Industrial Grade Bell 202T/V23 Modem for Reliable SCADA Communications

The Synxcom industrial grade modems SM202T and SMV23 are designed and manufactured for rugged communication networks. Both modems deliver cost-effective and reliable 0 to 1200 bps asynchronous solutions for point-to-point and multi-point connectivity.

The SM202T/V23 modems are ideal for industrial communication applications including SCADA systems, RTUs, traffic monitor and control, and industrial automation networks. The SM202T/V23 supports RTUs with a user-selectable EIA RS-232 or RS-485 serial port at speeds up to 1200 bps.

The SM202T/V23 modem is designed to operate over 4-wire full-duplex or 2-wire half-duplex over unconditioned leased lines or private metallic circuits. For optimum performance, the modem employs FSK modulations to be compatible with Bell 202T and ITU-V23 standards, which can communicate over a variety of transmission lines.

The SM202T/V23 modem can operate over a wide range of AC or DC power supply voltages and temperatures. With proven reliability and ease of installation, the SM202T/V23 is ideal for point-to-point and point-to-multipoint polling networks, where reliability and low-network latency are critical for system performance.

**KEY FEATURES**

- **Data Rate**: 0 - 1200 bps
- **Bell 202T and ITU-V.23 compatible operation for 1200 bps over Telco lines**
- **4-wire full-duplex or 2-wire half-duplex over unconditioned or conditioned lines for point-to-point or multipoint networks**
- **Selectable EIA RS-232/V.24 and RS-485 DTE support**
- **Built-in loopback diagnostics for local and remote testing**
- **Configuration options provided by DIP switches and jumpers (no AT command set required)**
- **Heavy-duty surge protection provided at power supply and leased line interface**
- **Supports wide range of AC & DC power supply options**
- **Isolated DC-to-DC converter for protecting critical DC or battery power system**
- **Wide range of operating temperatures from -40° to +85°C**
General Specifications

Data Rate Support
Data Speed:
- 0-1200 bps in Bell 202T mode
- 0-1200 bps in ITU-V.23 mode
Data Format:
- Asynchronous, transparent character format
- 9-, 10- or 11-bit character with 1 or 2 stop bits

Modulation
Frequency Shift Key (FSK)
Bell 202T Mode: Mark 1200 Hz
- 2200 Hz
- Soft Carrier 900 Hz
ITU-V.23 Mode: Mark 1300 Hz
- 3600 Hz

Transmission Line Interface
Leased Line:
- TELCO voice band 2- or 4-wire leased lines
- Private or metallic circuits 2- or 4-wire, 19-26 AWG
Connector: 4 pin RJ-11C modular Jack
Transmitter output level: 0 to -12 dBm, selectable

DTE/RTU Interface
The modem provides serial ports to support both the RS-232 and RS-485 interface standards:

RS-232 Interface
Connector: DB9-F
Signals: RTS, CTS, CD, TD, RD, DSR, SG

RS-485 Interface
Connector: RJ-11C
Signals: 4-wire full-duplex:
- TX+, TX-, RX+, RX-

Front Panel Indicators & Controls
LED. Indicators:
- RTS, CTS, TXD, RXD, CD, MR, ALB, DLB
TEST Switch:
- Push Button for Analog Loopback, Digital Loopback

Power Supply Specifications
Three models support various power options:
- Stand-alone: 90-264 VAC
- Stand-alone: 10-48 VDC
- Rack-mount: Powered by RM16M rack
Power Consumption:
- Idle mode: 1.0 Watts
- Normal mode: 2.0 Watts, typical

Mechanical Specifications
Enclosure dimensions:
- 4.1”(W) x 4.9”(L) x 1.4” (H)
Weight: 0.5 pound, without AC power module

Environment Specifications
Temperature:
- Operation: -40° to +85° C
- Storage: -40° to +85° C
Humidity:
- Up to 95% non-condensing

Model Numbers and Optional Features
SM202T: Stand-alone with AC power supply
90-264 VAC or 115-400 VDC
SM202T-DC: Stand-alone, DC power only
SM19202FP-DC 10-60 VDC or 90-264 VAC or 115-400 VDC
SM202T-RM: Rack-mount card for
Motorola/UDS RM16M modem nest.
SM202T-DIN: S/A unit with DIN Rail mounting kit

Multi-point Polling Network with the Synxcom Modems

Synxcom Inc, Newport Beach, CA 92660
Phone: (949) 390-8236, FAX (949) 872-2889
sales@Synxcom.com