

cVEND plug II - Solutions with payment app from FEIG

## TERMINAL MODULE FOR CONTACTLESS PAYMENT & TRANSIT

- Invisible integration into validators, on-board computers and other devices
- Tailored for transit applications
- PCI PTS 6.x
- Flat version without Ethernet connector available
- Choice between German payment service providers and international solution FEIG PayServ.GatewaySolution
- Once integrated - ready for international use



cVEND plug II is the powerful PCI PTS 6.x next generation and backwards compatible successor of the cVEND plug first generation, which has been used successfully in thousands of projects worldwide.

cVEND plug II is a future-proof solution for open-loop and closed-loop projects in public transport, parking and many other applications.

cVEND plug II is designed for transit applications and complies with related 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, it is also ideal for battery or solar-powered applications.

The cVEND.OS Multi-Application architecture supports open loop payment cards and mobile wallets as well as closed-loop cards like MIFARE, CIPURSE, ITS0, VDV-KA, or Calypso with the same priority.

An alternative hardware version without an Ethernet connector allows a more flat design. Network connection can be realized via USB.

The available cVEND plug II variants cover applications for Germany (DK) and international use (PayServ.GWS). cVEND - alpha offers particular flexibility, as the decision on a payment service provider does not have to be made until shortly before commissioning.

### cVEND plug II - alpha

Alpha is the version offering maximum flexibility for choosing a payment service provider. cVEND - alpha offers all the functions needed for testing and setting up the terminal. The final payment app can be conveniently downloaded remotely via our PayServ.SolutionSuite.

### cVEND plug II.DK (Deutsche Netzbetreiber)

Versions with payment app installed for a German payment service provider. You can choose from numerous German payment service providers that support cVEND terminals.

### cVEND plug II - PayServ.GWS

The variant for international use with FEIG's acquirer-independent payment service - PayServ.GatewaySolution.

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## Terminal module for contactless payment & ticketing

### Technical Data

|                                 |                                                                                                                                                                                             |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Housing</b>                  | Electronics module with plastic front element UL94 V0                                                                                                                                       |
| <b>Dimensions (W x H x D)</b>   |                                                                                                                                                                                             |
| Overall                         | 79 mm x 70 mm x 31,1 mm<br>(with Ethernet connector)<br>79 mm x 70 mm x 25 mm<br>(without Ethernet connector)                                                                               |
| Visible                         | Ø 28,5 mm                                                                                                                                                                                   |
| Installation                    | In or behind 3 mm non conducting front plates                                                                                                                                               |
| <b>Environmental conditions</b> |                                                                                                                                                                                             |
| Operation                       | -30 °C to +70 °C                                                                                                                                                                            |
| Storage                         | -30 °C to +80 °C                                                                                                                                                                            |
| Humidity                        | 5 % to 95 % condensing<br>moisture resistant coating                                                                                                                                        |
| <b>Power Supply</b>             | 5.0 to 5.5 V DC                                                                                                                                                                             |
| <b>Power Consumption</b>        |                                                                                                                                                                                             |
| Operation                       | < 1 A, peripherals excluded                                                                                                                                                                 |
| Standby                         | < 1 mA                                                                                                                                                                                      |
| Wake-up                         | digital input, timer, card detection                                                                                                                                                        |
| <b>User Interface</b>           | 6 LED (4 green, 1 red, 1 yellow)<br>internal multi-frequency buzzer,<br>illuminated contactless logo                                                                                        |
| <b>Contactless Interface</b>    | ISO/IEC 14443-A /-B (106, 224, 448, 847 kbit/s)<br>ISO/IEC 15693<br>Support of contactless payment cards, mobile NFC devices in card emulation mode, MIFARE, Calypso, Sony FeliCa and other |
| <b>SAM Interface</b>            | 4 x SAM Sockets with optional SAM Extension Board                                                                                                                                           |
| <b>Memory Expansion</b>         | 1 x microSD card with optional SAM Extension Board                                                                                                                                          |
| <b>Peripheral Interfaces</b>    | Ethernet, RS232 (V.24), RS232-LVTTL, USB 2.0 OTG, GPIO's, I²C and SPI (Optional without Ethernet)                                                                                           |
| <b>Online Connection</b>        | Ethernet, IP over USB                                                                                                                                                                       |
| <b>CPU &amp; Security</b>       | Secure ARM Cortex-A7 CPU up to 1 GHz with real time memory encryption, cryptographic hardware acceleration, true random number generator, tamper-proof hardware                             |
| <b>Memory</b>                   | RAM 512 Mbyte, FLASH 1 GByte                                                                                                                                                                |
| <b>Operating System</b>         | Linux based cVEND.OS                                                                                                                                                                        |
| <b>Clock</b>                    | Real Time Clock – Battery backed                                                                                                                                                            |
| <b>Battery</b>                  | 3 V Lithium Battery, 550 mAh,<br>Lifetime 15 years at 25 °C                                                                                                                                 |

### Standard Conformity

|                             |                                                                                              |
|-----------------------------|----------------------------------------------------------------------------------------------|
| <b>Payment Security</b>     | PCI PTS 6.x SRED, Common.SECC                                                                |
| <b>Contactless</b>          | EMVCo Contactless Level 1 - V3.1a<br>ISO/IEC TS 24192 (STA 3.1)                              |
| <b>Environment</b>          | RoHS 2011/65/EU                                                                              |
| <b>Vibration / Shock</b>    | IEC 60068-2-6, IEC 60068-2-27, EN 50155,<br>IEC 61373 ready                                  |
| <b>Protection class</b>     | (installed in equivalent housing)                                                            |
| Impact                      | IK 10                                                                                        |
| IP class                    | IP 65                                                                                        |
| <b>Electrical Approvals</b> | CE, FCC, IC and EN 50121<br>EN ECE – R10 (Automotive in conjunction with related components) |

### Terminalsoftware

|                                 |                                                                                                         |
|---------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Cash register interfaces</b> | ZVT Cash register interface via LAN (SSL / TLS encryption), USB or RS232<br>MDB Cash register interface |
| <b>Functions</b>                | Configurable languages and currencies,<br>fail-safe update                                              |

### cVEND plug II - alpha

|                                  |                                                                                             |
|----------------------------------|---------------------------------------------------------------------------------------------|
| <b>Specific functions</b>        | Remote loading of a productive app for a payment service provider via PayServ.SolutionSuite |
| <b>Supported payment systems</b> | In accordance with the selected payment service provider's offering                         |

### cVEND plug II.DK

|                                  |                                                                       |
|----------------------------------|-----------------------------------------------------------------------|
| <b>Specific functions</b>        | Age verification (girocard only)                                      |
| <b>Approvals</b>                 | TA 7.2, DC-POS 3.0 debit / credit                                     |
| <b>Supported payment systems</b> | girocard, VISA, Mastercard, American Express, Discover, JCB, UnionPay |
| <b>Payment service providers</b> | epay, Lavego, PAYONE, TeleCash, VR Payment                            |

### cVEND plug II - PayServ.GWS

|                                  |                                    |
|----------------------------------|------------------------------------|
| <b>Supported payment systems</b> | VISA, Mastercard, American Express |
| <b>Payment service provider</b>  | FEIG                               |

### Accessories

|                                       |                                                                                                                                             |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>cVEND plug SAM Extension Board</b> | 4 x SAM sockets ID000 format, EMVCo L1 compliant, voltage class A, B, C<br>T=0 and T=1 protocol, 1 x microSD card (SDIO / SD, V 2.0) socket |
| <b>cVEND plug Module Housing</b>      | Module housing for semi-integrated or surface mounting made of robust plastic                                                               |