# SocketModem® ISDN

### Embedded ISDN Modem



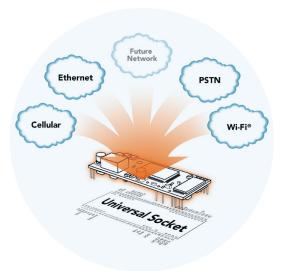
#### **Universal Socket Benefits**

- Interchangeable communications devices
- Quick-to-market
- Global approvals
- Easy migration to future networks

The SocketModem® ISDN embedded modem creates communication-ready devices by integrating BRI ISDN functionality and an S/T interface into a single, universal socket design. The space-efficient ( $1'' \times 2.5''$ ) modem provides bi-directional communication bandwidth of up to 128K bps. This complete, ready-to-integrate modem dramatically reduces development time and costs for system designers.

#### **Features**

- Complete ISDN modem and S/T interface
- Telecom approved for Europe
- U.S. National ISDN-1, AT&T 5ESS Custom, Northern Telecom DMS-100 Custom, ETSI/DSS1/NET3 (Euro ISDN), Japan NTT INS64, France VN-4 switch type support
- PPP, ML-PPP, MP+, V.120, X.75, raw HDLC, CLEAR (synchronous), CHAP MD5, PAP and Soft Bond B-channel protocols
- Serial interface supports DTE speeds to 230K bps
- Space efficient universal socket connectivity
- Caller Line Identification (Caller ID)
- Synchronous and asynchronous support
- 4-wire S/T interface
- Flash memory to update firmware with the latest enhancements
- 3.3V or 5V power input options
- Two-year warranty







## **Highlights**

**Applications.** With speeds up to 128K bps, the SocketModem ISDN embedded modem is ideal for:

- Appliances
- ATM terminals
- Automotive
- Data collection
- Gas pumps
- Industrial and medical remote monitoring systems
- Remote diagnostics
- Remote metering
- Security systems
- Vending/gaming machines

Integration Reduces Space, Power and Cost. The SocketModem ISDN embedded modem integrates the controller, data pump and S/T interface in one communications device. This integration requires low power, low real estate, and provides an overall reduction in costs.

**Complete WAN Protocol Support.** With support for a full-range of WAN protocols, including PPP, ML-PPP, MP+, V.120, X.75, raw HDLC, CLEAR (synchronous), CHAP MD5, PAP and Soft Bond you can connect to a variety of servers.

#### SocketModem ISDN Pin-out. The SocketModem ISDN

embedded modem interfaces easily with existing devices through a standard serial interface. The serial DTE channel is capable of transfer speeds up to 230.4K bps and can be interfaced directly to a UART or microcontroller.

(I/O) Tip 1 (I/O) Ring 2 Safety Void 3 (O) TX+ 4 (O) TX- 5 (I) RX+ 6 (I) RX- 7 Safety Void 8	0 0 X 0 0 0 0 X		000000000	64 SPKR (O) 63 GND (O) 62 MICV (I) 61 VCC (I) 60 -LED SPD (O) 59 -LED COL (O) 58 -LED LINK (O) 57 -LED ACT (O) 56 -LED FDX (O) 55
(O) TXCLK 11 (O) RXCLK 12 13 14 15 16 17 18 19 20	00	Universal Socket SocketModem ISDN	0000	54 53 52 51 GPIO (I/O) 50 GPIO (I/O) 49 GPIO (I/O) 48 GPIO (I/O) 47 46 45
(I) 21 (I) Mic- 22 (I) Mic- 23 (I) -Reset 24 (I) USB_VBUS 25 (I) GND 26 (I/O) USB_DD 28 (O) LED DCD 29 (O) LED DTR 31 (O) LED TX 32	00000000000		00000000000	443 SPK+ (O) 42 SPK- (O) 41 GND (I) 40 -DTR (I) 39 -DCD (O) 38 -CTS (O) 37 -DSR (O) 36 -RI (O) 35 -TXD (I) 34 -RXD (O) 33 -RTS (I)

## Universal Socket Connectivity.

Multi-Tech's universal

socket is a flexible, comm-port architecture that provides cellular, Ethernet, PSTN or Wi-Fi network access with interchangeable communications devices. This means you can utilize one system design and populate it with your connectivity device of choice accommodating multiple connectivity requirements. In addition, you are assured a seamless migration to future technologies.

**Developer's Kit.** The Developer's Kit provides the ability to plug in the communications device and use it for testing, programming and evaluation. The kit includes one development board with RS-232 DB-25 connector, universal power supply, RJ-45 jack, RS-232 cable, RJ-45 cable and Developer Guide CD.

## **Specifications**

#### ISDN Interface

Service: 2B+D Basic Rate Interface (BRI) Interface: 4-wire S/T-type interface

Rate: 64K bps/1 B-channel; 128K bps/2 B-channels; 16K bps/D-channel (for signalling) Sync or async (sync on one B-channel)

#### **ISDN Switch Types**

U.S. National ISDN-1, AT&T 5ESS Custom, Northern Telecom DMS-100 Custom, ETSI/DSS1/NET3 (Euro ISDN), Japan NTT INS64, France VN-4

#### **Protocols**

PPP, ML-PPP, MP+, V.120, X.75, raw HDLC, CLEAR (synchronous), CHAP MD5, PAP, & Soft Bond

#### Power Requirements

5VDC or 3.3VDC

#### Power Usage

Typical: 160mW @ 3.3V; 510mW @ 5V Maximum: 182mW @ 3.3V; 543mW @ 5V

#### Physical Description

2.541" L  $\times$  1.045" W  $\times$  0.680" H; (6.5 cm  $\times$  2.7 cm  $\times$  1.8 cm)

#### Operating Environment

Temperature Range: 0° to +70° C

#### Certifications

CE Mark

EMC: FCC Part 15 Class A, EN 55022, EN 55024

Safety: UL 60950, EN 60950

Telecom: TBR3

## **Ordering Information**

Product Description

MT128SMI 64/128K ISDN BRI Modem MT128SMI-L 64/128K ISDN BRI Modem Region Euro/ROW Euro/ROW

Made in Mounds View, MN, U.S.A.

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