

SR1601

IRIG B Time code reader board. PC/ISA bus

Features

- This PC-ISA board bus decode the time signal coded with IRIG B UT format
- The board uses a 8 bits ISA slot.
- The input time signal uses an isolated BNC connector.
- A Sub'D 9 pins female connector provide the 1 PPS signal. An external reset input is also provided on this connector.

FRAMES DECODING

- The time information's extracting from the time frame are saved in a dual access memory. The processor uses the PC bus in order to read this memory.

RESOLUTION

- By mean of a PLL disciplined on the input IRIG B signal the board offers a 100 μ s resolution .

INFORMATIONS READINGS

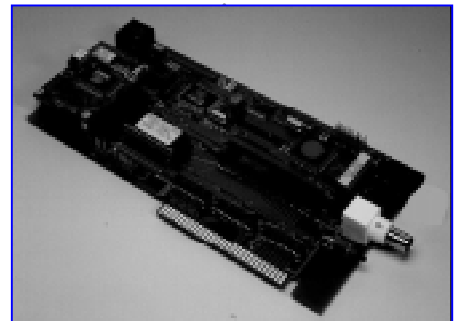
- Time information's could be red « on fly » at any time. A dedicated algorithm froze all the information when the first address is accessed. Information is automatically updated for a new reading since the access end (1/10 ms reading).

ONE SECOND INTERRUPTION

- On request, the board issues every second, a cyclic interruption in order to inform the system master on the availability of the new data's.

LEAP YEARS MANAGEMENT

- The leap year correction is due to the fact that IRIG B UT frames don't include year information. The leap year selection results from the year information coded in the dedicated register. On the basis of this initial information, the board manage automatically the change from one year to the next.



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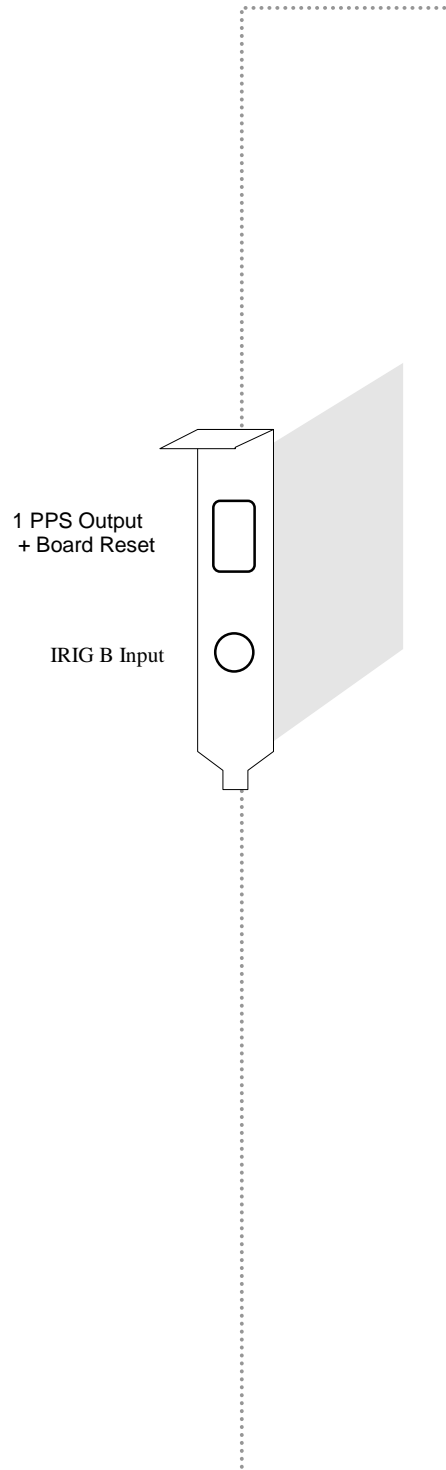
Specifications

- Time signal input : 1 kHz sine signal, amplitude modulated 1/3, 1/1 – Level 0.3 to 6V peak-peak – Transformer isolated – 600 Ω impedance.
- Time Code : IRIG UT
- ISA Bus : Programmable address in the input/output space from : 100_{Hex} to 3C0_{Hex}.
- Information's : 32 byte memory space are allocated to the board. This memory allows time information access and programming of working modes :

Address	Reading	Writing
Base + 0	State register	Control register
Base + 1	Seconds	Seconds
Base + 2	Minutes	Minutes
Base + 3	Hours	Hours
Base + 4	Day (Day of the year)	Day (Day of the year)
Base + 5	Hundreds of days	Hundred of days
Base + 6	Year	Year
Base + 7	Centuries	Centuries
Base + 16	ms & 1/10 ms	Ms & 1/10 ms
Base + 17	Hundred & tens ms	

Data coded in BCD format.

- Periodic interrupt : once per second, software enable/disable. The interrupt level is set by jumper from IRQ2 to IRQ7. Precision : ±50 μs with regard of the « second » reference of the time code.
- Synch output : 1 PPS, TTL level
- Leap year: Automatic management using the « initial year » information coded by the application software.
- Dimensions : ISA board with 8 bits bus connector, H = 100 mm, W = 175 mm.
- Weight : 0.3 Kg
- Consumption : 2 W
- Dependability : MTBF = 110 000 h



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