owa450

The Perfect Platform for controlling and monitoring your industrial Mahcines and Vehicles

Global LTE & ITXPT IoT Gateway

owa450 Core:

– LINUX Kernel 4.19.94
– Debian 10 Distribution File System
– ARM Cortex A8 32 bit 800MHz
– 512MB DDR3 (Up to 1 GB)
– 1GB NAND Flash (Up to 2 GB)
– Access to Debian Standard Repositories
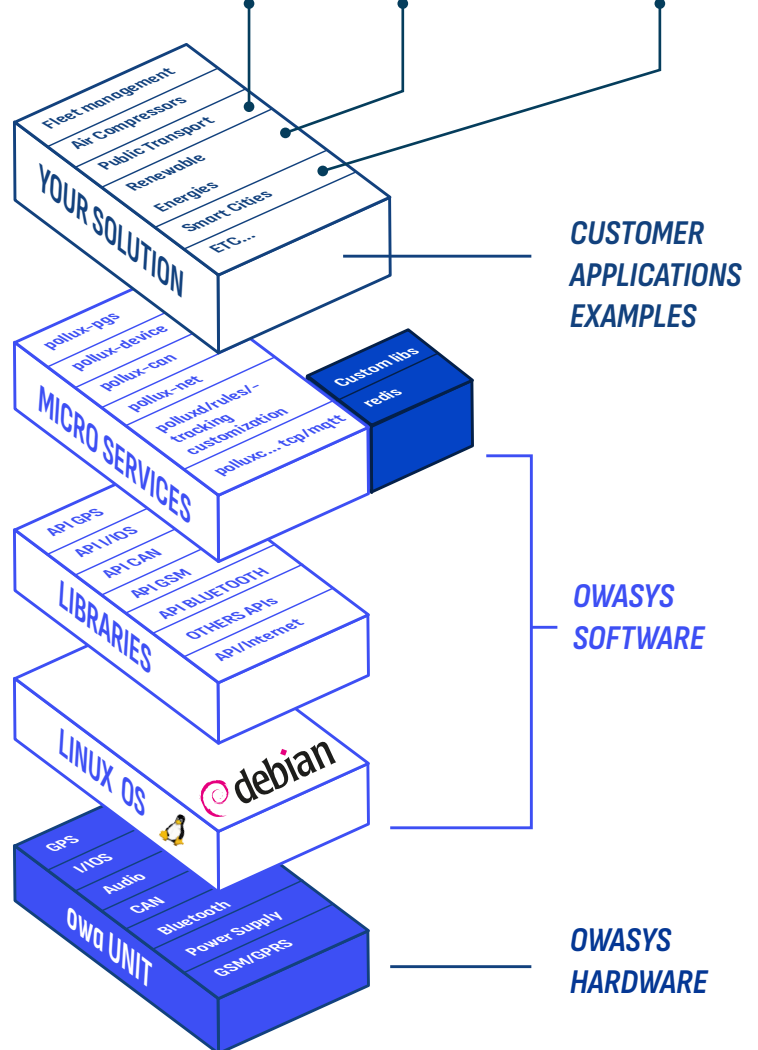– Able to run C/C++, Python, Java, LUA apps

Key Features:

– IP40 Enclosure
– CAN (up to 4 interfaces)
– Kline (up to 2 interfaces)
– RS485 (up to 2 interfaces)
– Programable 3 Axis Accelerometer
– TPM 2.0
– 8 digital output open drain 200mA.
– 2 digital output high side 1A.
– 10 digital input 0 to 50V.
– 3 additonal optional digital input.
– 4 analog input, 0 to 5,12V or 0 to 30,72V
– 5V voltage output
– 3 RS232 (TX, RX) interface
– Ethernet 10/100Mbps
    – RJ45 or M12 connector
– MicroSD
– Micro SIM
– USB 2.0
– Programmable 9 Axis sensor (optional)
    – Accelerometer/Gyroscope/Magnetometer.

Wireless Interfaces:

– Concurrent reception of up to 3 GNSS
  GPS, GLONASS, GALILEO, BeiDou
  Dead Reckoning options
– CELLULAR COMMUNICATIONS
– LTE Cat 1 with 3G and 2G fallback
– Region: Global (Worldwide)
– WiFi 802.11 a/b/g/n/ac
– BT 4.2

Mechanics

– IP40
– 150mm x 94mm x 32mm

CUSTOMER APPLICATIONS EXAMPLES

OWASYS SOFTWARE

OWASYS HARDWARE

Time to wireless!!

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CPU

– ARM Cortex A8 at 800MHz clock speed.
– Linux Kernel 4.19.94
– Debian 10 File System
– NAND FLASH 1GB (Up to 2 GB)
– DDR3 512MB (Up to 1 GB)
– MicroSD card holder for additional storage.

GNSS

– Receiver: GPS/GLONASS/GALILEO/QZSS/BeiDou.
– 72-channel continuous tracking receiver.
– SBAS: WAAS, EGNOS, MSAS, GAGAN.
– Update Rate: up to 10Hz.
– Accuracy: 2 meters CEP.
– Signal Acquisition:
    Cold Start: 26 s.
    Hot Start: < 1.5 s.
– Signal Reacquisition: < 1 s.
– Active Antenna Power Supply: +3.3V
Features availability depending on version.

Interfaces

– Up to 4 CAN bus

    – 2 CAN bus supporting full speed 1Mbps CAN 2.0B.

    – 2 CAN FD supporting 8Mbps

– Up to 2 K-line bus.
– Integrated sensors.

    - Programmable 9 axis sensor, accelerometer, gyroscope and magnetometer.

– TPM 2.0

    – 10 configurable digital input/outputs:

    - 50V max inputs (logic low <1.5V, high >3V).

    - All inputs function as wake signals for low power modes.

    - All inputs can be used as counters (odometer). 32bit, 3Khz max.

    - 8 open collector outputs (200mA each).

    - 2 high-side switches to Vin for output (1A each)

    - Short-circuit protection for all outputs

– Optional 3 extra digital inputs in expansion connector
– 4 analog inputs:

    - 12 bit resolution, 1% accuracy.

    - Multiplexed with digital I/O pins.

    - 0-5.12V (5mV per bit) or 0-30.72V (30mV per bit) configurable by SW

– Maxim 1-Wire.
– microSD card holder
– USB Host 2.0
– 3 external RS232 ports. 6 pins configurable by SW as follows:

    - 3 x (TX/RX) or

    - 1 x (TX/RX) & 1 x (TX/RX/CTS/RTS)

– Up to two RS485 port.
– Ethernet 10/100Base-TX
– Vout 5V power output (500mA max).
– FAKRA antenna connectors
– 4 LEDs for status indication
– Audio CODEC for external microphone and speaker
Availability of features depends on models

Power Supply:

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

OFF	0.335 mA
Standby	9.88 mA
RUN	47 mA
RUN + GSM + GPS	73 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.

Safety Purposes Operating Temperature Range without Li-ion Battery	-40 °C to +75 °C*
Safety Purposes Operating Temperature Range with Li-ion Battery	-40 °C to +55 °C (from external power supply) -20 °C to +55 °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

• **LTE Cat 1 with UMTS/HSPA and GSM fallback**
– DL 10.2Mbps, UL 5.2Mbps
– GPRS Class B, Class 12 (4&4).
– No standard voice calls support, calls must be done using a SIP client.
owa450(P):
    – LTE Cat 1 bands:1, 2, 3, 4, 5, 7, 8, 12, 13, 18, 19, 20, 26, 28, 66
    – UMTS/HSPA+ bands: 1, 2, 3, 4, 5, 6, 8, 19
    – GSM/GPRS/EDGE: Quad band

Enclosure

– Environmental protection to IP40 standard.
(protection against dust).
– Dimension: L=150 x W=94 x H=32 mm)
– Weight: 254g
– Material: PC+ABS.
– System connectors: Molex Microfit 24 way 43045-2400
– MicroSIM
– MicroSD
– Ethernet RJ45 or M12

Development Kit

Includes: Developer's board owa450, power supply cables, cables for interfaces, speaker, microphone, antennas, web access to: cross compiler, API, libraries, manuals and application notes.

Options

See DESI-BOK 100 9108 for product variants and options

Time to wireless!!

BOK 100 9101-I_owa450 Datasheet

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