TCP/IP-Based SNMP Management for Shelf & Remote Devices

Highlights

- Supports Ethernet, serial PPP, and serial DBU connectivity
- Supports Telnet connectivity for capable devices
- Serves as SNMP proxy agent for managed devices
- Provides the IP address for managed devices
- Polls and auto-discovers managed devices
- Provides craft port for local access to managed devices
- Provides a modem port for dial backup
- Supports TFTP firmware download to SCM and managed devices

SpectraCommonality

The SpectraComm Manager card is a 7-inch by 9.5-inch (178 mm by 241 mm) printed circuit card that conforms to GDC's SpectraComm format. The SCM provides the management interface for up to 15 managed SpectraComm or UAS network elements co-located in the shelf, and their remotes. *(Figure 1)*.

Overview

The SpectraComm Manager card (SCM) is the shelf controller and network management interface for a variety of GDC network devices installed in GDC shelves and enclosures. Primarily, the SCM card provides TCP/IP-based centralized management and uses the Simple Network Management Protocol (SNMP), a proxy agent for SpectraComm and UAS devices in the shelf. These functions are also performed for the remote units which communicate with their SCM-managed counterparts in the shelf.

For compatible GDC devices that have their own embedded SNMP agents, such as routers, switches, multiplexers and data transport devices, the SCM discovers the devices in the shelf and provides limited device-specific functions.

An SCM card and its corresponding IP address can control one other device in a SpectraComm 2000 shelf, up to 15 co-located devices in a SpectraComm/UAS shelf, and up to 31 elements in a dual shelf. With an optional software key, the SCM can allow capable modems to open a client service session for RADIUS security.

Figure 1: SCM-Managed Shelf Systems
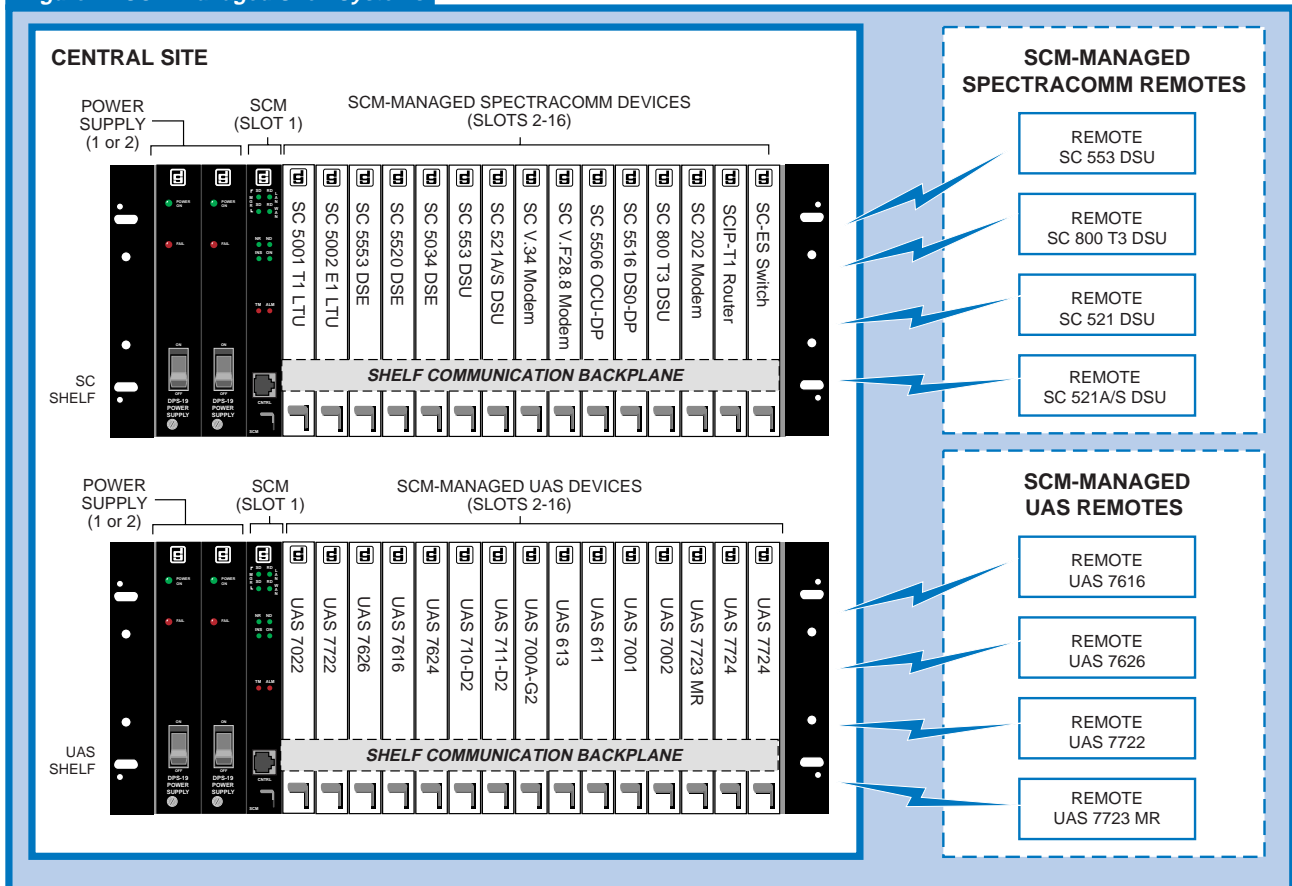
Features & Benefits

- Supports Ethernet, serial PPP and serial DBU connectivity.

- Supports Telnet connectivity for capable network elements.

- Provides a front panel control port configured as a EIA-561 DCE interface or as
  a VT100-compatible terminal connection.

- Acts as SNMP proxy agent for network elements under its control.

- Creates and maintains defined MIB objects.

- Locally manages up to 15 local network elements in one shelf of SpectraComm or UAS devices, or up to 31 devices on two shelves. Can manage up to 1024 network elements.

- Polls network elements for alarm and status change notification.

- Performs SNMP control for TEAM-managed elements according to their respective MIBs.

- Supports TFTP firmware download to the SCM and to network elements.

- Supports dial-backup recovery to preserve communication with network manager.

- Provides option for redundant SCMs.

- Provides Auto Configuration for capable network elements.

- Supports RADIUS (Remote Authentication Dial-In User Service) Authentication
  and RADIUS Accounting

- Supports remote configuration of SCM IP addressing SCM

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SpectraComm MANAGER

SCM 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: -25 to 70 degrees C (-9 to 158 degrees F)
Relative Humidity: 5% to 90%
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

Bell Pub. 62310 and ANSI T1.410 standards compliant

Security and Authentication Features

Super User Community Name password

Telnet Login password

Telnet port number

Inactivity timeouts

Optional RADIUS Authentication

Note:
Several combinations of security features can be configured simultanously in the SCM.

Supported Devices

SCM-controlled SC Devices
SCM Version 5.x.x
SpectraComm 202 Modem
SpectraComm V.F 28.8/33.6 Modem
SpectraComm V.34 4-Port Modem
SpectraComm V.34 DBU
SpectraComm Dual V.34 Modem
*SpectraComm 5001 T1 LTU
*SpectraComm 5002 E1 LTU
SpectraComm 521 All Rate DSU
*SpectraComm 521A DSU
*SpectraComm 521A/S DSU
NMS 510 DSU (Remote only)
NMS 520 DSU (Remote only)
SpectraComm 5034 DSE
SpectraComm 5090 DSE
*SpectraComm 553 T1/FT1 DSU
SpectraComm 5506 OCU-DP
SpectraComm 5516 DS0-DP
SpectraComm 5520 DSE
SpectraComm 5553 DSE
*SpectraComm 800 T3 DSU

SCM-Compatible SC Devices w/SNMP
SCM Version 5.9x or 7.9x
SpectraComm IP-T1 Router
SpectraComm IP-E1 Router
SpectraComm IP-DSL Router
SpectraComm ES 9-Port Ethernet Switch
SpectraComm ES 18-Port Ethernet Switch
SpectraComm M13 Multiplexer
SpectraComm ADT Asynchronous Data Transport
SpectraComm SDT Synchronous Data Transport
SpectraComm SRM-6 Subrate Multiplexer

SCM-controlled UAS Devices
SCM Version 7.x.x
SpectraComm V.F 28.8/33.6 Modem
SpectraComm V.34 4-Port Modem
SpectraComm V.34 DBU
SpectraComm Dual V.34 Modem
UAS 2011 DATX
UAS 611 NTU
UAS 613
UAS 616 LTU
UAS 700G2, 700G3
*UAS 701T2, 711D2, 700AG2
UAS 7001, 7002
UAS 7022
UAS 7616, 7616MP, 7616NZ
UAS 7624
UAS 7626
UAS 7722
UAS 7723 MR

UAS 700AG2NZ, 702G2, 710D2,720G1, 720G2, 721T2, 730D1, 730D2, 731D2 (Remotes only)

DC610 NTU, DC612 NTU, DC621 NTU (Remotes only)

GT1020, GT1030, GT1033 MR, GT2020, GT2030 (Remotes only)

GT 128 NTU (Remote only

* SCM-Controlled Devices with Data Highway Functionality

SD RD
M
G
R
SD RD
L
A
N
W
A
N

NR ND

INS ON

NR ND

TM ALM

CTRL

SCM

USDA
RUS
Accepted

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