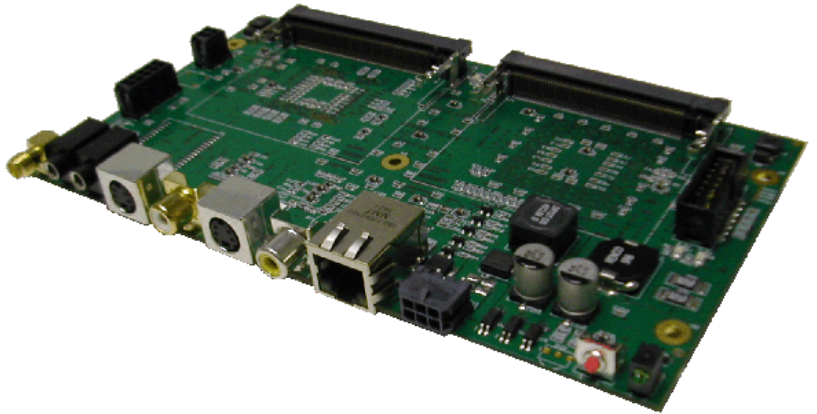


## A dual Mini-PCI Intel® XScale® IXP425/533MHz network processor for wireless video and audio applications

The GW2353 is a member of the Gateworks Avila Network Processor family. The GW2353 meets the requirements of wireless video and audio applications for security, surveillance and in-vehicle monitoring. This network processor consists of an Intel® IXP425 XScale® operating at 533MHz, 64Mbytes SDRAM, 64Mbytes Flash and a Nexperia PNX1520 Media Coprocessor. The PNX1520 is software programmable for encoding and decoding audio and video to various formats such as MPEG2, MPEG4, H.263 and H.264 at resolutions up to D1. Peripherals include two Type III Mini-PCI sockets, a 10/100 Base-TX Ethernet port with IEC-6100-4 ESD and EFT protection, and GPS. Additional features include serial EEPROM, real time clock with battery backup, system monitor to track operating temperature and input voltage, and watchdog timer. An RS-232 serial port is available through the JTAG programming connector using a Gateworks GW16027 JTAG Serial Port Adapter. Power is applied through the Ethernet connector with the unused signal pairs in a passive power over Ethernet architecture or through an optional automotive input connector. A board support package is included for Linux 2.6 operating systems.

## FEATURES

- ◆ Intel® XScale® IXP425 533MHz Processor
- ◆ 64Mbytes SDRAM Memory
- ◆ 64Mbytes Flash Memory
- ◆ Nexperia NXP1520 Media Processor
- ◆ Two Type III Mini-PCI Sockets
- ◆ 10/100 Base-TX Ethernet Port
- ◆ GPS with Pulse Per Second Support
- ◆ S-Video Input and Output
- ◆ Composite Video Input and Output
- ◆ Audio Line Input and Output
- ◆ 1Kbyte Serial EEPROM
- ◆ Battery Powered Real Time Clock
- ◆ Voltage and Temperature Monitor
- ◆ Watchdog Timer
- ◆ Front Panel LED and Reset Switch
- ◆ Passive Power Over Ethernet
- ◆ Reverse Voltage and Transient Protection
- ◆ 8 to 48VDC Input Voltage Range
- ◆ 10W Shared Between Mini-PCI Sockets
- ◆ 5W Typical Operating Power
- ◆ -40°C to 85°C Operating Temperature
- ◆ Linux v2.6 Board Support Package
- ◆ 1 Year Warranty



## SPECIFICATIONS

### ELECTRICAL

#### Input Voltage

- ▼ 8 to 48VDC

#### Operating Current

- ▼ 0.21A Typical @ 24VDC

### MECHANICAL

#### Dimensions

- ▼ 4.0in x 7.0in x 1.0in (102mm x 178mm x 25mm)

#### Weight

- ▼ 5 oz (142g)

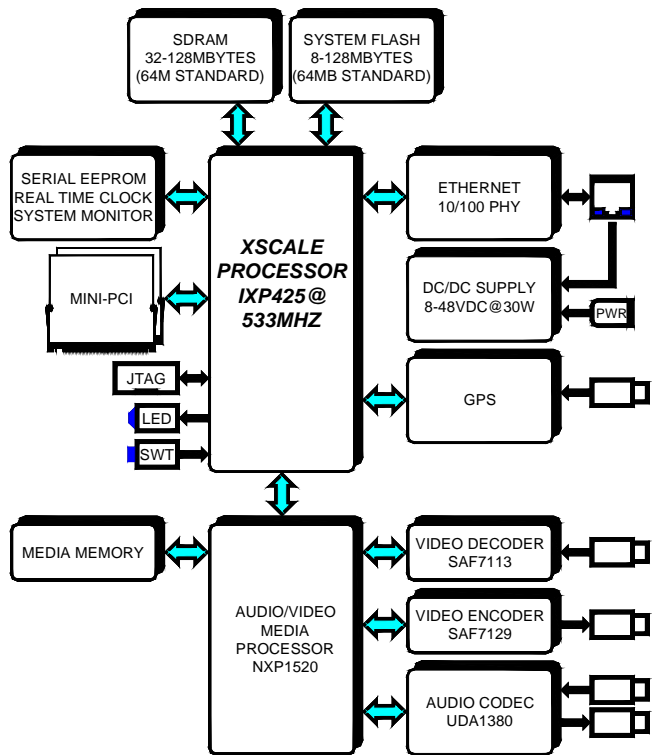
### ENVIRONMENTAL

#### Operating Parameters:

- ▼ Temperature: -40°C to +85°C
- ▼ Humidity (non-condensing): 20% to 90%
- ▼ MTBF: 62 years @ 55°C

#### Storage Parameters:

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



**Avila GW2353 Functional Diagram**

## ORDERING OPTIONS

### Standard Configuration

#### GW2353

- ▼ IXP425 CPU @ 533MHz
- ▼ 64Mbytes SDRAM
- ▼ 64Mbytes Flash
- ▼ Two Type III Mini-PCI Slots

### Development Kit

#### GW2353-DEVKIT

- ▼ GW2353 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

### Other Configurations

The GW2353 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 128Mbytes
- ▼ Adding optional peripherals
- ▼ Removing populated peripherals
- ▼ 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