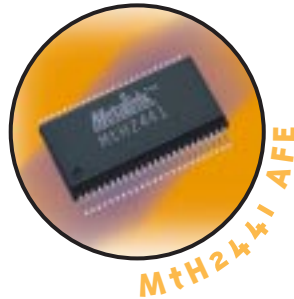
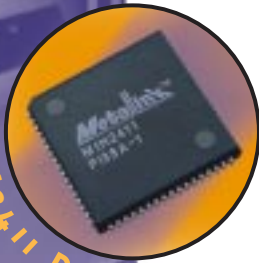


MtH2401

Scaleable HDSL/SDSL Transceiver For Transmission of Up to 2,320 Kbps

MtH2401



The MtH2401 is Metalink's advanced HDSL/SDSL Transceiver for transmission of up to 2,320 Kbps. This full 2B1Q HDSL Transceiver Chipset is composed of the MtH2411 Digital Signal Processor (DSP) and the MtH2441 Analog Front End (AFE). This Transceiver Chipset enables the digital transmission of voice and/or data at multiple transmission rates from 160 Kbps to 2,320 Kbps, using one hardware platform.

Thanks to an internal clock synthesizer and DCXO functionality, the MtH2411 DSP can produce multiple symbol (QUAD) clocks for multi-rate operation using one crystal as its clock source. In standard HDSL systems that use a Metalink HDSL/SDSL Framer, the DSP can operate with the XO of the Metalink HDSL/SDSL Framer as its clock source.

Metalink's Complete Package and Emphasis on Quality

Metalink places great emphasis on its complete product solution, making system design and development a case of 'cut and paste'. To simplify the development process, the MtH2401

Transceiver is supplied with a comprehensive development package that includes an extensive reference design file, and Metalink's Application Software with fully documented API.

Metalink submits its chips and complete solutions to extensive and rigorous qualification tests that ensure the robustness of the solutions. Metalink has been granted ISO 9002 approval, and is presently in the process of gaining ISO 9001 approval.

Metalink - leading the copper revolution

Based on the 2B1Q line-code and Metalink's innovative Near Maximum Likelihood (NML™) decoding algorithm, the MtH2401 Transceiver exhibits superior performance over conventional Decision Feedback Equalizer (DFE) transceivers by providing up to 3dB noise immunity gain in real life conditions.

The MtH2401 Transceiver, with its small DSP and AFE packages, occupies a minimal total surface mount area of approximately 450sq.mm. This is ideal for high port density designs. The Transceiver requires minimal CPU intervention during start-up, and no CPU intervention during normal operation after training. The Metalink MtH2401 Transceiver's other cutting-edge features include extremely low power consumption (less than 625mW at 1,168 Kbps, and less than 825mW at 2,320 Kbps), and a special low-power mode for repeater applications. The MtH2401 Transceiver is software compatible with previous Metalink solutions (including the MtH2410AL DSP) as it is operated by the same Metalink standard set of API functions. It conforms to ETSI TS 101 135 standard and to the ANSI T1E1.4 HDSL technical report. Target applications include: Fast Internet, Frame Relay and ATM access modems, E1/T1 HDSL links, high speed data modems, Digital Pair-Gain systems, and cellular base station links.

Metalink
Transmission Devices

MtH2401

Scaleable HDSL/SDSL Transceiver For Transmission of Up to 2.320 Kbps

MtH2411 Digital Signal Processor (DSP)

General Description:

The MtH2411 DSP performs all the digital functions of the Transceiver chipset to achieve a high quality echo free signal, with optimal decoding. These functions include 2B1Q encoding, scrambling/descrambling, adaptive echo canceling, linear equalization, timing recovery, and Metalink's proprietary adaptive

Near Maximum Likelihood (NML™) decoding algorithm.

Available in a 100-pin TQFP package, the MtH2411 DSP has a default operation mode that is fully software and hardware compatible with the MtH2410AL DSP.

Features:

- Multi-rate operation from 160 Kbps to 2,320 Kbps
- Internal clock synthesizer and DCXO functionality
- Fully compliant with the ETSI TS 101 135 standard, and ANSI T1E1.4 HDSL technical report
- Extremely low power consumption: less than 325mW at 1,168 Kbps, and less than 440 mW at 2,320 Kbps
- +3.3V power supply, +5V tolerant I/O level
- Serial and Parallel AFE interfaces
- Backwards compatibility mode to Metalink's MtH2410AL DSP
- Supports Motorola and Intel microcontroller interfaces
- Internal scrambler/descrambler for no-framer applications
- Low power mode for repeater applications
- 100-pin TQFP package
- Industrial temperature range from -40°C to +85°C

MtH2441 Analog Front End (AFE)

General Description:

Metalink's MtH2441 Analog Front End provides all of the active analog circuitry needed to connect a digital signal processor to an external compromise hybrid and line transformer. The transmit and receive filters are adaptive to the symbol rate - allowing the MtH2441 to operate over a wide range of data rates. The AFE's power dissipation can be reduced under digital control for operation at lower speeds.

Functionally, this unit consists of transmit and receive sections. The transmit section generates, filters and buffers, outgoing 2B1Q data. The on board differential line driver provides a 13.5 dBm signal to the telephone line. The receive section filters and digitizes the signal received on the telephone lines. Available in a very small 48-pin SSOP package.

Features:

- Multi-rate operation from 160 Kbps to 2,320 Kbps
- Full rate single pair E1 or T1 operation
- Complete HDSL analog interface
- Low power consumption: less than 300mW at 1,168 Kbps, and less than 385mW at 2,320 Kbps
- Programmable Power Dissipation
- +5V analog and 3.3V to 5V digital power supply
- Scaleable Data Rate with switched-capacitor technology
- 48-pin SSOP package
- Industrial temperature range from -40°C to +85°C

For more information:

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To contact your local Metalink distributor, please see our list of worldwide distributors to be found at our website.