

## High Precision GNSS GPS Mini-PCle Card

The GW16143 is a high precision GPS Mini-PCle card designed to provide precise positioning to applications utilizing Gateworks single board computers. It provides centimeter-level (<2cm) accuracy via GNSS positioning with concurrent reception of GPS, GLONASS, Galileo and BeiDou. A MMCX antenna port allows for an external antenna. USB signalling is used on the Mini-PCle connector to communicate with the host processor. Two UART headers are available for correction data via serial. A timepulse output header provides PPS signalling. To take advantage of faster acquisition times, a rechargeable 3.3V lithium battery is included. For applications that are mobile, it provides a high update rate. Multi-band Real-time kinematic (RTK) technology provides fast convergence times and reliable performance. The module supports both base and rover operation for RTK applications. Differential GNSS devices such as the GW16143 are starting to replace survey-grade equipment. Other radio cards such as the Gateworks GW16130 Iridium Satellite Modem or GW16132 CAT-M1 modem can provide communication links for the augmentation data. The GW16143 enables precision navigation and automation of moving machinery in industrial applications such as agriculture, mining, and field mapping.

### FEATURES

- High Precision GNSS Mini-PCle card
- Concurrent reception of GPS, GLONASS, Galileo and BeiDou
- Centimeter-level (<2cm) Accuracy GNSS positioning
- Integrated Multi-Band Real Time Kinematics (RTK)
- High update rate for highly dynamic applications
- Allows for "Base" and "Rover" Operation
- Two UART headers, Timepulse output header
- Uses Standard NMEA, UBX and RTCM Message Format
- USB to Serial Interface
- Status LEDs
- Rechargeable Lithium battery, 3.3V, 3mAh, 6.8mm
- RTCM 3.x, SSR, SBAS Corrections
- <1.0m SBAS, <0.2m SSR, <0.03m RTCM 3.x
- Supports L1 and L2/L5 Bands
- -40°C to +85°C Operating Temperature
- Made in USA
- 1 Year Warranty



### SPECIFICATIONS

#### Electrical

##### Input Voltage

- 3.3V From Mini-PCle Edge Connector

##### Typical Operating Current

- 100mA @ 3.3V

#### Mechanical

##### Dimensions

- 30.0x60.8x11.5mm (1.18x2.39x0.45in)

##### Weight

- 0.35 oz (10g)

#### 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

#### Product Customization

The GW16143 can be customized for high volume applications. Contact the factory for information.

- Removing headers
- Removing battery