



MOTOROLA

MC68185

Advance Information

MC68185 Twisted-Pair Modem (TPM)

The MC68185 twisted-pair modem (TPM) is used in conjunction with a MC68824 token bus controller (TBC), an RS485 transceiver, and a twisted-pair media to implement a low-cost local area network (LAN). The MC68824 TBC implements the layer 2 media access control (MAC) portion of the IEEE 802.4 LAN station and the receiver portion for the IEEE 802.2 logical link control (LLC) type 3 as well as providing support for LLC type 1 and type 2. Refer to MC68824UM/AD, *MC68824 Token Bus Controller User's Manual*, for further details. The MC68185 TPM interfaces directly to the TBC, providing physical layer management, including MAC symbol encoding/decoding at data rates up to 2 Mbps. The major features of the MC68185 are as follows:

- Supports Manchester, Biphasic Space (FM0), Differential Manchester, or Level Encoding Modes
- On-Chip Clock Recovery without External Components
- Interfaces to the MC68824 TBC
- Physical Layer Management Includes Local Loopback Mode, Transmitter Enable, and Reset
- Supports Data Rates up to 2 Mbps (10 Mbps in Level Encoding Mode)
- Supports Dual Redundant Media for Fault-Tolerant Applications
- On-Chip Jabber-Inhibit Timer for 1 or 2 Mbps Data Rates
- On-Chip Crystal Oscillator from 32 kHz to 20 MHz Generates a Transmit Clock without External Circuitry
- On-Chip Digital Filter for Noise Reduction of Received Data
- Single +5.0 V Power Supply
- Low Power CMOS
- 44-Lead PLCC and 68-Lead PGA Packages