DOC#10001285-01

A high performance quad core router board with six Mini-PCle sockets, video and audio capabilities

The GW5400 is a member of the Gateworks 5th generation Ventana family of network processor boards targeted for a wide range of indoor and outdoor applications that require audio and video. The GW5400 features the Freescale™ i.MX6 Quad Core ARM® Cortex™-A9 automotive grade processor operating at 1GHz, 1Gbyte of DDR3-1066 SDRAM, and 256Mbytes of System Flash. Six Mini-PCIe sockets support any combination of 802.11abgn radios, 4G WiMAX radios, 3G CDMA/GSM cellular modems and other PCI Express peripherals. The Gateworks System Controller provides embedded features such as real time clock, voltage and temperature monitor, serial EEPROM, fan control, programmable front panel switch, tamper switch and advanced power management with programmable board shut-down and wake-up for remote sensor applications. A wide-range DC input power supply provides up to 30W of power to the Mini-PCIe sockets supporting the latest high-power radios. Power is applied through a dedicated barrel jack connector or the Ethernet jack in a Power over Ethernet architecture. Both OpenWrt and OpenEmbedded Linux are supported.

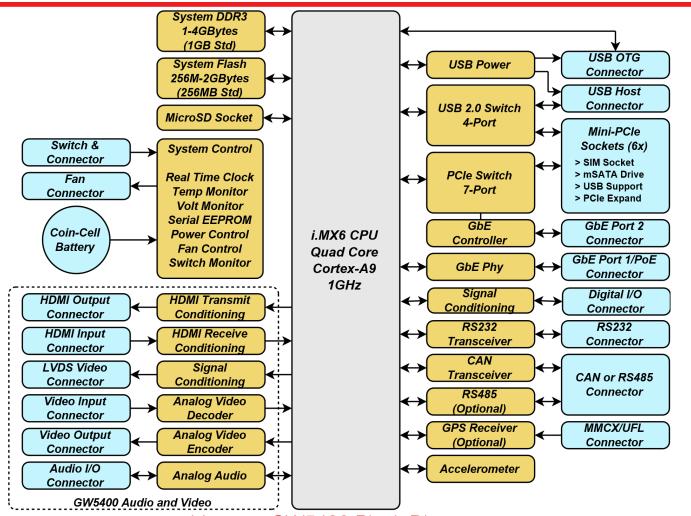
FEATURES

- Freescale[™] i.MX6 1GHz Quad Core ARM[®] Cortex[™]-A9 Automotive Grade Processor
- 1Gbyte DDR3-1066 SDRAM Memory and 256Mbytes Flash System Memory
- Micro SD™ Flash Expansion Socket Compatible with SD Specification 3.0
- Six High-Power Gen 2.0 Mini-PCle Sockets Support for SIM Socket, mSATA Disk Drive and USB Signaling
- Two GbE Ethernet Ports
- USB 2.0 Host and OTG Ports up to 480Mbps
- HDMI 1.4 Input and Output Ports with Audio Support
- LVDS Camera and Display Port
- Three Analog Video Inputs and Outputs
- Analog Stereo Line In/Out or Headphone/Mic Audio
- CAN Bus 2.0B 1Mbps Serial Port
- RS232 Serial Port
- Real Time Clock with Battery Backup
- Voltage and Temperature Monitor
- Serial Configuration EEPROM
- Programmable Watchdog Timer
- Digital 3-axis Accelerometer
- General Purpose Digital I/O and I2C Expansion Port
- Optional GPS Receiver and RS485 Serial Port
- Optional PCIe Expansion for Additional Mini-PCIe, Legacy Mini-PCI, or GbE
- 8 to 60VDC Input Voltage Range
- Power Through Ethernet or Barrel Jack
- Ethernet Power Supports Passive or 802.3at Compatible PoE
- 5W@25°C Typical Operating Power
- 30W Shared Between Mini-PCle Sockets
- Reverse Voltage and Transient Protection
- -40°C to +85°C Operating Temperature
- OpenWrt and OpenEmbedded Linux Board Support Package
- 1 Year Warranty



Preliminary Information

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Ventana GW5400 Block Diagram

SPECIFICATIONS

Electrical

Input Voltage

- ▼ 8 to 60VDC Barrel Jack or Passive PoE
- ▼ 36 to 60VDC 802.3at Compatible PoE

Operating Current

▼ 0.2A Typical @ 24VDC

Mechanical

Dimensions

▼ 140x100x13mm (5.5x3.9x0.5in)

Weight

▼ 4 oz (114g)

Environmental

Operating Parameters

- ▼ Temperature: -40°C to +85°C
- ▼ Humidity (non-condensing): 20% to 90%
- ▼ MTBF: TBD Years at 55°C

Storage Parameters

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

ORDERING OPTIONS

Standard Configuration - GW5400

- ▼ i.MX6 Quad Core CPU @ 1GHz
- ▼ 1Gbyte DDR3-1066 SDRAM
- ▼ 256Mbytes System Flash
- ▼ Six Mini-PCle Sockets

Development Kit - GW5400

- ▼ GW5400 Network Computer
- ▼ U-Boot Loader
- ▼ OpenWrt Linux Board Support Package
- ▼ Ethernet, Serial, Audio, USB and Video Cables
- ▼ Passive PoE Power Injector and Power Supply
- ▼ JTAG Programmer

The GW5400 can be customized for volume applications. Contact the factory.

- ▼ i.MX6 processor type and speed
- ▼ DDR3 SDRAM up to 4Gbytes
- System Flash up to 2GBytes
- Adding and removing peripherals