



DM9081FP Product Brief

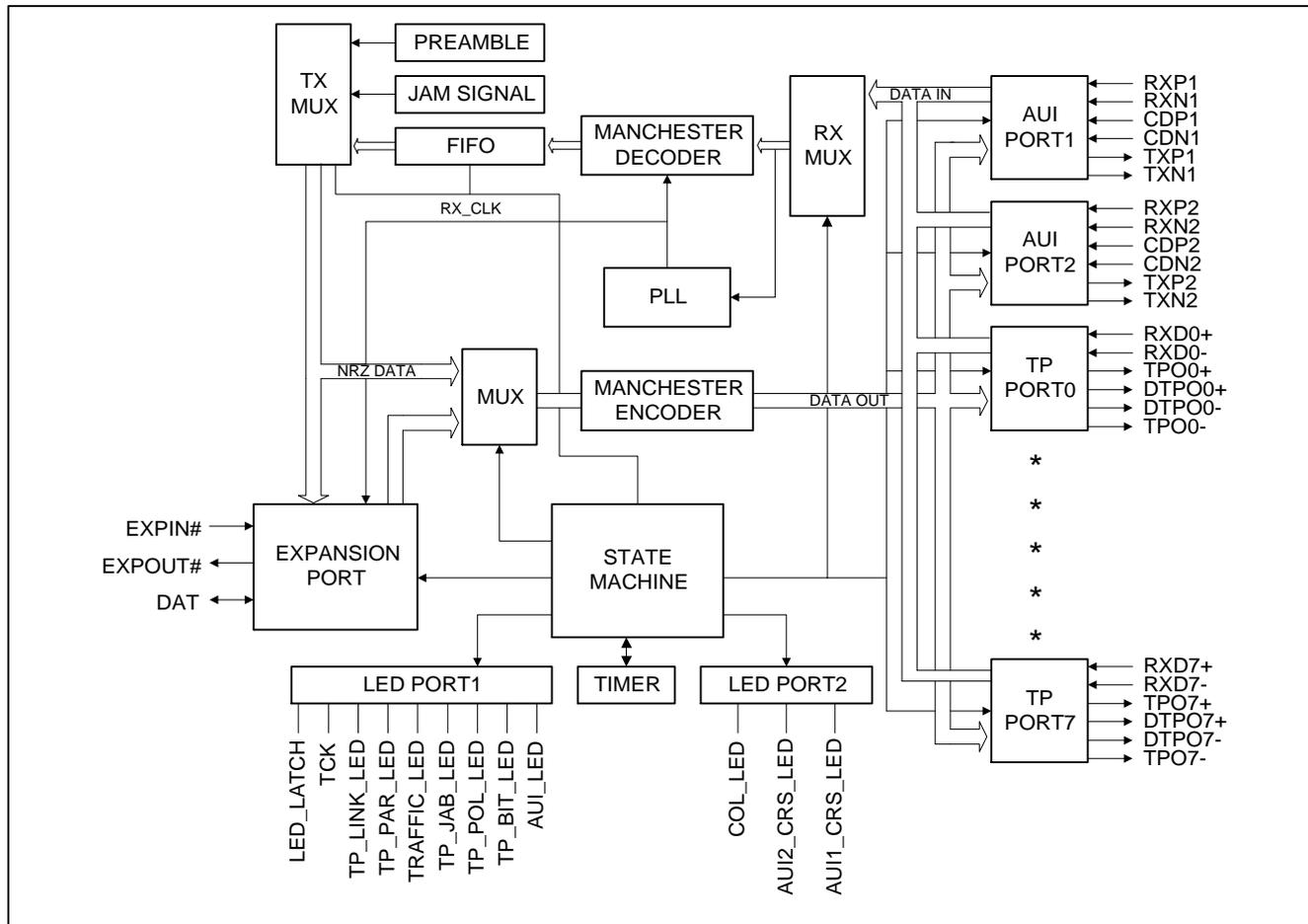
10BASE-T Hub Controller

May 2008 Rev.1.0

The 10BASE-T Hub Controller (DM9081) provides a system level solution for designing IEEE-compliant 802.3 repeaters that incorporate 10BASE-T transceivers. This device integrates the repeater functions specified by section 9 of the IEEE 802.3 standard. The Twisted Pair transceiver is compliant with 10BASE-T standards. The DM9081 provides eight integral Twisted Pair Media Attachment Units (MAUs) and two Attachment Unit Interface (AUI) ports in a 100-pin QFP package.

The total number of ports per repeater unit can be increased by connecting multiple DM9081 chips via their expansion ports. The DM9081 supports LED drivers to monitor port status. It displays Link, Carrier Sense, Collision, Partition, and Bit Rate Error Status. In minimum mode, Link, Carrier Sense, and Collision Status can be displayed without external TTL devices.

Block Diagram



Specifications

- Repeater functions comply with IEEE 802.3 Repeater Unit specification
- Eight Integral 10BASE-T transceivers utilize the required pre-distortion transmission technique
- Two Attachment Unit Interface (AUI) ports allow connection with 10BASE5 (Ethernet) and 10BASE2 (Cheapernet) networks
- Design a Dumb Hub in minimum mode by using minimum external logic that can respond to Link, Carrier Sense and Collision Status from LED
- Supports one LED output per port for additional status indicators such as Link, Partition, Carrier Sense, etc.
- Built-in Jabber LED reports global Jabber information of the DM9081 Hub
- Built-in Traffic LED indicates Hub global 10MHz bandwidth utilization status
- Expandable to accommodate two DM9081 connections, with no external logic required
- On board PLL, Manchester encoder/decoder and FIFO
- Expandable to accommodate increased number of repeater ports.
Recommended IC cascade number: under 3 and inclusive
- Preamble loss effects eliminated by deep FIFO
- Each port can be isolated (partitioned) and reconnected separately
- Twisted Pair Link Test capability
- Full amplitude and timing regeneration for retransmitted signals
- Low power CMOS process with single 5V supply, 100-pin QFP package

Application

VoIP CPE (ATA, IP Phone, Video Phone)

IP STB, IPC, Internet Radio

Ordering Information

Part Number	Pin Count	Package
DM9081F	100	QFP
DM9081FP	100	QFP (Pb-Free)

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