microSyncHR: Powerful IEEE 1588 PTP Grandmaster and High-performance NTP Server

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With unprecedented levels of efficiency and versatility, the microSyncHR sets new standards for compact yet powerful synchronization solutions.

Meinberg's microSyncHR is a feature-rich synchronization device, offering a high level of efficiency and versatility and impresses with its compact design and high port density.

Key Features

- Selectable Reference Time Sources: GPS: Satellite receiver for the Global Positioning System - Recommended for fixed-site applications   GNS: Combined GPS/GLONASS/Galileo/BeiDou satellite receiver - Recommended for both fixed-site and mobile applications GNS-UC: GPS and Galileo Satellite Receiver with Up-Converter for Meinberg GPS Antenna / Converter - Recommended for both fixed-site and mobile applications
- High Performance NTP Server (NTP & SNTP v2, v3, v4)
- Meinberg Device Manager for configuration and status monitoring
- Powerful IEEE 1588 PTP time server incl. IEC/IEEE 61850-9-3 & IEEE C.37.238
- Half rack solution for a space efficient design
- Different oscillator options for advanced holdover performance
- All microSync models offer a wide range of multiple output signals, allowing synchronization of both network devices such as NTP clients and PTP slaves as well as directly attached synchronization clients with other electrical and optical signals.

Description

Providing two IEEE 1588 ports, the microSyncHR models are powerful GNSS synchronized PTP Grandmasters offering a high level of accuracy and supporting all major PTP profiles: Default, Power, Telecom (Frequency and Phase profiles), SMPTE, AES67/RAVENNA or IEEE 802.1AS profile.

All microSyncHR variants offer key features like multiple programmable output signals (two over fiber optical ST connectors), four Gigabit Ethernet interfaces and the ability to synchronize both NTP and PTP devices.

The sheer diversity of outputs and interfaces allows the microSyncHR to be deployed in a large range of industries and applications. Depending on industry requirements customers can choose from different variants to best suit their needs.

The variants are defined via the BNC connectors which can provide several I/O options.

For further information, please check out our datasheet:

Datasheet microSyncHR-Series (PDF)

Characteristics

Supported PTP Profiles	**Default:**
	- IEEE 1588v2 (PTPv2)
	Power:
	- IEC/IEEE 61850-9-3
	- IEEE C37.238-2011
	- IEEE C37.238-2017
	Telecom:
	- ITU-T G.8265.1 Frequency
	- ITU-T G.8275.1 Phase/Time
	- ITU-T G.8275.2 Phase/Time
	- DOCSIS 3.1
	Broadcast:
	- SMPTE ST 2059-2
	- AES67 Media Profile
	AVB/TSN:
	- IEEE 802.1AS

Synchronous Ethernet	Master and Slave Capability
	Compliant to ITU-T G.8261, G.8262 and G.8264
	Ethernet Synchronization Messaging Channel (ESMC)

Network Protocols	IPv4, IPv6 NTPv3, NTPv4 PTPv2 IEC 62439-3 (PRP) DHCP, DHCPv6 DSCP IEEE 802.1q VLAN filtering/tagging IEEE 802.1p QOS SNMPv1/v2/v3 Remote Syslog Support (UDP)
Optical Outputs	2 x Programmable pulse outputs, fiber optic - ST connectors
Interface	Single serial RS-232 interface
Network Interface	**Gigabit Ethernet (GbE) - SFP:** LAN 0, LAN 1 Management 10/100/1000Mbit RJ45 or 1000FX NTP LAN 2, LAN 3 Management 10/100/1000Mbit RJ45 or 1000FX NTP / PTP
Universal Serial Bus (USB) Ports	**USB Terminal** USB-to-serial console - Micro-USB Type B **USB Host** USB connector management CPU - USB Type A
BNC Connectors	4 x BNC female connectors for different output signals - e.g. programmable pulses, frequency synthesizer, timecode AM
Terminal Connector	**16pin DMC X1** DC power supply connector programmable pulses Error/Relay **16pin DMC X2** programmable pulse (TTL, isolated) programmable pulse (RS-422) Time Code DCLS (TTL, isolated)
Oscillator Options	OCXO SQ Holdover performance 1 day: ± 220 E-6 sec 1 year: ± 4.7 sec OCXO MQ Holdover performance 1 day: ± 65 E-6 sec 1 year: ± 1.6 sec OCXO HQ

Holdover performance

1 day: ± 22 E-6 sec
1 year: ± 788 E-3 sec

OCXO DHQ
Holdover performance
1 day: ± 4.5 E-6 sec
1 year: ± 158 E-3 sec

Power Consumption   Pmax = 30W

Operating Voltage	DC: 20-60 V DC
Form Factor	Housing Type 9.5" (Half-Rack), 1U 223 mm x 251 mm x 43,7 mm / 8.78 inch x 9.88 inch x 1.72 inch (width x depth x height) Housing Material: Steel
Atmospheric Pressure	615 to 1600 hPa
Operating Altitude	Up to 4000 m (13,123 ft) above sea level
Protection	IP30
Supported Temperature	-20 °C to 55 °C (-4 °F to 131 °F) (operation)
Storage Temperature	-30 °C to 70 °C (-22 °F to 158 °F)
Supported Humidity	5 % to 95 %, 40 °C, non-condensing
Compliances	* CB Scheme * CE * FCC * UL * CSA * WEEE, Waste of Electrical and Electronic Equipment * RoHS, Restriction of Hazardous Substances * REACH, Registration, Evaluation, Authorization and Restriction of Chemicals
Contents of Shipment	Included in delivery is an outdoor antenna incl. mounting kit and pre-assembled antenna cable.
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.: [2]Contact us

Links:

[1] https://www.meinbergglobal.com/english/products/
[2] mailto:info@meinberg.de