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### ISO<sup>2</sup>-CMOS ST-BUS™ FAMILY MT8971B/72B



# Digital Subscriber Interface Circuit Digital Network Interface Circuit

Features

- Full duplex transmission over a single twisted pair
- Selectable 80 or 160 kbit/s line rate
- Adaptive echo cancellation
- Up to 3km (8971B) and 4 km (8972B)
- ISDN compatible (2B+D) data format
- Transparent modem capability
- Frame synchronization and clock extraction
- MITEL ST-BUS compatible
- Low power (typically 50 mW), single 5V supply

#### **Applications**

- · Digital subscriber lines
- High speed data transmission over twisted wires
- Digital PABX line cards and telephone sets
- 80 or 160 kbit/s single chip modem

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#### **Ordering Information**

MT8971BE 22 Pin Plastic DIP
MT8972BC 22 Pin Plastic DIP
MT8971BP 22 Pin Ceramic DIP
MT8971BP 28 Pin PLCC
MT8972BP 28 Pin PLCC
-40°C to +85°C

#### Description

The MT8971B (DSIC) and MT8972B (DNIC) are multi-function devices capable of providing high speed, full duplex digital transmission up to 160 kbit/s over a twisted wire pair. They use adaptive echo-cancelling techniques and transfer data in (2B+D) format compatible to the ISDN basic rate. Several modes of operation allow an easy interface to digital telecommunication networks including use as a high speed limited distance modem with data rates up to 160 kbit/s. Both devices function identically but with the DSIC having a shorter maximum loop reach specification. The generic "DNIC" will be used to reference both devices unless otherwise noted

The MT8971B/72B is fabricated in Mitel's ISO<sup>2</sup>-CMOS process.

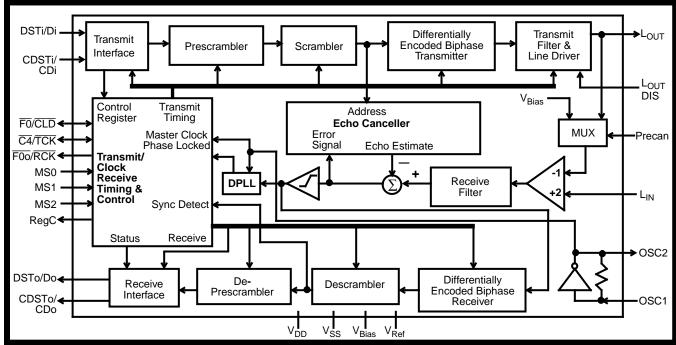


Figure 1 - Functional Block Diagram

## MT8971B/72B

Notes:



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