

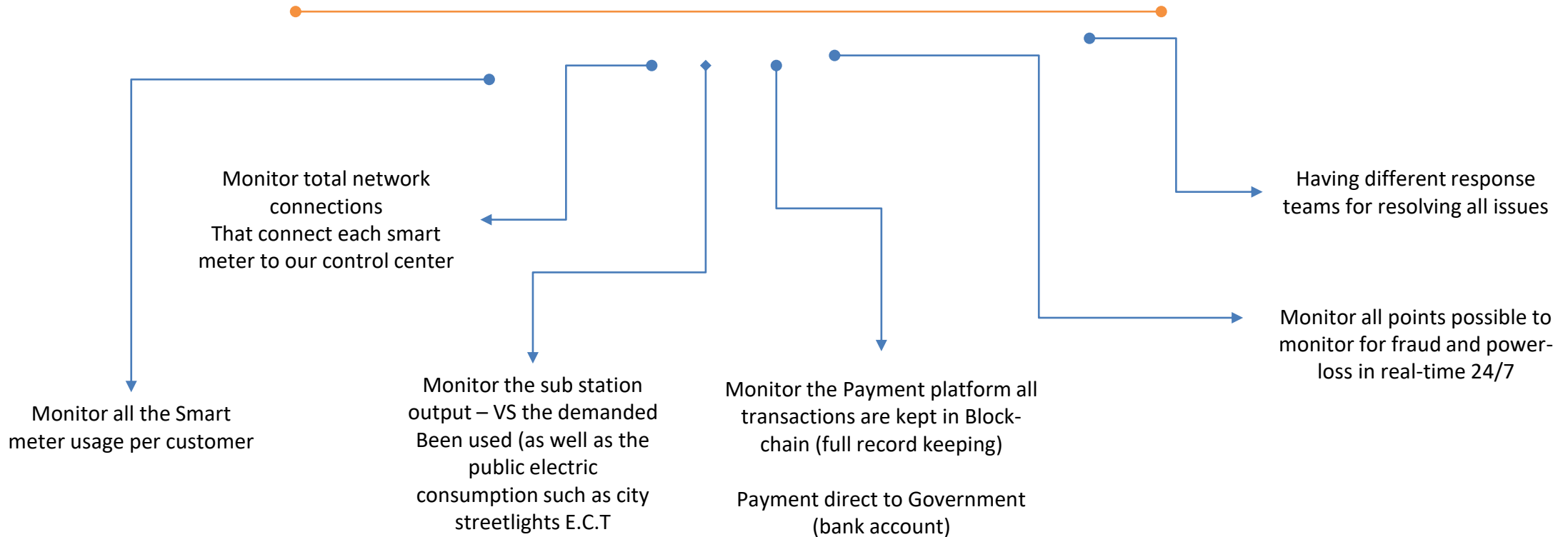


Our solutions for Electrical Energy distribution
Family of Products Pre-paid
Electrical Meter – Water meter – Gas meter

**WE ALSO OFFER A TOTAL ENERGY SAVING SOLUTIONS AND PRODUCTS FOR BUSINESS
CUSTOMERS**



Governments that intergrades with C4 Data System hardware and software can count on the us for a full end-to-end Solution
Having your power revenue pre-paid for from all your customers home and Business, including manufacturing company's.





C4 SYSTEMS AMR SMART METER

- Beyond AMR, the very First truly Smart Meter for a smarter grid.
- It implements the Smart grid concept to help Utility company to better plan energy production, routing and utilization
- It makes the billing process easier and more flexible, both for users and utility company
- Easy and flexible in-field deployment, supporting both (online) and (off-line) and Networked usage
- Safe, secure and reliable, it uses the most advanced IoT and secure communication standards.
- It allows seamless integration with users Home automation systems, supporting a more efficient energy usage at all levels



WE OFFER PRE-PAID SOLUTIONS FOR ALL OUR SMART METERS, ELETRIC, GAS, WATER, HEATHER



Function of smart meter

A few of our basic functions:

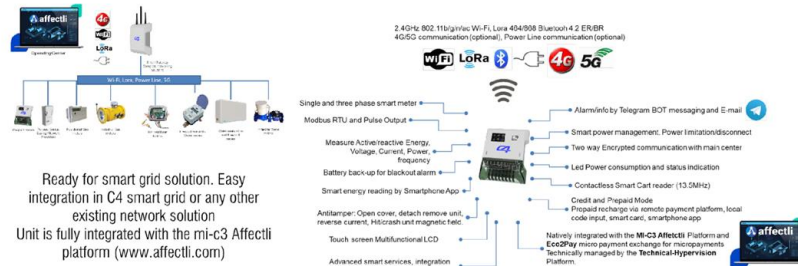
- The two-way communication function.
- The billing function/ updates smart meter
- The data collection function
- The data recording function
- The data storing function
- The smart load control function
- The programming function
- The security function
- The display function
- The Help screens
- Remote disconnect and reconnect function
- Connect to Lora-wan from internal modem
- Reset button / disconnect and reconnect to the power
- Tampering monitoring in real-time



The Pre-paid/Credit Energy meter for smart power Grid Companies



Smart Pre-paid/credit energy meter	The iSGEM-X is a Pre-paid/Credit smart grid energy meter for the effective distribution of energy in any type of environment: rural and urban. Available with any kind of communication network, ready for in-grid and off-grid application, pre-paid and credit mode.
Part Number	iSGEM-X1
Voltage and Frequency	100-240 V, 70% - 120%Un, 50-60Hz + 5%
Energy meter	Single phase Power energy meter. Accuracy as Active energy to IEC62053-21, Class1. Starting current 20mA, Reactive Energy measurement.
Power Meter	Instant Voltage, Active Power, Reactive Power, currents, PF, Frequency
User interface	2.4" Touchscreen LCD display, Local Web Interface.
Currents	Base Current 5-10A, (0.05-100A) Rated Current 80/120A
Power consumption	3W.
Protection	Insulation level: 4kV rms for 1min, impulse voltage withstand: 8kV, 1.2/50 μ s. Insulation System Classification: Class II
Physical interfaces	2 X Power In, 2 X Power Out Modbus RTU Pulse Output Power Line Communications (optional) Smart Card reader 13.56 MHz
Billing methods	Credit mode with remote energy readings and power control. Pre-paid recharge via remote payment platform, local code input, Contactless card reader, smartphone application.
Load control	Integrated latch Rele, power disconnect and power limitation. Advanced power management functions
Wireless Interfaces	Wi-Fi CPE 2.4GHz, Bluetooth, Lora, 4G/5G (optional) and Power line (optional) for communication with control center (Units management and billing functions)
Communication Protocol	MQTT, Modbus TCP, Modbus RTU, Lora with full data encryption.
Functionalities	Pre-paid/credit with time of Use (TOU), multi-tariff, holiday settings. Disconnection on overload or no-credit, programmable maximum load and pre-paid expiration. Alarms: Tamper attempt, Black Out, overload, magnetic field levels. Pre-paid charge via keypad or smart-phone. Smart-Grid ready. Natively integrated with the MI-C3 Affectli Management platform and Eco2pay Micropayment framework
Anti-Tamper	Real time Detection, transmission and record of tamper events: Main Case Open and/or detach-disconnect, Terminal cover open, reverse energy detection, black-out alert, magnetic field detection, accelerometer for equipment removal and crash.
Operating/Storage Temperature	-20° C ... +60° C / -30° C ... +70° C. (IEC 62052-11)
Protection Level	IP51 (IEC 60529)
Dimensions	195mm (w) x 250mm (h) x 80mm (d)
Weight	1.5 Kg
Power Supply	100/240VAC, self supplied. Hold-up Battery (Option)
Mounting	Wall, DIN Rail, IP65 kit (optional)



Ready for smart grid solution. Easy integration in C4 smart grid or any other existing network solution
Unit is fully integrated with the mi-c3 Affectli platform (www.affectli.com)

The Smart metering/Smart Grid Solutions

All **iSGEM** solutions are fully in line with the new Smart Grid requirements and represent the state of the Art solution for Utilities company, available in multiple versions to meet the most diverse needs.

iSGEM units are flexible and easily configurable depending on the specific operators' need. Can support standard installations, Renewable energy solutions (Solar panels, wind, cogeneration etc), can support EV charge requirements and can be integrated with Home automation systems, and Building management.

iSGEM Units are equipped with the latest IoT communication technologies and can be easily integrated into any communication framework, either existing or for new deployment, using Wi-Fi, Bluetooth, Lora, 3/4/5G, and power line communications. **iSGEM** are fully compatible with any communication infrastructure or can use our own **iSIOP Smart IoT** platform.

iSGEM versions all provide the highest level of security, with advanced anti-tamper features and state of the art data communication encryption. provide analog and digital output signal to advice of a specific (configurable) lons threshold level. An LED also provides visual indication of the status.

iSGEM is natively integrated with **AFFECTLI** which is a trusted Business Operating System that orchestrates disparate systems & data seamlessly into a single real-time overview of the organization, providing advanced features for units/network management and advanced energy monitoring/billing functionalities.

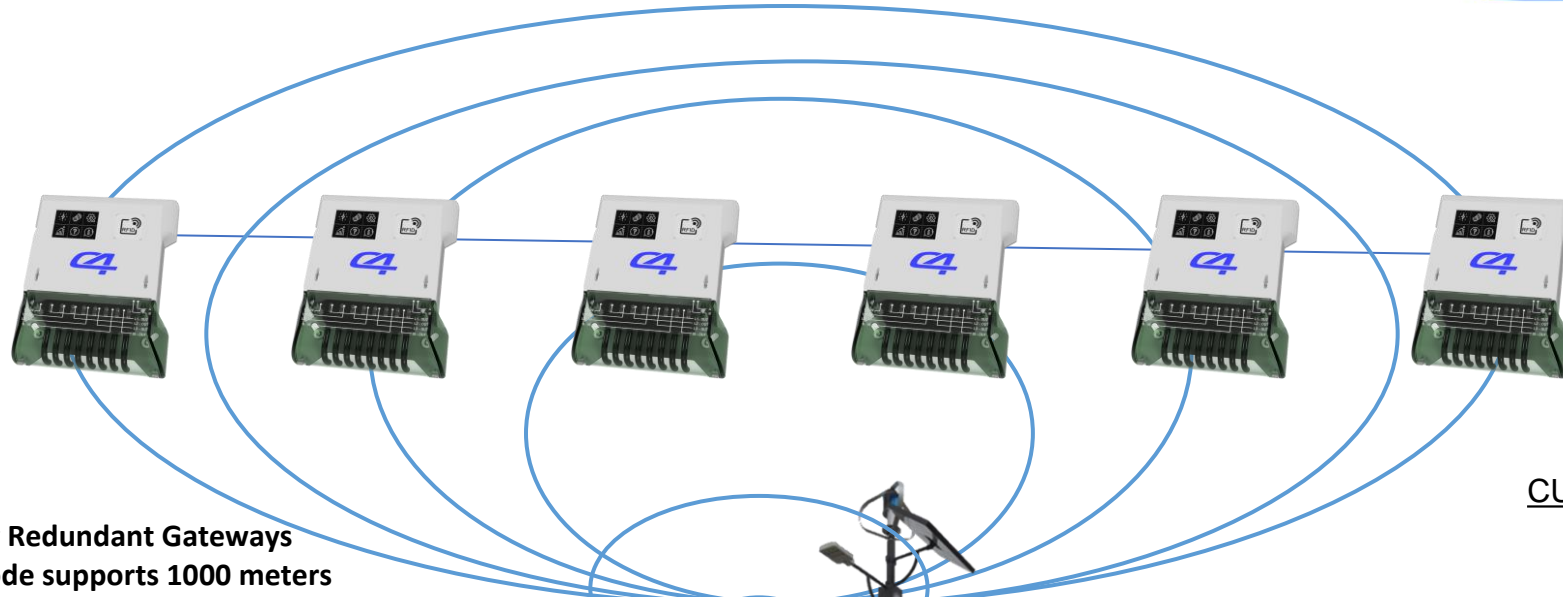
Version	Code (SKU)	Single-Phase measurement	Three-phase measurement	Smart Grid Functions	Power management (Amex)	Advanced anti-tamper features	2.4" Touch LCD	Advanced billing features	Remote management Cloud	Wi-Fi/Lora connectivity	3G/4G connectivity	Power Line Communication	Outdoor installation Kit	LAN Interface	DLSM Protocol	Modbus RTU
iSGEM-18	WSM-SGEM-18-xxx	◆		◆	80	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
iSGEM-38	WSM-SGEM-38-xxx		◆	◆	80	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
iSGEM-312	WSM-SGEM-312-xxx		◆	◆	120	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆

Function	Description
Single phase measurements	Single phase measurement, Active/reactive/apparent current/power/energy, peak/average load and demand
Three Phase measurements	Three phase measurement, Active/reactive/apparent current/power/energy, peak/average load and demand
Smart Grid Functions	Integration with appliances/grid information for advanced features, load control, load forecast and smart power management.
Power management	Advanced power management features, configurable reduced power, power peak, Max allowe current 80/120A per phase
Advanced anti Tamper	Real time Detection, transmission and record of tamper events: Main Case Open and/or detach-disconnect, Terminal cover open, reverse energy detection, black-out alert, magnetic field detection, accelerometer for equipment removal and crash
2.4 Touch LCD	LCD wit touchscreen for easy and simple data reading and data input. Local web interface for remote data reading.
Advanced billing features	Pre-paid/credit with time of Use (TOU), multi-tariff, holiday settings. Disconnection on overload or no-credit, programmable maximum load and pre-paid expiration. Alarms: Tamper attempt, Black Out, overload, magnetic field. Pre-paid charge via keypad or smart-phone. Smart-Grid ready
Remote management	Remote unit management and supervision
Wi-Fi/Lora connectivity	Wi-Fi 2.4GHz and LORA 464/868 communication capability
3G/4G/5G connectivity	Optional 3G/4G or 5G communication module
Power Line communication	Optional Power line communication module
Outdoor installation kit	Optional Kit for Outdoor installation
LAN interface	Optional Local LAN interface (RJ45)
DLSM Protocol	DLSM protocol for integration with existing infrastructures
Modbus RTU Interface	Modbus RTU serial interface (RS485) slave

• INSTALLATION TEAM

Business or Home Pre-paid Smart Meters

Installation Team Single Phase or Three Phase



Management your Data

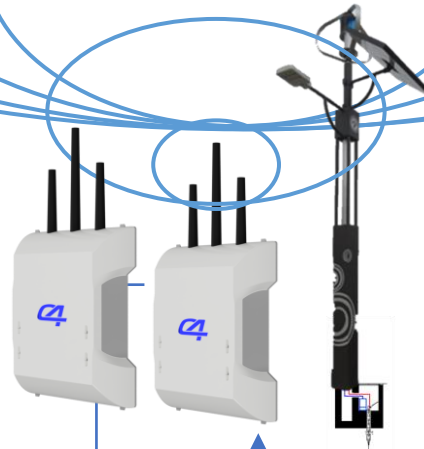


CUSTOMER SERVICES - SUPPORT



Fully Redundant Gateways
Each node supports 1000 meters
We work with seamless multiple communication media and Hybrid networks:

Wi-fi, Lora, Power Line, 4G/5G, Satellite



Eco 2 Pay

Payment Token



COMMAND & CONTROL CENTER
MONITORING THE TOTAL
NETWORK



BLOCK-CHAIN DATA BASE



MI-C3 AFFETCTLI PLATFORM



CREDIT CARD
PAYMENTS



NFC
PAYMENTS



WEB
PAYMENTS



SHOPS
PAYMENTS

ADVANTAGES

The Solution that meet Customers and Utility providers needs

FOR RESIDENTIAL AND BUSINESS USERS

- Provides real time energy consumption data, configurable alerts and alarms directly on users Smartphone or PC. Helps to be informed about energy usage, issues etc.
- Provides Energy consumption analysis, Peak values, average values and help in defining an energy saving strategy. Track and monitor expected consumption profiles
- It alerts in case of consumption exceedances, problems, disconnections.
- Easy and user-friendly Interface, make easy to use and solve problems anytime, anywhere
- Provide very flexible and customizable billing options, to meet any kind of operation requirements. The **Eco2pay** platform make easy and flexible payments, clear and easy accounting.
- Helps to safely run your business, promptly informed about any issue through advance messaging options: e-mail, WhatsApp, telegram etc.



FOR UTILITY COMPANY

- Easy Installation and maintenance. Networked units are fully monitored and managed remotely to grant an effective and reliable service h24/7/365.
- It use any kind of communication channel to be fully integrated into the network: Wi-Fi, BLE, Lora, LTE, 5G, Power line comm, Satellite comm. It can virtually be installed in any place world-wide
- It allows stand alone and networked operation with a single family of products. Data can be easily collected and safely reported by operators and directly by users using a dedicated app.
- It comes with an integrated Billing and smart grid platform, making easier for Utility companies remain focused in running and manage the business
- It provides smart grid functionalities calculating consumption averages, peak values and forecast data that are then consolidated at central level to provide a specific power usage geographical map.
- Provides support for several type of operations: Renewable energy. Electrical Vehicles, Public lighting, temporary usages (exhibitions. markets etc.)

2.4GHz 802.11b/g/n/ac Wi-Fi, Lora 464/868 Bluetooth 4.2 ER/BR
 4G/5G communication (optional), Power Line communication (optional)



Payment Gateway

- Single and three phase smart meter
- Modbus RTU and Pulse Output
- Measure Active/reactive Energy, Voltage, Current, Power, frequency
- Battery back-up for blackout alarm
- Smart energy reading by Smartphone App
- Antitamper: Open cover, detach remove unit, reverse current, Hit/crash unit magnetic field.
- Touch screen Multifunctional LCD



- Alarm/info by Telegram BOT messaging and E-mail
- Smart power management. Power limitation/disconnect
- Two-way Encrypted communication with main center
- Led Power consumption and status indication
- Contactless Smart Card reader (13.5MHz)
- Credit and Prepaid Mode
- Prepaid recharge via remote payment platform, local code input, smart card, smartphone app
- Natively integrated with the MI-C3 Affetctli Platform and Eco2Pay micro payment exchange for micropayments Technically managed by the Technical-Hyper-vision Platform.



ADVANCED SMART SERVICES, We have an integrated Home Automation systems. Wired/wireless MBUS version allows to also collect the Electrical , Gas and Water consumptions and multiple services we offer.



- A smart grid solution integrating Grid services with home appliances

- Plant supervision and management functionality simple and intuitive graphical user interface, systems synoptic
- Managing ignition times
- Thermal / Electric tracking functionality
- Data archiving and logging (64GB)
- Management of electrical, thermal and gas measurements
- Calculation of system operating parameters (Thermal efficiency and energy savings)
- Sending alarms in case of problems (temperatures above / below threshold, failures)
- Communication with operations center
- The has secure connections to the operations center (24/7 helpdesk).
- Physical interfaces for local devices
- It interfaces with other Wireless sensors and gateways
- Easy installation and management



Main Features

Multifunctional color Graphics Touch Screen

Advanced communications, IoT ready
Wi-Fi, Lora, BLE

Multifunctional RGB LED indicator

Advanced Smart Power management,
Power disconnection, power limitation

Anti Tamper detection

- Sealing screws
- Covers open
- Wall removal
- Crash-movement detection
- Magnetic Field detection
- Reverse Current detection

RFID/NFC

Reader for advanced Billing features
and AMR readings

Easily operated by
Smartphone webapp

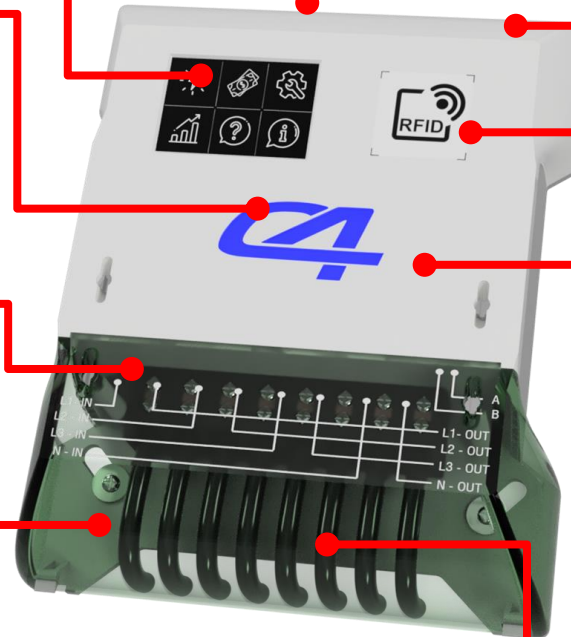


Smart Grid Features

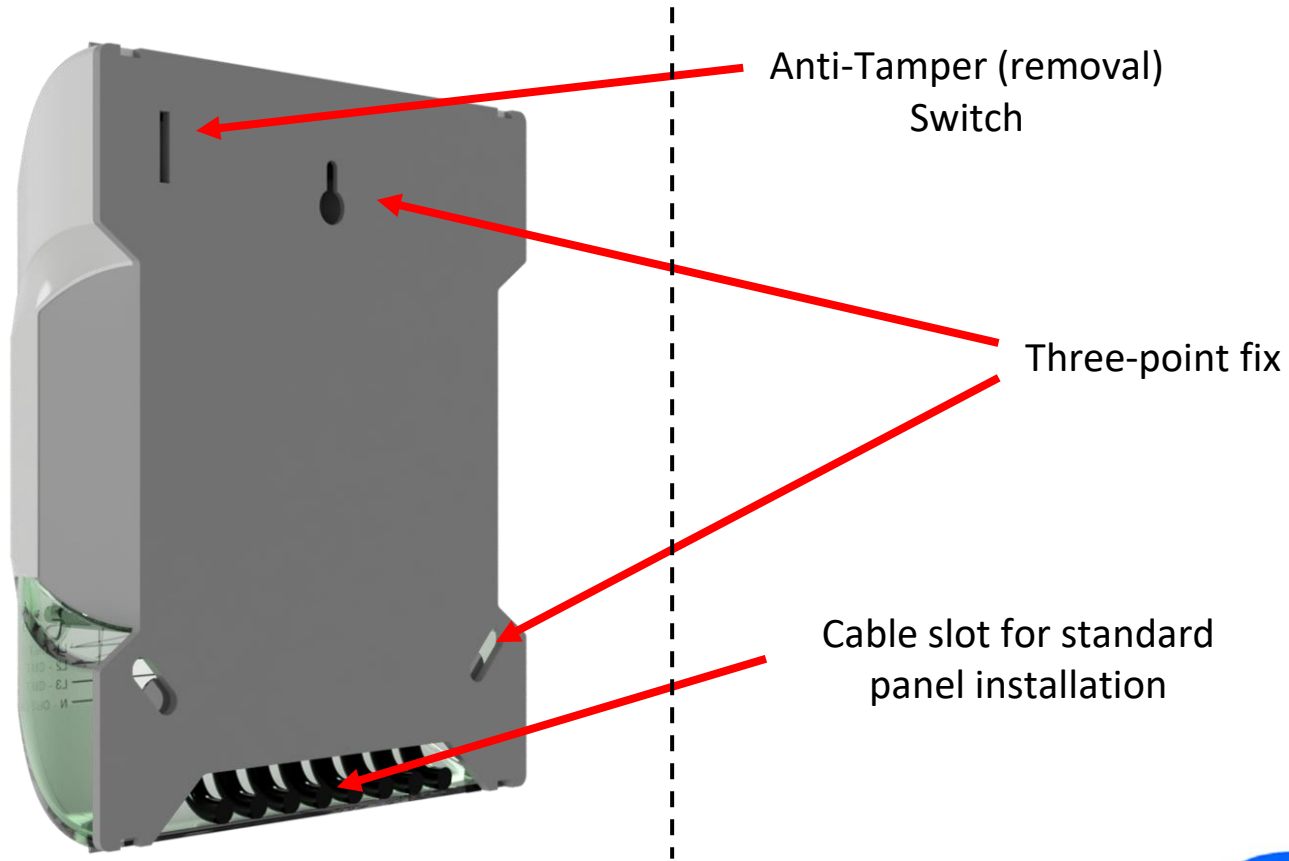
Data collection, consumption forecast
Integrated with Home automation

Single form Factor

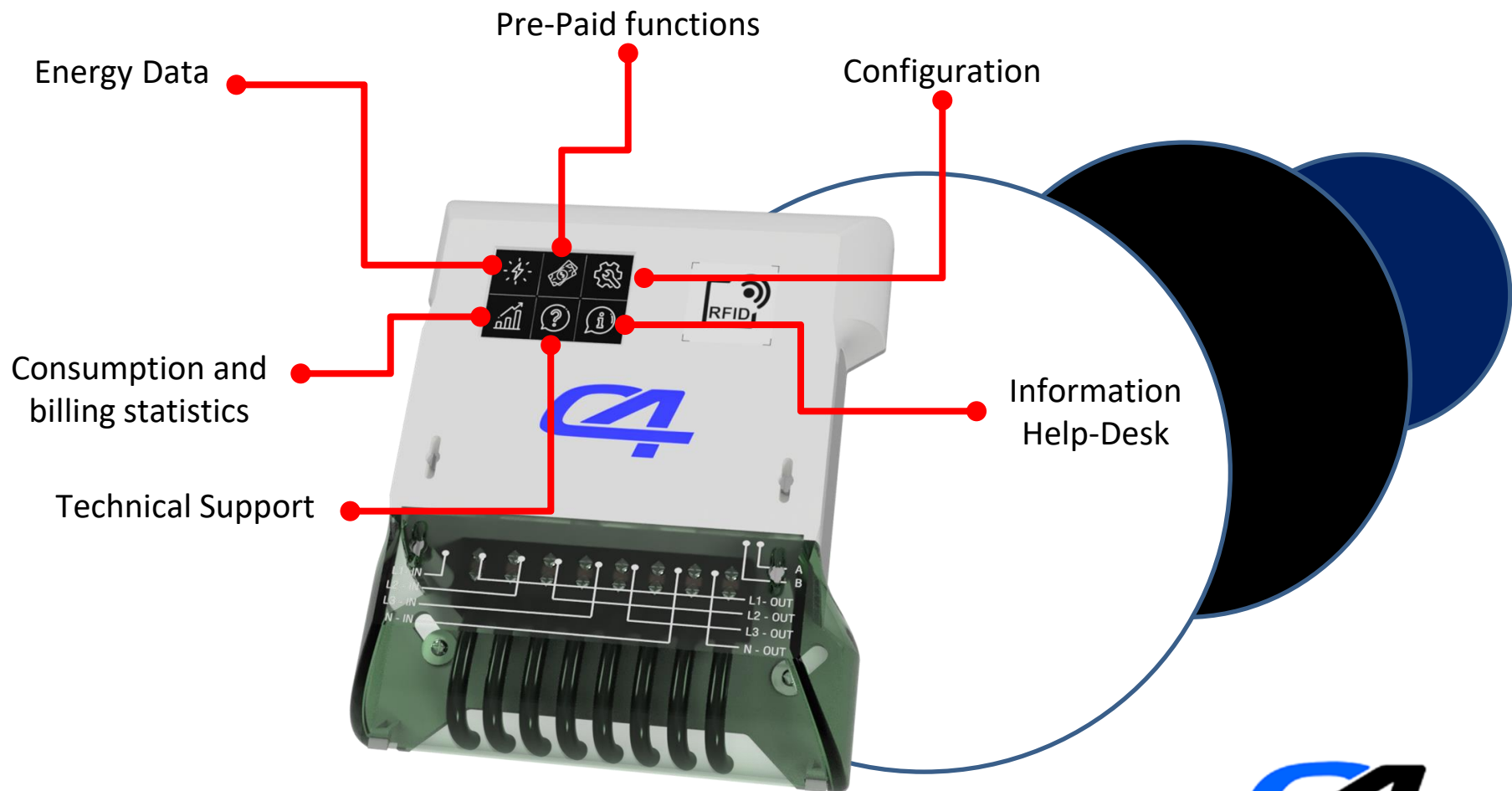
- Single Phase
- Three Phase
- Outdoor installation with external IP66 Case



EASY MOUNTING



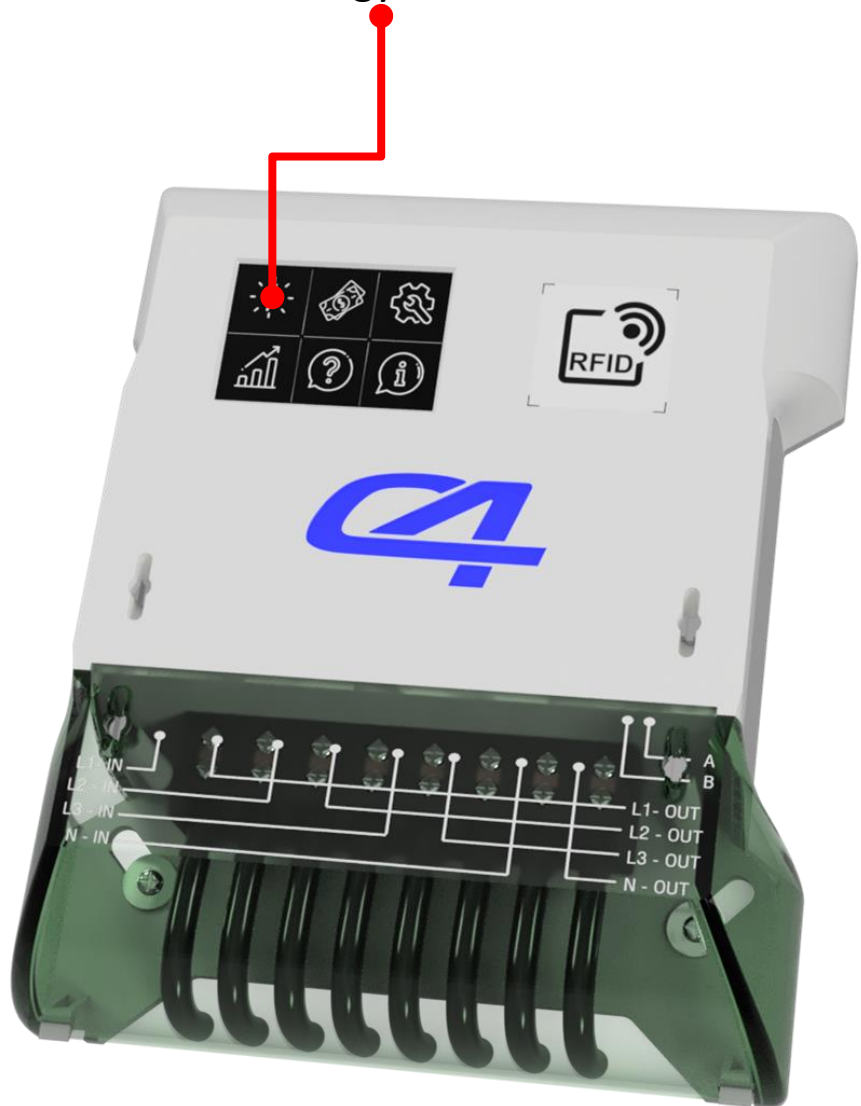
INTERFACE



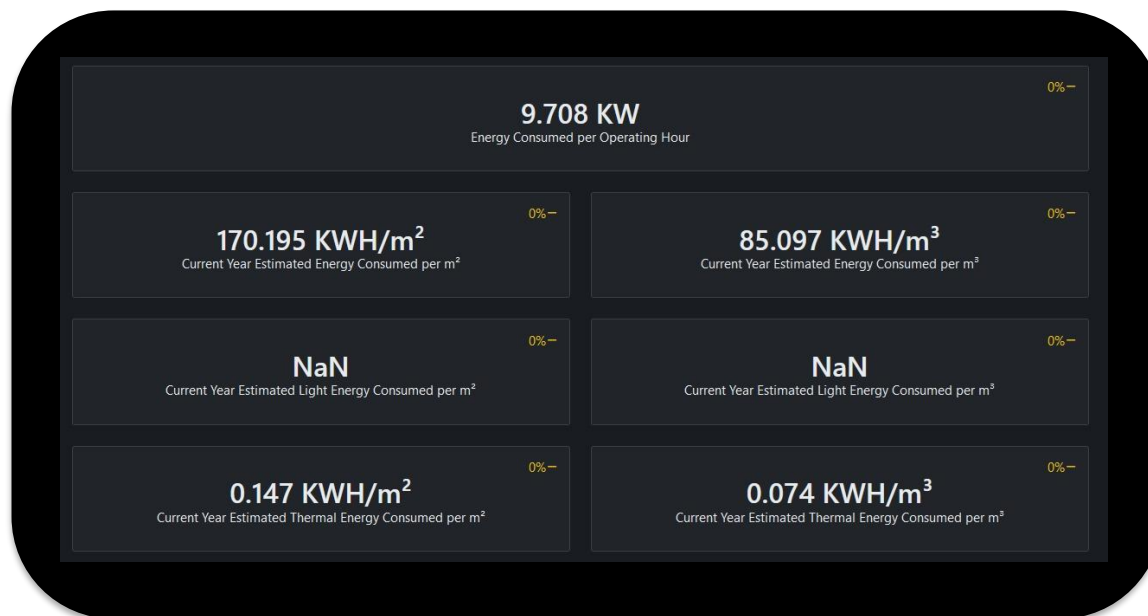
ENERGY RELATED DATA



Energy Data

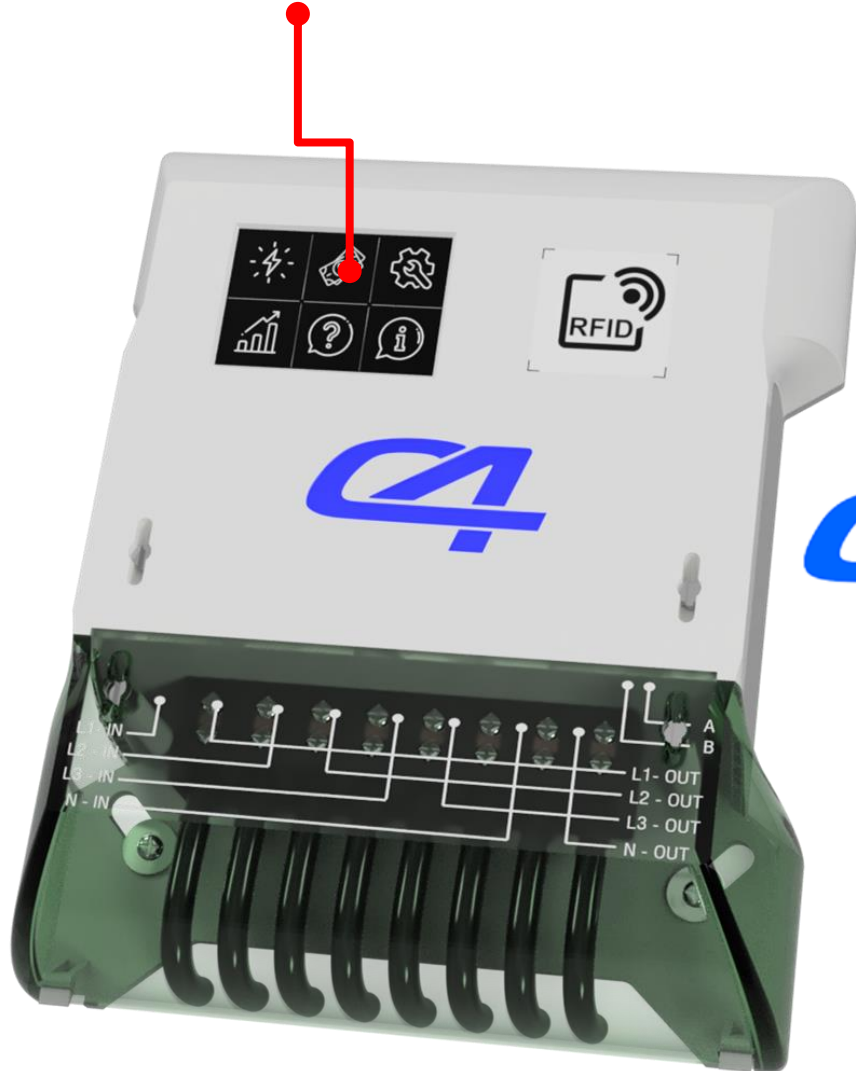


- Actual Power/energy Consumption
- Active/reactive energy
- Peak power/demand, power consumption profile
- Peak reactive power
- Remaining energy credit
- KPI Indexes



BILLING FUNCTIONS

Billing Functions



- Unit allows Pre-paid and contract billing
 - Pre-paid
 - Island mode
 - Networked mode
 - Contract
 - Island Mode
 - Networked Mode
- Pre-paid Options (island)
 - Smart Phone (NFC) payment
 - Smartphone app payment
 - Pre-paid smart card (RFID)
- Pre-paid manual Token insertion or by smartphone app
 - Pre-paid Options (Networked)
 - Cloud/internet Billing portal
 - Smartphone app payment
- **Note:** Island mode assume meter not connected to any network, energy data collected by local operators using smart phone app. Sync service allows data reconciliation if network is present. Island mode could be used for area not covered by networking or during temporary outage of network.

Billing Functions

ISLAND MODE – NFC PAYMENT

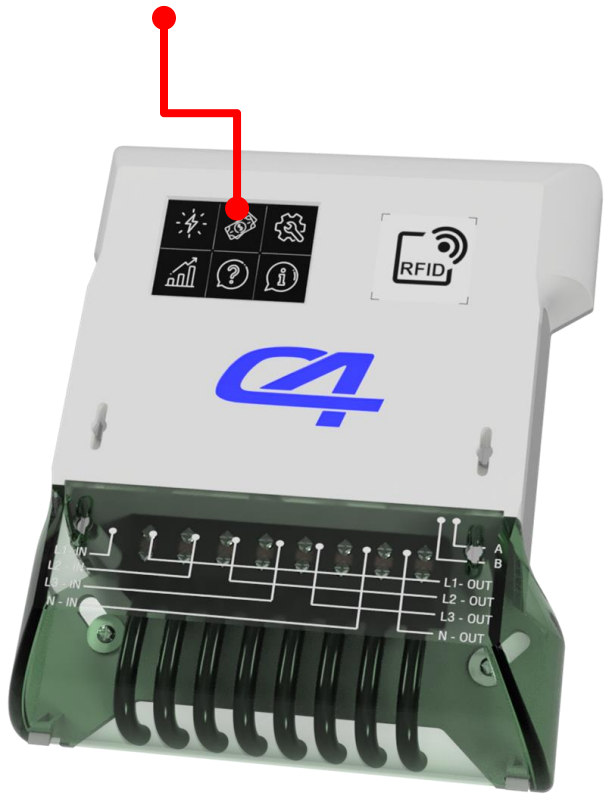


- Users can make payment at any location covered by 3G/Internet services using the smart phone app or the web portal
- To recharge credit on Island meter, they just need to get close to the meter to recharge
- The meter identify the correct token and apply the credit recharge as per the payment done.



ON-LINE MODE – SMART-PHONE /PC PAYMENT

Billing Functions



- Users can make payment at any shop reselling the service buying a prepaid scratch card.
- To recharge credit on Island meter, they just need to get close to the meter with the card to recharge
- The meter identify the correct token and apply the credit recharge as per the payment done.
- Or they can insert the code using the smartphone app or LCD functions to get prepayment loaded



- Users can make directly payment using the smartphone app or from the web portal.
- The credit shall be automatically recharged on the meter



- Users can make payment at any shop reselling the service and can recharge the card there.
- To recharge credit on Island meter, they just need to get close to the meter with the card to recharge
- The meter identify the correct token and apply the credit recharge as per the payment done.



System Configuration



CONFIGURATION

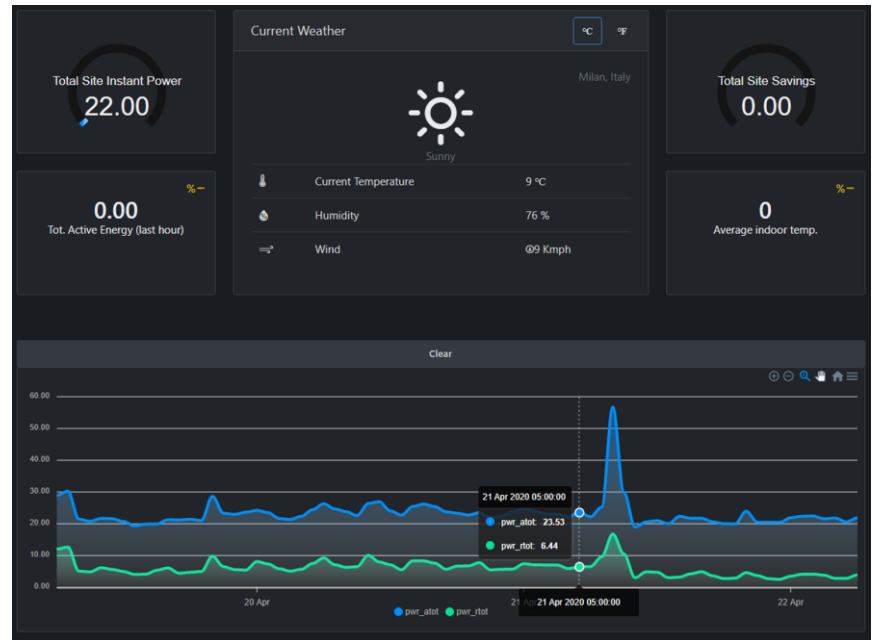
- Set alerts thresholds
 - Maximum Power alert
- Abnormal/Unexpected consumption
 - Energy alert
- Above threshold consumption
 - Credit Alert
- Low credit alert limits



STATISTICS

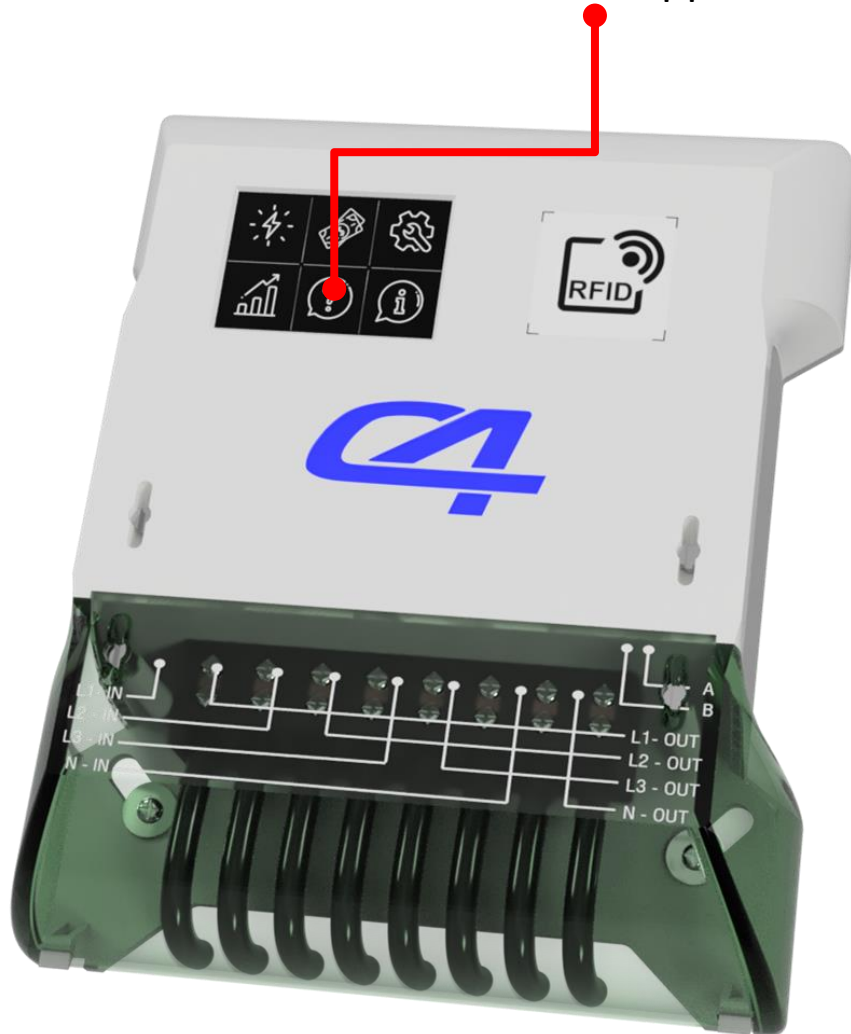


- Historical energy consumption
- Statistical consumption data
 - Graphical charts



TECHNICAL SUPPORT

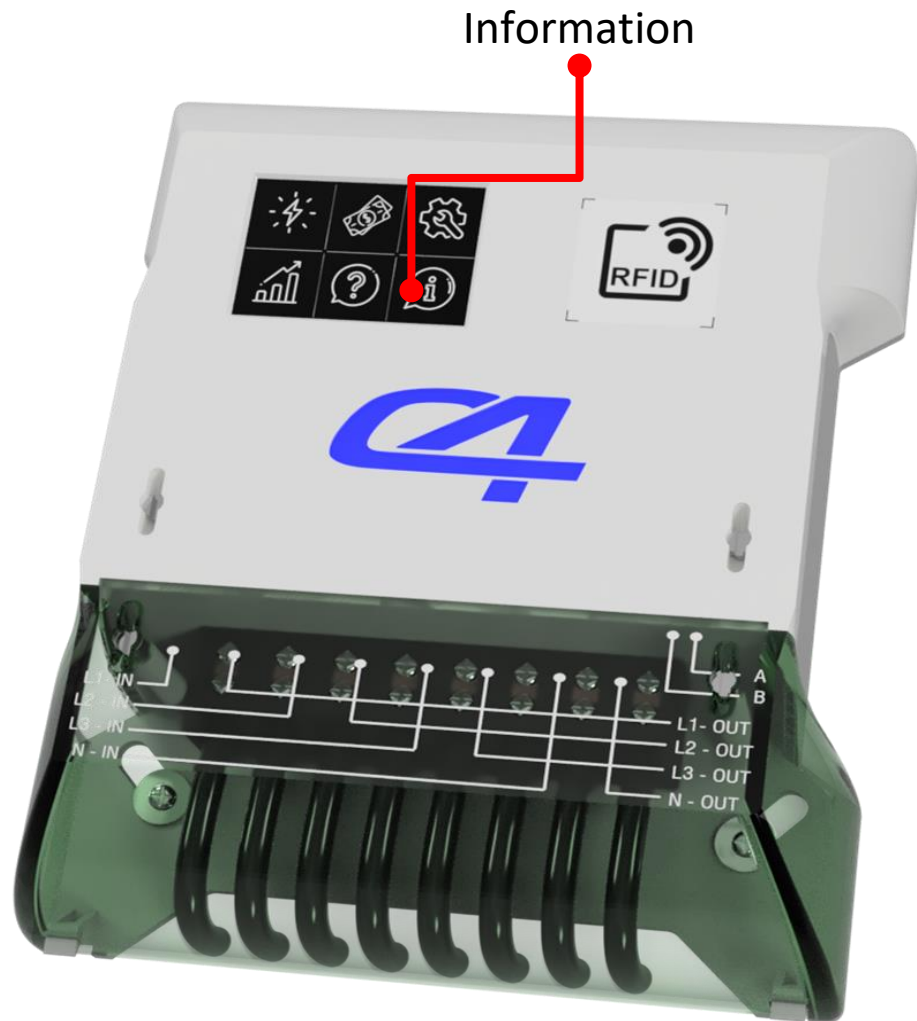
Technical Support



- Support for technical Issues
 - Service request
 - Typical troubleshooting
 - Main functions
 - Q&A
 - Live chat technical support (only networked units)



INFORMATION



- Request commercial info
- Payment/billing support
- General info



C4 Digital Systems and Affectli MONITORING TOTAL NETWORK IN REAL-TIME



C4- command & control center monitoring the total network

Payment Token

Eco 2 Pay

Natively integrated with the MI-C3 Affectli Platform and Eco2Pay micro payment exchange for micropayments
Technically managed by the Technical-Hyper vision Platform.

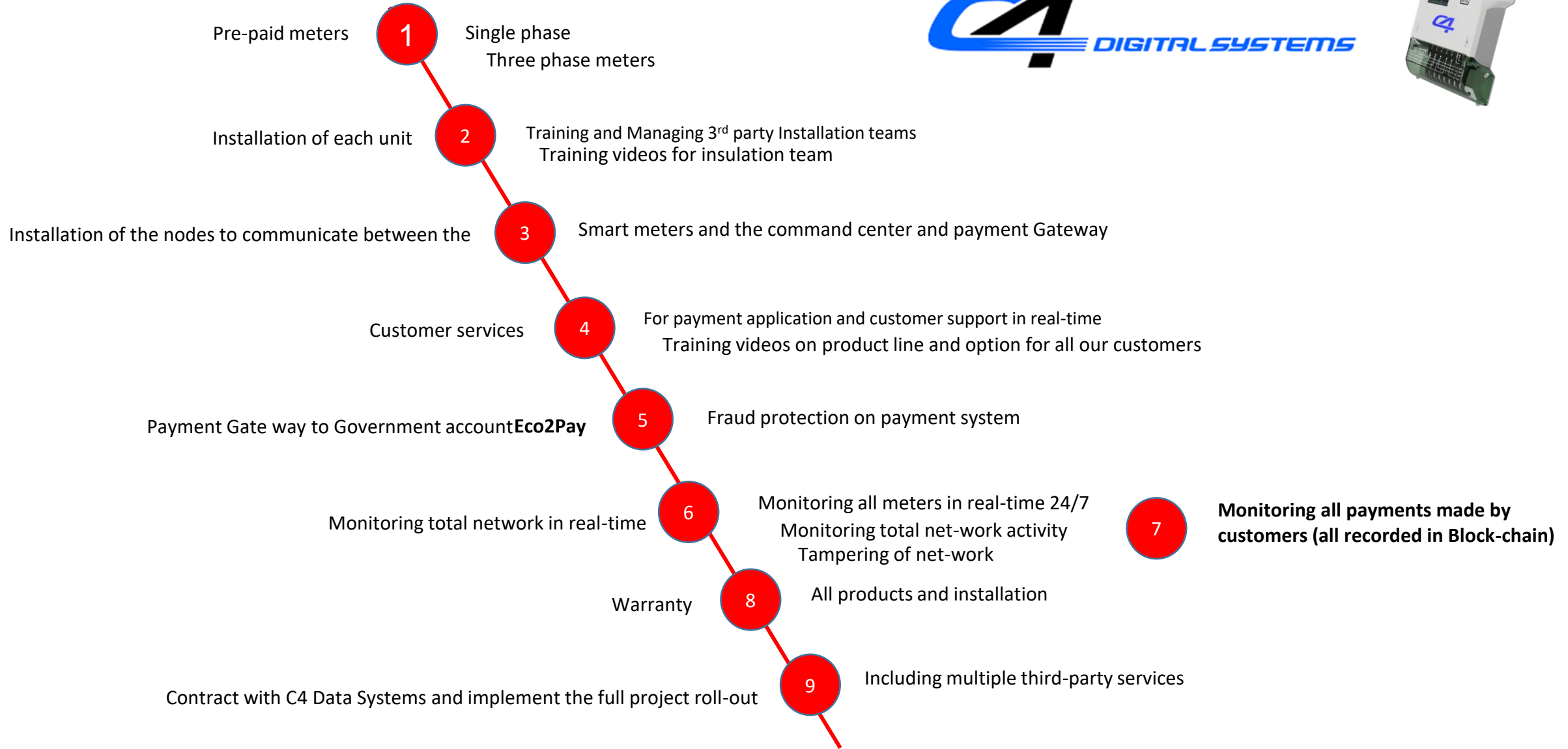
CUSTOMER SERVICES - SUPPORT



Screen chat and Videos download



C4 – OVERVIEW INFORMATION SERVICES



A

PRODUCT DEVELOPMENT

- C4 - Products development and production
- C4 - Products software development / Blockchain and micropayment
- C4 - Products local networking design and deployments / Partner Lora-wan
- C4 - App to be Developed

B

PAYMENT GATEWAY SOFTWARE

Eco 2 Pay



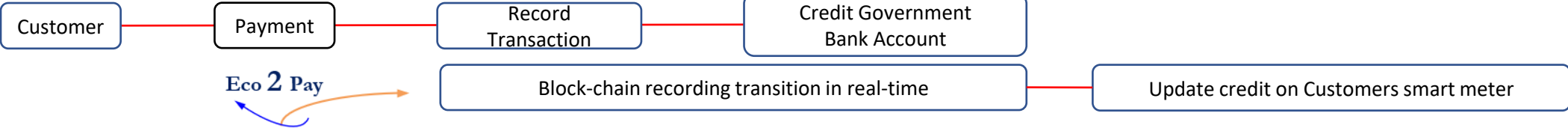
- Pay at retail store - software
- Payment using your cell phone (NFC) – software or App
- Payment using your PC or Laptop online – software or App



C

THE FLOW OF THE PAYMENT SYSTEM

- The flow of the payment** the customer pays options
- flow directly into the Governments bank account (special setup for pre-payments)
 - Or system them automatically records the transaction in Realtime into Block-chain
 - It will automatically date the users account by applying credit to the pre-paid smart meter -real-time



D

SECURITY AND FRAUD – ON NETWORK

- Monitoring all the nodes that communicate between the smart meter and our data-center
- Monitoring all the nodes that communicate between the smart meter and our data-center
- Fraud detection
- Against tampering,
- Monitoring power usage in real-time

E

HELP DESK

- Customer Services Q and A on the C4 product – line
- Customer Services on Payment options and Help
- Customer Services for or installation teams
- Training Video for Installation of Smart Meter



F

ADVANTAGES FOR THE CUSTOMER

- Savings per kWh
- No Security Deposit
- No Credit Check
- No Long-Term Commitment
- No Termination Fee





Smart Gateway
Complete networking
solutions

TOTAL PRODUCT LINE OPTIONS



Operating Center

Wi-Fi, Lora, Power Line, 5G



Pre-paid meters



Pre-paid Energy Saving /Network Protection



Residential Gas meters



Industrial Gas meters



Pre-paid Heat Meters



Pre-paid residential Water meters



Water sanitization and Pre-paid meters



Industrial Water meters





World-Wide HQ USA

<http://c4ds.com>

Phone:+1 (206) 486-4502