

IEEE 1588 Blades for the SSU 2000

IEEE 1588-2008 (PTP) Grandmaster Server Blades



Key Features

- Carrier-class IEEE 1588-2008 Grandmaster
- Telecom profile with unicast support
- Supports up to 400 clients per blade
- Interoperable with 3rd-party PTP clients
- End-to-end solution with TimeProvider 500 PTP Translator
- TL1 and CLI management
- NEBS Level 3 and ETSI Certified

Key Benefits

- Precise timing and synchronization over Ethernet
- Enables rapid migration to Ethernet backhaul
- Full hardware redundancy protects client clocks from potential service outages
- Superior precision and accuracy protected by the SSU 2000 system
- Scalable form factor allows for ease of expansion with network growth
- Proven interoperability with a wide range of IEEE 1588-2008 clients
- Complete end-to-end PTP solution with advanced monitoring and management support
- Technology flexibility: PTP operates in the same platform with TDM, NTP and SyncE solutions

Carrier-class IEEE 1588 Blades

Carriers have long relied on the Synchronization Supply Unit to meet all physical layer synchronization requirements with five-nines availability. With the introduction of high-performance IEEE 1588 Precision Time Protocol (PTP) Grandmaster Server Blades, the SSU 2000 platform can now deliver carrier-class PTP to meet demanding NGN packet timing requirements. IEEE 1588 Blades for the SSU 2000 provide the performance, scale, availability and security to deliver carrier-class synchronization to remote PTP clients over Ethernet networks.

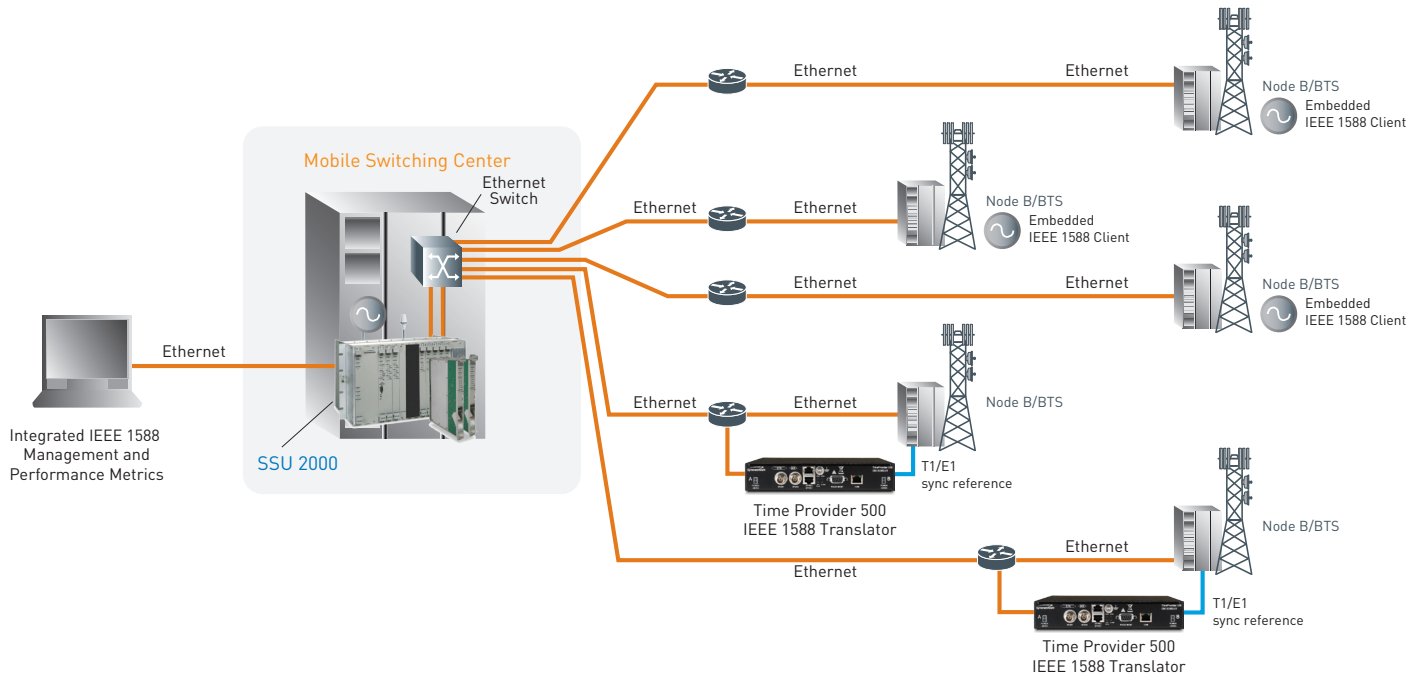
The Symmetricom® IEEE 1588 Blades are fully integrated into the SSU 2000 system. These cards can be installed as single servers or redundant pairs in any available master or expansion shelf output slot. PTP capacity scales up at a rate of up to 400 full rate clients per card. Front-access IEEE 1588 traffic ports utilize Small Form-factor

Pluggable (SFP) modules for flexibility to support 100 Base-T electrical or 1000Base-X optical or electrical interfaces. All configuration and management is consolidated through SSU 2000 system management ports to maintain security and isolation from IEEE 1588 ports.

The new IEEE 1588 Blades provide superior stability and protection through direct connection to the SSU 2000 system backplane. IEEE 1588 Blades operate either in ARB (arbitrary) timescale mode or in TAI (International Atomic Time) timescale with full UTC traceability through the SSU 2000 integrated GPS option.

• Above: The Symmetricom IEEE 1588
 • Blades for the SSU 2000 can be installed
 • as single servers or redundant pairs in
 • any available master or expansion shelf
 • output slots.

IEEE 1588 Blades for the SSU 2000



IEEE 1588 (PTP) Grandmaster Server Blades provide synchronization traceability over Ethernet to PTP client clocks in remote base stations.

Specifications

NETWORK PROTOCOL

- IEEE 1588-2008: Unicast with dynamic reservations (sec 16.1)
- IPv4 (annex D), IPv6 (future)

PTP CAPACITY

- Up to 400 PTP clients per blade at full rate of 128 messages/second, per the IEEE 1588-2008 Telecom Profile (Base model configured for 125 clients. License option to increase to 400 clients.)

SERVER PRECISION

- 10 ns rms typical (one-step, hardware timestamps)

TIME SCALE SUPPORT

- TAI (International Atomic Time), GPS module required
- Arbitrary Time Scale

INPUT REFERENCES

- Integrated GPS, and/or multiple PRS traceable synchronization reference inputs (user settable – refer to SSU 2000 specifications)

PTP TRAFFIC PORT

- One Ethernet Small Form-factor Pluggable (SFP)
- Optical: 1000 Base-X
- Electrical: 100 Base-T, 1000 Base-T

VLAN SUPPORT

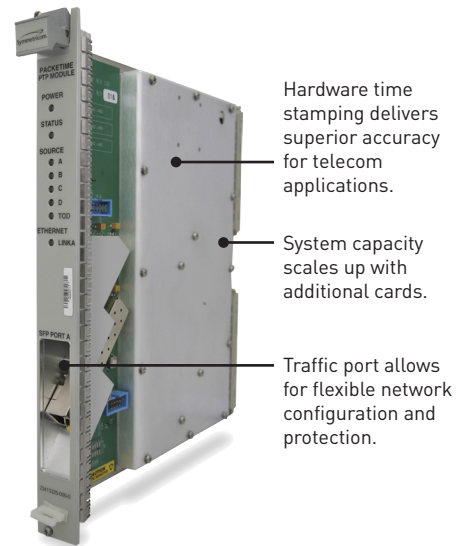
- 4 VLANs (IEEE 802.1Q)

PROTECTION

- 1:1 protection (full hardware redundancy)

MANAGEMENT

- TL1 and CLI – Integrated into SSU 2000 system management (physical isolation from PTP traffic ports)
- Please refer to SSU 2000 data sheet for full system specifications.



IEEE 1588 Blades for the SSU 2000