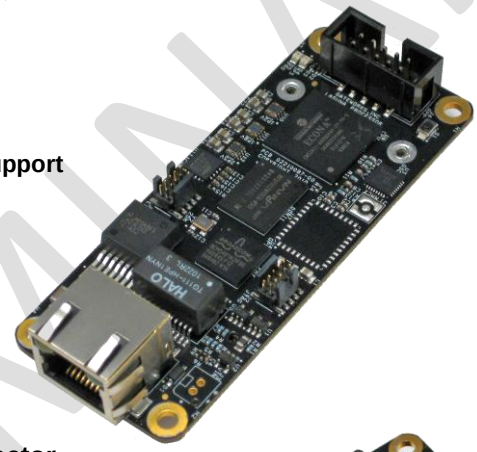
Laguna GW2380 Network CPU

A miniature full featured embedded routerboard with a footprint less than 5 square inches and power consumption below 3W

The Gateworks GW2380 Laguna Network Processor is targeted for small form factor, low power embedded applications such as Man Portable Units (MPUs), Automatic Meter Reading (AMR) equipment and remote sensor networks. The GW2380 uses a high performance ARM11 SoC coupled with a PCI Express Mini Card socket to provide support for a wide variety of current and next generation radio modules. These modules include 802.11a/b/g, 802.11n, and 4G WiMax. Additional radio functionality can be provided using an onboard expansion connector which allows support for ZigBee® and Bluetooth® mezzanine modules. Other peripherals include a Gigabit Ethernet port and the Gateworks System Controller for providing embedded features such as real time clock with battery backup, voltage and temperature monitoring, digital I/O, configuration EEPROM, and programmable board shut-down and wakeup for remote sensor applications. The GW2380 also features a dedicated 10-pin AMR serial connector for support of utility meters based upon ANSI C12.18, C12.19, and C12.21 protocols. The -40 to +85C operating temperature range is ideally suited for harsh and severe outdoor environments. Optional features include a GPS Receiver for location services. An OpenWRT board support package is included for Linux 2.6 operating systems.

FEATURES

- **Cavium® CNS3411 300MHz ARM11 SoC**
- **64Mbytes DDRII-400 SDRAM Memory**
- **16Mbytes Flash System Memory**
- **PCI Express Mini Card Socket Includes USB Support**
- **10/100/1000 Base-TX Ethernet Channel**
- **GSC Gateworks System Controller**
- **Real Time Clock with Battery Backup**
- **Voltage and Temperature Monitor**
- **8Kbits Serial EEPROM**
- **TTL Serial Port**
- **Programmable Watchdog Timer**
- **JTAG with Serial Console**
- **AMR Interface Connector (GE I210+)**
- **Zigbee® and Bluetooth® Expansion Connector**
- **2W @ 25C Typical Operating Power**
- **7W Available for PCI Express Mini Card**
- **8 to 42VDC Input Voltage - Passive PoE or 2-pin Connector**
- **Small 35 x 87mm Form Factor**
- **-40°C to +85°C Operating Temperature**
- **Optional GPS Receiver with MMCX Antenna Connector**
- **OpenWRT Linux v2.6 Board Support Package**
- **1 Year Warranty**



SPECIFICATIONS

ELECTRICAL

Input Voltage

- 8 to 42VDC
- Optional Universal AC Input Module 90-264VAC @ 50/60Hz

Operating Current

- 0.08A Typical @ 24VDC (no PCIe card @ 25C)
- 0.13A Typical @ 24VDC (no PCIe card @ 85C)

MECHANICAL

Dimensions

- 3.43 x 1.38 x 0.87in (87.0 x 35.0 x 22.0mm)

Weight

- 1 oz (28g)

ENVIRONMENTAL

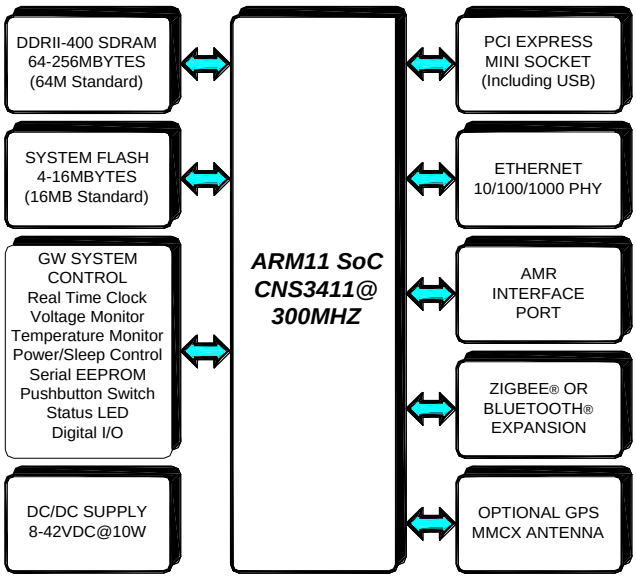
Operating Parameters

- Temperature: -40°C to +85°C
- Humidity (non-condensing): 20% to 90%
- MTBF: To Be Determined

Storage Parameters

- Temperature: -40°C to +85°C
- Humidity (non-condensing): 5% to 95%

PRELIMINARY



Laguna GW2380 Functional Diagram

ORDERING OPTIONS

Standard Configuration

GW2380

- CNS3411 CPU @ 300MHz
- 64Mbytes DDRII DRAM
- 16Mbytes System Flash
- PCI Express Mini Card Socket

Development Kit

GW2380-DEVKIT

- GW2380 Network Computer
- U-Boot Loader
- OpenWRT Linux v2.6 Board Support Package
- Ethernet and Serial Cables
- Passive PoE Power Injector
- JTAG Programmer with Linux & Windows Drivers

Other Configurations

The GW2380 can be customized for volume applications by changing the features listed below. Contact the factory for additional information.

- CNS3411 processor type and speed
- DDRII DRAM from 64Mbytes to 256Mbytes
- System Flash from 4Mbytes to 16Mbytes
- Adding optional peripherals
- Removing populated peripherals
- Operating temperature range

PRELIMINARY