

SNMP-Managed DDS CSU/DSU Data Set Emulator

Highlights

- Operates in Standard DDS mode, DDS with secondary channel mode, and clear channel (64 Kbps) mode.
- Communicates with an SNMP controller via a SpectraComm Manager (SCM) card co-located in the shelf.
- Supports comprehensive, non intrusive network management under Simple Network Management Protocol (SNMP), for configuration, alarm reporting, and diagnostic testing capabilities.
- Supports terminal interface via the SCM by an ASCII terminal or by Telnet access.
- Built-in DTE interface that conforms to EIA/TIA-232-E, ITU-T V.35; Optional EIA-530 interface plug-in.
- Senses and adapts automatically to the connection of either EIA/TIA-232-E or V.35 equipment at its DTE interface.
- Compatible with remote NMS 520, NMS 510, SC521A or SC521A/S DSUs, or any existing 500a-type DSU for user data transmit and receive.
- Stores two versions of operating firmware, with user control of switchover between active and standby firmware versions.
- Supports firmware download via TFTP for upgrades.

Overview

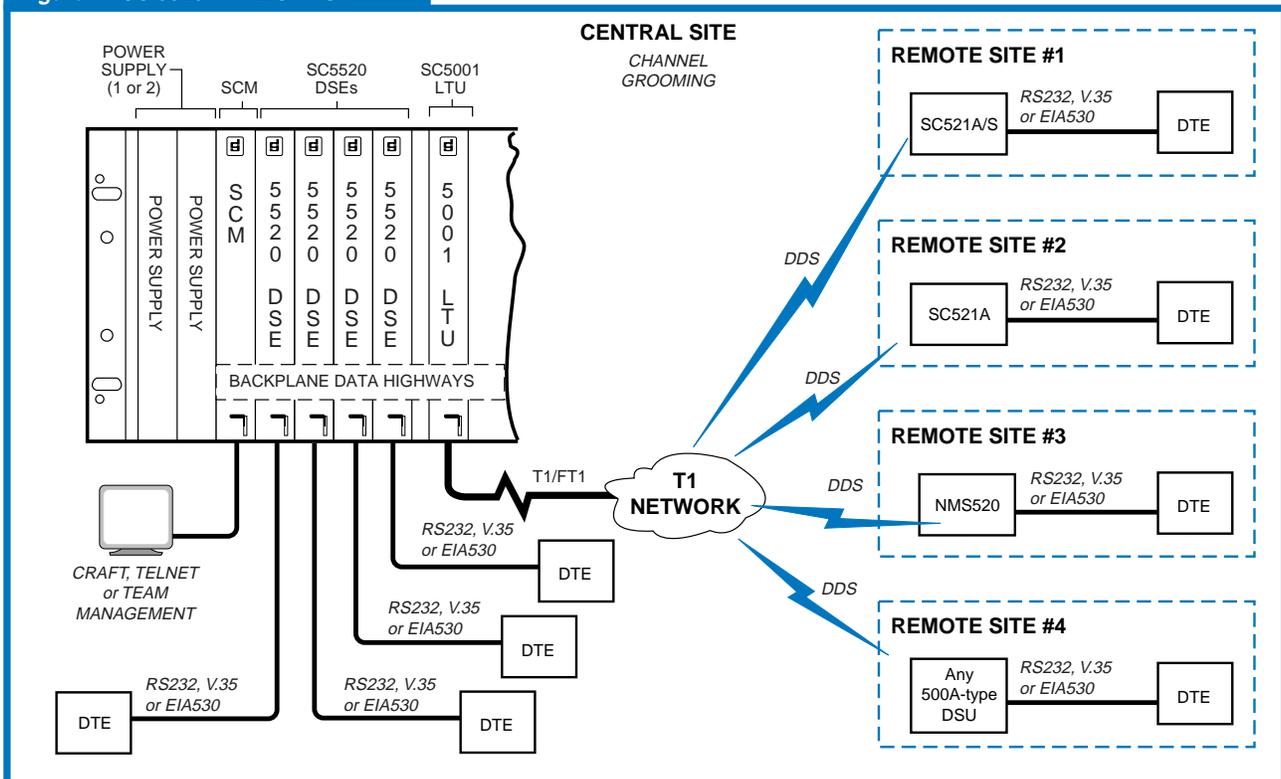
The SC5520 DSE provides the channel interface functionality of a multi-rate data service unit (DSU) and can operate in standard DDS, DDS with a secondary channel (DDS/SC), or 64 Kbps clear channel mode. The DSE works in conjunction with the SC5001 LTU which performs the line grooming necessary for the switching office to separate the signal back into its component parts for transmission to multiple locations (*Figure 1*). The SC5520 can also function as a point-to-point DSE.

The SC5001 LTU provides the T1 line interface, and supports up to 24 DSEs co-located in a dual SpectraComm shelf. The DSEs and LTU exchange channel data via one of four data highways in the shelf backplane.

The SC5520 supports an optional EIA530 interface plug-in. When the EIA530 plug-in is not installed, the DSE provides EIA/TIA-232-E and V.35 interfaces by soft-strap selection or automatic sensing.

The SC5520 also accepts a DRA plug-in that adapts a synchronous or asynchronous DTE data transmission speed of 19.2, 9.6, 4.8, or 2.4 Kbps to an aggregate line speed of 56 or 64 Kbps. At 56 Kbps it can be used in both point-to-point and multipoint applications. At 64 Kbps it can be used in point-to-point applications only.

Figure 1: SC 5520 APPLICATION



SC5520 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: 4 Watts maximum (card only)

Compliance

Safety: UL Approved
NEBS Level III Certified
EMI:FCC Part 15 Approved
Quality Assurance: ISO 9001: 2000 Certified

Operational Specifications

Modes of Operation

Standard DDS or DDS with secondary channel
(2.4 to 56 Kbps, Point-to-Point or Multi-Point)
64 Kbps clear channel (Point-to-point)

Signal Format

Serial, synchronous, or asynchronous

Asynchronous Character Format

8-11 bits/character

Overspeed

1 or 2.3%

Data Rates

Synchronous:
2400, 4800, 9600, 19200, 56000, or 64000 bps
Asynchronous:
2400, 4800, 9600, or 19,200 bps
Asynchronous via Rate Adaption option:
600, 1200, 1800, 2400, 4800, 9600, or 19,200 bps

DTE Interface

EIA/TIA-232-E, ITU-T V.35, or optional EIA-530

Transmit Timing

Shelf (Receive)
Internal (DSE) $\pm 0.01\%$
External (DTE)
Can accept external clock up to $\pm 0.02\%$

Diagnostic Tests

Local Test
Remote Loop
Data Loop
Self-Test

Alarm Reporting

EEPROM Checksum Error
Receive Data Loss
Front Panel Test
External Clock Loss
Test Mode Shorted
Data Set Ready Loss
Data Terminal Power Loss
Data Set Ready Shorted
Data Terminal Ready Loss
Data Carrier Detect Loss
Transmit Data Loss
Data Carrier Detect Shorted
STC Loopback
Clear To Send Shorted
Receive Data Shorted
Receive Clock Shorted
Transmit Clock Shorted

