

The Validator is a high performance device offering high integration level and processing power needed in state-of-the-art fare management applications. The validator can be used for ticket check or check-in-check-out functions for smart card or barcode tickets. The validator is ready for contactless debit and credit card payments within Closed Loop or Open Loop environments.

The validator features a wide variety of communication interfaces. It can work as a stand-alone validator as well as connected to an Electronic Ticketing Machine or a vehicle computer. The validator is equipped with a TFT-display, a loudspeaker, indication lights and optional a touch screen. It has a powerful processor and uses the open standard operation system Linux embedded.



#### Functionality

- Ticket Sales
  - Different Tariff Models possible
  - Check-In, Check-In-Check-Out
  - Multi-Journey, Stored-Value
  - Account Based Ticketing (ABT)
- Ticket Inspection
  - Hot-list inspection, Blocked card
  - Zone- and time-based validity
  - Ticket expiry date
- Actions
  - Card Blocking, Auto Load et cetera
- Driver Visualization
  - via ETM, driver unit or vehicle computer
- Contactless credit and debit card payment

#### Specification (partly optional)

- Processor NXP ARM Cortex  $\geq 1$  GHz
- Operating System Linux
- $\geq 1$  GB DDR3 RAM,  $\geq 4$  GB eMMC
- EEPROM with electronic serial number
- Real-Time-Clock and HW-Watchdog
- Color TFT-Display 3,5 Inch; option 5 Inch; resolution 320\*240 pixel; option touch screen
- Smart Card Reader
- ISO 14443 type A/B, four SAM slots
- Different national standards possible
- EMVco Level 1 and 2 certification (Mastercard, VISA, Amex ...); EMVco Level 3 certification (several acquirers); PCI-PTS POI V5.1; PAYG/MTT, Online Authorization, ... ready for Apple Pay™ & Google Pay™
- 1D/2D Barcode Imager
- Loudspeaker (I2S Codec)
- Serial (RS232/485), USB OTG, Ethernet
- Wireless LAN IEEE 802.11 ac/a/b/g/n/i
- Mobile communication (3G, 4G, 5G)
- IBIS, IBIS over IP, Bluetooth, GPS receiver
- ECR-Interface / ZVT-Protocol
- Power 9 to 36 Volt DC
- Operating temperature  $-25^{\circ}$  -  $+75^{\circ}$ C
- Relative humidity max. 95%
- Water and dust IP54 certification
- CE, E (Automotive) and RoHS compliant
- Dimensions 158\*98\*106 mm (HWD); without mounting kit 158\*98\*61 mm
- Weight 500 grams
- Installation via mounting kit with key lock
- Mounting kit with vehicle memory