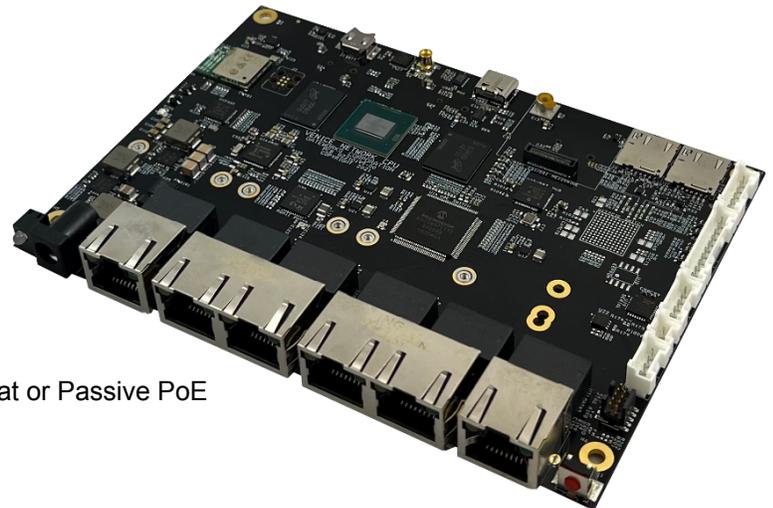


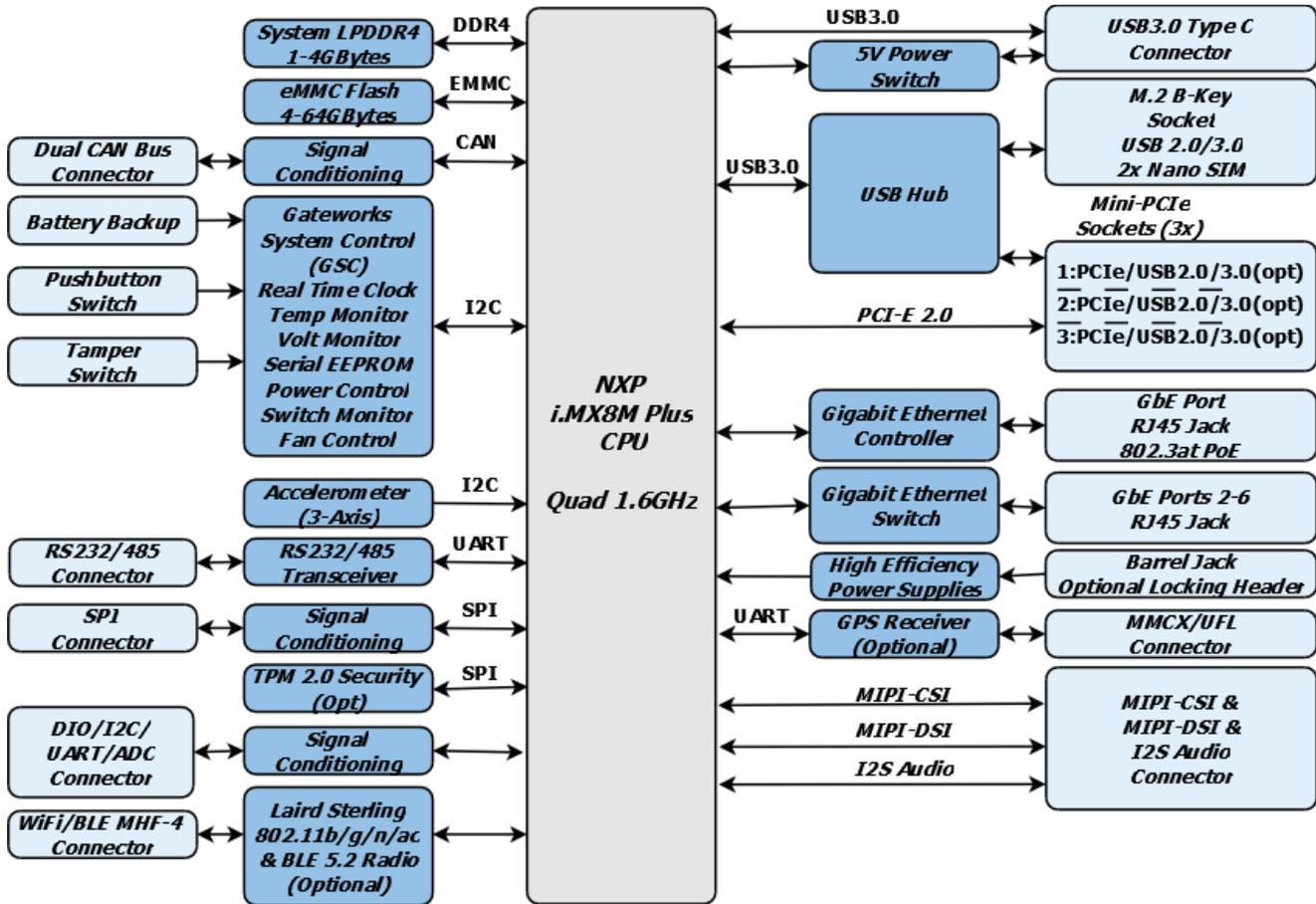
A 140x100mm i.MX8M Plus SBC with 3 Mini-PCle Slots, 1 M.2 Slot, Six GbE Ethernet, PoE, Wifi/BLE and MIPI-DSI & CSI

The GW7400 is a member of the Gateworks 7th generation Venice family of single board computers targeted for rugged and industrial embedded applications. The GW7400 features the 64-bit NXP™ i.MX8M Plus Quad Core ARM® Cortex™-A53 SoC processor operating at 1.6GHz, 1GBytes of LPDDR4 DRAM, and 8GBytes of eMMC System Flash. The i.MX8M Plus SoC features a Neural Processing Unit (NPU) operating at up to 2.3 TOPS, a Video Processing Unit (VPU) supporting up to 1080p60, a GC7000UL Graphics Processing Unit (GPU), and a Cadence® Tensilica® HiFi 4 DSP. Six total Gigabit Ethernet ports offer 1x WAN and 5x switched LAN ports. Three Mini-PCle expansion sockets support PCIe 2.0 & USB 2.0 (USB 3.0 optional) signaling and can be used for peripherals such as 802.11ax/ac/b/g/n WiFi radios. A M.2 B-Key socket (3042/3052) is also available with USB 3.0 for 5G/4G/3G/CATM1 cellular modems with support for dual nanoSIMs. A USB 3.0 Type-C port is standard. Peripheral headers support Digital I/O, Analog Input, RS232/RS485/TTL Serial, I2C and SPI. A combined MIPI-DSI/CSI header with I2S audio offers video input/output. A 3-Axis accelerometer and Dual CAN Bus are standard. An optional TPM 2.0 Security Element is available for ensuring system security and integrity. An optional GPS and onboard Laird Sterling-LWB5+ 802.11a/b/g/n/ac WiFi / Bluetooth v5.2 module are available. The Gateworks System Controller provides embedded features such as real time clock, voltage and temperature monitor, programmable pushbutton, and programmable board shut-down and wake-up for remote applications. A wide-range DC input power supply provides up to 15W of power for the Mini-PCle and M.2 sockets. Power is applied through a dedicated barrel jack or an Ethernet port in an active 802.3af/at or passive Power over Ethernet (PoE) architecture. Ubuntu Linux BSP is supported.

FEATURES

- NXP™ 64-bit i.MX8M Plus 1.6GHz Quad Core ARM® Cortex™-A53 SoC Processor
 - Neural Processing Unit (NPU) - up to 2.3 TOPS
 - Cadence® Tensilica® HiFi 4 DSP
 - Video Processing Unit (VPU) up to 1080p60
 - Graphics Processing Unit (GPU) - GC7000UL with OpenCL and Vulkan support
 - ARM Cortex®-M7 core Co-Processor for low-power RTOS
- 1GByte DRAM (up to 4GBytes optional), 8GBytes Flash Storage (up to 64GBytes optional)
- Three High-Power Mini-PCle Socket with PCIe 2.0 and USB 2.0 signaling
- One M.2 B-Key Socket (3042/3052) with USB 3.0 and Dual Nano SIMs for Cellular Modems
- Six GbE Ethernet Ports, One WAN and Five Switched LAN
- Optional Laird Sterling-LWB5+ 802.11a/b/g/n/ac WiFi & BLE v5.2 Module
- Optional u-blox GPS Receiver
- Dual CAN Bus
- Digital I/O & Analog Port, I2C & SPI Port
- RS232/RS485 and TTL Serial Port
- USB 3.0 Type-C Port
- MIPI-DSI / CSI Port, I2S Audio
- Digital 3-axis MEMS Accelerometer
- Real Time Clock with Battery Backup
- Voltage and Temperature Monitor
- Serial Configuration EEPROM
- Programmable Watchdog Timer
- 8 to 60VDC Input Voltage Range
- Power Through Barrel Jack Connector or 802.3af/at or Passive PoE
- 6W@25°C Typical Operating Power
- 15W Available for Mini-PCle and M.2 Sockets
- Reverse Voltage Protection
- -40°C to +85°C Operating Temperature
- Ubuntu Linux Board Support Package
- 1 Year Warranty





Venice GW7400 Block Diagram

SPECIFICATIONS

Electrical

Input Voltage

- 8 to 60VDC Barrel Jack or Active PoE

Operating Current

- 250mA Typical @ 24VDC

Mechanical

Dimensions

- 140x100x21mm (5.5x3.9x0.8in)

Weight

- 4.62 oz (130g)

Environmental

Operating Parameters

- Temperature: -40°C to +85°C
- Humidity (non-condensing): 20% to 90%
- MTBF: 23.99 Years at 25°C

Storage Parameters

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

ORDERING OPTIONS

Standard Product Models

- GW7400
- GW7401 - Adds TPM, GPS & WiFi/BLE
DRAM 4GB, eMMC 64GB

Development Kit

- GW11050-1: GW7400 Single Board Computer
- GW11050-2: GW7401 Single Board Computer
- Ubuntu Linux Board Support Package
- Ethernet & Accessory Cables
- Power Supply
- JTAG Programmer

Product Customization

The GW7400 can be customized for volume applications. Contact the factory for additional information.

- LPDDR4 DRAM up to 4GBytes
- System Flash up to 64GBytes
- GPS & WiFi/BLE
- TPM 2.0 Security
- Removing peripherals to achieve lowest cost