# SNx4HC595 8-Bit Shift Registers With 3-State Output Registers

## 1 Features

- 8-Bit Serial-In, Parallel-Out Shift
- Wide Operating Voltage Range of 2 V to 6 V
- High-Current 3-State Outputs Can Drive Up to 15 LSTTL Loads
- Low Power Consumption: 80-µA (Maximum) $I_{CC}$
- $t_{pd}$ = 13 ns (Typical)
- ±6-mA Output Drive at 5 V
- Low Input Current: 1 µA (Maximum)
- Shift Register Has Direct Clear
- On Products Compliant to MIL-PRF-38535, All Parameters Are Tested Unless Otherwise Noted. On All Other Products, Production Processing Does Not Necessarily Include Testing of All Parameters.

## 2 Applications

- Network Switches
- Power Infrastructure
- LED Displays
- Servers

## 3 Description

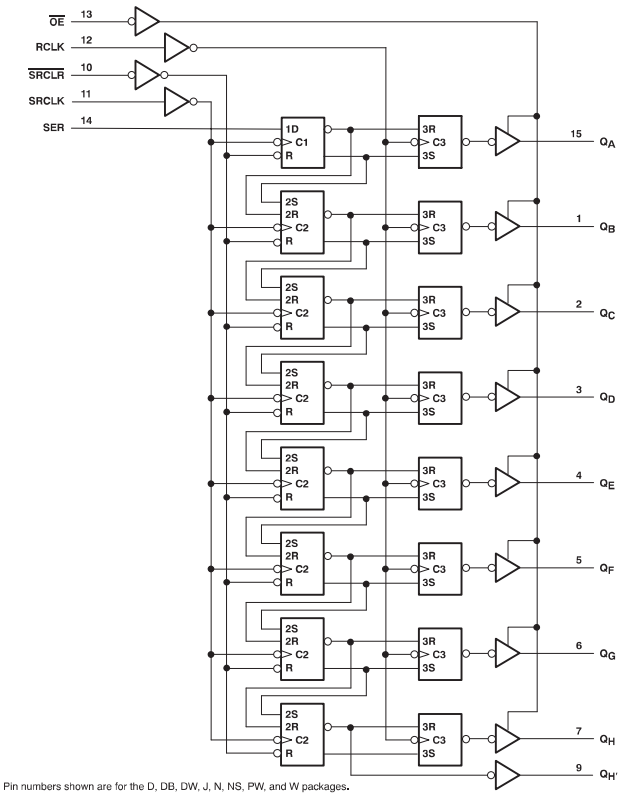
The SNx4HC595 devices contain an 8-bit, serial-in, parallel-out shift register that feeds an 8-bit D-type storage register. The storage register has parallel 3-state outputs. Separate clocks are provided for both the shift and storage register. The shift register has a direct overriding clear ($\overline{SRCLR}$) input, serial (SER) input, and serial outputs for cascading. When the output-enable ($\overline{OE}$) input is high, the outputs are in the high-impedance state.

**Device Information**(1)

| PART NUMBER | PACKAGE | BODY SIZE (NOM) |
|---|---|---|
| SN54HC595 | LCCC (20) | 8.89 mm x 8.89 mm |
| | CDIP (16) | 21.34 mm x 6.92 mm |
| SN74HC595 | PDIP (16) | 19.31 mm × 6.35 mm |
| | SOIC (16) | 9.90 mm x 3.90 mm |
| | SOIC (16) | 10.30 mm x 7.50 mm |
| | SSOP (16) | 6.20 mm x 5.30 mm |
| | TSSOP (16) | 5.00 mm x 4.40 mm |

(1) For all available packages, see the orderable addendum at the end of the data sheet.

**Logic Diagram (Positive Logic)**




Pin numbers shown are for the D, DB, DW, J, N, NS, PW, and W packages.