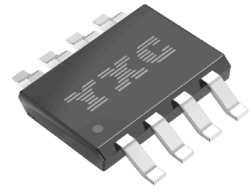


YSN1302 Realtime Clock Chip (3-Wire Serial)



YSN1302Z(SOP8)

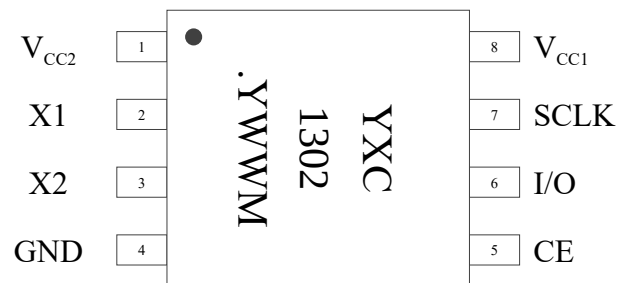
1 Features

- Real-time clock counts year, month, day, hour, minute, second, and weekday up to 2100, with leap-year correction
- 31 × 8-bit general-purpose scratchpad RAM
- Serial input and output keeps the pin count to a minimum
- 2.0 V to 5.5 V wide operating voltage range
- Operating current below 300nA at 2.0V
- Single-byte or multi-byte (burst mode) transfer when reading or writing the clock or RAM
- 8-pin DIP or optional 8-pin surface-mount SOP package
- Simple 3-wire interface
- TTL compatible ($V_{CC} = 5V$)
- Operating temperature range: $-40^{\circ}C$ to $+85^{\circ}C$

2 Description

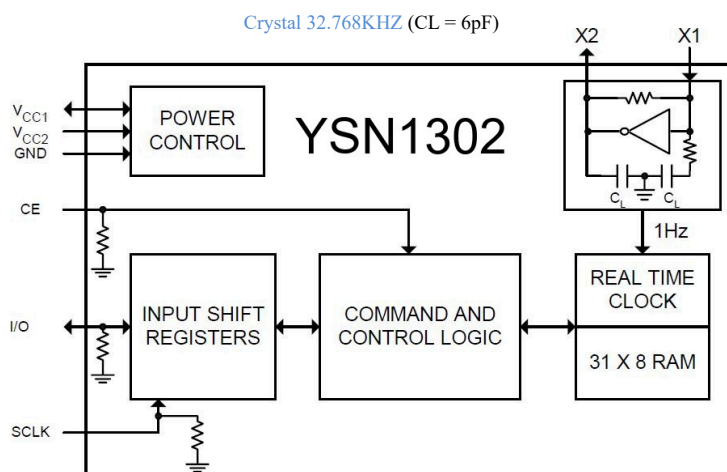
The **YSN1302** is a trickle-charge timekeeping circuit with a real-time clock/calendar and 31 bytes of static RAM, reached through a simple serial interface. It provides year, month, date, hour, minute, and second, adjusts the end-of-month date for months shorter than 31 days, corrects for leap years, and runs in 12-hour or 24-hour format. Beyond timekeeping it offers a dual-pin primary and backup supply and a programmable trickle charger on V_{CC1} .

3 Pinning Information



YSN1302Z(SOP8)

4 Block Diagram



5 Pin Description

SYMBOL	PIN	DESCRIPTION
V_{CC2}	1	primary supply input
X1	2	crystal input; external oscillator input
X2	3	crystal output; float if X1 driven
GND	4	ground
CE	5	read/write enable; 40k Ω pull-down
I/O	6	3-wire data I/O; 40k Ω pull-down
SCLK	7	serial clock input; 40k Ω pull-down
V_{CC1}	8	backup supply input; trickle-charge source