## *A single Mini-PCI Intel® XScale® IXP422/266MHz network processor powered with 802.3af PoE or Passive PoE*

The GW2357 is a member of the Gateworks Avila Network Processor family designed to support existing and next generation Wi-Fi and WiMAX radios. This network processor consists of an Intel® IXP422 XScale® operating at 266MHz, 32Mbytes of SDRAM, and 16Mbytes of Flash. Peripherals include a Type III Mini-PCI socket with support for extended length Mini-PCI cards, 10/100 Base-TX Ethernet port with IEC-6100-4 ESD and EFT protection, serial EEPROM, hardware watchdog timer, low ripple 5V supply and 5V fan connector. An RS-232 serial port is available through the JTAG programming connector using a Gateworks GW16027 JTAG Serial Port Adapter. The GW2357 also supports ordering options such as a system monitor to track operating temperature and input voltage, a real time clock with battery backup, a front panel serial port, a second serial port available through a 10-pin header, and an auxiliary input power connector. The GW2357 is powered through the Ethernet connector with 802.3af PoE or Passive PoE. A board support package is included for Linux 2.6 operating systems.

# FEATURES

- **Intel® XScale® IXP422 266MHz CPU**
- **Integrated Hardware Encryption Engine (SHA-1, MD5, DES, 3DES, AES)**
- **32Mbytes SDRAM and 16Mbytes Flash Memory**
- **Type III Mini-PCI Socket Supports Extended Length Cards**
- **10/100 Base-TX Ethernet Port**
- **1Kbyte Serial EEPROM**
- **Watchdog Timer**
- **Three Input Power Configurations:**
  **802.3af PoE with 38-60V Range**
  **Passive PoE with 20-60V Range**
  **Optional Connectors with 10-30V Range**
- **Full Input Power Isolation**
- **Reverse Voltage and Transient Protection**
- **7W Available for Mini-PCI Socket**
- **2W Typical Operating Power**
- **5V Fan Connector**
- **Low Ripple 5V Supply for WiMAX Card Support**
- **0°C to 70°C Operating Temperature**
- **Linux v2.6 Board Support Package**
- **1 Year Warranty**
- **Optional RTC, System Monitor, and Serial Ports**

# SPECIFICATIONS

## ELECTRICAL

### Input Voltage
- 802.3af Compliant PoE: 38 to 60VDC
- Passive PoE: 20 to 60VDC
- Optional Connectors: 10-30VDC

### Operating Current
- 0.04A Typical at 48VDC

## MECHANICAL

### Dimensions
- 4.0in x 4.0in x 0.6in (102mm x 102mm x 15mm)

### Weight
- 4oz (114g)
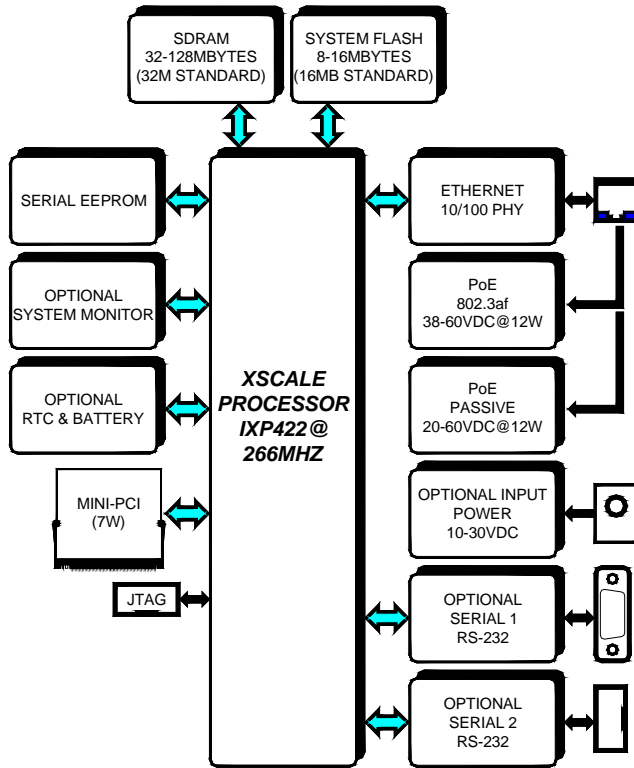
## ENVIRONMENTAL

### Operating Parameters
- Temperature: 0°C to +70°C
- Humidity (non-condensing): 20% to 90%
- MTBF: 155 Years @ 55°C

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

**GATEWORKS**
CORPORATION

*Avila GW2357 Functional Diagram*

## ORDERING OPTIONS

### Standard Configurations

**GW2357**
- IXP422 CPU @ 266MHz
- 32Mbytes SDRAM
- 16Mbytes Flash

### Development Kit

**GW2357-DEVKIT**
- GW2357 Network Computer
- Redboot v2.04 Loader
- Linux v2.6 Board Support Package
- USB, Ethernet and Serial Cables
- Passive PoE Power Supply
- JTAG Programmer with Linux & Windows Drivers

### Configuration Options

**The GW2357 can be customized for volume applications by changing the features listed below. Contact the factory for additional information.**
- Intel IXP42x processor type and speed
- SDRAM from 32Mbytes to 128Mbytes
- Flash from 8Mbytes to 16Mbytes
- Adding optional peripherals
- Removing populated peripherals
- Industrial operating temperature range

| Product | CPU | Size (in) | Mini-PCI Sites | Ethernet Ports | PoE | Special Features | Operating Range |
|---|---|---|---|---|---|---|---|
| GW2347 | IXP42x | 4x4 | 1 | 1 | Passive | Small, Low Power | 6-20VDC |
| GW2357 | IXP42x | 4x4 | 1 | 1 | 802.3af | Small, 802.3af Power | 38-60VDC |
| GW2353 | IXP42x | 4x7 | 2 | 1 | Passive | Audio, Video, GPS, Auto | 8-48VDC |
| GW2355 | IXP42x | 4x6 | 4 | 5 | Passive | Optional GPS, QoS Switch | 9-48VDC |
| GW2348-2 | IXP42x | 4x6 | 2 | 2 | Passive | Low Cost Two Radio | 9-48VDC |
| GW2348-4 | IXP42x | 4x6 | 4 | 2 | Passive | Optional USB | 9-48VDC |
| GW2358-4 | IXP43x | 4x6 | 4 | 2 | Passive | USB, Optional GPS & RS485 | 8-48VDC |

Other configurations of each product are possible. Contact factory for more information.

*Gateworks Avila and Cambria Feature Comparison*