ACR300
Bus Validator

Technical Specifications

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1.0. Introduction

ACR300 Bus Validator is designed specifically for use in Automatic Fare Collection systems (AFC) for public transport.

The ACR300 Bus Validator supports all smart cards compliant to ISO14443 Type A & B, Mifare. By virtue of the embedded powerful 32bit ARM 9 processor, ACR300 Bus Validator can complete typical transaction within 0.2 second including recovery and backup, after the presentation of the card. Special Anti-collision algorithm effectively prevents the collision conflict when the user has many contactless cards put together, e.g. in his purse. Special Anti-Tearing mechanism also guarantees the transaction to be either completed or rejected, avoiding any data corruption and unexpected transaction error.

There are two card slots for holding Purchase SAM cards to ensure the security and integrity of the transactions. Furthermore, the data storage in ACR300 Bus Validator is tailor-made for Automatic Fare Collection (AFC) applications and ACR300 stores as many as 30 pages of information with 2,000 records per page. The memory capacity is more than enough for storing 30 day transaction records and blacklists.

With the integrated smart card readers, graphical LCD, audio, LED indicators and reliable waterproof casing, ACR300 Bus Validator is perfectly suitable for various types of automatic fare collection systems, e.g. for buses, ships, trams and other transportation means.

The Latest version equipped with GPS, enables you to locate the vehicle and set fare flexibly with reference to distance.

2.0. Features

- 32-bit Arm-9 / Linux

- 64MB flash and 64MB SDRAM and 2GB SD card

- Contactless Interface Reader supporting Types A & B and Mifare Cards

- USB Full Speed Host

- RS232 Interface

- 2 x ISO7816 SAM-Size Card Slots

- Card Authenticity, Validity & Backlist check

- Graphical LCD with Backlight

- Driver red/orange/green LED indicators

- 2 control buttons

- Speaker and Buzzer

- Real time clock

- Dust and water resistant
- Over Voltage & Over Current Protection

- Support USB secured thumb-drive data extraction

- Firmware Upgradable

- (Optional) GPS

3.0. International Certification

- ISO 7816
- ISO 14443
- RoHS

4.0. Supported Card types
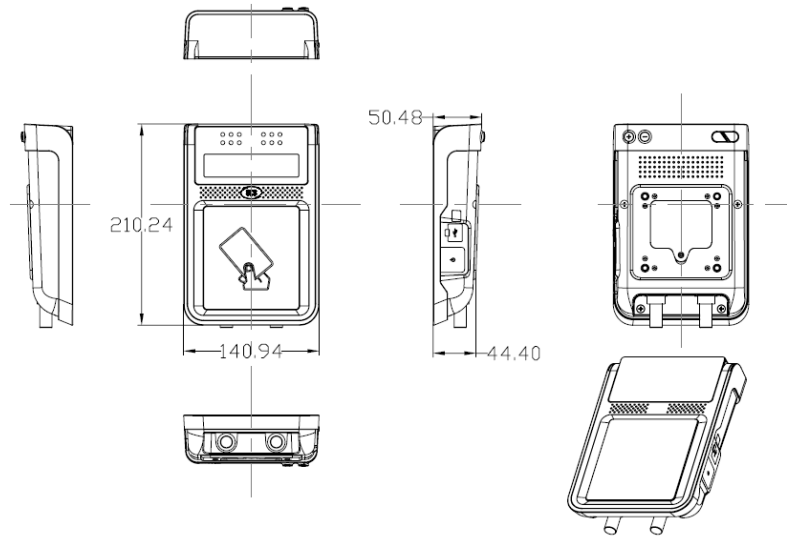
Contact Cards

MCU Cards

- Comply with ISO-7816 part 1-4
- Class A (5V)
- T=0 or T=1 protocol

Contactless Cards

- Comply with ISO-14443 Type A & B Standard, parts 1-4, T=CL protocol
- Mifare Classics

5.0. Technical Specifications

Processor	
32-bit Arm9 Processor	
Operating System	
Linux	
Memory	
Memory..	64MB flash + 64MB SDRAM + 2GB SD card
Power	
Supply Voltage.....................................	9 - 45V DC
Connectivity	
USB...	USB Full Speed Host
RS232	3 lines RxD, TxD and GND
Smart Card Interface	

Contact - SAM

SAM card slots	Two ID-000 slots
Card connector type...............................	Contact
Smart card read / write speed	9600-76800 bps

Contactless

Standard...	ISO-14443 A & B part 1-4
Protocol	.Mifare® Classics protocols, T=CL
Smart card read / write speed	106 kbps
Operating distance.................................	up to 70 mm
Operating Frequency	13.56 MHz
Human Interface	
LCD Display..	Graphical LCD with Backlight
LED Indicators......................................	Two Bi-Color LED (Red /Orange/ Green) Indicators
Speaker..	8Ω dynamic type, 1/4 W
Buzzer...	Dynamic type
Physical Specification	
Dimensions...	Device : 210mm(L) x 142mm (W) x 50mm (H)
Case Color..	Black
Operating Conditions	
Temperature………………………………	-20 ~ +70 ℃
Humidity..	20 ~ 99%
Optional Features	
GPS	