

IS200

PCIe IEEE1588v2 PTP Grandmaster Clock



Key Features

- IEEE1588v2-2008 Precision Time Protocol(PTP) Grandmaster clock
- PCI card type IEEE1588v2 PTP grandmaster clock
- 4x lane low-profile PCIe NIC-Rev.1.0a
- Comply with IEEE1588v2-2008 standard
- One 100/1000Mbps Ethernet port
- One SMA connector for receiving GPS signal
- Up to 64 clients for PTP slaves
- Hardware processing for receiving, and generating the PTP time packets
- Supports unicast, multicast, and mixed mode
- ITU-T G.8275.1, G.8275.2 time profiles
- High quality holdover : OCXO, TCXO option
- In-band management : web GUI, SNMP
- Supply server UI : Linux, Window

Application

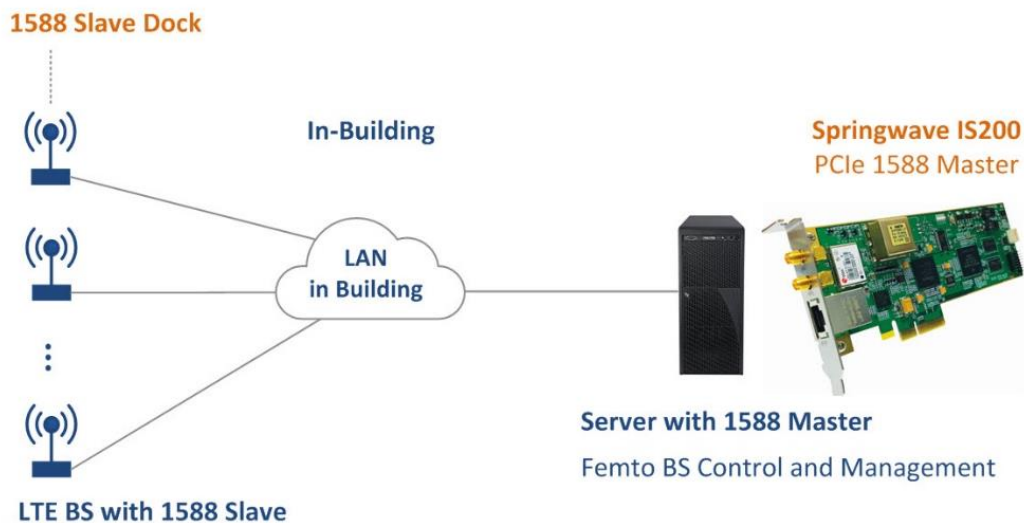
- 4G Mobile Network, LTE Small Cell Network
- Carrier Ethernet
- Industrial Automation Timing
- IoT(Internet of Things), Sensor Networks
- Power Electric, Smart Grid

Overview

The Springwave's IS200 series is a PCI Express card type grandmaster clock to build the precision time and frequency synchronization based on the IEEE1588v2-2008 standards. This PTP card on the server's PCI slot supports economic and flexible deployment for the LTE small cell, smart grid, and power IEDs.

The IS200 PCIe card is a low-profile(half height) PCIe form factor. It has one GPS receiving port, one 1PPS out port, and one 100/1000Mbps Ethernet port on the front panel. The IS200 card with on-board u-processor works with PTP clients without server's help after configuration. Also this card can be managed by SNMP, WEB based GUI through inband management.

And this card can be also controlled and monitored by server's main processor via PCIe interface. The IS200 card can be populated for OCXO(SMD type) or TCXO by holdover performance.



Specification

> GNSS input

- Factory option : GPS/SBAS or GLONASS IF
- Connector : 50Ω SMA [female]
- Voltage feed to GNSS antenna : 5Vdc±5%

> Mechanical

- Card size : 64.4 x 167.65 mm
- Low-Profile PCI Express, half height

> Environmental

- Operating temperature : 0 ~ 50°C
- Operating humidity : 0 ~ 90 % RH non-condensing

> Power Supply

- +3.3Vdc, +12Vdc
- Power consumption : max 25[W]

> IEEE1588v2 PTP Interface

- Client capacity : 64 clients, basic
- Hardware-based PTP packet processing.
- Fully comply with IEEE1588v2-2008 standard
- Support ITU-T G.8275.1, G.8275.2 Telecom Profiles

> Time and Frequency Accuracy

- Accuracy under locked to GNSS at operating temp.
- Time : < 100ns
- Frequency : 1x10⁻¹¹ (ITU-T G.811)
- Holdover Accuracy (over constant temperature)
- Time : < 8.6us/4hrs (G.812 Type II)
- Frequency : < 1 x 10⁻¹⁰ /day (G.812 Type II)

> I/O Port in Front Panel

- Monitoring
 - 1PPS output : 50Ω SMA [female]
 - PTP interface : 100M/1000Mbps Ethernet
 - GNSS input : 50Ω SMA [female]
- ### > Management
- WEB base management, Web UI
 - Telnet for remote system control
 - PCIe interface with server's processor
 - Remote software upgrade