owa3X platform

POWERFUL OPEN M2M PLATFORM SUITABLE FOR THE WIRELESS APPLICATION YOU NEED TO DEVELOP

A NEW GENERATION OF OPEN, FLEXIBLE AND POWERFUL WIRELESS EMBEDDED COMPUTERS, PROVIDING FULLY WIRELESS CAPABILITIES FOR REMOTE MANAGEMENT AND MONITORING.

A UNIQUE PLATFORM TO DEVELOP TELEMETRY AND TELEMATIC APPLICATIONS WITH OPTIONAL ENCLOSURE FOR RUGGED CONDITIONS, INTERNAL ANTENNAS AND A WIDE RANGE OF CONNECTIVITY.

owa3X PLATFORM INTEGRATES:
- GSM/GPRS (optional 3G)
- GPS
- EMBEDDED IP FUNCTIONALITY
- WIDE VARIETY OF INTERFACES
  • ANALOG AND DIGITAL I/O
  • 3 RS232 & 2 RS485
  • 3 CAN, 2 K-Line & iButton
  • AUDIO
  • ETHERNET, MICROSD, etc.
  • USB

OPTIONS:
- BLUETOOTH™
- WiFi
- HSPA / UMTS
- CODEC
- I/Os Expansion Board

Wireless Embedded Computer

ARM

ARM9 CPU 32bit
• 400 MIPS
• 64MB FLASH
• 32MB / 64MB RAM
• Industry Standard Architecture

LINUX and C
• Open Platform
• Complex Applications
• Flexible

PSU
• Robust for Automotive
• Very low power
TECHNICAL SPECIFICATIONS

• Interfaces
  - 10 configurable digital input/outputs:
    - 50V max inputs (logic low <3V, high >5V).
    - 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.
    - Share 4 of the digital I/O pins (only in owa3x-IP30 models).
    - 0-5.12V (5mV per bit) or 0-30.72V (30mV per bit) configurable by sw.
  - Internal ADCs for Vin, Vbat, and temperature.
  - Removable cover for SIM; main battery and microSD.
  - microSD card holder.
  - 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/DT)
  - RS485 1Mbps Interface
  - Ethernet 10/100 BaseT.*
  - Vout 4.5V power output (100 mA max).
  - When running from battery backup 3.7V (100mA max).
  - GSM / GPRS with FAKRA antenna connector.
  - GPS with FAKRA antenna connector.*
  - 4 LEDs for status indication (6 with Ethernet).
  - Audio for external microphone and speaker.*
  - CAN bus supporting full speed 1Mbps CAN 2.0B.*
  - K-line bus.*
  - Integrated sensors.
    - Programmable 3 axis accelerometer and/or gyroscope.*
* Availability of features marked with (*) depends on model.

• Power Supply
  - Nominal range of 7 V to 48 V.
  - Typical consumption at 12V:
    
    | Mode                  | Current (mA) |
    |-----------------------|--------------|
    | OFF                   | 0.4mA        |
    | Standby              | 15 mA        |
    | RUN                  | 50 mA        |
    | RUN + GSM voice call | 90mA         |

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

• Temperature
  - Safety Purposes Operating
    - without Li-ion Battery
      - Temperature Range: -40°C to 80°C
  - Safety Purposes
    - Temperature Range with Li-ion Battery: -40°C to 55°C from external power supply
    - Temperature Range from Li-ion battery (-40°C to -20°C internally limited with battery protection)
    - Temperature Range: 0°C to 45°C (Li-ion battery charge (internally controlled))

  *Operating (industrial temp range components) -40°C to 85°C

• CPU
  - ARM9 at 400MHz clock speed.
  - Linux OS 2.6.36.
  - FLASH 64Mbyte.
  - RAM 32Mbyte / 64Mbyte.
  - 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

• Mechanical
  - Aluminium enclosure:
    - Environmental protection to IP30 standard.
    - Dimensions: 110 x 85 x 40 mm, excluding connectors and screws.
    - Dimensions: 110 x 85 x 26 mm, COMPACT VERSION.
    - Weight: 270g.
  - Connectors
    - GSM & GPS, 24 pin Machine, RJ11 (audio), microSD slot and SIM slot (optional dual SIM slot) Optional RJ45 (ETH) and Optional USB.
    - Plastic mounting bracket with screw mounting holes.
    - It can also be used for DIN rail mounting. Mounting bracket includes holes to support an optional expansion board.

• Conformity
  - 2011/65/UE RoHS II Directive.

• Development Kit
  - Includes: Developer’s board owa3X, power supply cables, cables for interfaces, antennas, web access to: cross compiler, API’s, libraries, manuals and application notes.

• Options
  - See DESI-BOK100 6006 for product variants and options.