

# RTCs INTEGRATE $\mu$ P SUPERVISOR AND HAVE MORE ON-BOARD SRAM

## Reduce the Complexity of Power-Supply Monitoring or Battery Control and Improve Reliability

The MAX6916/MAX6917 real-time clocks combine a microprocessor ( $\mu$ P) supervisor and NV RAM controller in a 20-pin QSOP package, thus saving board space and reducing cost. The integrated  $\mu$ P supervisory circuit reduces the complexity and number of components required for power-supply monitoring and battery control in microprocessor systems. These RTCs significantly improve system reliability and accuracy compared to separate ICs or discrete components.

### Real-Time Clock

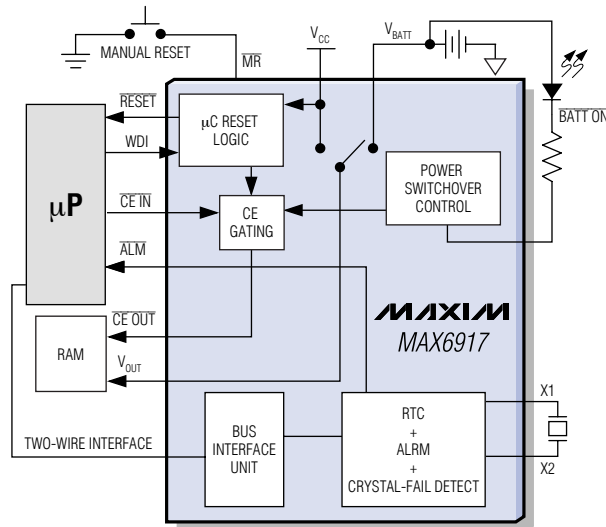
- ◆ Standard 32.768kHz Crystal
- ◆ Dual Power-Supply Pins:  $V_{BATT}$ ,  $V_{CC}$
- ◆ Time-of-Day Alarm Output
- ◆ Crystal-Fail Detect
- ◆ 96 Bytes of Scratchpad SRAM
- ◆ Low-Battery Indicator

### $\mu$ P Supervisor

- ◆ Reset Output
- ◆ Manual Reset Input
- ◆ Watchdog Input

### NV RAM Controller

- ◆ Chip-Enable Gating
- ◆  $V_{OUT}$  with Power Switchover



**NEW  
NEW**

| Part                       | Bus Interface | Battery Backup | Trickle Charger | Watchdog | Manual Reset | Alarm | SRAM   | Crystal-Fail Detect | Other Features                  | Package  |
|----------------------------|---------------|----------------|-----------------|----------|--------------|-------|--------|---------------------|---------------------------------|----------|
| MAX6917                    | 2-wire        | ✓              | —               | ✓        | ✓            | ✓     | 96 x 8 | ✓                   | Low-battery indicator           | 20-QSOP  |
| MAX6916                    | SPI™          | ✓              | —               | ✓        | ✓            | ✓     | 96 x 8 | ✓                   | Low-battery indicator           | 20-QSOP  |
| MAX6909                    | 2-wire        | ✓              | —               | ✓        | ✓            | ✓     | 31 x 8 | ✓                   | 4-frequency piezo buzzer driver | 20-QSOP  |
| MAX6910                    | 2-wire        | ✓              | ✓               | ✓        | ✓            | ✓     | 31 x 8 | ✓                   | 4-frequency piezo buzzer driver | 20-QSOP  |
| DS1670<br>DS1673<br>DS1677 | 2-wire        | ✓              | ✓               | ✓        | ✓            | ✓     | —      | —                   | 3-channel ADC                   | 20-TSSOP |

SPI is a trademark of Motorola, Inc.



[www.maxim-ic.com/MAX6917rtc](http://www.maxim-ic.com/MAX6917rtc)

**FREE Real-Time Clocks Design Guide—Sent Within 24 Hours!**

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