

The Validator Application (VAP) is a key element of the Automated Fare Collection (AFC) system which ensures the smooth operation of public transport services. It supports a wide range of payment options, including smart cards, paper tickets, contactless credit/debit cards, QR codes, NFC, Apple Pay, and Google Pay. VAP is Account-Based Ticketing (ABT) ready and provides a strong foundation required for MaaS (Mobility as a Service) projects.

In addition to the Validator, we offer a highly advanced back-office system designed to support even the most complex pricing structures. The communication infrastructure is built using cutting-edge wireless technologies that allow the transmission of detailed device information related to the status and configuration. It also features aural and visual announcement capabilities, ensuring a comprehensive and user-friendly solution. Our secure information storage capabilities arrange that all data is stored safely and is easily accessible when needed.

The Validator and back-office software solution will quickly carry your public transportation services to the next level!









# Validator Application

## **KEY FEATURES**

## PARAMETER AND CONFIGURATION

- Remote update of fare tables and configuration files
- · Stores more than one fare table
- Fare tables support passenger types (Adult, student, concessinory, etc.)

### **GENERAL SOFTWARE**

- Linux operating system
- EMV card acceptance (Transit Kernel)
  - Retail like real-time authorization capability
  - PayG or MTT policy options
- Compatible with Transit UI indication directives (MasterCard, Visa)
- · Media read less than 500 ms
- Card-based and account-based ticketing acceptance
- QR media QR ticket acceptance
- Various complex fare support policy (CICO, flat, transfers, etc.)
- · Remote software update

#### **SECURITY**

- Uses security module for encryption and closed loop card handling
- Supports cryptographic algorithm (RSA, 3DES, AES, ECCDSA, etc.)
- Signs all records by using the security module

## **TRANSACTION**

- Generates and stores a discrete data record for each transaction performed
- Has capacity to store no less than 10,000 records
- Generates logs

#### LIST

- Receives MSL of data from the back-office
- Updated at configurable frequency (hour, day, etc.)
- Takes differences of MSL at each update
- Internal database support

## COMMUNICATION

- Wide range of communication protocols (MQTT, TLS, Web Socket, HTTPS, etc.)
- Communication over web services
- Kentkart Terminal Management System (IoT) support

