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

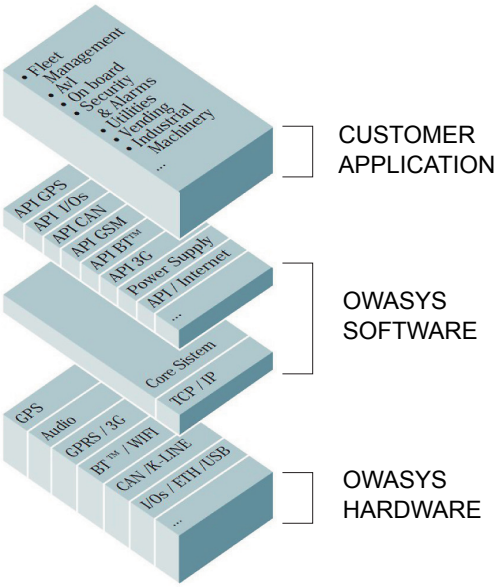
Key Features:

– IP67 Enclosure
– Internal antennas
– CAN (up to 4 interfaces)
– Kline (up to 2 interfaces)
– 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
  – GSM/GPRS, UMTS OR LTE
– WiFi 802.11 b/g/n
– BT 4.2

Wireless Embedded Computer



owasys
Advanced Wireless Devices

DESI-BOK 100 9000 PA6 Subject to change without prior notice Printed January 2017

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TECHNICAL SPECIFICATIONS

• CPU
– ARM Cortex A8 at 800MHz clock speed.
– Linux Kernel 4.4.19
– Debian File System
– NAND FLASH 1GByte.
– DDR3 512MBytes.
– 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 + GSM1800 + GSM1900.
– 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 protecion 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 ºC to +85 ºC
Operating from Li-Ion Battery	-20 ºC to +60 ºC
Li-Ion Battery recharge	0 ºC to +45 ºC

• 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.

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