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microSync Broadcast: Compact and flexible Sync Solution for Broadcast Environments

[1]

Meinberg's microSync for broadcast applications is a powerful dual-port PTP generator, supporting SMPTE ST 2059-2 profile and offering a high level of efficiency and flexibility.

It is available in a compact, space-saving half-rack design and in a 19-inch rack-mount enclosure which additionally offers redundannt power supplies and OLED display as an option.

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. SMPTE ST 2059-2, AES67 Media and IEEE 802.1AS Profiles
- Half-Rack Option for a Space Efficient Design
- Different oscillator options for advanced holdover performance
- Option: OLED display with rotary knob for initial setup (RX models only)
- Video-Sync Generator and Video Input References (Black Burst, LTC and Word Clock)

Description

This innovative, multipurpose synchronization solution offers a variety of outstanding features, many of which are also found in Meinberg's IMS and LANTIME product families.

Key features include a GNSS receiver, two PTP ports, two Management/NTP ports, Black Burst, LTC, Word Clock, DARS and many other sync pulses available as input or output. The microSync Broadcast variants combine a modern sync reference for IP based devices and a Signal Pulse Generator for legacy video and audio devices.

The half-rack microSyncHR (7xx) model impresses with its compact design and high port density and is a perfect solution for smaller broadcast environments like OB vans or remote production use cases. The 19-inch rackmount microSyncRX (7xx/8xx) model additionally offers redundant power supplies and OLED display as an option.

The units run the operating system meinbergOS and can be managed using the Meinberg Device Manager software, which is available for Windows and Linux platforms.

For further information, please check out our datasheets:

Datasheet microSyncRX Broadcast (PDF)

Datasheet microSyncHR Broadcast (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)
Display	**OLED display option** **Functions** (system administration): * IP address * Subnet * Gateway * DHCP **Indication:** * Time and date * Status of synchronization source: * Firmware version * Model and serial number

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)
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	Output Signals **Black Burst Output** Output signal: PAL, NTSC Black Burst with VITC support Signal level: 300 mVpp into 75 Ohm (unbalanced) * PAL (SMPTE259M/ITU-R BT.470-6) * NTSC (SMPTE170M/ITU-R BT.470-7) * VITC (SMPTE12M-1/SMPTE ST309M) **Tri-Level Sync:** * 720p50 Hz (SMPTE296M3) * 1080i25 Hz (SMPTE274M6) * 720p59,94 Hz (SMPTE296M1) * 1080i29,97 Hz (SMPTE274M7)

DARS Output

Output signal: DARS
Signal level: TTL, 2.5 Vpp into 75 Ohm
Signal type: base frequencies - 44.1 kHz and 48 kHz

Word Clock Output

Output signal: Word Clock
Signal level: TTL, 2,5 Vpp into 75 Ohm
Base frequencies: 44.1 kHz and 48 kHz
Frequency range (44.1 kHz): 1.378125 kHz ... 1.4112 MHz
Frequency range (48 kHz): 1.5 kHz ... 1.536 MHz
Scale factor: 1/32, 1/16, 1/8, 1/4, 1/2, 1, 2, 4, 8, 16, 32 Input Signals

Black Burst Input

Input signal: Black Burst (PAL)
Input with VITC Reader
Input with Prescaler mode (Frequency only)

Signal level: 300 mVpp into 75 Ohm (unbalanced)
Time Code Formats: PAL SMPTE259M / ITU-R BT.470-6 SMPTE12M-1 / SMPTE ST309M

Word Clock Input

Input signal: Word Clock Input with programmable frequency range
Signal level: TTL
Frequency range: 1 kHz - 10 MHz

Pulse Per Second Input

Input signal PPS (pulse per second)
Signal level: TTL
Pulse lenght: >= 5 microsec, active high

GPIO (General Purpose Input/Output)	**GPIO / LTC** Input signal: LTC Reader (25 fps) Output signals: LTC Out, DARS Out, Time Sync Out Signal level: TTL, 2,5 Vpp (MARK/SPACE) into 50 Ohm
Oscillator Options	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	**microsyncHR** Pmax = 30 W **microsyncRX** Pmax = 100 W (redundant operation)

Operating Voltage	**Maximum voltage range:** microSyncRX AC / DC: 90-265 V AC, 47-63 Hz / 90-250 V DC DC: 20-60 V DC microSyncHR DC: 10-36 V DC
Form Factor	Housing Type: 19", 1HE 482,6 mm x 248 mm x 43 mm /19 inch x 9.76 inch x 1.69 inch (widthx depth x height) Material: Steel
Atmospheric Pressure	615 to 1600 hPa
Operating Altitude	Up to 4000 m (13,123 ft) above sea level
Protection	IP30
Supported Temperature	0 °C to 50 °C (32 °F to 122 °F) (operation)
Storage Temperature	-20 to 70 °C (-4 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. The microSyncHR system is supplied with a power adapter (input voltage range 90 - 264 V AC, output voltage 24 V DC).
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