

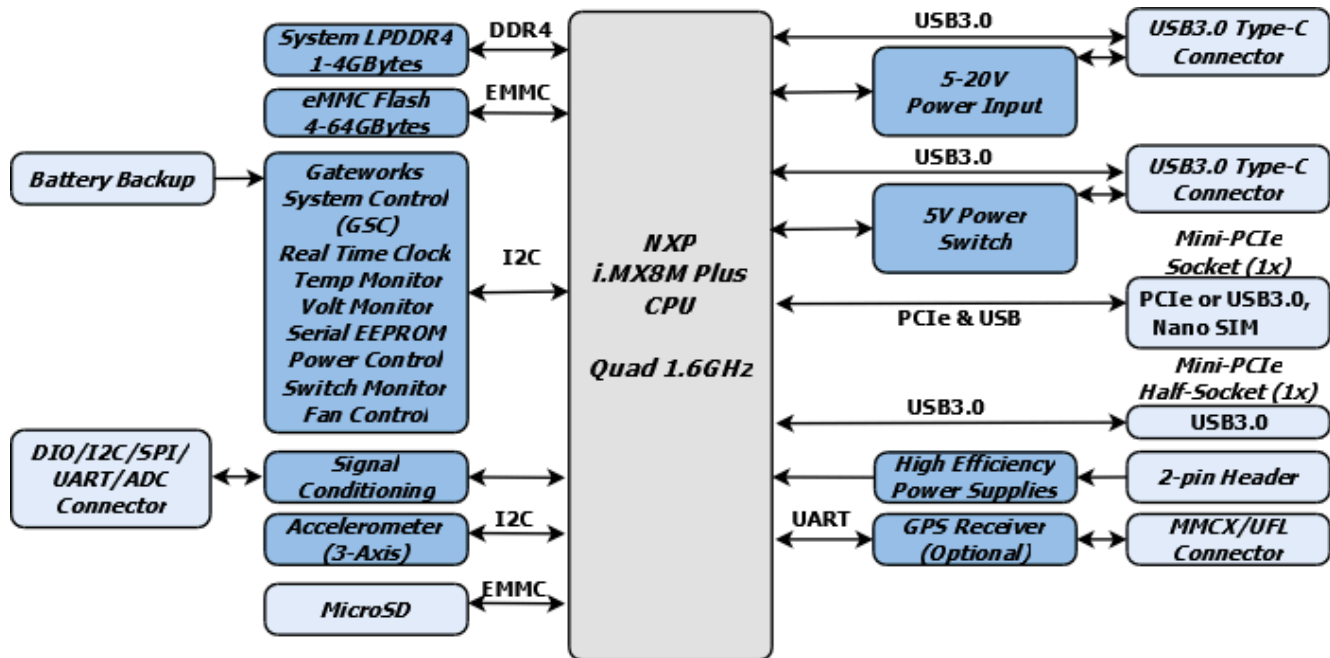
A 35x110mm i.MX8M Plus SBC with 2 Mini-PCle Slots, Two USB Type-C Connectors, Peripheral IO & GPS

The GW7500-21 is a member of the Gateworks 7th generation Venice family of single board computers targeted for rugged and industrial embedded applications. The GW7500-21 features the 64-bit NXP™ i.MX8M Plus Quad Core ARM® Cortex™-A53 SoC processor operating at 1.6GHz, 4GBytes of LPDDR4 DRAM, and 64GBytes of eMMC System Flash. Two Mini-PCle expansion sockets (one full-size, one half-size) can be used for PCI Express peripherals such as 802.11ax/ac/b/g/n WiFi radios, 5G/4G/3G/CATM1 cellular modems. A USB 3.0 Type-C can be used to power the SBC. A second USB Type-C can be used to source power to devices. Peripheral headers support Digital I/O, Analog Input, UART/TTL Serial, I2C and SPI. A MicroSD & Nano SIM slot are standard. A 3-Axis accelerometer is standard. A GPS is standard. 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. Power is applied through a dedicated header or via USB Type-C. Ubuntu Linux BSP is supported.

FEATURES

- NXP™ 64-bit i.MX8M Plus 1.6GHz Quad Core ARM® Cortex™-A53 SoC Processor
- 4GByte LPDDR4 DRAM Memory
- 64GBytes eMMC Flash System Memory
- One Full-Size High-Power Mini-PCle Socket with PCIe or USB 3.0 and Nano SIM
- One Half-Size High-Power Mini-PCle Socket with USB 3.0
- One USB 3.0 Type-C Port with power input (5-20VDC)
- One USB 3.0 Type-C Port with power output
- Standard u-blox GPS with MMCX Antenna Connector
- Digital I/O & Analog Port, I2C & SPI Port
- Optional UART TTL Serial Port
- Digital 3-axis MEMS Accelerometer
- Real Time Clock with Battery Backup
- Voltage and Temperature Monitor
- Serial Configuration EEPROM
- Programmable Watchdog Timer
- 5 to 20VDC Input Voltage Range
- Power Through Dedicated Connector or USB Type-C
- 6W@25°C Typical Operating Power
- 9W Available for Mini-PCle Sockets
- Reverse Voltage Protection
- -40°C to +85°C Operating Temperature
- Ubuntu Linux Board Support Package
- 1 Year Warranty





Venice GW7500-21 Block Diagram

SPECIFICATIONS

Electrical

Input Voltage

- 4.5 to 20VDC Header or Type-C

Operating Current

- 104mA Typical @ 20VDC

Mechanical

Dimensions

- 35x110x21mm (1.37x4.33x0.8in)

Weight

- 2 oz (57g)

Environmental

Operating Parameters

- Temperature: -40°C to +85°C
- Humidity (non-condensing): 20% to 90%
- MTBF: 67 Years

Storage Parameters

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

ORDERING OPTIONS

Development Kit - GW11054-4-A

- GW7500-21 Single Board Computer
- U-Boot Boot Loader
- Ubuntu Linux Board Support Package
- Accessory Cables
- Power Supply
- JTAG Programmer

Product Customization

The GW7500 can be customized for volume applications. Contact the factory for additional information.

- i.MX8M Plus processor
- LPDDR4 DRAM up to 4GBBytes
- System Flash up to 64GBBytes
- GPS
- Removing peripherals to achieve lowest cost