SR1602B

IRIGB reader board for PCI bus

Functions

- This board is compliant with PC-PCI 33 MHz standard and works as a decoder of IRIGB UT time code signal.
- One PCI slot is needed.
- One BNC connector is used for time signal input and one Sub'D female 9 pins connector provides the 1 PPS (pulse per second) signal. This connector also provide and input for external signal dating.

FRAME DECODING

- Time informations extracted from the time frame are recorded in a double access memory which could be read from the PC bus by the processor.
- The board is compliant with IRIGB, AFNOR and IEEE1344 standards. On request specific time format for countdown, H0 or other could be taken into account as board options.

RESOLUTION

- Thanks to a PLL disciplined on the IRIGB input signal the board provide 1µs resolution.

INFORMATIONS READING

- Time informations could be read "on fly" at any time. When accessing the first address all the information is frozen in order to guaranty the consistency of the time message. At the end of access, the information is automatically updated for a new reading (µs reading).

PERIODIC INTERRUPTION

- On request a cyclic programmable interruption from 1/10 s to 9999 s is generated for applications clocking.

LEAP YEAR MANAGEMENT

- As standard UT IRIGB frames dont holds the year information, it's necessary to make the correction for leap years. The selection normal year/leap year is infered from the « year » information programmed in the corresponding register. From this initial information, the board manages automatically the change-over from one year to the next year. With AFNOR or IEEE1344 format the year information is directly extracted of the frame.

SOFTWARE

- The board runs with Windows and Linux OS.

Under Windows, the board is delivered with two softwares :

- A DLL allowing access to the board informations (decoded UT and board initialization procedure in case of UT code absence). This DLL could be linked with a user's application.
- An utility software using the DLL in order to keep the PC time on time. This utility is only available with Windows.

For Linux, the driver sources are delivered for the 2.6 kernel 32 or 64 bits. Example applications are also provided for illustrate the different call functions of the driver.

The board as been tested with Mandriva 2008 and RedHat EL5 environment.

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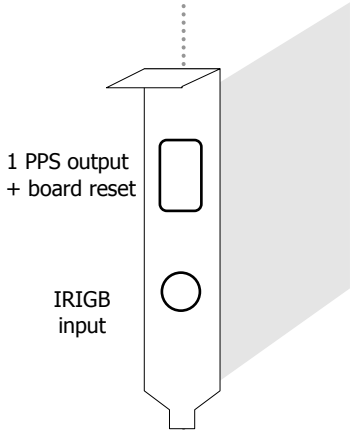
Characteristics

- Time signal input: sine signal, 1 KHz amplitude modulated 1/3, 1/1 - Level 0.5 to 6 V peak-peak , isolated - Impedance 600 Ω.
- Time code: compliant IRIG B12x (x=0 to 3) according to IRIG STANDARD 200-98, AFNOR and IEEE1344
- Specific time code: on request. Pseudo IRIG B TD (countdown), TU+TD (composite), H0.
- Informations : the board has registers wich allows direct access to time information « on fly » and also to programm the operrating modes of the board.
- Output synchro : 1 pps TTL level or RS422
- Event dating input : 1 input, TTL or RS422 level. µs dating of the rising and descending front. Programmable interrupt generated on the rising (or descending) front.
- Periodic programmable interrupt: 1/10 s to 9999 s with 1/10s steps.
- Leap years : Automatic management from « initial year » programmed by the application software.
- Dimensions : PCI board with 32 bits bus connector, H = 100 mm, Depth = 175 mm.
- Weight : 0.3 Kg
- Operating temperature : -40°C/+70°C
- Consumption : 2 W
- MTBF = 110 000 h



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