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Find the *Microsemi / Symmetricom / Datum bc630AT* at our website: ***Click HERE***

Features

PC, XT or AT Bus Operation (ISA/EISA Compatible)
Microsecond Resolution Clock
External Synchronization:
- 1, 5, or 10 MHz
- Digital Synchronization Signals
- IRIG B, NASA or 2137 Time Code

RS-422 and PDC Time Broadcast
Programmable Heartbeat/Interrupt
External Event Time Capture/Interrupt
Battery Backed Clock
Programmable Propagation Delay Compensation
Supplied with Free Windows Driver

PC Real Time Clock



Overview

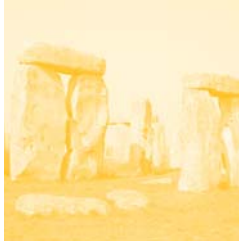
The bc630AT offers a means of synchronizing computers to a common time source with micro-second precision. Computer to computer synchronization is generally achieved by using the bc630AT's digital synchronization signals, although time code signals can also be used. If the time source is lost, the module will continue to maintain time (flywheel). If power is lost, a 10 PPM battery backed clock is available to maintain time.

Since the board is installed inside a host AT or XT computer, it has full access to the PCbus interrupts and data transfer capability. Interrupts can be enabled to occur in response to a time data request, programmable heartbeat, or receipt of an Event Time Capture pulse. Time data is transferred with less than 150 microsecond access latency. Optional software development kits are available for Windows 95/98/NT/2000.

The bc630AT Real Time Clock module maintains time with microsecond precision. Initial time can be loaded via the bus interface registers or acquired from the chosen external time source. Microseconds through days time data can be accessed via the bus interface. In addition, major time (seconds through days) is broadcast once per second from the Peripheral Data Connector (PDC).

When using external time codes from a remote source, the distance of the bc630AT from the source introduces a propagation delay error due to cable delays. The time and pulse rate outputs of the bc630AT can be adjusted in 0.5 microsecond steps to compensate for this propagation error.

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Model bc630AT

BUS LEVEL PRODUCTS

VME, VXI, PCI, PC/AT/XT, Sbus, SBX

Specifications

Real Time Clock

Bus Request Resolution	1 microsecond
Bus Request Latency	<150 microseconds
Flywheel Accuracy	5 ppm per day

Battery Backed Clock

Format	24 hour
Accuracy	±10 ppm per day

Time Code Input

Time Code Formats	IRIG B, NASA 36, 2137 (modulated or DCLS)
Modulation Ratio	3:1 to 6:1
Input Amplitude	0.5 to 5.0 V P-P
Input Impedance	>10KΩ (AC coupled)
Carrier Frequency	Carrier ±2%

Timing Functions

Heartbeat (TTL, 50Ω)	Programmable periodic 1 Hz to 2 kHz
Event Capture Input (TTL)	1 microsecond resolution 150 microsecond latency
RS422 Input/Output	1 PPS (+), 1 PPS (-), positive edge on-time; TX/RX (+), TX/RX (-), 9600 Baud TX (-) compatible with most RS232 ports
Timing Outputs:	1 PPS Major time from PDC (D,H,M,S)

Propagation Delay Compensation

Up to 1 millisecond in steps of 0.5 microsecond

AT Bus

Address Space	1 block of 16 bytes in the PC I/O map
Range	100H - 3FFH, AT computer 200H - 3FFH, XT computer
Data Transfer	8-bit
Interrupts	IRQ 3-7, 9-12, 14-15 (jumper selectable)
Power	+5 VDC @ 0.5 A

Environment

Temperature:	
Operating	0° to 70° C
Storage	-50° to 125° C
Humidity:	
Operating	10% to 80% (without condensation)
Storage	5% to 95% (without condensation)

Software Support

'C' Demo Program	Free, supplied on CD
Windows Driver	Free, supplied on CD
LabVIEW Driver	Free, supplied on CD

Consult factory for other drivers

Connector Types

Module I/O Signals	15-pin 'DS'
PDC Signals	20-pin header connector
Serial Port	RJ11
Jumper Selectable I/O	BNC

Options

IRIG A Decoding
'D' Connector to BNC Adapter
Isolation Transformer Time Code Input
WINSDK for Windows 95/98/NT/2000
LabVIEW

Specifications subject to change without notice.

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We buy equipment

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