



Meinberg Radio Clocks

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LNO180: 10 MHz sine output module

The LNO180 is a 10 MHz generator card, which provides sine signals with low phase noise to 4 external outputs. The card has a microprocessor system, which monitors the output signals and generates status signals for the upper-level management system accordingly. It may be preferably used in our modular M900 timeserver platform and GPS based 3U housing but can also be applied in older systems without management functions.

Key Features

- Four sine wave outputs with 5dBm output level
- Four LEDs: Signal status at corresponding output
- Input: 10 MHz, sine (1Vpp min.) or TTL

Description

Function operation

The card has a high quality oscillator, which is locked to an external 10 MHz signal. The microprocessor monitors the lock status of the PLL and the warm up phase of the oscillator. It activates the outputs only after the phase is locked. This condition is signaled by all LEDs switched from green to red. In the phase locked state the output levels of the four outputs are monitored and in case of a failure signaled by an associated red LED.

The function of the LEDs is as follows:

- * All LEDs red: outputs disabled
- * PLL not locked, OCXO in warm up phase
- * 10 MHz reference not available
- * Quality of the reference signal is not sufficient

- * All LEDs green: normal operation, outputs activated
- * Associated LED red: defect output or short circuit during normal operation

Characteristics

Status Indicators	All LEDs red: outputs disabled All LEDs green: normal operation, outputs activated Associated LED red: defect output or short circuit during normal operation
Frequency input	10 MHz, sine (1Vpp min.) or TTL
Interface	4 sine outputs 10 MHz Output level: 5 dBm +/- 1 dBm into 50 ohm Option: LNO-8dB with 8 dBm output level LNO-12dB with 12 dBm output level
Dimensions of the front panel	4HP/3U (20mm x 128mm)
Electrical Connectors	Rear VG edge connector DIN 41612, type C 96-pins, rows a + b + c BNC connectors
Quartz Filter	Bandwidth 1 kHz
Operating Voltage	5 dBm: +5 V @ 550 mA (steady state), +5V @670 mA (warm-Up) 8 dBm: +5 V @ 720 mA (steady state), +5 V @ 640 mA (warm up) 12 dBm +5 V @ 970 mA (steady state), + 5V @ 620 mA (warm up)
Board type	Eurocard
Board Dimensions	160 mm x 100 mm, 1,5 mm Epoxy
Supported Temperature	0 to 65 °C / 32 to 149 °F
Supported Humidity	Max. 85 % (non-condensing) at 40 °C
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.: [1][Contact us](#)

Links:

[1] <mailto:info@meinberg.de>