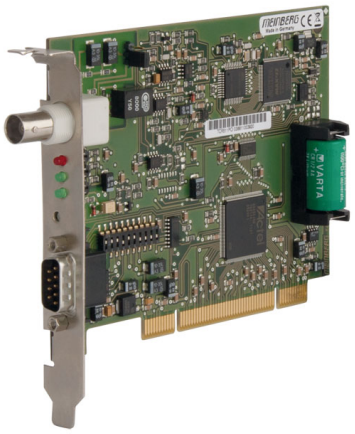

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TCR511PCI: IRIG Time Code Receiver for Computers (PCI/PCI-X bus)

The TCR511PCI receivesIRIG-A/B or AFNOR time codes and uses them to synchronize the system time of the host PC. The easy-to-use Meinberg API enables you to access this stable and accurate time base and its status information from within your own applications.

Key Features

- PCI LOCAL BUS interface,
  3.3V or 5V, 33MHz or 66MHz,
  PCI-X compatible
- Plug and play
- RS232 interface
- Status LEDs
- Reception of time code formats IRIG A/B or AFNOR
- Configurabel time zone
- Driver software for all popular operating systems

Description

The board TCR511PCI has been designed to receive different IRIG-A/B and AFNOR codes. The decoded date and time can be read via the PCI/PCI-X bus 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 TCR511PCI 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.

If you are going to use the TCR511PCI in your own applications, please ask for our sample application which shows how to access the card from within your software.

All drivers and the API sample sourcecode can be downloaded free of charges from our website and we are happy to assist you if you face any difficulties in using the Meinberg driver API in your software development process.

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
Input signal	Modulated IRIG A/B or AFNOR signal, input insulated by transformer, input impedance 600 ohm (optional 50 ohm) unmodulated (DC level shift) IRIG A/B or AFNOR signal, input insulated by photocoupler
Accuracy free run	±1·10E-6 if the decoder was synchronous for at least 1 h
IRIG Time Code Input	IRIG-A133, A132, A003, A002, B123, B122, B003, B002 and AFNOR NFS 87-500 (other codes on request)
Pulse outputs	Pulses per second (RS232/TTL level) and per minute (TTL level), pulse duration 200 msec
Precision of timebase	±5 µsec referred to IRIG-reference marker
Interface	Single serial RS232 interface
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.
Electrical connectors	9 pin sub D male connector BNC female connector
Computer interface	33MHz- or 66MHz-PCI BUS (PCI-X) 32 Bit/3.3V or 5V card slot
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	PCI card short
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: [2]Download (PDF)

Links:

[1] http://www.meinberg.de/english/specs/timepack.htm
[2] http://www.meinberg.de/download/docs/manuals/english/tcr511pci.pdf