

**A 35x100mm i.MX8M Mini SBC with 1 Mini-PCIe Slot,  
One GbE Ethernet, USB, PoE, GPS**

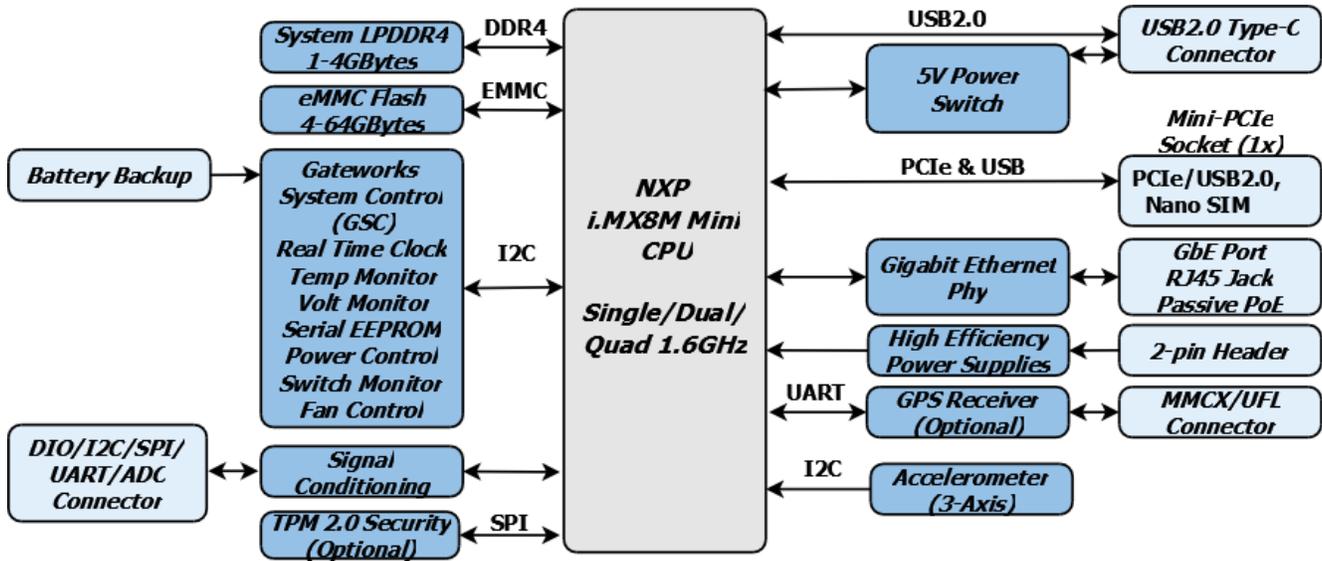
The GW7100-00 is a member of the Gateworks 7<sup>th</sup> generation Venice family of single board computers targeted for rugged and industrial embedded applications. The GW7100-00 features the 64-bit NXP™ i.MX8M Mini Quad Core ARM® Cortex™-A53 SoC processor operating at 1.6GHz, 1GBytes of LPDDR4 DRAM, and 8GBytes of eMMC System Flash. One Mini-PCIe expansion socket can be used for PCI Express peripherals such as 802.11ax/ac/b/g/n WiFi radios, 5G/4G/3G/CATM1 cellular modems. Peripheral headers support Digital I/O, Analog Input, UART/TTL Serial, I2C and SPI. A Nano SIM slot is standard. A 3-Axis accelerometer is standard. An optional GPS is available. A TPM 2.0 secure crypto-processor is optional for ensuring system security and integrity. 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 an Ethernet port in passive Power over Ethernet (PoE) architecture. Ubuntu Linux BSP is supported.

SBC	CPU	DRAM	eMMC	GPS	WiFi/BLE
GW7100-00	Quad 1.6GHz	1GByte	8GBytes	No	Use Mini-PCIe Slot
GW7100-01	Quad 1.6GHz	4GByte	64GBytes	No	Use Mini-PCIe Slot
GW7101-00	Quad 1.6GHz	1GByte	8GBytes	Yes	Use Mini-PCIe Slot
GW7101-01	Quad 1.6GHz	4GByte	64GBytes	Yes	Use Mini-PCIe Slot

**FEATURES**

- NXP™ 64-bit i.MX8M Mini 1.6GHz Quad Core ARM® Cortex™-A53 SoC Processor
- 1GByte LPDDR4 DRAM Memory
- 8GBytes eMMC Flash System Memory
- One High-Power Gen 2 Mini-PCIe Socket with USB 2.0 and Nano SIM
- One GbE Ethernet Port supporting Passive PoE
- Optional u-blox GPS with MMCX Antenna Connector
- Digital I/O & Analog Port, I2C & SPI Port
- UART TTL Serial Port
- USB 2.0 Type-C Port
- Digital 3-axis MEMS Accelerometer
- TPM 2.0 Security Element (Opt.)
- Real Time Clock with Battery Backup
- Voltage and Temperature Monitor
- Serial Configuration EEPROM
- Programmable Watchdog Timer
- 8 to 60VDC Input Voltage Range
- Power Through Dedicated Connector or Ethernet with Passive PoE
- 6W@25°C Typical Operating Power
- 9W Available for Mini-PCIe Socket
- Reverse Voltage Protection
- -40°C to +85°C Operating Temperature
- Ubuntu Linux Board Support Package
- 1 Year Warranty





Venice GW7100-00 Block Diagram

## SPECIFICATIONS

### Electrical

#### Input Voltage

- 8 to 60VDC Barrel Jack or Active PoE

#### Operating Current

- 104mA Typical @ 24VDC

### Mechanical

#### Dimensions

- 35x100x21mm (1.37x3.9x0.8in)

#### Weight

- 1.76 oz (50g)

### Environmental

#### Operating Parameters

- Temperature: -40°C to +85°C
  - \*Note: -25C to +85C for -01 Models
- 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

See table at beginning of datasheet

### Development Kit - GW11047-1-A

- GW7100 Single Board Computer
- U-Boot Boot Loader
- Ubuntu Linux Board Support Package
- Ethernet & Accessory Cables
- Power Supply
- JTAG Programmer

### Product Customization

The GW7100 can be customized for volume applications. Contact the factory for additional information.

- i.MX8M Mini processor type and speed
- LPDDR4 DRAM up to 4GBytes
- System Flash up to 64GBytes
- GPS
- TPM 2.0 Security
- Removing peripherals to achieve lowest cost