

## 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-V23 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

Space 2200 Hz

Soft Carrier 900 Hz

**ITU-V.23 Mode** Mark 1300 Hz

Space 2100 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)

104mm(W) x 125mm(L) x 36mm(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

**SMV23:** Stand-alone with AC power supply  
90-264 VAC or 115-400 VDC

**SMV23-DC:** Stand-alone, DC power only  
SM19202FP-DC 10-60 VDC

**SM202T-RM:** Rack-mount card for  
Motorola/UDS RM16M modem nest.

**SMV23-RM:** Rack-mount card for  
Motorola/UDS RM16M modem nest

**SM202T-DIN:** S/A unit with DIN Rail mounting kit

