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TCR510: IRIG Time Code Receiver

The TCR510 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.

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This product is no longer available and may have been replaced by a newer product.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

- 2 RS-232 interfaces
- Status LED
- DCF77-simulation
- Reception of time code formats IRIG-A/B or AFNOR NFS 87-500

Description

The TCR510 has been designed for the reception of the IRIG code formats A133 and B123, as well as the translation of these received IRIG codes into a serial telegram and a pulse telegram as broadcasted by the German time code transmitter DCF77. TCR510 can perform a re-calculation of UTC from IRIG time. A buffered real time clock keeps time and date after power down. The receiver's automatic gain control (AGC) allows the reception of IRIG signals within an amplitude range from 600mV to 8V (peak to peak). The board is equipped with a flash memory and a bootstrap loader which allows to update the systems firmware via serial port.

Characteristics

Input signal	modulated time code signal, input insulated by transformer, terminated in 50Ω / 600Ω / 5kΩ jumper selectable unmodulated (DC level shift) time code,
IRIG Time Code Input	IRIG-A133, A132, A003, A002, B123, B122, B003, B002 and AFNOR NFS 87-500 (other codes on request)
Frequency Outputs	10 MHz, 1 MHz, 100 kHz (TTL level) Accuracy referred to Reference : 1 x 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).
Serial Time String Output	Baudrates: 9600, 19200, Framing: 7E2 or 8N1 Modes: Telegram per second or on request. Telegram: 32-Bytes ASCII with time and date information
Dimensions of the front panel	4HP/3U (20mm x 128mm)
Electrical Connectors	64-pin rear VG edge connector DIN 41612 SMB male connector
Power Consumption	1,2W / 3W (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
Operating Voltage	+5 V DC
Current Draw	250mA/600mA (TCXO / OCXO)
Board type	Eurocard
Board Dimensions	160 mm x 100 mm, 1,5 mm Epoxy

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
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

The English manual is available as a PDF file: [3]Download (PDF)

Links:

[1] mailto:sales@meinberg.de
[2] https://www.meinbergglobal.com/english/products/tcr180.htm
[3] https://www.meinbergglobal.com/download/docs/manuals/english/tcr510.pdf