

Fare Collection

Easier, safer, and more flexible payment experience for public transport



EMPTECH provides fare collection systems based on advanced data security, ticketing, clearing and payment technologies for public transport such as buses and metro railways. The solution consists of following systems:

▶ **Revenue Clearing System**

Transaction entry, transaction record, revenue clearing, verification of transaction validity, effectiveness and continuity, generate parameter files

▶ **Operation Management System**

Parameter management, device management, user account management, basic information management, operation maintenance, authorization management etc.

▶ **Report Query System**

Provide add-value, vending and consumption statistical report; provide statistical report for bus company, lines, vehicles, driver, steward, and bus shift; provide reconciliation statement

▶ **Data Encryption System**

Encryptor access control, add-value device transaction data collection, downloading parameter files and blacklist files

▶ **Customer Service Management System**

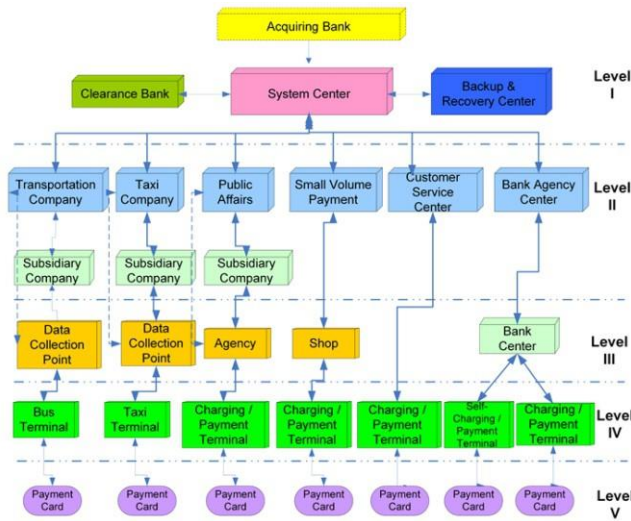
Maintenance and management of card vending, add-value, consumption, freeze/unfreeze account, annual auditing, and card return

▶ **Mobile APP and Service (payment, add-value, etc.)**

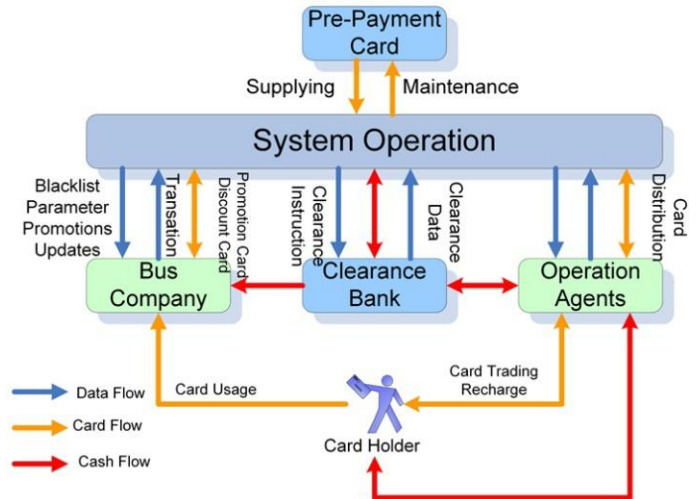
Mobile payment card management, add-value management, settlement, on line add-value and payment management

▶ **Ticket Validator, Add-value & Payment Terminals**

Support a wide range of products for multiple ticketing modes, add-value, and payment validation



Fare Collection System Architecture



System Operation Flows

Ticket Validator & Payment Terminals

Ticket Validator EMP5210

Bus, BRT fare collection applications
Support RFID, NFC, banking card, QR code payments
 Offline data authentication GPS and satellite positioning
 Solid strong housing, robust design **200,000+** units deployed in **100+** cities Strategic cooperation with Alipay



Multi-function Validator EMP5560

Support **RFID, NFC, banking card, QR Code** payments
Metro ticketing gate application
 Cost saving solution
 Robust design, 7x24 operation
 Open for app development



QR Code Reader EMP0185

Read QR Code, QR 1/2, Micro GPRS communication Contactless card reading Interface: USB, RS232s



Handheld Ticket Validator EMP5511

2.4" LCD
 QR Code, RFID reading
 GPS + Satellite positioning
 4G, Wi-Fi, Bluetooth communication
 Program storage ≥ 8GB;
 Memory ≥ 2GB
 8+ hours working duration
 4 SAM card slots

