

Cellular Service Access Package

Cell Site DSU/CSU

Highlights:

- Specific design for cellular service access requirements
- End-to-end SNMP management
- Unique design for line cost savings
- Comprehensive diagnostic tools for fault isolation

Overview The Cellular Service Access Package (CSAP) is a cell site unit that supports T1 communication between cellular phone service cell sites (or base stations) and associated switching stations. The CSAP comprises GDC's SpectraComm 2000 two slot enclosure and up to two SpectraComm 553 (SC 553) T1 DSU/CSUs. The CSAP resides in high density cell site cabinets, forming the bridge for wireless cellular phone service to basic land line services. The SC 553 T1 DSU/CSUs can be equipped with an optional cascade port (DSX-1 interface) to link contiguous cell sites as a cost savings measure using fractional T1 service (FT1) or to function as a CSU where specific CSU application support is required. Rapid installation and remote management enable network managers to control costs.



Management of the CSAP can be accomplished via an SNMP manager supporting HP OpenView version 4.1 or IBM NetView 6000 in conjunction with GDC's TEAM 553 application software, a MIB browser, or via Telnet application software. Craft port configuration and monitoring is also available for SC 553 units integral to CSAPs.

Product Description The CSAP consists of a two slot SpectraComm 2000 enclosure (19" W x 11.5" D x 1.75" H) easily installed in a standard 19" cabinet at cell site locations. The enclosure comes equipped with a single 24 VDC/-48 VDC power supply. A second power supply can be added for redundancy. An external power converter is also available for AC applications. All cards are accessible from the front of the SC 2000 enclosure, including the DSU/CSU and power supplies, for ease of access. Both the DSU/CSU and power supplies are hot swappable for non-intrusive field upgrades.

The backplane supports an alarm terminal block for connection to an external alarm indicator for such alarms as power supply failure and T1 circuit failure. Each of the two slots reserved for SC 553 T1 DSU/CSUs on the SpectraComm 2000 backplane has a DB-25 female DTE physical connector as well as T1 network line and cascade port modular jack interfaces. DTE ports can be configured for either a V.35 or an EIA 530/422 interface. Two female modular jacks are available on the backplane in support of a local craft port function.

Switching Stations GDC's high density SpectraComm 5000 provides a complementary switching station offering. The SpectraComm 5000 Series is a central site system supporting up to 31 SC 553 T1 DSU/CSUs in two 7 inch high NEBS compliant shelves creating T1 and fractional T1 service to remote cell sites equipped with CSAPs. Shelf management is provided by the SpectraComm Manager (SCM), which supports Ethernet LAN and PPP connectivity for SNMP managers, Telnet and craft port configuration and management of the SC 553 cards.

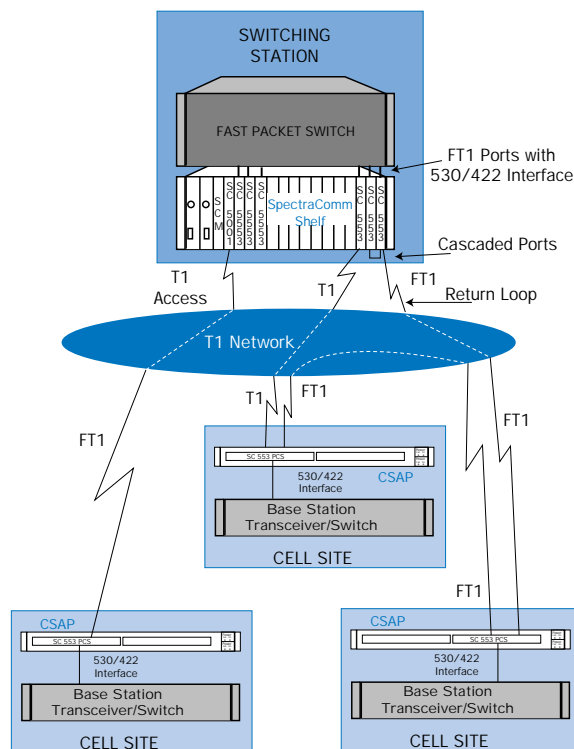
Network Management The CSAP is in-band SNMP manageable via GDC's TEAM custom graphical application software, a MIB browser, or customer developed software. Other management choices include Telnet, which can be used for configuration, monitoring and testing, either as the primary manager or as a backup to SNMP. A craft port for on-site optioning and monitoring is supported through a direct interface to a collocated SCM card in the 16 slot SpectraComm Shelf at a central network management location. Craft port capability is provided directly on the SC 2000 for local cell site optioning and monitoring. The flash memory architecture enables downline loading of software and software revisions for easy installation and upgrades to the SCM and SC 553 units at central and remote cell site locations.

Comprehensive Diagnostics TEAM 553 or Telnet can be used to perform a full complement of diagnostic loopback tests. GDC's exclusive Service Lane™ diagnostics enable loopback and bit-error-rate testing on a single DSO timeslot. Also, the SC 553 supports the ability to monitor and report data terminal EIA leads, network faults or alarms, independent user and Telco performance registers. Front panel test switches are available for T1 payload and channel testing



and T1 composite diagnostic loopback tests, as well as channel loopback tests. Convenient front-panel test jacks facilitate “break-in” testing and non-interfering in-service monitoring. Dual non-volatile ESF (Extended Super Frame) registers support telephone company diagnostics while allowing the user to access the same data through the SNMP manager.

Network Applications The CSAP provides significant flexibility to support varied cellular service applications. At cell sites, the CSAP package can be configured with one or two SC 553 T1 DSU/CSUs supporting point-to-point T1 circuits or fractional T1 circuits. When configured with the cascade card, the SC 553 can transport excess DSO channels to contiguous cell sites, providing a cascading cell site structure that conserves line costs. Switching stations can be configured with CSUs supporting fractional T1 service to cell sites configured with SC 553 units as CSUs. Network management of this application can be provided to remote cell sites via designated DSOs. Alternatively, switching stations can be configured with the SpectraComm 5000 Series for a total end-to-end SNMP management solution.



Specifications

Aggregate Data Rates:	N x 56/64 Kbps to 1.544 Mbps, where N = 1 to 24 DSOs
Data Encoding:	Bipolar Return to Zero (AMI or B8ZS)
Frequency:	1.544 Mbps ± 50 bps
Framing:	D4, AT&T 54015 ESF, ANSI T1.403 ESF
Network Interface:	1.544 Mbps channelized DS1 in consecutive or alternate DSOs or field selectable DSX-1
DTE Interface:	One ITU-T V.35 or EIA-530; optional DSX-1
Timing Options:	Internal clock; DTE external clock; slave timing (received timing loopback); or Station Clock at DS1/RS-422 1.544 Mbps
Diagnostics	
T1 (CSU) Tests:	Cascade (equipment) Digital Loop, Line Loop, Local Test, Remote Test, Self Test (QRS, 3:24, prog 16 Bit, 2047, 511), Local Test with Self Test and Remote Test with Self Test, NI Loop
Channel Tests:	Local Loop, Digital Loop, Remote Loop, Self Test (2047, 511), Local and Remote Loop with Self Test
Service Lane™ DS0 Tests:	Loopbacks, Self Test (2047, 511) and Circuit Delay
SNMP Compatibility:	Fully compliant with SNMP Version 1 agent RFC 1213 MIB II, Enterprise MIB for SC 553 Features
Network Manager:	TEAM 553 under HP OpenView; intelligent front panel for local diagnostics and control; Telnet screens
Physical and Environmental	
Power Requirements:	24 VDC Nominal (+20 to +30 VDC); -48 VDC Nominal (-40 to -60 VDC); -60 VDC Nominal (-50 to -72 VDC); Optional second power supply for redundancy, dual power input AC Power: External AC “all range” power supplies are available.
Operating Temperature:	0° to 50° C (32° to 122° F)
Storage Temperature:	-40° to 70° C (-40 to 158° F)
Relative Humidity:	5% to 95% non-condensing
Regulatory:	FCC Compliant Part 68; Part 15, Class A; UL1950; CSA 22.2 no.950

WORLD HEADQUARTERS
Middlebury, Connecticut USA 06762-1299 • Tel: 1-203-574-1118 • Fax: 1-203-758-8507 • 1-203-758-9518 (GDC International) • www.gdc.com

U.S. SALES OFFICES

Atlanta, GA (770) 955-0682 • Boston, MA (617) 622-5900 • Chicago, IL (630) 261-0670 • Cleveland, OH (216) 328-2044 • Dallas, TX (972) 406-4800
Denver, CO (303) 782-3600 • Detroit, MI (248) 540-4110 • Honolulu, HI (808) 235-2319 • Houston, TX (713) 779-7879 • Kirkland, WA (206) 820-9451
Los Angeles, CA (310) 348-5200 • Los Angeles, CA (818) 506-8897 • Minneapolis, MN (612) 935-7765 • New York, NY (212) 248-7220
Pennsauken, NJ (609) 663-0755 • San Francisco, CA (510) 769-4500 • St. Louis, MO (314) 537-1333 • Strongsville, OH (440) 572-3355
Washington, DC (301) 595-0300 • For the name of your U.S. Distributor contact: (800) 523-1737 • For 24-hour delivery, call GDC QUIKSHIPPER® at 1-800-432-2228
U.S. Government Sales (703) 205-2960

SUBSIDIARIES

Australia Tel: 61-2-9956-5099 Fax: 61-2-9956-5083 • Canada Tel: 416-498-5100 Fax: 416-499-0248 • France Tel: 33-1-4762-6200 Fax: 33-1-4762-9696
Germany Tel: 49-69-950840 Fax: 49-69-5073259 • Mexico Tel: 52-5-645-2238 Fax: 52-5-645-5976 • Russia Tel: 7-812-325-1085 Fax: 7-812-325-1086
United Kingdom Tel: 44-1189-774-868 Fax: 44-1189-774-871

INTERNATIONAL REGIONAL OFFICES

Asia Singapore Tel: 65-735-2123 Fax: 65-735-6889 Hong Kong Tel: 852-25265511 Fax: 852-25259944 China Tel: 86-10-6500-6589 Fax: 86-10-6500-6590
Japan Tel: 81-3-3862-1730 Fax: 81-3-3862-6326 • Europe/Africa/Middle East Tel: 44-1189-774-868 Fax: 44-1189-774-871 •
Latin America Argentina Tel: 54-1-315-6086 Fax: 54-1-312-2819 Brazil Tel: 55-11-535-0232 Fax: 55-11-542-0547
Miami, Florida Tel: 1-954-724-3511 Fax: 1-954-724-5397

For the name and address of your local distributor, contact your nearest area office or General DataComm World Headquarters

All specifications subject to change without notice. © General DataComm (1997) All Rights Reserved • Registered trademark of General DataComm Industries, Inc. General DataComm, GDC, and the GDC logo are trademarks of General DataComm, Inc. All other trademarks and registered trademarks are the property of their respective owners.