

owa4X platform

POWERFUL LINUX IoT GATEWAY TO PROCESS DATA COMING FROM WIRED AND WIRELESS SENSORS/DEVICES/PERIPHERALS.

owa4X Core:

- LINUX Kernel 4.14.67
- Debian Distribution File System
- ARM Cortex A8 32 bit 800MHz
- 512MB DDR3
- 1GB NAND Flash
- Access to Debian Standard Repositories
- Able to run C, C++, Java, LUA applications



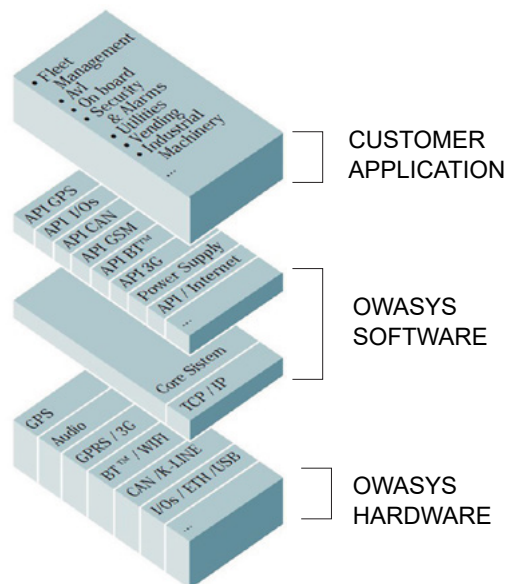
Key Features:

- IP67 Enclosure
- Internal antennas
- CAN (up to 4 interfaces)
- Kline (up to 2 interfaces)
- Global LTE Cat 4
- TPM 2.0
- Programable 9 Axis sensor: Accelerometer/Gyroscope/Magnetometer
- Dead reckoning
- Ethernet 100Mbps
- Audio CODEC
- MicroSD
- Micro SIM and Chip SIM available

Wireless Interfaces:

- GNSS (GPS + GLONASS)
- CELULAR COMMUNICATIONS
 - UMTS/HSPA+
 - LTE CAT 4 / 3G / 2G
- WiFi 802.11 a/b/g/n/ac
- BT 4.2

Wireless Embedded Computer



• CPU

- ARM Cortex A8 at 800MHz clock speed.
- Linux Kernel 4.14.67
- Debian File System
- NAND FLASH 1GByte.
- DDR3 512MBytes.
- MicroSD card holder for additional storage.

• GNSS

- Receiver: GPS/GLONASS/QZSS/BeiDou.
 - 72-channel* continuous tracking receiver.
 - GALILEO E1B/C ready.*
 - SBAS: WAAS, EGNOS, MSAS, GAGAN.
 - Update Rate: 10Hz.
 - Accuracy: 2 meters CEP.
 - Signal Acquisition:
 - Cold Start: 26 s.
 - Hot Start: < 1.5 s.
 - Signal Reacquisition: < 1 s.
 - Active Antenna Power Supply: +3.0V @ 34mA..
- * Features availability depending on version.

• Rugged enclosure

- Environmental protection to IP67 standard. (full protection against dust and water).
- Dimension: L=149 x W=135 x H=58 mm)
- Weight: 385g
- Material: Glass reinforced polyester.
- System connectors: TE 776163-1 (35 pins)
- MicroSIM
- MicroSD

• Interfaces

- Up to 4 CAN bus
 - 2 CAN bus supporting full speed 1Mbps CAN 2.0B.
 - 2 CAN FD supporting 8Mbps. (Only with Global LTE option)
 - Up to 2 K-line bus.
 - Integrated sensors.
 - Programmable 9 axis sensor, accelerometer, gyroscope and magnetometer.
 - TPM 2.0 (Only with Global LTE option)
 - 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 (100mA 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.
 - 2 Share digital I/O pins and 2 dedicated pins.
 - 0-5.12V (5mV per bit) or 0-30.72V (30mV per bit) configurable by sw.
 - Maxim 1wire
 - 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) or
 - 1 x (TX/RX/CTS/RTS/DCC/DTR)
 - One RS485 port.
 - Ethernet 10/100 BaseT.
 - Vout 5V power output (500 mA max).
 - FAKRA antenna connectors.
 - 4 LEDs for status indication.
 - Audio CODEC for external microphone and speaker.
- * Availability of features depends on models.

• POWER SUPPLY

- UMTS/HSPA + Version:
 - Nominal range of 9 V to 48 V.
- Global LTE Version:
 - Nominal range of 9 V to 36 V
- 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.

• Temperature

| | |
|-------------------------------|------------------|
| Storage | -40 °C to +85 °C |
| Operating | -40 °C to +85 °C |
| Operating from Li-Ion Battery | -20 °C to +60 °C |
| Li-Ion Battery recharge | 0 °C to +45 °C |

• UMTS/HSPA+

- GSM/GPRS/EDGE: Quad band 850/900/1800/1900MHz.
- UMTS/HSPA+: Five band 800/850/900/1900/2100MHz.
- DL 7.2Mbps, UL 5.7Mbps
- GPRS Class B, Class 12 (4&4).
- EDGE Multislot Class 12.
- Audio and CSD Data calls.
- SMS (MT/MO).

• LTE Cat 4 / 3G / 2G (Option)

- LTE FDD B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28
- LTE TDD B38/B39/B40/B41
- UMTS B1/B2/B4/B5/B6/B8/B19
- GSM 850/900/1800/1900MHz
- LTE-FDD: Max 150Mbps (DL), Max 50Mbps (UL)
- LTE-TDD: Max 130Mbps (DL), Max 30Mbps (UL)

• Development Kit

Includes: Developer's board owa4X, power supply cables, cables for interfaces, antennas, web access to: cross compiler, API's, libraries, manuals and application notes.

• Options

See DESI-BOK 100 9001 for product variants and options.