PERICOM
Enabling Serial Connectivity

REAL TIME CLOCKS

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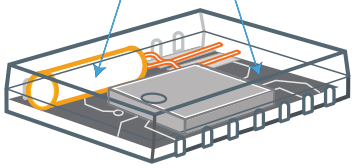
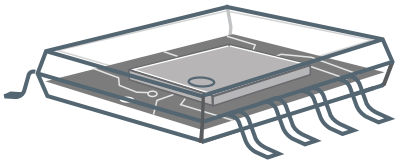
High Accuracy
Timekeeping Module
RTC with Integrated Crystal

Built-in Crystal in SOP and DFN package



3-Wire Interface RTC
I²C Interface RTC



Design with Pericom's Real Time Clock Portfolio

RTC with Integrated Crystal PT7C4337AC

Pericom's high accuracy RTC with integrated crystal could help designers to reduce development and testing time, and simplify testing process. Speed up end product mass production, as well as save PCBA size. It meets low timekeeping voltage 1.2V with SOIC-16 and DFN standard package.

I²C Interface RTC

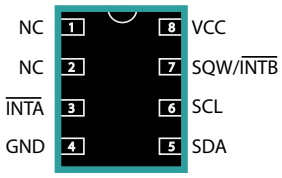
Pericom's I²C interface RTCs are all the lowest cost timekeeping options due to their simple, small circuit and reduced pin count. They are offered in various package types including SOP, MSOP, TSSOP and the smallest package DFN.

3-Wire Interface RTC

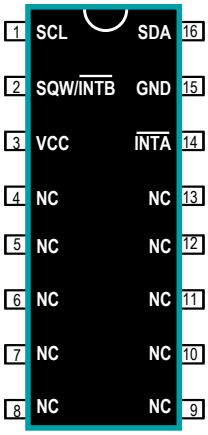
Pericom's 3-wire interface RTCs also are the lowest voltage timekeeping and low power consumption for common application, it is have CS, CLK and Data line and could be stable to work in high frequency clock, still available in SOP, TSSOP and Smallest DFN package.

For more information regarding this product line, please go to:
https://www.pericom.com/products/clocks/real-time-clock/

RTC with Integrated Crystal – PT7C4337AC



DFN-8



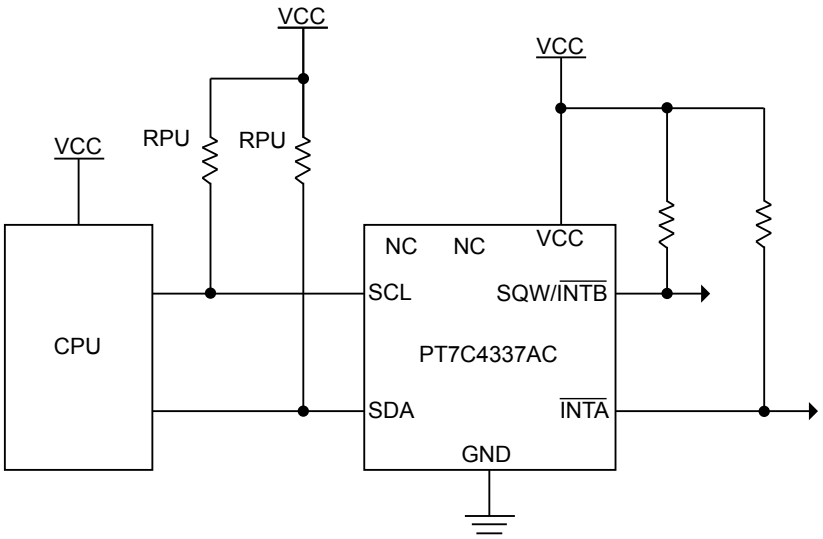
SOIC -16

PT7C4337AC Key Features

- Using internal 32.768kHz quartz crystal
- Supports I²C-Bus's high speed mode (400 kHz)
- Includes time (Hour/Minute/Second) and calendar (Year/Month/Date/Day) counter functions (BCD code)
- Programmable square wave output signal
- Two Time-of-Day Alarms
- Oscillator Stop Flag
- Operating range: 1.8V to 5.5V
- Timekeeping range: 1.2V to 1.8V
- Lead free and Green SOIC-16 and DFN package

Applications

- Wireless Access, Switch, NVR
- Application circuit



Advantages of RTC Module with Integrated Crystal vs Stand-alone RTC IC

- ➔ Ensure RTC and crystal have good match and work (appropriate load capacitance and Series Resistance)
- ➔ No crystal procurement problem
- ➔ Do not have crystal layout problems (for PCB)
- ➔ Not like the through hole type crystal, that will have additional steps in production and additional test process

Advantages of using SOIC-16 Package and DFN Package

- ➔ ROHS Package
- ➔ DFN package is smaller than RTC IC
- ➔ Integrated crystal package can cut off destructor for crystal destruction thereby providing an additional security barrier
- ➔ Save PCBA size designer

I²C Interface RTC's

➔ Uses external 32.768kHz quartz crystal

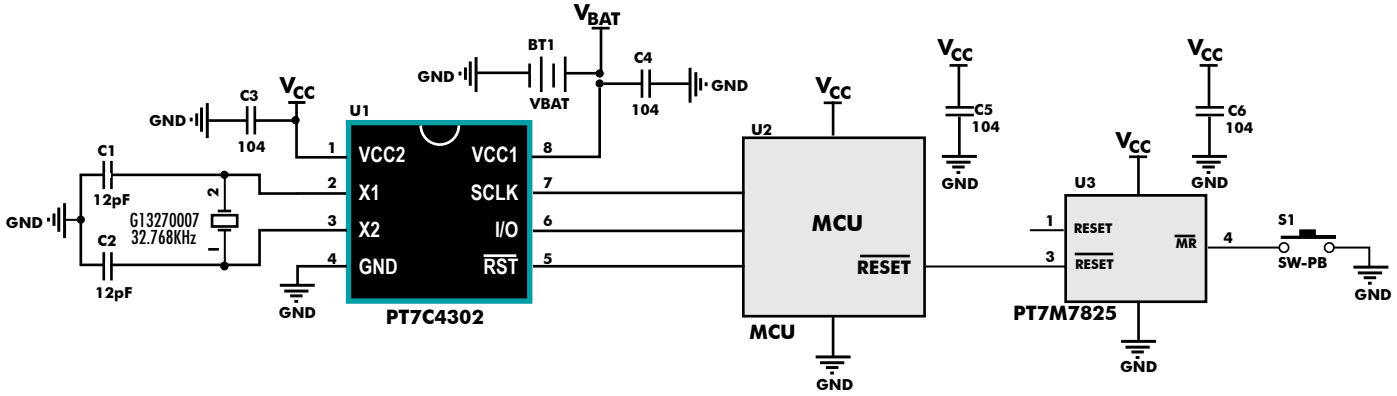
Part No.	Description	Applications & Benefits	Package Types
PT7C4337	Low cost Timekeeping RTC	Cost effective RTC with low operating current. Application: Switch, NVR, Car tracker, IP Camera, Mobile POS	SOIC-8, MSOP-8, DFN-8
PT7C43390	Low-current consumption RTC	Works under a wide operating voltage range (1.3V-5.5V) Application: IP Camera	SOIC-8, TSSOP-8, DFN-8
PT7C433833	Low-current consumption RTC with NVRAM	Supports battery backup feature to provide system flexibility. Application: Switch	SOIC-8, MSOP-8, DFN-8
PT7C4311	Low-current RTC with NVRAM and clock calibration capability	Supports battery backup feature to provide system flexibility with clock calibration capability Application: HD STB, car tracker, security	SOIC-8, DFN-8

3-Wire Interface RTC's

➔ Uses external 32.768kHz quartz crystal

Part No.	Description	Applications & Benefits	Package Types
PT7C4302	Low-Power RTC with Programmable Square-wave Output and 31 Bytes of NVRAM	Works under a wide voltage range with battery backup supply Application: Water heater	SOIC-8, DFN-8
PT7C43190	Low-Power 3-wire interface RTC with wide operating voltage range	Works under a wide operating voltage range. (1.3V - 5.5V) Application: Monitors	SOIC-8, TSSOP-8, DFN-8

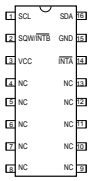
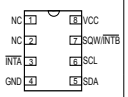
Typical Application Circuit - PT7C4302



PERICOM®
Enabling Serial Connectivity

REAL-TIME CLOCK SOLUTIONS

Pericom offers a diverse range of accurate, low cost RTC solutions for handheld & embedded applications

		Pericom Real-Time Clock Solutions										
		PT7C4302	PT7C4307	PT7C4337	PT7C4337AC*	PT7C433833	PT7C4311	PT7C4363	PT7C4372A	PT7C43190	PT7C43390	PT7C4563
Oscillator	Crystal (HZ)	32.768K	32.768K	32.768K	Integrated 32.768K	32.768K	32.768K	32.768K	32.768K 32.000K	32.768K	32.768K	32.768K
	Enable/Disable	√	√	√	√	√	√	/	/	/	/	/
	Failure Detect	/	/	√	√	√	/	√	√	/	/	√
Time	Display (Hour)	12/24	12/24	12/24	12/24	12/24	24	24	12/24	12/24	12/24	24
Programmable	Square Wave Output (HZ)	/	1, 4.096K, 8.192K, 32.768K	1, 4.096K, 8.192K, 32.768K	1, 4.096K, 8.192K, 32.768K	1, 4.096K, 8.192K, 32.768K	512	1, 32, 1.024K, 32.768K	1, 2, 32.768K, 32K	1, 2, 4, 8, 16, 32K	1, 2, 4, 8, 16, 32K	1, 32, 1.024K, 32.768K
	High/Low Output	/	√	/	/	√	√	/	/	/	/	/
	Alarm Interrupt	/	/	√	√	/	/	√	√	√	√	√
	NV RAM	31x8	56x8	/	/	56x8	56x8	/	/	/	/	/
	Clock Calibration	/	/	/	/	/	√	/	√	√	√	/
	Battery Backup	√	√	/	/	√	√	/	/	/	/	/
	Interface	3-Wire	I²C	I²C	I²C	I²C	I²C	I²C	I²C	3-Wire	I²C	I²C
	Charger	√	/	/	/	/	/	/	/	/	/	/
	Battery Voltage Range	1.5V~5.5V	4.5V~5.5V	1.8V~5.5V	1.8V~5.5V	2.7V~5.5V	1.5V~5.5V	1.3V~5.5V	1.8V~6.0V	1.3V~5.5V	1.3V~5.5V	1.3V~5.5V
	Package	 SOIC8 DFN8*	 SOIC8 DFN8*	 SOIC8 MSOP8 DFN8	 SOIC16  DFN8	 SOIC8 MSOP8 DFN8*	 SOIC8 DFN8*	 SOIC8	 SOIC8, DFN8*, TSSOP8	 SOIC8, TSSOP8	 SOIC8, TSSOP8	 SOIC8 MSOP8 DFN8* TSSOP8

Note: * Contact Pericom for Availability

http://www.pericom.com/products/clocks/real-time-clock/