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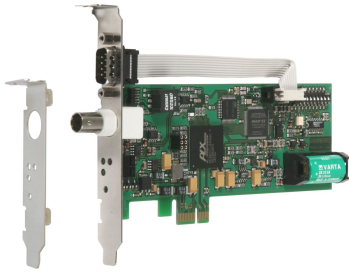31812 Bad Pyrmont, Germany
Phone: +49 (5281) 9309-0
Fax: +49 (5281) 9309-30
http://www.meinberg.de
info@meinberg.de

TCR511PEX: IRIG Time Code Receiver for Computers (PCI Express)

Reception of IRIG-A/B or AFNOR time codes for synchronization of computers and networks in PCI Express form factor, can be used in both low profile and regular PCIe slots.

Key Features

- PCI Express Interface
- Plug and play
- Pulses per second and per minute
- Periodic interrupts
- RS232 interface
- Status LEDs
- Buffered hardware clock
- Reception of time code formats IRIG A/B or AFNOR
- Configurabel time zone
- Driver software for all popular operating systems

Description

The board TCR511PEX has been designed to receive different IRIG-A/B and AFNOR codes. The decoded date and time can be read via the PCI Express interface and is also transmitted via the board's RS-232 port. The receiver's automatic gain control (AGC) allows the reception of modulated IRIG signals within an amplitude range from 600mVpp to 8Vpp. In addition, the TCR511PEX provides an optocoupler input for decoding unmodulated codes with TTL- or RS485-level for example. A buffered real time clock keeps time and date after power down.

The module is designed as a x1-board (single lane) in "low profile" format. It is equipped with a standard height bracket with integrated D-Sub connector making the serial interface, the input for unmodulated IRIG codes, the pulses per second and the pulse per minute available. For installation in a "low profile" computer, an adequate bracket can be mounted that is included in delivery. The D-Sub connector is only available when using an additional bracket in this case.

The drivers package for **Windows** contains a time adjustment service which runs in the background and adjusts the Windows system time continously and smoothly. A monitor program is also included which lets the user check the status of the device and the time adjustment service, and can be used to modify configurable parameters.

The driver package for **Linux** contains a kernel driver which allows the board to be used as a reference time source for the NTP daemon which is shipped with most Linux distributions. This also turns the computer into a NTP time server which can also provide accurate time to other NTP clients on the network. Some command line tools can be used to setup configurable parameters and monitor the status of the board.

Additional drivers packages are available for **DOS**, **Novell NetWare**, and **OS/2**. At the bottom of this page there's a link to the download area.

The device's serial port can be used to update the card's firmware. Additionally it can be connected to the serial port of a computer to use the card as reference time source under operating systems where a serial time string is supported, e.g. by NTP, but no kernel device driver is available.

Characteristics

Status info	3 status LEDs for indication of: detection of a correct code, synchronization of the internal timing and holdover mode
Accuracy free run	±1·10E-6 if the decoder was synchronous for at least 1 h
Pulse outputs	Pulses per second (RS232/TTL level) and per minute (TTL level), pulse duration: 200 msec, active high (only available with "standard height" bracket or with additional "low profile" bracket).
Precision of timebase	±5 µsec referred to IRIG-reference marker
Interface	One serial RS232 interface (only available with "standard height" bracket or with additional "low profile" bracket).
Data format PC interface	[1]Binary, byte serial
Data format of interfaces	Baudrate: 300, 600, 1200, 2400, 4800, 9600, 19200, 38400 baud Framing: 7E2, 8N1, 8E1, 8N2 Output string: 32 ASCII characters with date, time and status information
Statusbyte	Information about holdover mode, synchronization since last reset and the validity of the RTC data.
Input signal	Modulated IRIG A/B or AFNOR signal, input insulated by transformer, input impedance selectable by jumper: 50, 600 or 5000 ohm unmodulated (DC level shift) IRIG A/B or AFNOR signal, input insulated by photocoupler (DC level shift only available with "standard height" bracket or with additional "low profile" bracket).
Input time codes	IRIG-A133, A132, A003, A002, B123, B122, B003, B002 and AFNOR NFS 87-500 (other codes on request)
Electrical connectors	BNC female connector 9 pin sub D male connector (only available with "standard height" bracket or with additional "low profile" bracket)
Computer interface	Single lane (x1) PCI Express (PCIe) Interface PCI Express r1.0a compatible
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	Low profile board (68,90 x 150 mm)
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

There is no online manual available for this product: [2]Contact us

Links:

[1] http://www.meinberg.de/english/products/../specs/timepack.htm
[2] mailto:info@meinberg.de