



Meinberg Radio Clocks

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TCR511: IRIG Time Code Receiver

The TCR511 is synchronized by modulated (DC Level Shift) and unmodulated (AM) IRIG and AFNOR time code signals and can be integrated in industrial systems that require high-accurate time and/or frequency synchronization.

Key Features

- 2 RS232 interfaces
- Status LED
- DCF77-simulation
- Reception of time code formats IRIG-A/B or AFNOR NFS 87-500

Description

The TCR511 has been optimized for reception of IRIG code formats A133 and B123, as well as the translation of these received IRIG codes into a serial telegram and a pulse telegram (representing the signal broadcasted by the German time code transmitter DCF77). The TCR511 can perform a re-calculation of UTC based on the IRIG time. A buffered real time clock maintains time and date while the power supply is not available. The receiver's automatic gain control function (AGC) allows the reception of IRIG signals within an amplitude range from 600mV to 8V (peak to peak). The board uses a flash memory and a bootstrap loader which allows to update the systems firmware via its serial port.

Characteristics

Frequency outputs	10 MHz, 1 MHz, 100 kHz (TTL level) Accuracy referred to Reference : 1×10^{-8} (TCXO) if synchronized for more than 24hours
Pulse outputs	Pulse per second and pulse per minute (TTL level), pulse width: 200 msec
Precision of timebase	+/-10us referred to reference marker in synchronous mode
Interface	two independent RS232 ports COM0 and COM1 (COM1 RS485 optionally).
Data format of interfaces	Baudrates: 9600, 19200, Framing: 7E2 or 8N1 Modes: Telegram per second or on request. Telegram: 32-Bytes ASCII with time and date information
Input signal	modulated time code signal, input insulated by transformer, terminated in 50Ω; / 600Ω; / 5kΩ; jumper selectable unmodulated (DC level shift) time code,
Input time codes	IRIG-A133, A132, A003, A002, B123, B122, B003, B002 and AFNOR NFS 87-500 (other codes on request)
Dimensions of the front panel	4HP/3U (20mm x 128mm)
Electrical connectors	64-pin rear VG edge connector DIN 41612 SMB male connector
Current consumption	250mA/600mA (TCXO / OCXO)
Backup battery type	When main power supply fails, hardware clock runs free on quartz basis, life time of lithium battery min. 10 years
Board type	Eurocard
Board dimensions	160mm x 100mm , 1,5mm Epoxy
Power supply	+5V DC
Power consumption	1,2W / 3W (TCXO / OCXO)
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/tcr511.pdf>