



IMS HPS100

High Precision Synchronization
PTP / SyncE / Hardware NTP Interface



High Performance Dual Core CPU
Gigabit Ethernet SFP/RJ45 Combo Port
8ns Time Stamp Accuracy
1-Step or 2-Step Master/Slave Operation
Multi-Profile Support
(Default, Power, Telecom, SMPTE)

Up to 2048 PTP-Clients
(128 Sync / Delay Request per Second)
SyncE - Synchronous Ethernet
2 SMA Outputs for
1 PPS, 10MHz or 2048 kHz
Compatible with the
Meinberg IMS Platform

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



Combo Port:
GBIC SFP - Slot
100/1000BASE-T RJ45

The ability to select Master and Slave operation for either Default, Power, Telecom, SMPTE or IEEE 802.1AS 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 eNodeBs for LTE base stations, Linux servers running high-frequency trading applications, IEEE 1588 compatible IEDs in Smart Grid environments or IP-interconnected Audio / Video devices in TV or Radio studios.

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

Technical Specifications

Profiles	<ul style="list-style-type: none"> - IEEE 1588v2 Default Profile - IEEE 1588v1 (option) - Enterprise Profile - IEEE C.37.238 Power Profile - ITU-T G.8265.1 Telecom Frequency Profile - ITU-T G.8275.1 Telecom Phase / Time Profile (full timing support) - ITU-T G.8275.2 Telecom Phase / Time Profile (partial timing support) - SMPTE ST 2059-2 Broadcast Profile - IEEE 802.1AS TSN/AVB Profile - AES67 Media Profile - DOCSIS 3.1
PTP Modes	<ul style="list-style-type: none"> - Multicast / Unicast Layer 2 (IEEE 802.3) - Multicast / Unicast Layer 3 (UDP IPv4/IPv6) - Hybrid Mode - E2E / P2P Delay Mechanisms - Up to 128 messages / second per client
NTP Mode	NTP Server mode (8 ns time stamp accuracy)
1588 Clock Mode	1-Step, 2-Step for both Master and Slave operation
Synchronous Ethernet	<ul style="list-style-type: none"> - Master and Slave Capability - Compliant to ITU-T G.8261, G.8262 and G.8264 - Ethernet Synchronization Messaging Channel (ESMC)
Network Protocols	<ul style="list-style-type: none"> - IPv4, IPv6 - DHCP, DHCPv6 - DSCP - IEEE 802.1p & 802.1q VLAN filtering / tagging
Ethernet Interface	Combo Port: 1 x 100 / 1000BASE-T RJ45 1 x GBIC SFP - Slot
Signal Outputs	2x SMA (50 Ohm) connectors, configurable signals (taken from chassis backplane): <ul style="list-style-type: none"> - 1 PPS - 10 MHz - 2048 kHz
Time Stamp Accuracy	8 ns
Supported LANTIME Models	(M500, M1000, M1000S, M3000, M3000S, M4000)

HPS100 PTP Client Licences

License	Unicast Clients	Delay Req./s in Multicast/ Hybrid Mode	NTP Req./s	PTPv1	PTP Monitoring
PL-A	8	1024	1600	NO	NO
PL-B	256	32768	51200	NO	NO
PL-C	512	65536	102400	YES	NO
PL-D	1024	131072	204800	YES	YES
PL-E	2048	262144	409600	YES	YES

