microSync-Series

Meinberg's multipurpose synchronization solution, available in three different form factors to best suite your network requirements.

The microSync family is Meinbergs new series of compact synchronization solutions. There are multiple variants and form factors available, including rackmount (both half-rack and full 19") as well as railmount chassis models. The half-rack microSyncHR models and the railmount microSyncHS products impress with their compact design and a high port density. The 19" rackmount microSyncRX models additionally offer redundant power supplies.

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. All models share the integrated microSync embedded network processor running our sync-optimized meinbergOS firmware, supporting NTP, PTP IEEE 1588 and a variety of protocols for management tasks.

The microSync-Series offers optical or electrical network connectivity by using SFP modules. There are a selection of sync input possibilities available, for example the 72-channel Multi GNSS Receiver for GPS, Galileo, GLONASS and BeiDou.

Product Highlights

- Powerful IEEE 1588 PTP Time Server incl. IEC/IEEE 61850-9-3 & IEEE C.37.238
- High performance (S)NTP server
- DIN rail and Half rack solution for a space efficient design
- Different Oscillator options for advanced holdover performance
- Meinberg Device Manager for configuration and status monitoring
- 3 years warranty
- Unlimited technical support including firmware updates

Reference Inputs

microSync-Series

Signal	Signal Type
Meinberg GPS IF-Receiver, 12-Channel[1]	IF (Meinberg Antenna)
Meinberg GNS-UC GPS/Galileo IF-Receiver[1]	IF (Meinberg Antenna)
GNSS (GPS, GLONAS, Galileo, BeiDou) Receiver (L1/E1/B1), 72-Channel[1]	L1/E1/B1 band
IEEE 1588	Ethernet
SyncE	Ethernet
NTP	Ethernet
10 MHz	TTL / Sine
Pulse Per Second, PPS	TTL
String + PPS	RS-232, TTL
Time Code[2], DCLS	TTL

Outputs

microSync HR + microSync RX

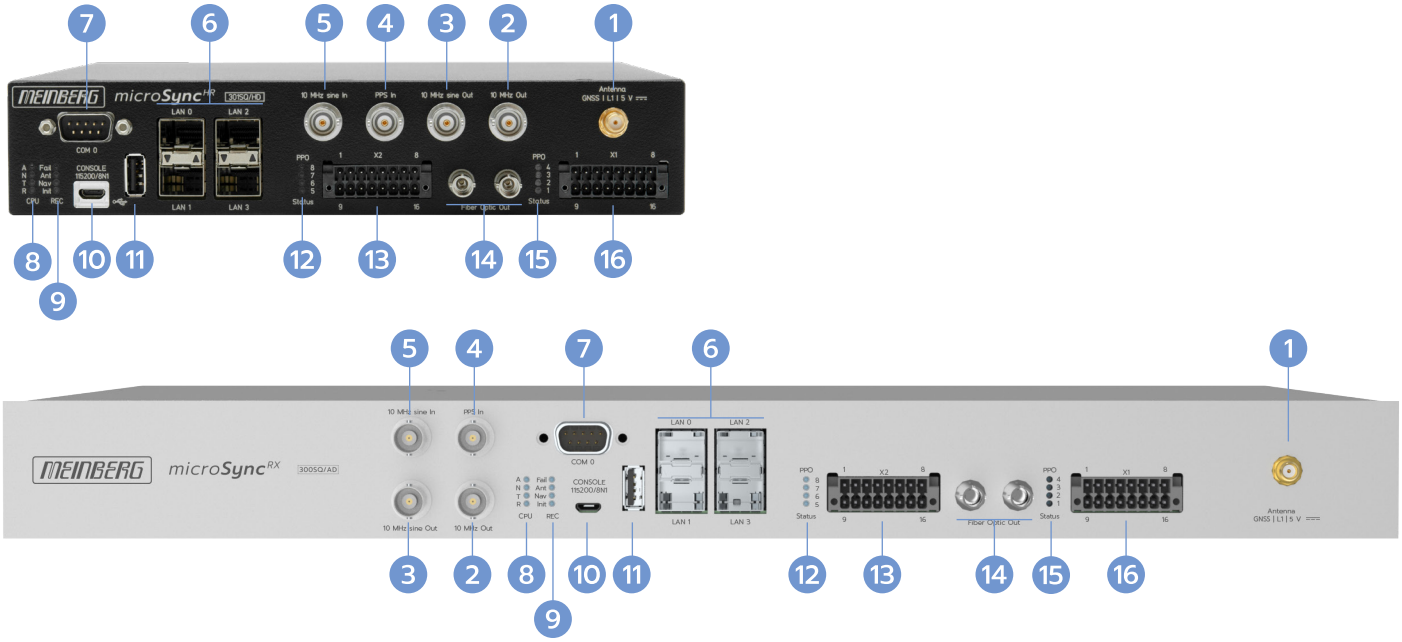
Signal	Signal Type
10 MHz clock	Sine
10 MHz clock	TTL
4x Gigabit Ethernet (GbE)	IEEE 1588, SyncE, NTP
1x ASCII Time-strings	RS-232
Programmable Output[3]: 4x Optocoupler	—
Programmable Output: 4x PhotoMOS (optional, replacing Optocoupler)	—
Programmable Output[3]	TTL
Programmable Output[3]	RS-422
Frequency Synthesizer	Sine
Time Code[2], AM	Sine
Time Code[2], high current DCLS	TTL
Error Relais	—
2x Programmable Outputs	Fiber Optic

microSync HS

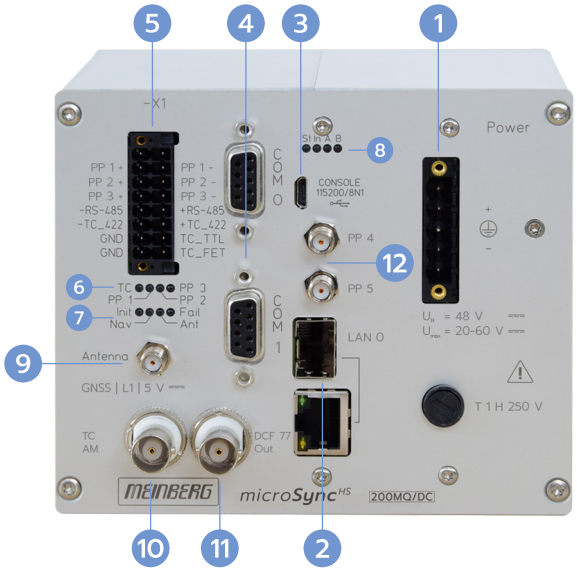
Signal	Signal Type
1x Gigabit Ethernet (GbE)	IEEE 1588, SyncE, NTP
3x ASCII Time-strings	2x RS-232, 1x RS-485
Programmable Output[3]: 3x Optocoupler	—
Programmable Output: 3x PhotoMOS (optional, replacing Optocoupler)	—
Time Code[2]	RS-422
DCF77, AM	Sine
Time Code[2], AM	Sine
Time Code[2]	TTL
2x Programmable Outputs	2.048 MHz, 10 MHz, 1PPS

[1] *Available Receiver Options*
[2] *IRIG-B, AFNOR NF S87-500, IEEE 1344, IEEE C37.118*
[3] *Programmable with: Timer Mode, Cyclic Mode, DCF77 Simulation Mode, Single Shot Mode, Pulse Per Second, Pulse Per Minute, Pulse Per Hour, Status, Time Code[3] (DCLS), Idle Mode, Frequency Synthesizer*

Socket Assignment in Comparison



1 GNSS Antenna, L1-band, SMA
2 10 MHz output, TTL, BNC
3 10 MHz output, sine, BNC
4 PPS input, TTL, BNC
5 10 MHz input, sine or TTL, BNC
6 Gigabit Ethernet (GbE), 100/1000 MBit, SFP
LAN 0, 1: NTP & Management
LAN 2, 3: PTP, NTP & Management
7 ASCII time string, RS-232, DE-9
8 Status LEDs CPU
9 Status LEDs receiver
10 Terminal, USB, micro-USB type B
11 USB Host, USB, USB type A
12 Status LEDs prog. outputs, DMC X2
13 Several outputs, DMC 16-pin male-connector
14 Prog. outputs fiber optic, ST-connector
15 Status LEDs prog. outputs, DMC X1
16 Power supply, prog. outputs optocoupler,
DMC 16-pin male-connector



1 Power supply
2 Gigabit Ethernet (GbE), 100/1000 MBit, SFP
PTP, NTP, Management
3 Terminal, USB, micro-USB type B
4 2x ASCII time string, RS-232, DE-9
5 Prog. outputs optocoupler, DMC 16-pin male-connector
6 Status LEDs prog. outputs
7 Status LEDs receiver
8 Status LEDs CPU
9 GNSS Antenna, L1-band, SMA
10 Time Code, AM, BNC
11 DCF77, AM, BNC
12 2x Prog. outputs, SMA

Protocols & Profiles

Network Protocols	▪ IPv4, IPv6 ▪ NTPv3, NTPv4 ▪ PTPv1, 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)
PTP Profiles	▪ IEEE 1588v2 Default Profile, IEEE 1588v1 (optional) ▪ IEEE C.37.238-2011 Power Profile ▪ IEEE C.37.238-2017 Power Profile ▪ IEC/IEEE 61850-9-3 Power Utility Profile ▪ Enterprise Profile ▪ ITU-T G.8265.1, ITU-T G.8275.1, ITU-T G.8275.2 Telecom Profiles ▪ SMPTE ST 2059-2 Broadcast Profile ▪ IEEE 802.1AS TSN/AVB Profile ▪ AES67 Media Profile ▪ DOCSIS 3.1

Management

User Management

The user management allows to create, manage and delete individual users. Thereby, each user can be given, or withdrawn individual write and read access for all configuration options, as well as read-only rights for status displays. Furthermore, users can be deactivated or added for a limited time. Password changes are also possible, as well as the option of periodically prompting the user to renew its password.

In addition, there are three available predefined role templates (admin, info, status) included that offer the user a preselection of access levels. Based on this, individual rights can be added or deleted. Moreover, management protocols like SNMP, Shell or mbgdevman can be enabled for each user account to limit access to the device.

Firmware Management

The integrated firmware management of meinbergOS allows to install multiple firmware versions in parallel and choose which one to run. All integrated components and modules (e.g. the GPS receiver part) can be updated with the latest firmware if required.

Meinberg Device Manager

The Meinberg Device Manager utility is a graphical desktop application that allows to configure Meinberg Devices over an encrypted network connection or a local USB or serial connection. A great advantage of the Meinberg Device Manager is that various devices can be configured and monitored simultaneously.

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