CHAIN2GATE

ENERGY AWARE PLATFORM

MAC srl

Developing the Unexpected

CHAIN 2 technology is the only channel which allows the user to receive the fiscal data supplied by the Open Meters.

CHAIN2GATE
ENERGY AWARE PLATFORM

This new, innovative **Meter will be installed by all the utilities and energy distributors in Italy as the single meter** for electricity, enabling energy awareness services without the need for complex installations.

This represents a **market of 40 million houses**, buildings and small business.

PRODUCT FAMILY

Our product family **Chain2Gate communicates directly with the Open Meter** and is versatile for installation, design and connectivity needs.

Thanks to the awareness of their consumption and production data, in an increasingly electric traction market, **the final consumer participates actively in the energy flexibility market**: making a decisive contribution to sustainability, energy efficiency decisions and maximizing self-consumption.
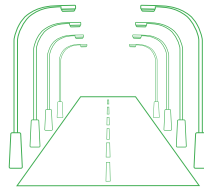
SMART

OPEN-MINDED

GREEN
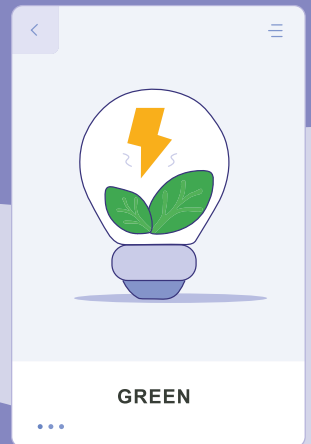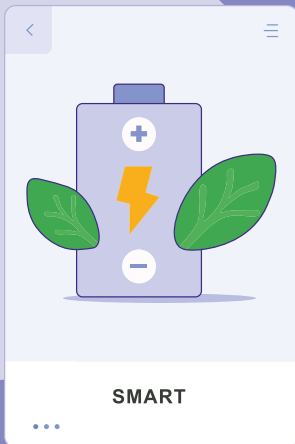
Applications

The variety of applications and use cases is one of the most innovative steps made available by CHAIN 2.
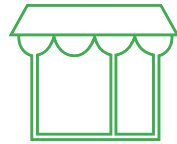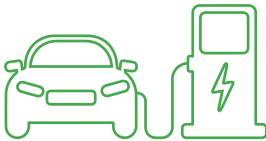
ENERGY COMMUNITIES
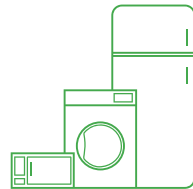
STREET LIGHTING

RESIDENTIAL

RENEWABLE ENERGY

SMALL BUSINESS

E-MOBILITY

SMART APPLIANCES

ENERGY COMMUNITIES

- awareness of consumption and production data
- maximization of the surplus use of energy produced
- reduction of waste between 7 and 10%
- consumption time band setting
- consumption, production and saving reports
- peak Shaving (automatic disconnection of unnecessary loads)
- load Shifting (shifting of consumption to optimize the surplus of energy produced)

STREET LIGHTING

- consumption monitoring directly from the Meter of the distributor
- consumption monitoring by integrated three-phase energy Meter
- notifications in real time of activations and resets, system status (lamp fault, blackout), intervention of the automatic switch of the electrical panel
- remote control (LTE) of the plant: on/off, twilight sensor, programming and monitoring of on/off times, astronomical calendar

Applications

RESIDENTIAL AND SMALL BUSINESS

- awareness of consumption and production data
- preventive alarm to avoid blackouts
- maximization of the surplus use of energy produced
- reduction of waste between 7 and 10%
- consumption time band setting
- consumption, production and saving reports
- peak Shaving (automatic disconnection of unnecessary loads)
- load Shifting (optimization of absorption from the grid at the most convenient times)

E - MOBILITY

- autonomous power modulation based on the load of the home network to maximize performance
- vehicle recharging in the most convenient time slots
- participation in the energy flexibility market: Demand Response logic
- maximization of self-consumption: management of the energy Surplus

RENEWABLE ENERGY

- awareness of consumption data
- maximization of the self-consumption: optimized management of the energy Surplus
- priority activation of loads which dispatch a potential energy Surplus
- warning of faults or system malfunction
- indication and tracking of the instantaneous power produced, used and fed into the grid

SMART APPLIANCES

- autonomous modulation of power based on the domestic network load to maximise performance and avoid disconnection
- warning of ntework overload in order to minimise the risk of blackouts
- participation in the energy flexibility market: Demand Response logic
- maximization of auto-consumption: the use of the energy surplus

Products

PRODUCT	TECHNICAL FEATURES	MARKET
C H A I N 2 G A T E PLUG 	**GENERAL INFO** • Size: 24,5 mm (L) x 79,55 mm (H) x 81 mm (D); Weight: 100g • Protection grade: IP40 • Operating Temperature: 0°C ÷ +40° C • Voltage: 230 Vac (-20/+15%); Frequency: 50 Hz; Insulation Class II; • Consumption: 25 mA **USER INTERFACE** • LED: status visual indicator - 5 LED lights (red, yellow, and green) as consumption visual indicators - Wi-Fi application with white LED - Tariff plan signaled with blue LED • BUTTON: to link the device with the home network • BUZZER: acoustic signal in case power is exceeded or there is an imminent interruption. **CONNECTIONS:** Plug: Europlug IEC type C **SHORT RANGE CONNECTIVITY:** WI-FI: 802.11 b/g/n - IOT Protocol: MQTT, WebSocket, REST. Cloud Security: Client Certificate on TLS; Bluetooth: v4.2. **CERTIFICATIONS:** CE Marking/Directive 2014/35/UE **PLC NARROW BAND:** PLC - Modem C-Band, B-PSK Modulation – Compliant with Italian Standard Chain2full: TS CEI 13-82:2020-04; TS CEI 13-83:2020-04; TS CEI 13-84:2020-04	 RESIDENTIAL AND SMALL BUSINESS ENERGY COMMUNITIES

CHAIN2GATE
ENERGY AWARE PLATFORM

PRODUCT	TECHNICAL FEATURES	MARKET
CHAIN2GATE DIN	**GENERAL INFO** • Size: 36.3 mm (L) x 90.5 mm (H) x 62 mm (D) (2 DIN Modules); Weight: 120g • Protection grade: IP20 • Operating Temperature: -20 °C ÷ +50° C • Voltage: 230 Vac (-20/+15%); Frequency: 50 Hz; Insulation Class II; • Consumption: 50 mA **USER INTERFACE** • LED: status visual indicator red light • BUTTON: service and reset button **CONNECTIONS:** •Power Supply:2 poles (Line, Neutral) screw terminals; Wire section (min ÷ max): 0.5 -2.5 mm2 **SHORT RANGE CONNECTIVITY:** • WI-FI: 802.11 b/g/n - IOT Protocols: MQTT, WebSocket, REST. Cloud Security: Client Certificate on TLS; BLE v5.0. **CERTIFICATIONS:** CE Marking/Directive 2014/35/UE **PLC NARROW BAND:** PLC - Modem C-Band, B-PSK Modulation – Compliant with Italian Standard Chain2full: TS CEI 13-82:2020-04; TS CEI 13-83:2020-04; TS CEI 13-84:2020-04	 RESIDENTIAL AND SMALL BUSINESS ENERGY COMMUNITIES
CHAIN2GATE DIN ETHERNET	**GENERAL INFO** • Size: 53.5 mm (L) x 90.5 mm (H) x 62 mm (D) (3 DIN Modules); Weight: 150g • Protection grade: IP20 • Operating Temperature: -20 °C ÷ +50° C • Voltage: 230 Vac (-20/+15%); Frequency: 50 Hz; Insulation Class II; • Consumption: 50 mA **USER INTERFACE** • LED: status visual indicator red light • BUTTON: service and reset button **CONNECTIONS:** •Power Supply:2 poles (Line, Neutral) screw terminals; Wire section (min ÷ max): 0.5 -2.5 mm2 •Ethernet: RJ45 **WIRED CONNECTIVITY** • Ethernet Standard Protocol: 10/100 Mbps up to (IEEE 802.3 and IEEE 802.3u). • IOT Protocols: MQTT, WebSocket, REST. Cloud Security: Client Certificate on TLS; BLE v5.0. **CERTIFICATIONS:** CE Marking/Directive 2014/35/UE **PLC NARROW BAND:** PLC - Modem C-Band, B-PSK Modulation – Compliant with Italian Standard Chain2full: TS CEI 13-82:2020-04; TS CEI 13-83:2020-04; TS CEI 13-84:2020-04	 RESIDENTIAL AND SMALL BUSINESS ENERGY COMMUNITIES

Products

PRODUCT	TECHNICAL FEATURES	MARKET
CHAIN2GATE DIN MODBUS	**GENERAL INFO** • Size: 36.3 mm (L) x 90.5 mm (H) x 62 mm (D) (2 DIN Modules); Weight: 120g • Protection grade: IP20 • Operating Temperature: -20 °C ÷ +50° C • Voltage: 230 Vac (-20/+15%); Frequency: 50 Hz; Insulation Class II; • Consumption: 50 mA **USER INTERFACE** • LED: status visual indicator red light • BUTTON: service and reset button **CONNECTIONS:** • Power Supply:2 poles (Line, Neutral) screw terminals; Wire section (min ÷ max): 0.5 -2.5 mm2. • BUS485: 5 pole screw terminals (GND, B, A, nc, nc); Wire section (min ÷ max): 0.2 ÷ 1 mm2 **WIRED CONNECTIVITY:** ModBUS RS485 RTU Slave Protocol; Communication speed up to 115.200 bps; Compact Frame Chain 2 memory map **WIRELESS CONNECTIVITY:** ModBUS RTU TCP Server; WI-FI Interface; Compact Frame Chain 2 memory map; WI-FI: 802.11 b/g/n - BLE v5.0. **CERTIFICATIONS:** CE Marking/Directive 2014/35/UE **PLC NARROW BAND:** PLC - Modem C-Band, B-PSK Modulation – Compliant with Italian Standard Chain2full: TS CEI 13-82:2020-04; TS CEI 13-83:2020-04; TS CEI 13-84:2020-04	**RESIDENTIAL AND SMALL BUSINESS** **ENERGY COMMUNITIES**

PRODUCT	TECHNICAL FEATURES	MARKET
CHAIN2GATE DIN MODBUS-ETHERNET	**GENERAL INFO** • Size: 53.5 mm (L) x 90.5 mm (H) x 62 mm (D) (3 DIN Modules); Weight: 150g • Protection grade: IP20 • Operating Temperature: -20 °C ÷ +50° C • Voltage: 230 Vac (-20/+15%); Frequency: 50 Hz; Insulation Class II; • Consumption: 50 mA **USER INTERFACE** • LED: status visual indicator red light • BUTTON: service and reset button **CONNECTIONS:** •Power Supply:2 poles (Line, Neutral) screw terminals; Wire section (min ÷ max): 0.5 -2.5 mm2. •BUS485: 5 pole screw terminals (GND, B, A, nc, nc); Wire section (min ÷ max): 0.2 ÷ 1 mm2 • Ethernet RJ45 **WIRED CONNECTIVITY:** •ModBUS RS485 RTU Slave Protocol; Communication speed up to 115.200 bps; Compact Frame Chain 2 memory map • ModBUS RJ45 RTU TCP Server; Ethernet Communication speed up 10/100 Mbps (IEEE 802.3 and IEEE 802.3u). WIRELESS CONNECTIVITY: ModBUS RTU TCP Server; WI-FI Interface; Compact Frame Chain 2 memory map; WI-FI: 802.11 b/g/n - BLE v5.0. CERTIFICATIONS: CE Marking/Directive 2014/35/UE PLC NARROW BAND: PLC - Modem C-Band, B-PSK Modulation – Compliant with Italian Standard Chain2full: TS CEI 13-82:2020-04; TS CEI 13-83:2020-04; TS CEI 13-84:2020-04	RESIDENTIAL AND SMALL BUSINESS ENERGY COMMUNITIES
CHAIN2GATE ENERGY METER 1P	**GENERAL INFO** • Size: 36.3 mm (L) x 90.5 mm (H) x 62 mm (D) (2 DIN Modules); Weight: 120g • Protection grade: IP20 • Operating Temperature: -20 °C ÷ +50° C • Voltage: 230 Vac (-20/+15%); Frequency: 50 Hz; Insulation Class II; • Consumption: 90 mA **USER INTERFACE** • LED: status visual indicator red light • BUTTON: service and reset button **ENERGY METER** • Minimum Current: 100 mA / Reference Current: 5 A • Nominal rating: 26A; for Power Contract up to 6 kW – Maximum range (only for short periods) 32A; up to 7.4 kW. • Measurements: Voltage rms • Current rms • Active power • Direct Connection with shunt CONNECTIONS: Screw terminal: 3 poles CERTIFICATIONS: CE Marking/Directive 2014/35/UE SHORT RANGE CONNECTIVITY: WI-FI: 802.11 b/g/n - IOT Protocol: MQTT, WebSocket, REST. Cloud Security: Client Certificate on TLS; Bluetooth: v4.2. PLC NARROW BAND: PLC - Modem C-Band, B-PSK Modulation – Compliant with Italian Standard Chain2full: TS CEI 13-82:2020-04; TS CEI 13-83:2020-04; TS CEI 13-84:2020-04	RESIDENTIAL AND SMALL BUSINESS ENERGY COMMUNITIES

Products

PRODUCT	TECHNICAL FEATURES	MARKET

CHAIN2GATE ENERGY METER 3P	**GENERAL INFO**
	• Size: 53.5 mm (L) x 90.5 mm (H) x 62 mm (D) (3 DIN Modules); Weight: 150g
	• Protection grade: IP20
	• Operating Temperature: -20 °C ÷ +50° C
	• Voltage: 230 Vac single phase (-20/+15%); Frequency: 50 Hz; Insulation Class II;
	• Consumption: 120 mA
	
	USER INTERFACE
	• LED: status visual indicator red light
	• BUTTON: service and reset button;
	
	ENERGY METER
	• Minimum Current: 100 mA / Reference Current: 5 A
	• Nominal rating for each phase: 45.5 A; for Power Contract up to 10 kW – Maximum range for each phase (only for short periods) 60A; up to 13.8 kW.
	• Measurements:
	  - Voltage rms
	  - Current rms
	  - Active power
	
	CONNECTIONS: Screw terminal: 8 poles
	CERTIFICATIONS: CE Marking/Directive 2014/35/UE
	SHORT RANGE CONNECTIVITY: WI-FI: 802.11 b/g/n - IOT Protocol: MQTT, WebSocket, REST. Cloud Security: Client Certificate on TLS; Bluetooth: v4.2.
	PLC NARROW BAND:
	PLC - Modem C-Band, B-PSK Modulation – Compliant with Italian Standard Chain2full: TS CEI 13-82:2020-04; TS CEI 13-83:2020-04; TS CEI 13-84:2020-04
		RESIDENTIAL AND SMALL BUSINESS
		
		ENERGY COMMUNITIES

CHAIN2GATE
ENERGY AWARE PLATFORM

PRODUCT	TECHNICAL FEATURES	MARKET
CHAIN2GATE ENERGY METER 3P LTE	**GENERAL INFO** • Size: 53.5 mm (L) x 90.5 mm (H) x 62 mm (D) (3 DIN Modules); Weight: 150g • Protection grade: IP20 • Operating Temperature: -20 °C ÷ +50° C • Voltage: 230 Vac single phase (-20/+15%); Frequency: 50 Hz; Insulation Class II; • Consumption: 50 mA **USER INTERFACE** • LED: status visual indicator red and green lights • BUTTON: service and reset button. **ENERGY METER** • Minimum Current: 100 mA / Reference Current: 5 A • Nominal rating for each phase: 45.5 A; for Power Contract up to 10 kW – Maximum range for each phase (only for short periods) 60A; up to 13.8 kW. • Measurements: Voltage rms • Current rms • Active power CONNECTIONS: Screw terminal: 8 poles CERTIFICATIONS: CE Marking/Directive 2014/35/UE SHORT RANGE CONNECTIVITY: WI-FI: 802.11 b/g/n - IOT Protocol: MQTT, WebSocket, REST. Cloud Security: Client Certificate on TLS; Bluetooth: v4.2. LONG RANGE CONNECTIVITY: 4G LTE; Fallback 2G; External Antenna PLC NARROW BAND: PLC - Modem C-Band, B-PSK Modulation – Compliant with Italian Standard Chain2full: TS CEI 13-82:2020-04; TS CEI 13-83:2020-04; TS CEI 13-84:2020-04	RESIDENTIAL AND SMALL BUSINESS ENERGY COMMUNITIES

CHAIN2GATE ENERGY METER 1P LORAWAN	**GENERAL INFO**
	• Size: 53.5 mm (L) x 90.5 mm (H) x 62 mm (D) (3 DIN Modules); Weight: 120g
	• Protection grade: IP20
	• Operating Temperature: -20 °C ÷ +50° C
	• Voltage: 230 Vac single phase (-20/+15%); Frequency: 50 Hz; Insulation Class II;
	• Consumption: 90 mA
	
	USER INTERFACE
	• LED: status visual indicator red and green lights
	• BUTTON: service and reset button
	• BUZZER: acoustic signal in case power is exceeded or there is an imminent interruption
	
	ENERGY METER
	• Minimum Current: 100 mA / Reference Current: 5 A
	• Nominal rating: 26A; for Power Contract up to 6 kW – Maximum range (only for short periods) 32A; up to 7.4 kW.
	• Measurements:
	  - Voltage rms
	  - Current rms
	  - Active power
	• Direct Connection with shunt
		RESIDENTIAL AND SMALL BUSINESS
		
		ENERGY COMMUNITIES

Products

PRODUCT	TECHNICAL FEATURES	MARKET
C H A I N 2 G A T E ENGINE	**GENERAL INFO** • Size: 65 mm (L) x 42 mm (H) x 20 mm (D); Weight: 60g • Protection grade: IP00, open frame • Operating Temperature: -30°C ÷ +70° C • Humidity Percentage: 5% ÷ 95% • Altitude: <= 3000 m • Over voltage category: III • Pollution Degree: 2 • Voltage: 12 Vdc typ (da 9 V a 14V); 3.3 Vdc (±3%) regulated by internal DC/DC Converter (optional) or supplied by external main board. Pmax: 6W transmission; 250mW reception; 75mW in stand-by **CONNECTIONS:** • Pin Strip connectors or board-cable connectors for external main board connection. • UART main BUS with 3V3 signal voltage • Optional BUSes: I2C, SPI and RS485 **CERTIFICATIONS:** CE Marking/Directive LVD 2014/35/UE/ EMC 2014/30/UE **PLC NARROW BAND:** PLC - Modem C-Band, B-PSK Modulation – Compliant with Italian Standard Chain2full: TS CEI 13-82:2020-04; TS CEI 13-83:2020-04; TS CEI 13-84:2020-04 • Modem C-Band, B-PSK Modulation Application: DLMS/COSEM IEC (IEC 62056-5-3) • Data Model: COSEM Data Model (IEC 62056-6-1, IEC 62056-6-2) • AC voltage for PLC: 230 V typ; 264 V max • Insulation: reinforced insulation • Protections: integrated fuse and overvoltage protection (optional)	SMART APPLIANCES E-MOBILITY RENEWABLE ENERGY

CHAIN2GATE
ENERGY AWARE PLATFORM

PRODUCT	TECHNICAL FEATURES	MARKET
C H A I N 2 G A T E **ENERGY MANAGER** **METER MODULE** 	**METER MODULE** **GENERAL INFO** • Size: 53.5 mm (L) x 90.5 mm (H) x 62 mm (D) (3 DIN Modules); Weight: 180g • Protection grade: IP20 • Operating Temperature: -20 °C ÷ +55° C • Voltage: 230 Vac single phase (-20/+15%); Frequency: 50 Hz; Insulation Class II • Consumption: 50 mA **USER INTERFACE** • LED: status visual indicator red light • BUTTON: service and reset button **ENERGY METER** • Minimum Current: 100 mA / Reference Current: 5 A • Nominal rating for each phase: 45.5 A; for Power Contract up to 10 kW – Maximum range for each phase (only for short periods) 60A; up to 13.8 kW. • Measurements: Voltage rms • Current rms • Active power CONNECTIONS: Screw terminal: 8 poles CERTIFICATIONS: CE Marking/Directive 2014/35/UE SHORT RANGE CONNECTIVITY: WI-FI: 802.11 b/g/n - IOT Protocol: MQTT, WebSocket, REST. Cloud Security: Client Certificate on TLS; Bluetooth: v4.2. LONG RANGE CONNECTIVITY: 4G LTE; Fallback 2G; External Antenna PLC NARROW BAND: PLC - Modem C-Band, B-PSK Modulation – Compliant with Italian Standard Chain2full: TS CEI 13-82:2020-04; TS CEI 13-83:2020-04; TS CEI 13-84:2020-04	 RESIDENTIAL AND SMALL BUSINESS ENERGY COMMUNITIES
MODULE I/O 	**I/O MODULE** **GENERAL INFO** • Size: 53.5 mm (L) x 90.5 mm (H) x 62 mm (D) (3 DIN Modules); Weight: 200g • Protection grade: IP20 • Operating Temperature: -20 °C ÷ +55° C • Voltage: Provided by the meter • Consumption: 30 mA CONNECTIONS: • BUS (Power supply and UART serial communication towards Meter mod.): 5-pole detachable screw terminal • Relay: 9-pole screw terminal INPUT/OUTPUT: N°3 relay general puropose NA/NC; N°4 input SELV CERTIFICATIONS: CE Marking/Directive 2014/35/UE POWER SUPPLY: To support sending last event via 4G before power-off. 6V, 650 mAh Ni-MH battery. PLC NARROW BAND: PLC - Modem C-Band, B-PSK Modulation – Compliant with Italian Standard Chain2full: TS CEI 13-82:2020-04; TS CEI 13-83:2020-04; TS CEI 13-84:2020-04	

Products

PRODUCT	TECHNICAL FEATURES	MARKET
C H A I N 2 G A T E **ENERGY MANAGER** **PLUG&PLAY** 	**CHIAN2GATE PLUG** **GENERAL INFO** • Size: 24,5 mm (L) x 79,55 mm (H) x 81 mm (D); Weight: 100g • Protection grade: IP40 • Operating Temperature: 0°C ÷ +40° C • Voltage: 230 Vac (-20/+15%); Frequency: 50 Hz; Insulation Class II; • Consumption: 25 mA **USER INTERFACE** • LED: status visual indicator 5 LED lights (red, yellow and green) • BUTTON: to link the device with the home network • BUZZER: acoustic signal in case power is exceeded or there is an imminent interruption CONNECTIONS: Plug: Europlug IEC type C CERTIFICATIONS: CE Marking/Directive 2014/35/UE SHORT RANGE CONNECTIVITY: WI-FI: 802.11 b/g/n - IOT Protocol: MQTT, WebSocket, REST. Cloud Security: Client Certificate on TLS; Bluetooth: v4.2. PLC NARROW BAND: PLC - Modem C-Band, B-PSK Modulation – Compliant with Italian Standard Chain2full: TS CEI 13-82:2020-04; TS CEI 13-83:2020-04; TS CEI 13-84:2020-04 **CHIAN2GATE SMART PLUG** **GENERAL INFO** • Size: 66 mm (L) x 79 mm (H) x 70 mm (D) • Operating Temperature: -20°C ÷ +50° C • Voltage: 100 -240 V; Frequency: 50 – 60 Hz; **USER INTERFACE** • LED: status visual indicator (red and blue) • BUTTON: to link the device with the home network; CONNECTIONS: Plug: Europlug IEC type C CERTIFICATIONS: CE Marking/Directive 2014/35/UE SHORT RANGE CONNECTIVITY: WI-FI ENERGY METER: Measurements Voltage (V) • Current (A) • Active power (W) CONTROL RELAY: maximum current 16 A	 RESIDENTIAL AND SMALL BUSINESS ENERGY COMMUNITIES

PRODUCT	TECHNICAL FEATURES	MARKET
C H A I N 2 G A T E ENERGY SUPERVISOR LTE **METER MODULE** 	**METER MODULE** GENERAL INFO • Size: 53.5 mm (L) x 90.5 mm (H) x 62 mm (D) (3 DIN Modules); Weight: 180g • Protection grade: IP20 • Operating Temperature: -20 °C ÷ +55° C • Voltage: 230 Vac single phase (-20/+15%); Frequency: 50 Hz; Insulation Class II; • Consumption: 50 mA USER INTERFACE • LED: status visual indicator red light • BUTTON: service and reset button ENERGY METER • Minimum Current: 100 mA / Reference Current: 5 A • Nominal rating for each phase: 45.5 A; for Power Contract up to 10 kW – Maximum range for each phase (only for short periods) 60A; up to 13.8 kW. • Measurements: Voltage rms • Current rms • Active power CONNECTIONS: Screw terminal: 8 poles CERTIFICATIONS: CE Marking/Directive 2014/35/UE SHORT RANGE CONNECTIVITY: WI-FI: 802.11 b/g/n - IOT Protocol: MQTT, WebSocket, REST. Cloud Security: Client Certificate on TLS; Bluetooth: v4.2. LONG RANGE CONNECTIVITY: 4G LTE; Fallback 2G; External Antenna PLC NARROW BAND: PLC - Modem C-Band, B-PSK Modulation – Compliant with Italian Standard Chain2full: TS CEI 13-82:2020-04; TS CEI 13-83:2020-04; TS CEI 13-84:2020-04	 STREET LIGHTING
MODULE I/O 	**I/O MODULE** GENERAL INFO • Size: 53.5 mm (L) x 90.5 mm (H) x 62 mm (D) (3 DIN Modules); Weight: 200g • Protection grade: IP20 • Operating Temperature: -20 °C ÷ +55° C • Voltage: Provided by the meter • Consumption: 30 mA CONNECTIONS: • BUS (Power supply and UART serial communication towards Meter mod.): 5-pole detachable screw terminal • Relay: 9-pole screw terminal INPUT/OUTPUT: N°3 relay general puropose NA/NC; N°4 input SELV CERTIFICATIONS: CE Marking/Directive 2014/35/UE POWER SUPPLY: To support sending last event via 4G before power-off. 6V, 650 mAh Ni-MH battery. PLC NARROW BAND: PLC - Modem C-Band, B-PSK Modulation – Compliant with Italian Standard Chain2full: TS CEI 13-82:2020-04; TS CEI 13-83:2020-04; TS CEI 13-84:2020-04	

Software Tools

CHAIN2GATE STARTER KIT

The Chain2gate Starter kit is composed by:

• N°5 Chain2gate Devices

• APP Temporary use license (demo version)

• CLOUD Temporary use license (demo version)

• Experimentation Support Activities:

   - OPEN METER 2G Configuration for CHAIN2 activation

   - Support for the CHAIN2GATE APP & CLOUD implementation

   - Support for CLOUD Data Visualization

BROKER MQTT

Through the MQTT Service we allow third party software to receive the data collected by Chain2gate and integrate it into its own platform.

UNIVERSAL CLOUD DOWNLOADER (UCD)

The UCD is a Cloud Architecture for the notification and distribution of new release files or software modules.

The Universal Cloud Downloader service allows the firmware update of the devices remotely through a Cloud connection even if installed and operational in the field (FOTA).
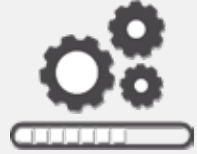
CHAIN2 PORTAL SERVICE

The Chain2 Portal Service is a Web Portal that as Asset Provider, we provide to make the association service on the distributor's portal between the user device and the Open Meter.
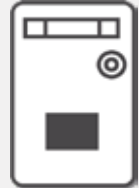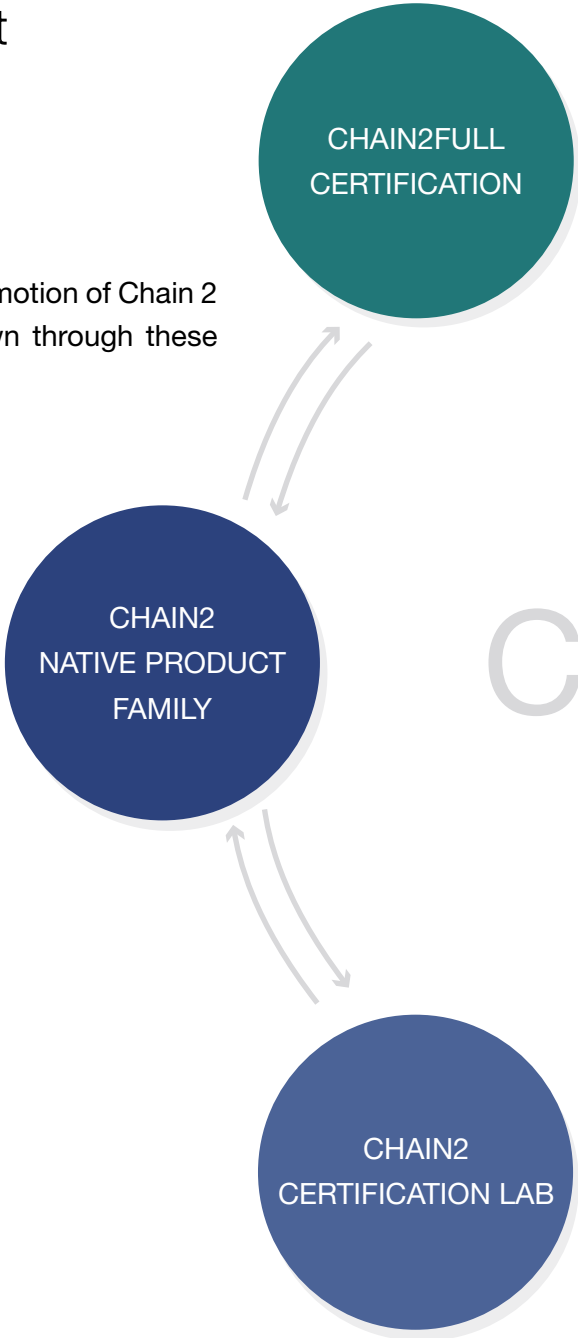
JCD API

JCD IOT Protocol Architecture is a message-oriented architecture in Json format for Peer To Peer communication on local and Cloud networks based on MQTT or WebSocket transport. Easy and intuitive tool for programming the I/O section of the gateways.

Achievement

Our work for the promotion of Chain 2 technology, as shown through these **important steps:**

CHAIN2FULL CERTIFICATION

CHAIN2 NATIVE PRODUCT FAMILY

CHA

CHAIN2 CERTIFICATION LAB

CHAIN2GATE
ENERGY AWARE PLATFORM

WWW.CHAIN2GATE.IT

E-MOBILITY LAB

REGISTERED PLATFORM
CHIAN2GATE ENERGY AWARE PLATFORM
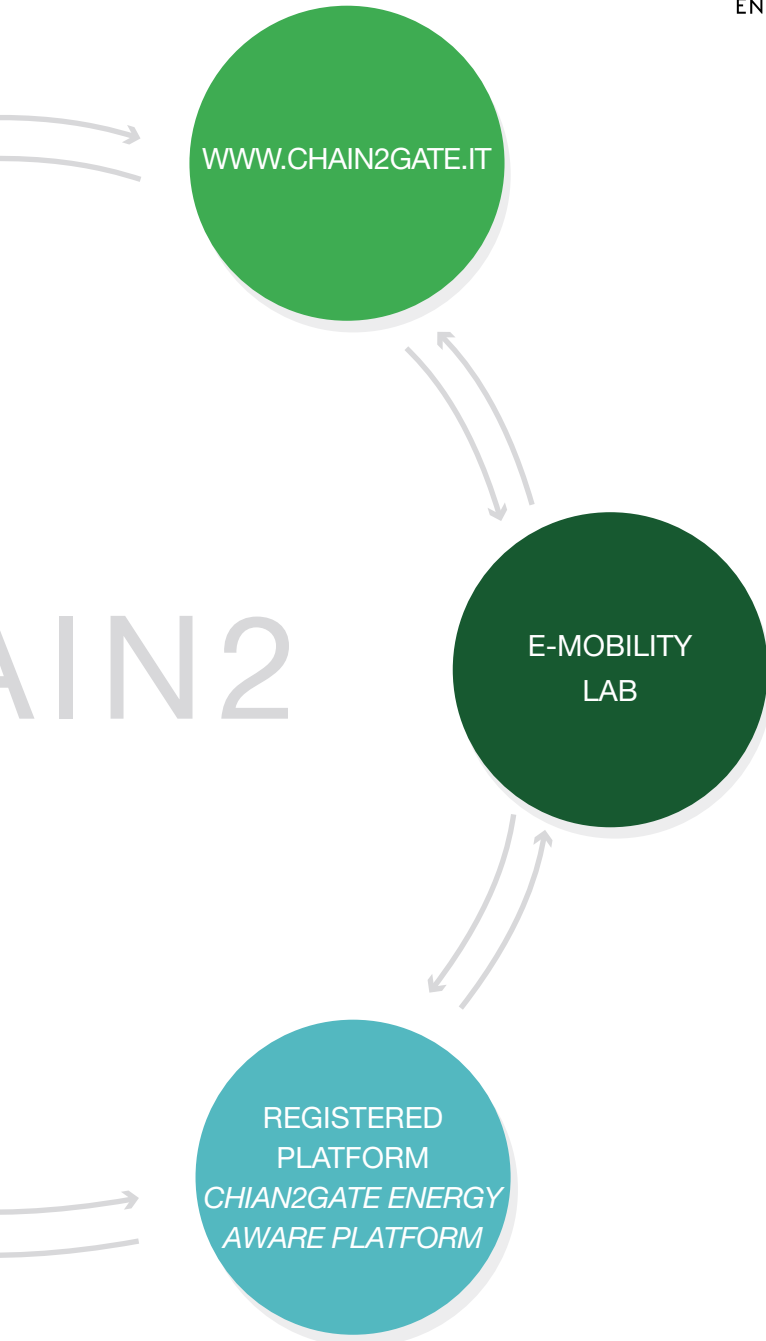
Labs

I-LABS SMART ENVIRONMENTS
Jesi, Ancona (Italy)

Infrastructure capable of evolving and experimenting, aimed at encouraging the exchange of knowledge and skills among research centers, companies and universities.
The Laboratory represents a privileged location for the experimentation of the CHAIN 2 functions and subsequent integration of other technologies.

The laboratory will be used for:
• technology development
• integration and testing
• development of interoperability solutions
• re-creation of different types of electrical supplies with real or simulated loads

IN COLLABORAZIONE CON :

www.chain2gate.it

CHAIN2GATE
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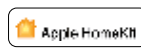
E-MOBILITY LAB
Recanati, Macerata (Italy)

The development of an infrastructure for charging electric cars spread throughout the territory to:

• follow a constantly growing market, which in Italy, in 2020, saw the vehicle fleet rise to 3.2 million (+155%)
• attract a type of tourism that is increasingly attentive to eco-sustainability issue
• become a reference point for frontier technologies

LIVING LAB
Recanati, Macerata (Italy)

Positive experiences in the field of energy management inspired MAC, in 2014, to create an experimental laboratory dedicated to the study of technologies for energy efficiency and for the creation of an intelligent and collaborative Grid: "The Living Lab".

Smart lighting solutions coexist with energy efficiency, Ambient Assisted Living, infotainment and Smart Home, all united by one common denominator: "comfort and energy efficiency".

CHAIN2GATE
ENERGY AWARE PLATFORM
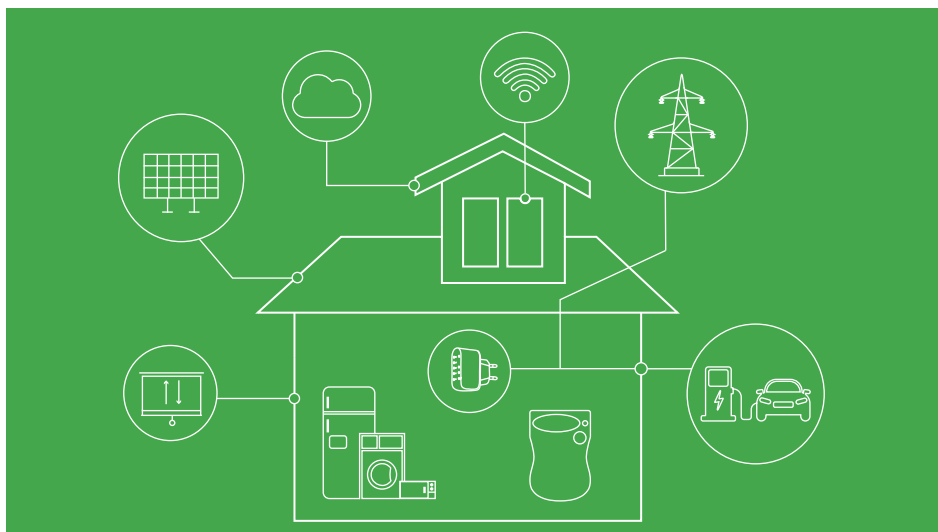
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