tensor
SENSORS

IoT Solutions for the Aerospace Industry

Tensor TGWRF-001 USB Gateway Node Datasheet

Features / Specifications

- Voltage Input Range: 4.75VDC – 5.25VDC
- Connection Method: USB Type-A
- ESD Protection: IEC 61000-4-2, Level 4
- EMI Filtering Noise Suppression
- USB 2.0 Compliant: Full Speed – 12Mbps
- Tensor Mesh Network Handshaking
- TX/RX in the 2.4GHz Band
- 32-bit 38.4MHz ARM Cortex-M4 with DSP instruction and floating point unit
- 512kB Flash Program Memory
- TX at 500kbps GFSK (Up to +2Mbit/sec with decrease in RX Sensitivity)
- TX Power: 0dBm (up to +19dBm)
- RX Sensitivity: -98dBm
- Size: 49mm x 19mm
- Weight: 6.6g (bare boards)
- Battery Life:
  - USB Powered
- Operating Temperature: -40°C to 85°C
- FCC Part 15, B: Intentional Radiator Certification
  - FCC ID: QOQ13
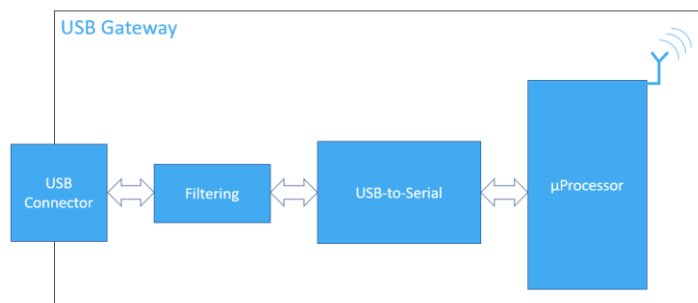
Typical Applications

- Aircraft, Drones or Launch Vehicles
- Rotating Machinery
- Medical Devices
- Agricultural Monitoring
- Smart Farming

General Description

Tensor's wireless data acquisition nodes feature sensor data capture capabilities with direct-to-PC data transfer tailored for all of your sensor needs.

The TGWRF node provides a simple method to downlink all your sensor node data across your entire Tensor mesh network to a single centralized host point. Operates at USB 2.0 Full Speed 12Mbps protocol.

In addition, every Tensor node comes complete with Tensor's innovative mesh network geared to support drop-in sensor additions to any existing mesh network, enabling a truly modular and flexible mesh. Tensor's low power design also makes it possible for nodes to run independent of user interaction for months at a time.

Data Acquisition for the Modern World