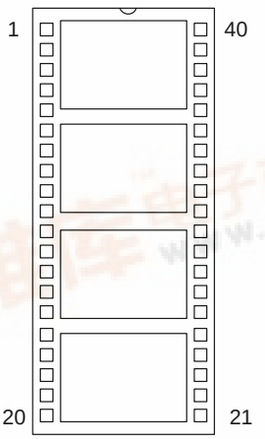
DALLAS SEMICONDUCTOR

DS1310/DS1311
Super Socket

FEATURES

- Built-in CMOS circuitry adds nonvolatile SRAM and real time clock to existing microcontroller-based designs
- Requires no printed circuit board modification
- 4K bits of NV SRAM for more than 10 years in the absence of V_{CC}
- Optional timekeeper for event dating and activity scheduling
- Accepts any microcontroller in standard 40-pin DIP whose V_{CC} and ground are pins 40 and 20, respectively
- Parasitic serial interface to built-in circuitry via a single microcontroller I/O pin
- Special wake-up pattern for invoking added functionality
- Proven gas-tight socket contacts

PIN ASSIGNMENT



PIN DESCRIPTION

All pins pass through except for:

Pin 20 – Ground
Pin 40 – V_{CC}

Any pin except for 20 and 40 can be user-configured for added functionality by closing the appropriate shorting pads of the Super Socket with solder.

DESCRIPTION

DS131x Super Sockets are 40-pin, 0.6-inch wide DIP sockets with built-in CMOS circuitry that adds new functions to existing microcontroller-based systems. The circuits within the Super Socket are special versions of a 1-wire peripheral integrated circuit designed to support parasitic communication on a single I/O pin of the microcontroller.

The Super Socket accepts any 40-pin, single-chip microcontroller with V_{CC} and ground on pins 40 and 20, respectively. When mated with a microcontroller, the Super Socket provides access to its built-in, 1-wire chip by means of a wake-up pattern that is sent via a single bidirectional I/O pin on the microcontroller. As a result, the chip resides as a parasite on an I/O pin without encumbering the pin's normal function.

The DS131x is an effective upgrade option for previously-designed, single-chip systems and requires only slight software modification.