



Meinberg Radio Clocks

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TSU-GbE: PTP / SyncE / Hardware NTP Interface

TSU - IEEE 1588 Time Stamp Unit

The Meinberg time stamping unit provides a future-proof platform for your IEEE 1588 / SyncE / Carrier Grade NTP infrastructure. The high-power dual-core processor, the 1-step master clock and the 1GE interface with SFP slot supports a large number of PTP clients.

Important Note

This product is no longer available and may have been replaced by a newer product. We will, of course, continue to provide support for units that have already been purchased and are still in use. Please contact our [1][Sales Department](#) for further details.

This product has been discontinued and has been replaced with: [2]

Key Features

- Compatible with the Meinberg IMS Platform
- High Power Dual Core CPU
- LED status indicators for init, error and PTP mode
- Data Link Layer: Layer 2 / Layer 3 / E2E / P2P
- 1-Step or 2-Step Master/Slave operation
- SyncE - Synchronous Ethernet
- 10 ns Time Stamp Accuracy
- Multi-Profile Support (Default, Power, Telecom, SMPTE)
- Gigabit Ethernet SFP/RJ45 Combo Port
- 2 BNC Outputs for 1 PPS, 10 MHz or 2048 kHz

Description

The ability to select Master and Slave operation for either Default, Power, Telecom or SMPTE profile makes this product the most flexible PTP solution on the market, suitable for a wide range of applications.

A lot of IEEE 1588 slave devices or NTP clients from different market segments can be synchronized, even over IPv6 networks, for example eNodeB's for LTE base stations, Linux servers with hardware-assisted time stamping support for high-frequency trading applications, IEEE 1588 compatible IEDs in Smart Grid environments or IP-interconnected Audio / Video devices in broadcast studios.

The Synchronous Ethernet function provides a high accurate frequency transport over Ethernet networks. The card can be used either to take a SyncE signal from the network as a source or generate SyncE as a Master.

Characteristics

Supported PTP Profiles	<p>Default:</p> <ul style="list-style-type: none"> - IEEE 1588v2 (PTPv2) <p>Power:</p> <ul style="list-style-type: none"> - IEC 61850-9-3 - IEEE C37.238-2011 - IEEE C37.238-2017 <p>Telecom:</p> <ul style="list-style-type: none"> - ITU-T G.8265.1 Frequency - ITU-T G.8275.1 Phase/Time - ITU-T G.8275.2 Phase/Time <p>Broadcast:</p> <ul style="list-style-type: none"> - SMPTE ST 2059-2 - AES67 Media Profile <p>AVB/TSN:</p> <ul style="list-style-type: none"> - IEEE 802.1AS
NTP Mode	NTP Server Mode (10 ns timestamp accuracy)
1588 Clock Mode	1-Step or 2-Step Master/Slave operation
PTP Modes	<p>Multicast Layer 2 (IEEE 802.3)</p> <p>Multicast/Unicast Layer 3 (UDP IPv4/IPv6)</p> <p>E2E / P2P Delay Mechanisms</p> <p>Up to 128 messages/second per client</p>
Synchronous Ethernet	<p>Master and Slave Capability</p> <p>Compliant to ITU-T G.8261, G.8262 and G.8264</p> <p>Ethernet Synchronization Messaging Channel (ESMC)</p>

Processor Type	CPU: 1 GHz Dual Core ARM
Network Protocols	IPv4, IPv6 DHCP, DHCPv6 DSCP IEEE 802.1q VLAN filtering/tagging
Output signal	2x BNC (50 Ohm) connectors Configurable signals (taken from chassis backplane): 1 PPS, 10 MHz, 2048 kHz
Available Network Connectors	Combo Port: * 1 x 100/1000BASE-T RJ45 1 x GBIT SFP - Slot * The two network connectors are dedicated to a single physical interface.
Supported Models	LANTIME M900 IMS - LANTIME M400, M1000, M3000
Supported Temperature	Operational: 0 - 50 °C (32 - 122 °F) Storage: -20 - 70 °C (-4 - 158 °F)
Supported Humidity	Max. 85 % (non-condensing) at 40 °C
Warranty	Three-year warranty
RoHS Status of Product	This product is fully RoHS-compliant.
WEEE Status of Product	This product is handled as a B2B (Business to Business) category product. To ensure that the product is disposed of in a WEEE-compliant fashion, it can be returned to the manufacturer. Any transportation expenses for returning this product (at end-of-life) must be covered by the end user, while Meinberg will bear the costs for the waste disposal itself.

Manual

There is no online manual available for this product.: [3][Contact us](#)

Links:

[1] <mailto:sales@meinberg.de>

[2] <https://www.meinbergglobal.com/english/products/ims-hps.htm>

[3] <mailto:info@meinberg.de>