



Meinberg Radio Clocks

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LIU: Line Interface Unit

Generation of reference clocks for synchronization tasks

Key Features

- Standard frequency outputs
- Synchronization of telecom networks
- Synchronization of transmitters/base stations (GSM/CDMA/UMTS/DAB/DVB)
- Synchronization/calibration of laboratory equipment
- *Unframed* und *Framed* telecom outputs
- Reference frequency delivered by preconnected GPS-receiver GPS167/GPS167SV

Description

The module LIU (**L**ine **I**nterface **U**nit) generates different reference clock pulses which are derived from the GPS-locked master oscillator of a preconnected GPS clock. The output signals are available with high accuracy and stability therefore.

Characteristics

Control elements	E1- or T1-generator, settable by DIL-switch or control input
Frequency outputs	1 x 5 MHz sinewave and 1 x 10 MHz sinewave, 0.6 Vrms into 50 Ohm, unbalanced
Accuracy of frequency outputs	The accuracy of the generated output signals depends on the master oscillator of the preconnected GPS-satellite controlled clock. The following options are available: Option Short term stability with GPS-synchronization OCXO MQ $\pm 2 \cdot 10^{-10}$ OCXO HQ $\pm 5 \cdot 10^{-12}$ Rubidium $\pm 2 \cdot 10^{-12}$
Interface	Unframed Outputs: 2 x 2.048 MHz (E1-mode) or 1.544 MHz (T1-mode), G.703, 75 Ohm, unbalanced 2 x 2.048 MHz (E1-mode) or 1.544 MHz (T1-mode), G.703, 120 Ohm, balanced Framed Outputs: 1 x 2.048 Mbps (E1-mode) or 1.544 Mbps (T1-mode), 75 Ohm, unbalanced 1 x 2.048 Mbps (E1-mode) or 1.544 Mbps (T1-mode), 120 Ohm, balanced Output pulses according to G.703 (E1-mode) or T1.403 (T1-mode) (T1-Mode) Line Coding HDB3 (E1-mode) or B8ZS (T1-mode)
Dimensions of the front panel	14HP/3U (70mm x 128mm)
Electrical connectors	64 pin rear VG edge connector DIN 41612 Female BNC-connectors for unbalanced outputs BNC-Twinax-connectors for balanced outputs
Current consumption	ca. 470mA
Board type	Eurocard
Board dimensions	160mm x 100mm , 1,5mm Epoxy
Power supply	+5V DC
Ambient temperature	0 ... 50°C / 32 ... 122°F
Humidity	Max. 85%
RoHS-Status of the product	This product is fully RoHS compliant
WEEE status of the product	This product is handled as a B2B category product. In order to secure a WEEE compliant waste disposal it has to be returned to the manufacturer. Any transportation expenses for returning this product (at its end of life) have to be incurred by the end user, whereas Meinberg will bear the costs for the waste disposal itself.

Manual

The english manual is available as a PDF file: [1][Download \(PDF\)](#)

Links:

[1] <http://www.meinberg.de/download/docs/manuals/english/liu.pdf>