Meinberg Radio Clocks
Lange Wand 9
31812 Bad Pyrmont, Germany
Phone: +49 (5281) 9309-0
Fax: +49 (5281) 9309-30
https://www.meinbergglobal.com
info@meinberg.de

IMS-GLN Clock: Clock Module with combined GPS/GLONASS Satellite Receiver

Central clock module for the Meinberg IMS platform. The GPS/GLONASS receiver can use an externally connected antenna to receive both GPS and GLONASS satellite signals, decode them and use them as a reference source for the integrated, oscillator-based hardware clock. In addition to synchronizing with the GPS/GLONASS satellite system, the IMS-GLN clock module accepts a wide range on input references when combined with IMS input cards (MRS - Multi Reference Source).

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This product is no longer available and may have been replaced by a newer product.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

- Pulses per second and per minute
- RS-232 interface
- Combined GPS/GLONASS receiver

Description

The IMS-GLN module can be installed in any Clock slot of your IMS system. It is capable of using all the various IMS reference sources, either by adding an MRI or ESI compatible input card or by using the network connection of the CPU to synchronize to an external NTP server. The Meinberg MRS concept supports setting up a prioritized list of input sources that are used to synchronize the internal hardware clock of the IMS-GLN and then generate a large number of different output signals used by IMS I/O compatible cards to provide a user-defined selection of synchronization output signals by adding BPE, CPE or other IMS modules.

By combining the IMS-GLN module with another Clock module and an RSC switch card, a fully redundant synchronization solution can be created.

The integrated GNSS receiver requires an external antenna. It can be configured to only use GPS, only use GLONASS or use both signals in parallel. The receiver is capable of operating during high speed movement and delivers reliable and highly precise synchronization solutions in stationary installations and on fast moving vehicles, such as aircraft, ships or trucks. The signals generated by the CLK module can be used by adding BPE output cards which take the module's signals and make them accessible for the user on a front end. The various front end options offer all kinds of different electrical or optical interfaces. A CPE module will take the signals provided by the CLK module and convert them into other electrical or optical synchronization signals.

The IMS-GLN module is hot-swappabel and is automatically detected by the management CPU of an IMS system.

Characteristics

Receiver	Combined GPS / GLONASS receiver Number of channels: 32 Frequency band: GPS L1 / GLONASS L1 1575.42 ± 10 MHz / 1602-1615 MHz Antenna connector: female SMA connector
Status Indicators	**Status info by 4 LED light indicators (2mm light pipes)** * Init - blue: while the receiver passes through the initialization phase * Nav Solved - green: positioning successfully * Ant Fail - red: antenna faulty or not connected * Fail - red: time is not synchronized
Type of Antenna	**40 dB GPS L1/GLONASS L1** Antenna with Integrated Lightning Protection * Frequency Band: 1575.42 ± 10 MHz / 1602-1615 MHz * Antenna Gain:

Synchronization Time	Max. 1 minute in normal operating conditions Max. 25 minutes (average 12 minutes) upon first initialization or in the absence of saved satellite data
Frequency Outputs	
Pulse Outputs	Pulse per second (PPS) and pulse per minute (PPM). TTL level, pulse width: 200 msec
Accuracy of Pulse Outputs	Depends on oscillator option: < ±50ns (OCXO SQ, OCXO MQ, OCXO HQ, OCXO DHQ, Rubidium)
Interface	Single serial RS-232 interface
Serial Time String Output	Baud Rates: 300, 600, 1200, 2400, 4800, 9600, 19200 Baud Framing: 7E1, 7E2, 7N2, 7O1, 7O2, 8E1, 8N1, 8N2, 8O1 Time String Formats: [3]Meinberg Standard Time String , SAT, Uni Erlangen (NTP), SPA, Sysplex, RACAL, NMEA0183 (RMC,GGA,ZDA), Meinberg GPS, COMPUTIME, ION, [4]Capture String
Switch outputs	**Optional:** Four TTL outputs can configured independently for the following modes: - free programmable cyclic or fixed impulses - timecode - timer mode; three 'ON'- and three 'OFF'-states can be setup per day The switch states can be inverted for all three outputs, the impulse lengths are configurable in 10msec steps in a range from 10msec to 10sec. The impulse output can be configured for all channels together to 'always' or 'ifsync'.
Supported Timecode Formats	**IRIG B002:** 100pps, DCLS signal, no carrier, BCD time-of-year **IRIG B122:** 100pps, AM sine wave signal, 1 kHz carrier, BCD time-of-year **IRIG B003:** 100pps, DCLS signal, no carrier, BCD time-of-year, SBS time-of-day **IRIG B123:** 100pps, AM sine wave signal, 1kHz carrier, BCD time-of-year, SBS time-of-day **IRIG B006:** 100 pps, DCLS Signal, no carrier, BCD time-of-year, year **IRIG B126:** 100 pps, AM sine wave signal, 1 kHz carrier frequency, BCD time-of-year, Year **IRIG B007:** 100 pps, DCLS Signal, no carrier, BCD time-of-year, year, SBS time-of-day **IRIG B127:** 100 pps, AM sine wave signal, 1 kHz carrier frequency, BCD time-of-year, year, SBS time-of-day **IEEE1344:** Code according to IEEE1344-1995, 100pps, AM sine-wave signal, 1kHz carrier, BCD time-of-year, SBS time-of-day, IEEE1344 expansion for date, time zone, daylight saving and leap second in Control Functions segment **C37.118:** Like IEEE1344 - with inverted sign bit for UTC offset **AFNOR:** Code according to NFS-87500, 100pps, AM sine-wave signal, 1kHz carrier, BCD time-of-year, complete date, SBS time-of-day
Electrical Connectors	96-pin DIN 41612 connector
Backup Battery Type	**CR2032 (lithium button cell)** In the event of loss of power to the main system, this battery powers the real-time clock and also ensures that GNSS almanac data is properly buffered in RAM. Lifetime of lithium battery: Min. 10 years

Cable Type	Coaxial cable Belden H155 indoor or outdoor usage Maximum length of antenna cable: 70 meters
Operating Voltage	+5 V DC
Current Draw	+5 V 1,1 A to 1,4 A (depends on oscillator option)
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
Options	Synthesizer 1/8 Hz up to 10 MHz (TTL level, sine wave 1.5Veff, open drain) 4 programmable TTL outputs and timecode generator (IRIG-B, AFNOR)
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.: [5]Contact us

Links:

[1] mailto:sales@meinberg.de

[2] https://www.meinbergglobal.com/english/products/ims-gns-receiver.htm

[3] https://www.meinbergglobal.com/english/specs/timestr.htm

[4] https://www.meinbergglobal.com/english/specs/capstr.htm

[5] mailto:info@meinberg.de