integration into validators, on-board computers and other devices
- Tailored for transit applications
- Multi-Application architecture enables independent acceptance of contactless open-loop banking cards and closed-loop tickets
- Supports migration from closed-loop to open-loop
- Flexible secure Linux platform to develop own applications
- PCI PTS 5.x and EMVCo L1 certified

cVEND is used successfully thousands of times in transit applications around the globe.

cVEND plug is designed for flush integration in any kind of non-conducting front plates like ticket validators, driver consoles, kiosk-systems and many others.

cVEND plug is electrically and mechanically designed for transit applications and complies with transit specifications of global card brands as well as with railway and automotive standards. Due to the low power consumption and a special low-power standby mode, the cVEND plug is ideal for battery or solar-powered applications.

cVEND plug is fully approved for open-loop payment by EMVCo and PCI PTS. cVEND plug is VISA ready for Transit listed.

It's Multi-Application architecture supports open-loop contactless payment cards and mobile wallets from international and domestic payment card brands as well as closed-loop cards like MIFARE, CIPURSE, ITSO, VDV-KA, or Calypso with the same priority.

The cVEND specific secure Linux operating system together with an easy to use SDK and the cVEND multi-application architecture makes application development fast and easy.

The step-by-step upgrade concept enables migration from closed-loop to open-loop. Level 2 kernel packages can be upgraded later in field.

It's innovative security concepts with crypto plug-ins supports symmetric and asymmetric encryption, key-derivation and remote key loading and makes cVEND capable for PCI P2PE solutions.

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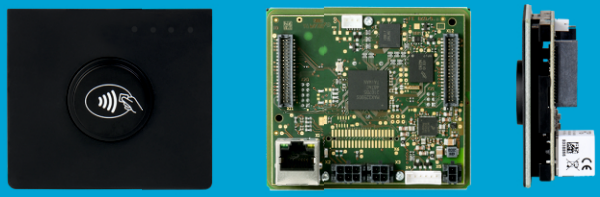

Technical Data

Housing	Electronics module with plastics front element UL94 V0
Dimensions (W x H x D))	
Overall	79 mm x 70 mm x 31,1 mm
Visible	Ø 28,5 mm
Environmental conditions	
Operation	-30 °C to +70 °C
Storage	-30 °C to +80 °C
Humidity	5 % to 95 % not condensing
Power Supply	
Voltage	5.0 to 5.5 V DC
Power Consumption	
Operation	< 1 A, peripherals excluded
Standby	< 1 mA (Wake-up by digital input and time controlled)
User Interface	6 LED (4 green, 1 red, 1 yellow) internal multi-frequency Buzzer, illuminated Contactless Logo
Contactless Interface	ISO/IEC 14443-A / -B, ISO 15693 Support of contactless payment cards, mobile NFC devices in card emulation mode, MIFARE, Sony FeliCa and other contactless cards
SAM Interface	4 x SAM Sockets available with optional SAM Extension Board
Memory Expansion	microSD socket (SDIO / SD, V 2.0) with optional SAM Extension Board
Peripheral Interfaces	Ethernet, RS232 (V.24), RS232-LVTTL, USB 2.0 Device, GPIO's, I2C and SPI
Online Connection	Ethernet, IP over USB
CPU & Security	Secure ARM 9 CPU, real time memory encryption, cryptographic hardware acceleration and a true random number generator Tamper-proof hardware, protection against side-channel attacks
Clock	Real Time Clock – Battery backed
Memory	
RAM	128 Mbyte (256 Mbyte optional)
FLASH	256 Mbyte (512 Mbyte optional)
Battery	3 V Lithium Battery, 540 mAh, Lifetime 15 years at 25 °C

Conformity to standards

Payment Security	PCI PTS 5.x, SRED Australian Payment Network Type 2
Contactless	EMVCo Contactless Level 1 - V3.0a CEN/TS 16794-1:2017 Class D
Available Level 2 Payment Kernel	Mastercard contactless V3.1.4 VISA contactless V2.2. incl. transit V1.1 American Express - Expresspay 4.0.3 Discover D-PAS 2.0 JCB contactless 1.5 Union Pay contactless 2018 RuPay - qSPARC 2.0.0 PURE 2.1.8 CPACE 1.1 Bancomat contactless 2.2.0
Environment	RoHS 2011/65/EU
Vibration / Shock	IEC 60068-2-6, IEC 60068-2-27, EN 50155, IEC 61373
Protection class	(installed in equivalent housing)
Impact	IK10
IP class	IP65
Electrical Approvals	CE, FCC, IC, UKCA EN ECE – R10 (Automotive in conjunction with related components) ISO 10605, Category 3

Accessories

Development Devices, Tools and SDK on request

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