eManager Energy X2

Main features

- **High performance embedded system with Linux Yocto integrated (other on request)**
- **CPU, RAM and Flash memory ready to be the core of any Smart Project**

  ARM CORTEX-A7 700 Mhz

  256 MB DDR3 memory

  512 MB NAND flash memory
- **Wi-Fi and BT (optional)**
- **2 Three-phase energy meters or 6 Single-phase energy meters**
- **Node-RED integrated with customes nodes to easy monitor any electrical parameter**

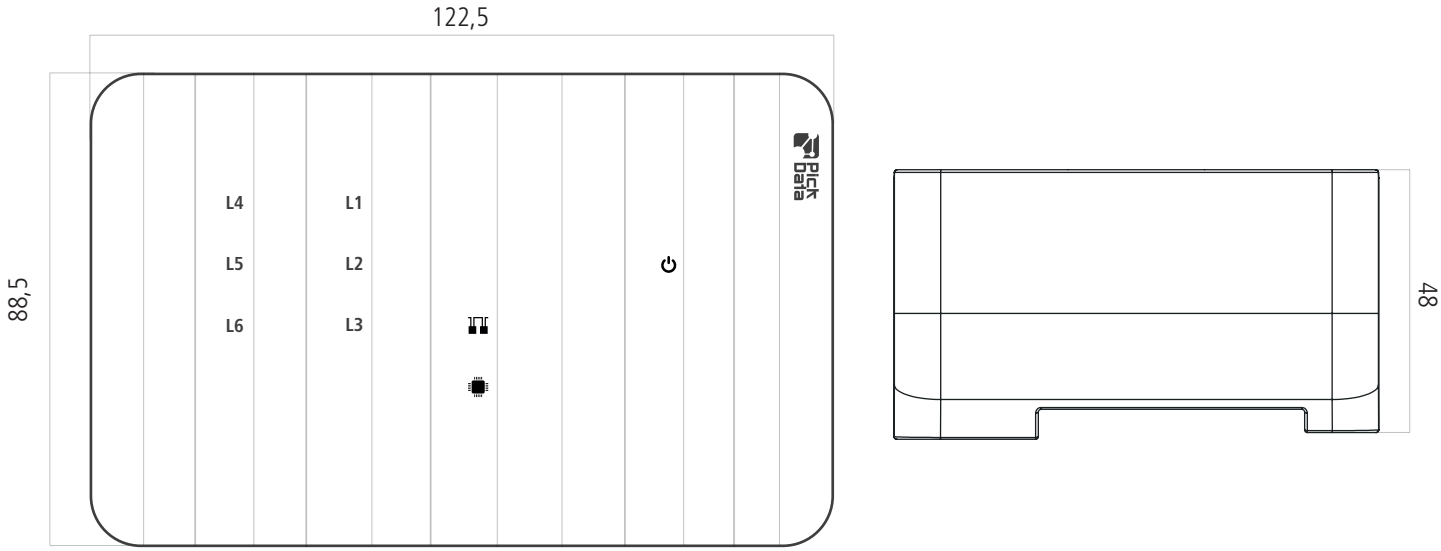
Description

eManager Energy X2 is an OEM industrial controller which is equipped with a high-performance control unit with a Linux Yocto embedded and Node-RED software integrated. The device includes RS-232/485 serial communications, an Ethernet 10/100 port and a Wi-Fi interface. eManager Energy X2 is ideal for fog computing applications where monitoring, control and data sending is required. In addition, eManager Energy X2 is equipped with a double energy meter with capacity to monitor 2 three-phase energy circuits or 6 single-phase energy circuits.

Double three-phase energy meter

- 4 quadrants measurement including consumption and generation parameters
- Active and reactive energy, power, voltage, current, frequency and cos phi, including single phase and three phase
- Accuracy of class 1 for active energy and class 2 for reactive energy
- Current secondary of 1A

Dimensions



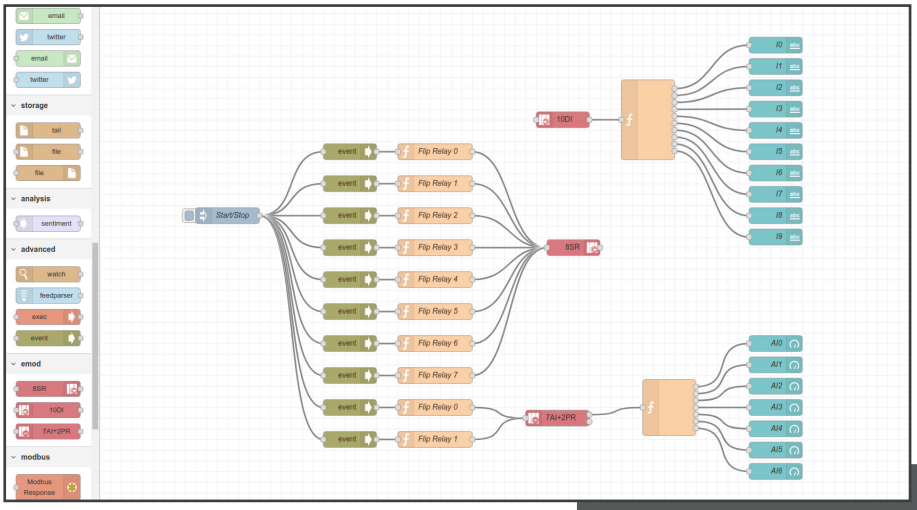
LEDs

LED	Name	Description
⏻	**Power**	Powered: Green
	RS-232/485	Data transmission: Blue Data reception: Green
	CPU	Activity: Blinking blue
L1	**L1 Control**	Positive current & cosphi >= 0,8 : Green Positive current, positive reactive power & cosphi < 0,8 : Blinking green Negative current: Red Positive current, negative reactive power & cosphi < 0,8 : Blinking red
L2	**L2 Control**	Positive current & cosphi >= 0,8 : Green Positive current, positive reactive power & cosphi < 0,8 : Blinking green Negative current: Red Positive current, negative reactive power & cosphi < 0,8 : Blinking red
L3	**L3 Control**	Positive current & cosphi >= 0,8 : Green Positive current, positive reactive power & cosphi < 0,8 : Blinking green Negative current: Red Positive current, negative reactive power & cosphi < 0,8 : Blinking red
L4	**L4 Control**	Positive current & cosphi >= 0,8 : Green Positive current, positive reactive power & cosphi < 0,8 : Blinking green Negative current: Red Positive current, negative reactive power & cosphi < 0,8 : Blinking red
L5	**L5 Control**	Positive current & cosphi >= 0,8 : Green Positive current, positive reactive power & cosphi < 0,8 : Blinking green Negative current: Red Positive current, negative reactive power & cosphi < 0,8 : Blinking red
L6	**L6 Control**	Positive current & cosphi >= 0,8 : Green Positive current, positive reactive power & cosphi < 0,8 : Blinking green Negative current: Red Positive current, negative reactive power & cosphi < 0,8 : Blinking red

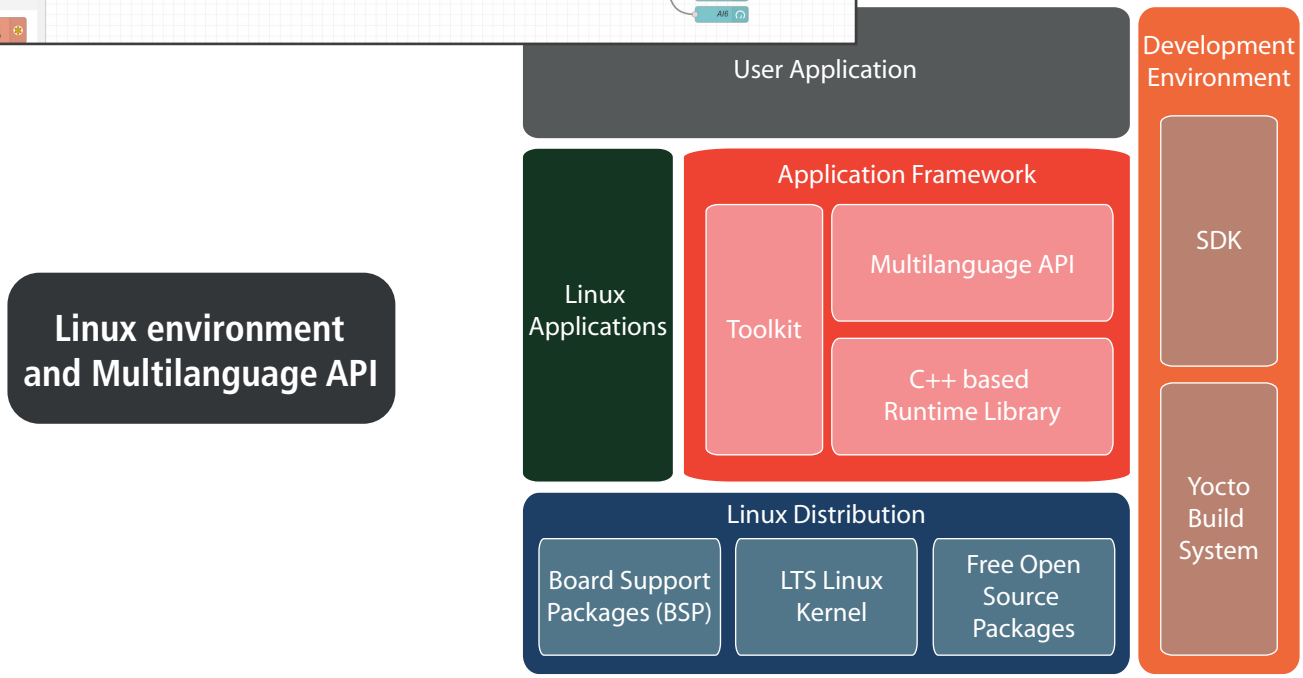
Technical features

Category	Parameters	Value
Power circuit	**Power supply**	85 … 264 Vac / 120 … 300 Vdc
	Frecuency	47 … 63Hz
	Consumption (a.c. / d.c.)	8,8 ... 10,5 VA / 6,4 ... 6,5 W
Control unit	**CPU**	ARM Cortex-A7 700 Mhz
	RAM Memory	256 MB DDR3
	Flash Memory	512 MB NAND
	Clock	RTC with supercap to backup clock time
Environmental conditions	**Operating temperature**	-20 … +50 ºC
	Relative humidity	5 … 95 %
	Maximum working altitude	2000 m
Mechanical characteristics	**Enclosure material**	UL94 polycarbonate - Self-extinguishing V0
	Protection grade	IP20 (assembled)
	Dimensions (Width x High x Length)	122,5 x 88,5 x 48 mm (7 DIN rail modules)
	Weight	180 g
	Mounting	DIN rail 46277 (EN 50022)
	Connectors	Pluggable terminals, max. wire section 1,5 mm^2
Electrical and safety features	**Electric shock protection**	Double-insulated class II
	Insulation	3 kVac
	Installation category	CAT III 300 V
Wireless interface	**Wi-Fi**	802.11 b/g/n (2.4 GHz)
	BT (optional)	4.2
Serial interface	**Type**	RS-232 (full-duplex) / RS-485 (half-duplex). Galvanic isolation
	Baud rate	9600...115200 bps
Network interface	**Type**	Ethernet
	Working speed	10/100 Mbps
Voltage measurement circuit	**Rated voltage (Un)**	285 Vac (p - N) / 480 Vac (p - p)
	Voltage measurement margin	5 ... 120% Un
Current measurement circuit	**Nominal current (In)**	In / 1 A
	Current measurement margin	2 ... 120% In
Measurement accuracy	**Active energy measurement**	Class 1
	Reactive energy measurement	Class 2
Standards	**Standards**	UNE EN 61010-1, UNE-EN 61000-6-2, UNE-EN 61000-6-4

Software platform



Node-RED Integrated



Linux environment and Multilanguage API

Description

eManager Energy X2 is equipped with a software platform designed for easily developing industrial and edge computing applications. With eManager Energy X2 you can smoothly develop your application with our multilanguage API which include the most popular programming language for IoT applications (C, C++, Python, Go, Java...). In addition, eManager Energy X2 fully integrates Node-RED which includes protocols such as Modbus, BACNET, MQTT, OPC-UA, together with easy communication with platforms like Amazon WBS, Microsoft Azure, Google Cloud and more.

Main features

IoT open software tools

Multilanguage API

Public protocols libraries