



**FAST**  
**SECURE**  
**VERSATILE**  
**USER-FRIENDLY**  
**ROBUST**

# Validator

## AREA OF APPLICATION

The Validator is the key element of the Automated Fare Collection (AFC) system that ensures the smooth operation of public transport services. It enables various payment options, including smart cards, paper tickets, contactless credit/-debit cards, QR codes, NFC, FeliCa, Apple Pay, and Google Pay. The Validator is Account-Based Ticketing (ABT) ready, EMV Level 1 and Level 2 compatible, and provides a strong foundation required for MaaS (Mobility as a Service) projects.

Developed especially for harsh environments, the Validator successfully withstands shocks, vibrations, and extreme temperatures. Its user-friendly design ensures easy mounting on various public transport modes, such as buses, minibuses, trains, and trams. Its “high-brightness display” ensures clear readability day and night. Finally, the Validator’s encrypted communication protocols safeguard sensitive payment data and transactions for the sake of passengers and transport authorities.

# Validator



## TECHNICAL SPECIFICATIONS

	VAL-S	VAL-X
Power Supply	9-36 V DC and PoE PD 802.3af	9-36 V DC (Non PoE)
Communication Interface	Ethernet 10/100 Mbps, RS232/RS485	Dual Ethernet, RS232/RS485
Operating System	Linux (Kernel 5.10), 696 MHz ARM Cortex A7 Processor	
Memory	512 MB DDR3 RAM	
Flash Memory	512 MB (NAND) Flash, 16 MB (NOR) Redundant Data Flash	
Real-Time Clock	Battery Powered RTC	
Display	480 x 272 4.3" TFT LCD	
Audio	Mono Speaker (1W)	
User Interface	Capacitive Touch Screen With Reinforced Protection Glass - 4 LEDs	
Smart Card Reader	Security Module 2 SAM (4 SAM Optional), GSM Standards (1 SIM)	
Memory Card Reader	MicroSD Card Reader	
Contactless Card Reader	NFC, Mifare Classic, UL, ULC, My-D Move, Mifare Plus, DESRre, Smart Cards, Java Cards, Contactless Credit Card	
Barcode Reader	2D Barcode Scanning Device	
Standards	ISO/IEC 14443 Type A/B, ISO/IEC 7816-4 Compliant, ISO/IEC 18092, ISO/IEC 21481, ISO/IEC 15693 (Optional)	
Operating Temperature	-20°C to +70°C	
Storage Temperature	-30°C to +80°C	
Humidity	10% to 90%	
Dimensions	(H) 215 x (W) 146 x (D) 72 mm	
Weight	882 g	

## CERTIFICATIONS

- EMV Level 1, Level 2 (Mastercard and Visa)
- Electromagnetic Compatibility: IEC/EN55032, IEC/EN55024
- EMARK E24
- Low Voltage Directive: IEC/EN60695
- IK08
- Shock and Vibration: IEC/EN60068
- IP65
- CE
- ROHS (Restriction of Hazardous Substances Directive)