owa344l

Implement a telemetry system that allows you to have remote access to your machines from a single point of control

IoT Embedded Linux Platform

owa344l Core:

– Linux Kernel 6.6.15
– Yocto Kirkstone 4.0 File System
– ARM Cortex A7 32 bit 792MHz
– 512MB DDR3
– 512MB NAND Flash
– Optional 8GB EMMC

Key Features:

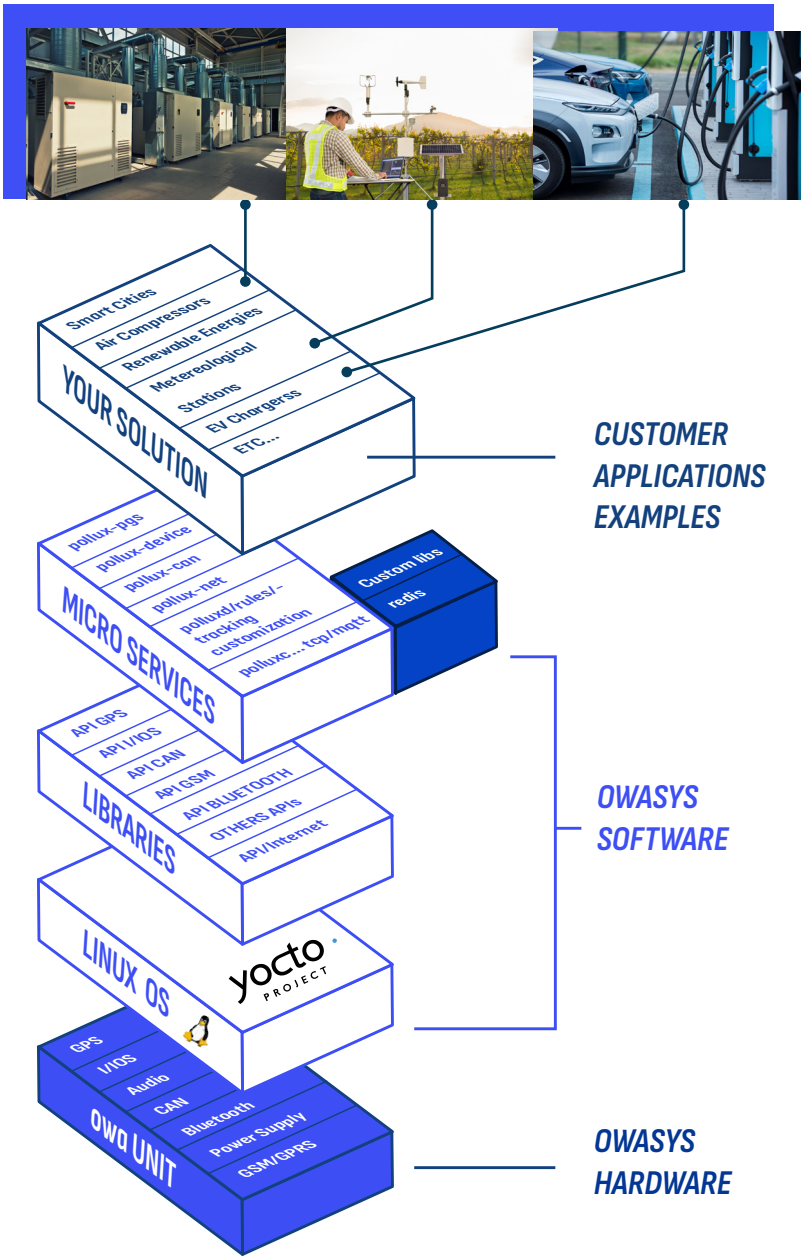
– 2 Ethernet 10/100Mbps - RJ45
– RS485 (up to 2 interfaces)
– USB 2.0
– 2 RS232 (TX, RX) interface
– 6 digital output open drain 200mA.
– 2 digital output high side 1A.
– 9 digital input 0 to 50V.
– 4 analog input, 0V to 30V.
– 5V voltage output
– Nano SIM or MFF2
– Low Power Modes
– TPM 2.0 (Optional)
– Secure boot
– IP40 Enclosure

Wireless Interfaces:

CELLULAR COMMUNICATIONS
– LTE Cat 1 bis with 2G fallback
– EXTERNAL ANTENNA SMA CONNECTOR

Mechanics

– IP40
– 114mm x 85mm x 32mm (excluding DIN Rail Fixing)



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TECHNICAL SPECIFICATIONS

CPU

– ARM Cortex A7 at 792MHz clock speed.
– Linux Kernel 6.6.15
– Yocto Kirkstone File System
– DDR3 512MB RAM
– NAND FLASH 512MB
– Optional EMMC 8GB for additional storage
– Optional TPM 2.0

LTE Cat 1 bis with 2G fallback

– LTE-FDD bands: B1/B2/B3/B4/B5/B7/B8/B12/B13/B17/B18/B19/B20/B25/B26/B28/B66
– LTE-TDD bands: B34/B38/B39/B40/B41
– GSM/GPRS/EDGE: Quad band
– DL 10M bps, UL 5 Mbps
– GPRS multi-slot Class 12.
– LTE-TDD: Max 130 Mbps (DL), Max 30 Mbps (UL)

Interfaces

Two Ethernet 10/100Base-TX.

– Up to two RS485 port
– 2 external RS232 ports. 6 pins:
  - 1 x (TX/RX/CTS/RTS) Console
  - 1 x (TX/RX)
– Maxim 1-Wire
– USB Host 2.0
– Configurable digital input/outputs:
  - 9 INPUTS:
    - 50V max inputs (logic low <1.5V, high >3V).
    - 7 inputs function as wake signals for low power modes
  - All inputs can be used as counters (odometer). 32bit, 3Khz max.
  - 6 open collector outputs (200mA each)
  - 2 high-side switches to Vin for output (1A each)
  - Short-circuit protection for all outputs
– 4 analog inputs:
  - 12 bit resolution, 1% accuracy
  - Multiplexed with digital I/O pins
  - 0-30V range
– Vout 5V power output (500mA max)
– SMA antenna connector
– 4 LEDs for status indication

* Availability of features depends on models

Options

See DESI-BOK 000 3012 for product variants and options.

Power Supply:

– Nominal range of 9V to 48V.
– Typical consumption at 24V:

OFF	320 uA
Standby	9,53 mA
RUN + ETH0 + ETH1	50,50 mA
RUN + GSM + ETH0 + ETH1	68,10 mA

Batteries

Back-up when there is no power supply available
– Standard backup battery for RTC. Duration 10 years
– Optional rechargeable Li-Ion 3.7V.
Inserted via rear battery cover

Temperature

Safety Purposes Operating Temperature Range without Li-ion Battery	-40 °C to +73 °C*
Safety Purposes Operating Temperature Range with Li-ion Battery	-40 °C to +53 °C (from external power supply) -20 °C to +53 °C (battery can power the unit)** 0 °C to +45 °C (battery will be charged if external power available)

* Industrial temperature range components -40 °C to 85 °C
** (-40 °C to -20 °C internally limited with battery protecton during discharge)

Enclosure

– Environmental protection to IP40 standard
– Dimension: L=120,60 x W=85 x H=32 mm. (With the DIN Rail fixing)
– Weight: 175 gr.
– Material: PC+ABS
– System connectors: Molex Microfit 24 way 43045-2400
– NanoSIM
– 2 Ethernet RJ45

Development Kit (POP 000 3100#UDK)

Includes: Developer's board owa344, power supply cables, cables for interfaces, antennas, web access to developers area: cross compiler, API, libraries, manuals and application notes.