TDC1004
Use TMC2023 for New Designs

7RW

Analog Output, Digital Correlator
64 – Bit

The TRW TDC1004 is a 64–bit digital correlator with a current source analog output. The device consists of three 64–bit, independently–clocked shift registers capable of a shift speed of 15MHz and a parallel correlation rate of 10MHz.

Correlation takes place when two binary words are serially shifted into the A and B registers. The two words are continually compared, bit for bit by exclusive–NOR (XNOR) circuits. Each XNOR circuit controls a current source. The current output of each current source is then summed to produce the correlation current that is proportional to the degree of correlation.

The third 64–bit shift register (M register) is provided to allow the user to mask or selectively choose "no compare" bit positions.
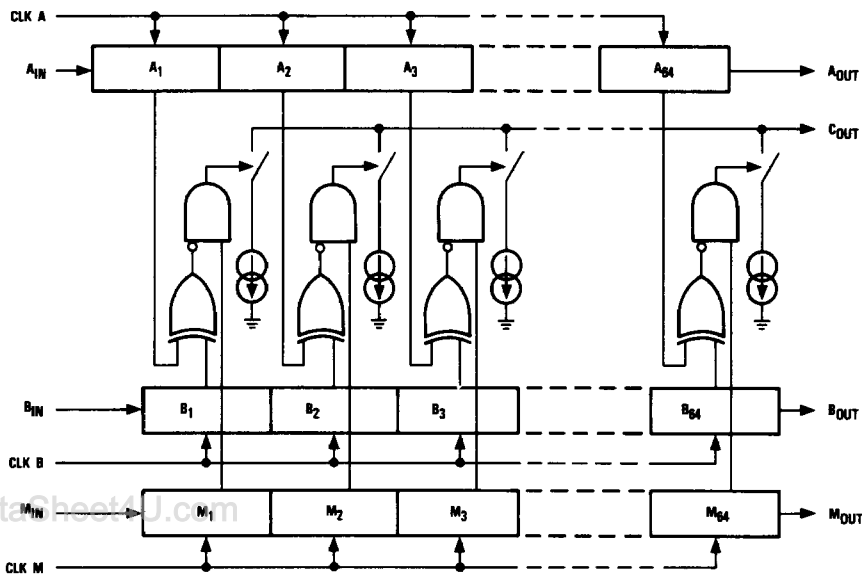
Features

- 10MHz Correlator Speed
- 15MHz Shift Speed (Static Shift Registers)
- Current Output
- Mask Register
- TTL Compatible
- Available In 16 Lead Ceramic DIP
- Radiation Hard
- 700mW Power Consumption

Applications

- Image Comparison/Recognition
- Bit/Word Synchronization
- Key Word Detection
- Error Correction Coding
- Radar And Sonar

Correlators

H

Functional Block Diagram

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