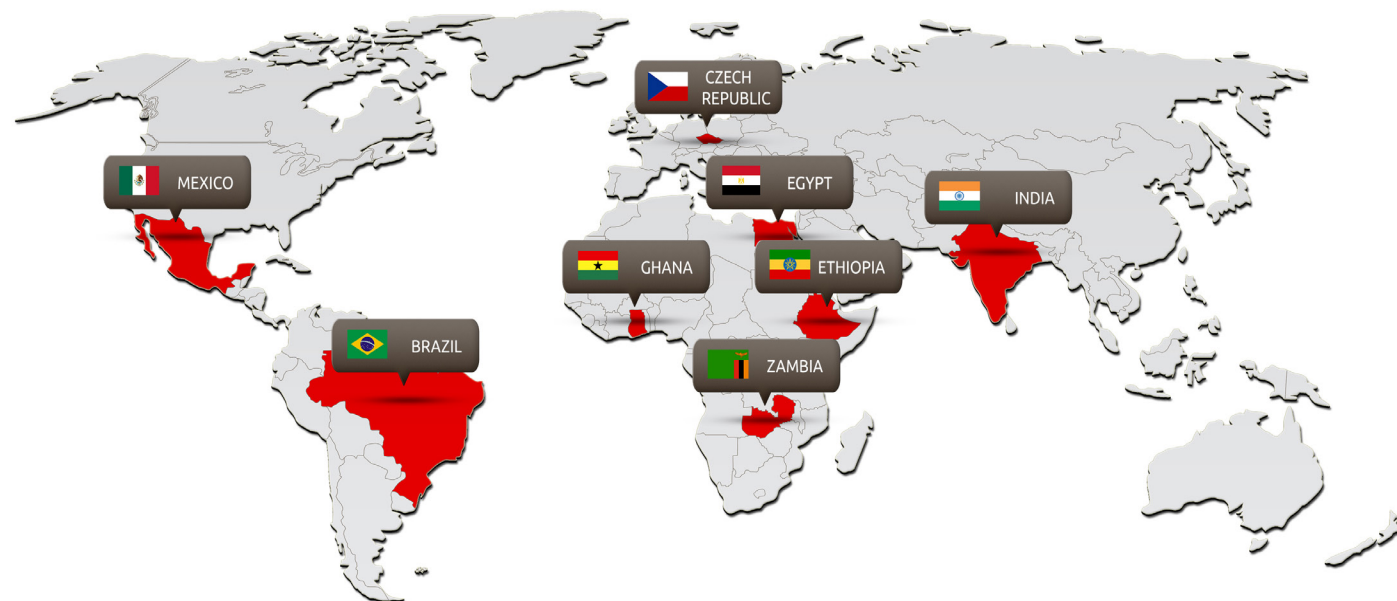


More than 25 Million Meters running in 46 Countries



Egypt	Malta	Jordan	Bulgaria
Greece	Czech Republic	Croatia	Switzerland
Macedonia	Kenya	Iraq	U.A.E
Montenegro	Poland	Lebanon	Ethiopia
Estonia	Sierra Leone	Palestine	Tanzania
Slovak Republic	Ghana	Comoros Islands	Nigeria
Syria	Congo DRC	Germany	Angola
Ethiopia	Lithuania	Guinea	Burundi
Mexico	Burkina Faso	Brazil	Latvia
Tunisia	Netherlands	Sudan (North)	Zambia
Rwanda	Serbia	Guinea	India
Austria	Congo Brazzaville		

e-cash solutions

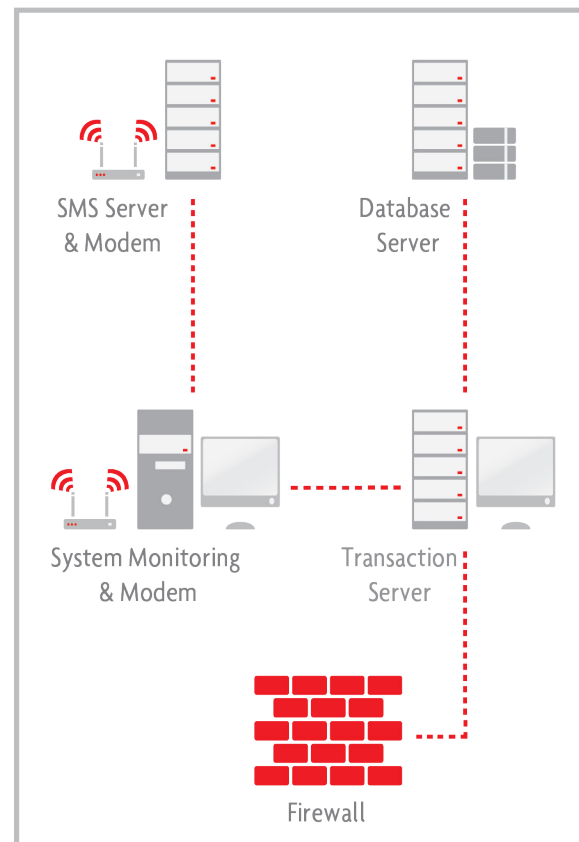


Overview

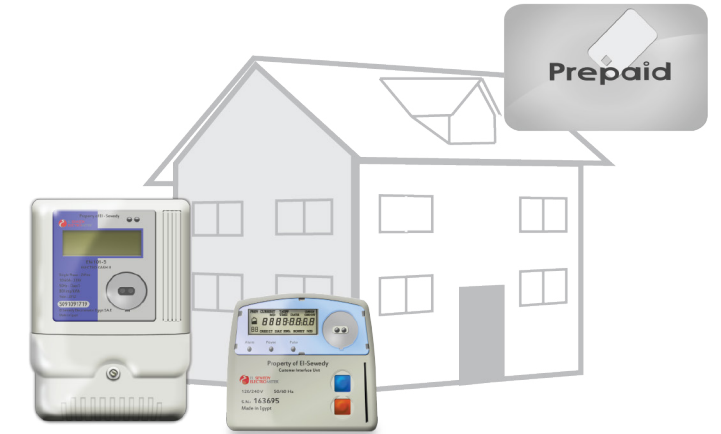
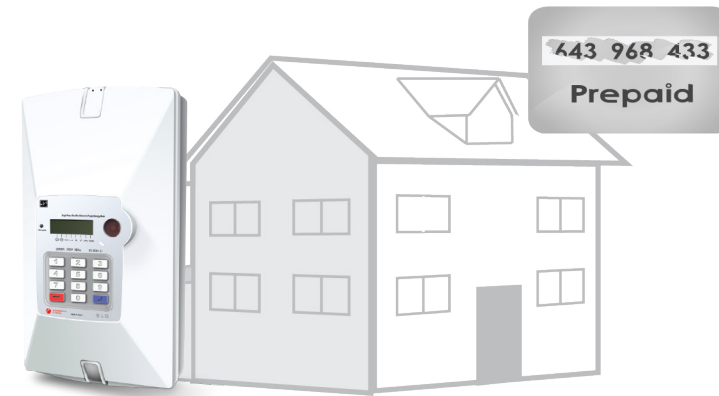
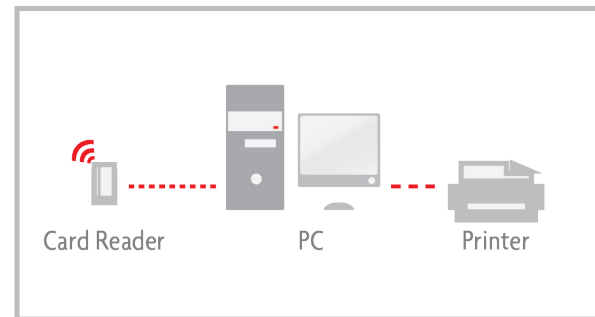
The e-cash solutions aim to simultaneously allow consumers to control their consumption and the utility company to control revenue collection through the utilization of various payment forms.

Utilities have the flexibility to choose between charging the meter directly through the e-cash I solution or indirectly through the e-cash II solution. In the e-cash II solution, consumers charge their meters through the Customer Interface Unit (CIU), while in the e-cash I solution, the credit recharge operations are done directly through the meter.

Main Control Station MCS



Vending Station



PLC



Mobile
Vending
Station



Features

- There is no need for meter readers
 - All information is transferred directly to the utility through vending stations
- There is no need for money collectors
 - Credit recharge transactions are done at vending stations
- Consumers have control over their consumption
 - Consumers have the ability to budget their consumption by choosing the payment form that best suits their needs
- Revenue collection for utilities is guaranteed
 - Consumers have to go to vending stations to recharge credit
- Allows utilities to better allocate their resources
 - Money collectors and meter readers can be re-utilized to fulfill other tasks
- Allows easier detection of tampering and fraud
 - All data and events are transferred to the utility via a secure medium
- Mobile Vending
- The solution can easily be re-configured to support different Payment forms
 - There is no need to physically change the system in order to switch between payment forms

e-cash I

- The e-cash I solution supports contact and contactless cards
- The events registered by the system are:
 - Power Monitoring
 - Power supply failure events
 - Power supply Activation events
 - Over voltage events
 - Under voltage events
 - Configuration & Control
 - Change in operating modes: Basic, Prepayment, Post-payment mode and vice-versa
 - Reading and Configuration events (Via Optical, etc....)
 - Date and time adjustment
 - Tamperers
 - Over Maximum demand events
 - Reverse Connection Detection
 - Different types of meters can detect different forms of tamperers
 - Credit Control (Incase of Payment Plans)
 - Credit recharge events
 - Scheduled cut-off date
 - Missing Credit events

e-cash II

- The e-cash II solution provides the same functionality as the e-cash I in addition to supporting a Customer Interface Unit (CIU)
- Two-way communication with the Meter via one of the following methods
 - Radio communication via wired/wireless M-bus
 - RS-485
 - PLC
 - ZigBee
 - Bluetooth
- Real time information displayed to the end-user
- The Meter is accessible to utility field technical staff for audits & inspections at all hours
- Significantly reduces the risk of tampering with the meter
- The CIU can be configured to indicate several events, tamperers, etc...
- Consumers can track their consumption from the comfort of their home
- Various topologies of remote access systems are possible depending on the nature of the site and the communication technology used within the split meter
- The CIU provides both visible and audible alarms to indicate that the credit level is at or below preset "low level" limits
- The Split unit can be integrated in the HAN network through the use of different technologies (Optional)

Payment Forms

- (Charges can be added to the meter in the form of credit Money / Credit Units / kWh)
- Open Account:
 - The system functions as a smart replacement for the mechanical meter
 - The Cut-off device isn't related to bills
 - The Cut-off device can be pre-configured by the Utility to disconnect in case of Tamperers/Events
 - Advance Payment:
 - Credit amount is normally charged before use just like in any prepayment system
 - The system supports offers the use of the Grace Period (if configured by the utility company) which provides an optional amount that is allowed to be consumed after reaching 0 credit (customizable friendly option)
 - The plan uses a billing cycle, so consumers are placed in the tariff bracket that correctly matches their usage
 - Credit Payment:
 - Payment is made at the end of the billing cycle just like in any postpaid system
 - The system allows for charging credit within a grace period after the end of each billing cycle
 - The amount accumulated during the grace period is considered a part of the next billing cycle
 - Limited Credit Payment:
 - Payment is made at the end of the billing cycle just like in any postpaid system
 - It allows the customer/Utility to set a limit to be used during each billing cycle
 - If that limit is exceeded then the service will be disconnected until the next billing cycle i.e. (There is no Grace Period)
 - If a consumer decides to use the service again during the original cycle, then he/she can add an extra prepaid amount to be able to complete the original billing cycle