owa4X platform

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

owa4X Core:
– LINUX Kernel 4.4.19
– 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)
– Programmable 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
  – GSM/GPRS, UMTS OR LTE
– WiFi 802.11 b/g/n
– BT 4.2
**TECHNICAL SPECIFICATIONS**

- **CPU**
  - ARM Cortex A8 at 800MHz clock speed.
  - Linux Kernel 4.4.19
  - Debian File System
  - NAND FLASH 1GByte.
  - DDR3 512MB
  - MicroSD card holder for additional storage.

- **GNSS**
  - Receiver: GPS L1 frequency, C/A code.
  - 56-channel* continuous tracking receiver.
  - GALILEO L1 open service and GLONASS ready.*
  - SBAS: WAAS, EGNOS, MSAS, GAGAN.
  - Update Rate: 4Hz.
  - Accuracy: 2.5 meters CEP.
  - Signal Acquisition
    - Cold Start: 29 sec.*
    - Warm Start: 28 sec.*
    - Hot Start: < 1 sec.
  - Signal Reacquisition: < 1 sec.
  - Active Antenna Power Supply: +3.0V @ 30mA.
  - * Features availability depending on version.

- **GSM/GPRS (UMTS and LTE options available)**
  - GSM850 + EGSM900 + GMS1800 + GMS1900.
  - Class 4 (2W) for GSM850/EGSM900.
  - Class 1 (1W) for GSM1800/GSM1900.
  - GPRS Class B, Class 10 (4&2).
  - Audio and CSD Data calls.
  - SMS (MT/MO).
  - Multiplexed communication supported allowing GSM events and SMS during GPRS connection.

- **Interfaces**
  - Up to 4 CAN bus supporting full speed 1Mbps CAN 2.0B.
  - Up to 2 K-line bus.
  - Integrated sensors.
    - Programmable 9 axis sensor, accelerometer, gyroscope and magnetometer.
  - 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:
    - 10 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/DCD/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**
  - Nominal range of 7 V to 48 V.
  - Typical consumption at 24V:
    - OFF
    - Standby
    - RUN
    - RUN + GSM voice call

- **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

- **Rugged enclosure**
  - Environmental protection to IP67 standard.
  - (full protection against dust and water).
  - Dimension: L=149 x W=135 x H=58 mm)
  - Weight: TBD (aprox 400g)
  - Material: Glass reinforced plastic.
  - System connectors: TE 776163-1 (35 pins)
  - MicroSIM
  - MicroSD

- **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-BOKxxx xxxx for product variants and options.