Bell 202T Compatible Modem for Private Line Applications

Highlights

- Custom VSLI technology for superior performance and reliability
- Bell 202-compatible 1800 bps asynchronous data rate
- High or low density rackmount packaging for easy installation in a variety of GDC shelves and enclosures
- Simple configuration and option selection without complicated programming
- Configuration values stored in non-volatile memory.
- With the SCM, supports Telnet and SNMP-based management
- Ideal for Point-to-Point or Multi-point applications

Scalable and Flexible Connectivity

The SpectraComm 202 modem is a 7-inch by 9.5-inch (178 mm by 241 mm) printed circuit card that conforms to GDC's SpectraComm format. As part of the SpectraComm family of products, SC 202 modem installs in any GDC high- or low-density shelf, or the single-slot SpectraComm AC or DC standalone enclosures.

Overview

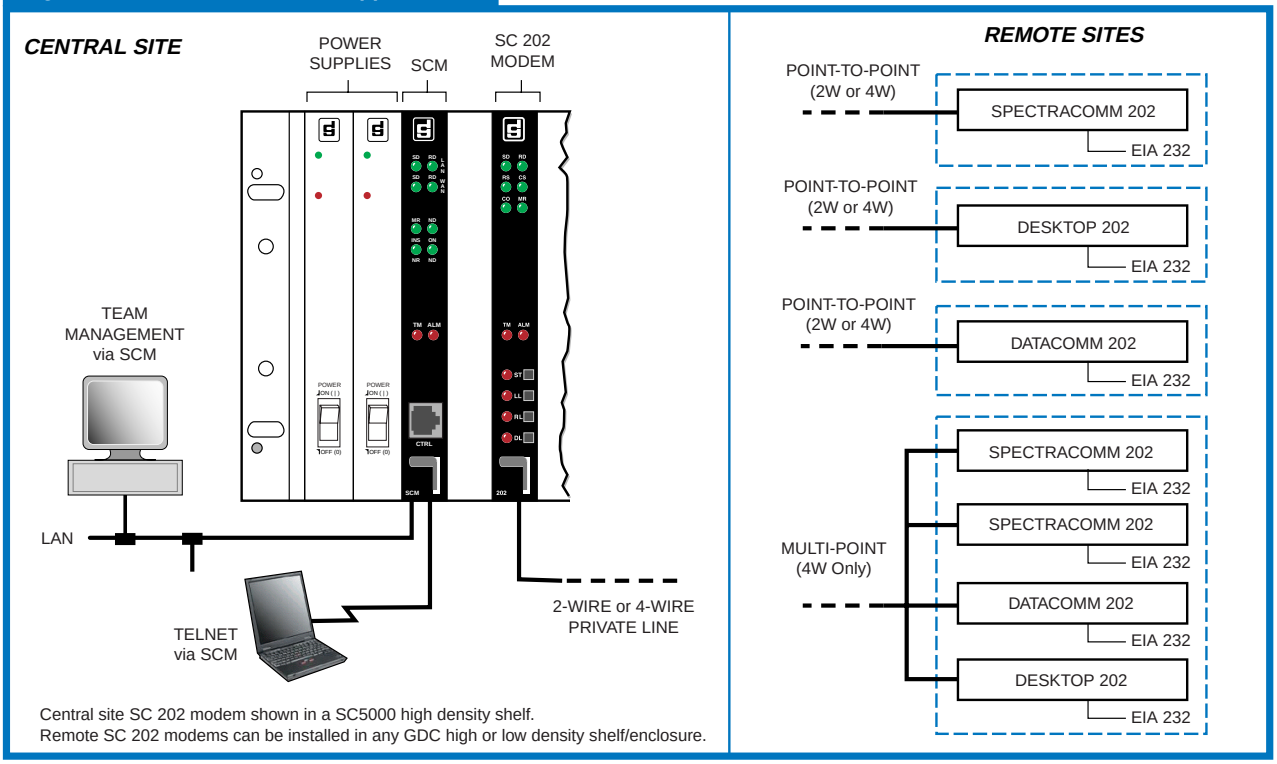
The SpectraComm 202 modem is a Bell 202T compatible modem that provides asynchronous communications over two-wire, half-duplex and four-wire, full-duplex private lines, at 0 to 1400 bps over unconditioned lines (on basic 3002 channel), and 0 to 1800 bps over lines with C2 conditioning (on basic 3002 channel).

The SpectraComm 202 modem supports end-to-end interoperability with GDC DeskTop 202, DataComm 202T, and DataComm 202S/T modems, and other SpectraComm 202 modems.

The device can operate in a stand-alone mode, controlled by on-board switches and jumpers. Remote management can be conducted via GDC's SNMP-based TEAM software. which requires a SpectraComm Manager card (SCM) co-located in the shelf with the SC 202.

Figure 1 shows SpectraComm 202 modems in typical point-to-point and multipoint applications.

Figure 1: SC202 Point-to-Point Applications



Central site SC 202 modem shown in a SC5000 high density shelf.
Remote SC 202 modems can be installed in any GDC high or low density shelf/enclosure.

Features & Benefits

- Bell 202T compatibility for 2- or 4-wire private line applications
- Compromise equalizer that guards the modem from problems associated with unconditioned voice grade facilities.
- Soft transmit carrier turnoff which virtually eliminates erroneous data bits affecting polled applications.
- Anti-streaming timer which keeps the modem from being disrupted by faulty streaming terminals in polled applications.
- Simple installation in any high- or low-density SpectraComm shelf or SpectraComm standalone enclosure.
- Power supplied by the SpectraComm shelf or enclosure, with all connections made at the rear panel.
- Optional network management via the SCM (SpectraComm Manager) card.
- Configurable hardware switches and jumpers.
- Options such as Request-to-Send (RS) , Clear-to-Send (CS) delays and carrier mode, can be set from switches located on the modem card.
- Built-in default values allow fast configuration for most applications
- Diagnostic tests accurately detects system faults and helps you to quickly restore service: Self-Test (ST), Local Loopback (LL), Remote Loopback (RL), and Digital Loopback (DL).
- All diagnostic tests can be controlled from the front panel switches;
- Front Panel LED indicators monitor operation and diagnostics.
- The local loopback and remote loopback can also be controlled from the terminal.
- A selectable 10-minute abort timer allows the modem to recover from an inadvertent test.

General DataComm
The Best Connections in the Business

SpectraComm 202

SC202 Physical Specifications

Single-slot Blade

Width: 178 mm (7.0 in)
Height: 21 mm (0.81 in)
Depth 241 mm (9.5 in)
Weight: 0.28 kg (10 oz)

Environmental Specifications

Non-Operating

Temperature: -40 to 85 degrees C (-40 to 185 degrees F)
Relative Humidity: 5% to 95%
Altitude: 0 to 12,191 m (40,000 ft)

Operating

Temperature: 0 to 50 degrees C (32 to 122 degrees F)
(Derate by 1 deg C/1000 ft above sea level)
Relative Humidity: 5% - 95% non-condensing
Altitude: 0 to 3,047 m (0 to 10,000 ft)

Electrical Characteristics

Power (AC or DC), voltage, frequency, and fusing determined by your SpectraComm shelf or enclosure

Power Dissipation: 6 Watts per slot maximum

Compliance

Safety: UL Approved

NEBS Level III Certified

EMI: FCC Part 15, Subpart J (Class A) Approved

Quality Assurance: ISO 9001: 2000 Certified

Operational Specifications

Operating Modes

4-wire: Full-duplex, point-to-point or multipoint
2-wire: Half-duplex, point-to-point

Operation

Data Rates:
0-1400 bps (unconditioned line);
0-1800 bps (C2 conditioning recommended for optimum performance)

Line Type: 4- or 2-wire private line

Impedance: 600 ohms (private line only)

Connectivity:
8-pin JM8 jack or 50-pin Telco or wire-wrap (depends on shelf)

Operating Format: Asynchronous, serial, binary

Request-to-Send to Clear-to-Send delay:
0, 8, 30, or 180 ms

Modem compatibility: Bell 202T

Terminal interface: Compatible with EIA-232-D

Transmitter Characteristics

Modulation:

Frequency shift keying (FSK)

Carrier Frequency Mark: 1200 Hz +/- 1%

Space: 2200 Hz +/- 1%

Soft Carrier Turnoff Timing: 0, 8, or 30 ms

Frequency: 900 Hz +/- 1%

Adjustable Output Level:
0 dBm to -15 dBm in 1 dB steps (+/- 0.5 dB)

Receive Characteristics

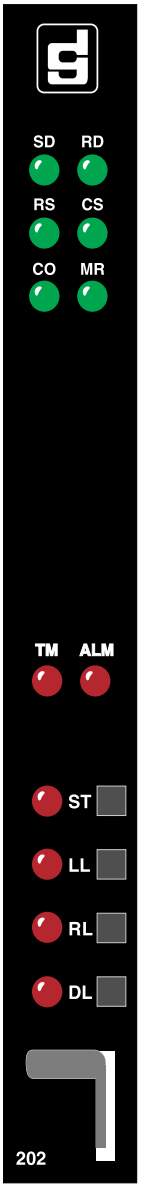
Demodulation: FSK tone demodulation

Carrier detect:
Acquisition At or before (ON) -26 dBm
Release At or before (OFF) -31 dBm
Hysteresis 2 dB minimum
Timing Within 8 ms

Soft carrier detect:
Within 8 ms

Equalization:
Compromise amplitude and delay

Operating range:
0 to -26 dBm



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