

74LS1812 Bit Stream Manager

Serializer/Deserializer
Preliminary Specification

Logic Products

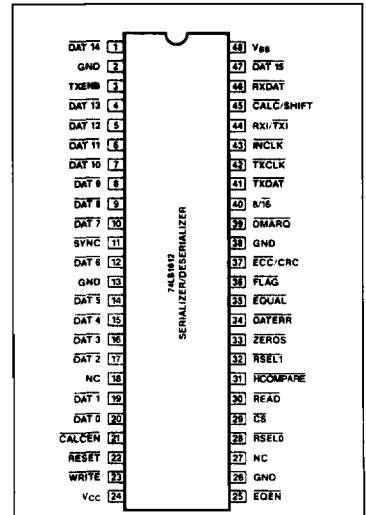
DESCRIPTION

The 74LS1812 Serializer/Deserializer (Figure 1) incorporates speed, flexibility, and proven ISL technology into a general-purpose device that performs many of the functions necessary for the implementation of a disk or communications controller. On-chip serializing/deserializing, programmable ECC and CRC operation, and bit comparison logic (useful for address-mark or header comparisons) make for a truly versatile device. A selectable 8- or 16-bit data bus and associated control lines allow for a DMA interface which requires little external hardware — a minimum system may be easily built with a microcontroller, a DMA controller, a RAM buffer, disk control lines and interface logic.

FEATURES

- Data rates up to 30MHz
- Selectable CRC-16 or CRC-CCITT polynomials
- Full Duplex operation with CRC/ECC on receive data
- Programmable ECC polynomial register
- Programmable control register
- On-chip bit comparator
- 8- or 16-bit selectable data bus
- 48-pin DIP or 68-pin PLCC

PIN CONFIGURATION



CD006325

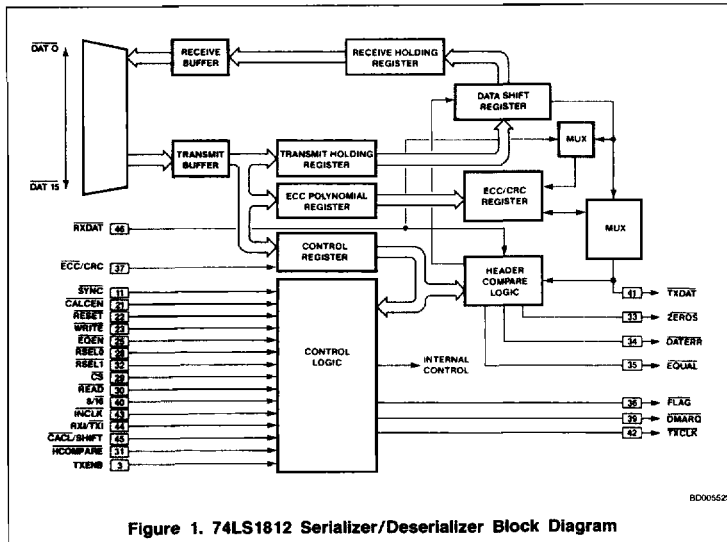
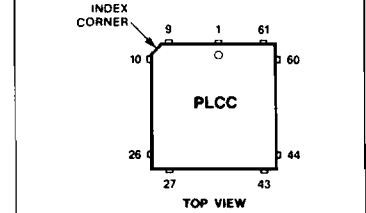


Figure 1. 74LS1812 Serializer/Deserializer Block Diagram



CD0068P5

PLCC FUNCTION	PLCC FUNCTION	PLCC FUNCTION
1 VBB	24 DAT 2	47 ZEROS
2 DAT 14	25 NC	48 DATERR
3 GND	26 NC	49 EQUAL
4 NC	27 NC	50 FLAG
5 DAT 13	28 DAT 1	51 ECC/CRC
6 DAT 12	29 DAT 0	52 NC
7 DAT 11	30 CALCEN	53 GND
8 NC	31 NC	54 DMARQ
9 TXENB	32 RESET	55 NC
10 NC	33 NC	56 8/16
11 NC	34 WRITE	57 TXDAT
12 DAT 10	35 VCC	58 TXCLR
13 DAT 9	36 EOEEN	59 NC
14 DAT 8	37 GND	60 HCOMPARE
15 NC	38 NC	61 NC
16 DAT 7	39 RSELD	62 NC
17 SYNC	40 CS	63 INCLK
18 DAT 6	41 READ	64 RXI/TXI
19 GND	42 NC	65 CALC/SHIFT
20 NC	43 NC	66 RXDAT
21 DAT 5	44 NC	67 NC
22 DAT 4	45 NC	68 DAT 15
23 DAT 3	46 RSELT	