DALLAS SEMICONDUCTOR

Real-Time Clocks and Elapsed Time Counters with Serial Interfaces

Serial interface clocks provide 4-, 3-, or 2-wire solutions for systems requiring small real time clocks.

Real-Time Clocks

Mfr.'s Type	No. of Pins	Package*	Description
DS1302	8	DIP	RTC, 3-wire Interface, 31 Bytes RAM, Trickle Charger
DS1305	16	DIP	RTC, 3-, 4-wire Interface, 96 Bytes RAM, Trickle Charger, 2 Time-of-Day Alarms
DS1305E	20	TSSOP	RTC, 3-, 4-wire Interface, 96 Bytes RAM, Trickle Charger, 2 Time-of-Day Alarms
DS1307	8	DIP	RTC, 2-wire Interface, 56 Bytes RAM
DS1603	7	SIP Mod.	2 Counters, 3-wire Interface
DS1670E	20	TSSOP	RTC, 3-wire Interface, CPU Reset, Watchdog, NV RAM Control, Time-of-Day Alarm, 8-Bit A/D, 3 V

Real-Time Clocks with Bytewide Interface

Bytewide interface clocks provide additional general-purpose RAM. Accept SRAMs or ROMs or densities indicated. Available in PowerCap except DS1742.
Phantom interface clocks are transparent to the system until a particular 64-bit data sequence has been recognized.

Mfr.'s Type	No. of Pins	Package*	Description
DS1243Y	28	Module	8 KB RAM, Phantom Interface for RTC
DS1243Y-120	28	Module	8 KB RAM, Phantom Interface for RTC
DS1244Y	28	Module	32 KB RAM, Phantom Interface for RTC
DS1244Y-120	28	Module	32 KB RAM, Phantom Interface for RTC
DS1244Y-150	28	Module	32 KB RAM, Phantom Interface for RTC
DS1248-100	32	Module	128 KB RAM, Phantom Interface for RTC
DS1251Y-100	32	Module	512 KB RAM, Phantom Interface for RTC
DS1642-100	24	Module	2 KB RAM
DS1643-100	28	Module	8 KB RAM
DS1646L-120	34	LPM	128 KB RAM
DS1742-100	28	Module	2 KB RAM
DS1744-100	28	Module	32 KB RAM
DS1744W-120	28	Module	32 KB RAM
DS1746-100	32	Module	128 KB RAM
DS1746W-120	32	Module	128 KB RAM
DS1747W-120	32	Module	128 KB RAM

Watchdog Timekeepers with Bytewide Interface

Watchdog Timekeepers provide, time-of-day alarm and microprocessor reset. Available in PowerCap except DS1501 and DS1511.

Mfr.'s Type	No. of Pins	Package*	Description
DS1286	28	Module	50 Bytes RAM, Time of Day Alarm
DS1386-32-120	32	Module	32 KB RAM, Time of Day Alarm
DS1501W	28	DIP/TSOP/SOIC	256 Bytes RAM, KS, WU, 3.3 V, Y2K
DS1501Y	28	DIP/TSOP/SOIC	256 Bytes RAM, KS, WU, 5 V, Y2K
DS1511W	28	Module	256 Bytes RAM, KS, WU, 3.3 V, Y2K
DS1511Y	28	Module	256 Bytes RAM, KS, WU, 5 V, Y2K
DS1543-100	28	Module	8 KB RAM
DS1543W-120	28	Module	8 KB RAM
DS1553-100	28	Module	8 KB RAM
DS1553W-120	28	Module	8 KB RAM
DS1554-100	32	Module	32 KB RAM
DS1554W-120	32	Module	32 KB RAM
DS1556-100	32	Module	128 KB RAM
DS1556W-120	32	Module	128 KB RAM
DS1557P-100	34	Power Cap	512 KB RAM
DS1557WP-120	34	Power Cap	512 KB RAM

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Real-Time Clocks with Multiplexed Address/Data Bus

Multiplexed address/data bus clocks provide time-of-day alarm, programmable square wave output and a programmable interrupt output in addition to clock and calendar.

Mfr.'s Type	No. of Pins	Package*	Description
DS12887	24	Module	114 Bytes RAM
DS14287	24	Module	114 Bytes RAM, NV RAM Control
DS1693	28	Module	114 Bytes RAM, NV RAM Cont., KS, S/N, WU, V_{BAUX}
DS17287-5	24	Module	114+ 2 KB RAM, KS, S/N, WU, V_{BAUX}, 5 V
DS17487-3	24	Module	114+ 4 KB RAM, KS, S/N, WU, V_{BAUX}, 3 V
DS17887-5	24	Module	114+ 4 KB RAM, KS, S/N, WU, V_{BAUX}, 5 V

Sockets with Real Time Clocks

Mfr.'s Type	No. of Pins	Package*	Description
DS1216C	28	Socket	RAM: 8 KB, 32 KB
DS1216D	32	Socket	RAM: 8 KB, 32 KB, 128 KB
DS1216E	28	Socket	ROM: 8 KB, 32 KB
DS1216E-3	28	Socket	ROM: 8 KB, 32 KB, 3 V
DS1216F	32	Socket	ROM: 8 KB, 32 KB, 128 KB
DS1216F-3	32	Socket	ROM: 8 KB, 32 KB, 128 KB, 3 V
DS1216H	32	Socket	RAM: 512 KB

*All modules contain 32.768 KHz crystal and embedded lithium energy source.

DS9034PC PowerCap

The DS9034PC PowerCap is a snap-on lithium power source which provides 10 years of battery backup power for Nonvolatile SRAMs in Dallas Semiconductor's surface-mountable PowerCap Module (PCM) package. After a PowerCap Module has been soldered in place, the DS9034PC PowerCap is snapped onto the PCM to form a complete Nonvolatile SRAM module. The PowerCap is keyed to prevent incorrect attachment and is designed to maintain mechanical and electrical contact with its host PowerCap Module even during severe mechanical shock and vibration. Periodic replacement allows Nonvolatile SRAM module life to be extended indefinitely. The DS9034PC is easily removed by inserting a regular screwdriver into the detachment feature and prying gently outward and upward to release the PowerCap from the PCM board.

To be used with Mfr.'s Type — DS1230YP-70, DS1245YP-70, DS1250YP-70, DS1230WP-150, DS1245WP-150, DS1250WP-150, DS1330WP-150, DS1345-150, DS1350WP-150. See next page for information on these devices.

Mfr.'s Type	Nominal Voltage	Nominal Capacity	Data Retention Life
DS9034PC	3 V	130 mAH	10 Years (25°C)