Access Navigator™

DCS Service Manager

CAC's Access Navigator/ DCS Service Manager contains the functions of a 32 port T1 1/0 Digital Cross Connect System, T1 CSUs, T1 diagnostic test equipment, and Access Bank II host controller in a modular chassis less than 1.5 rack units high. Ethernet SNMP, controller redundancy, and modular T1 expansion provide carrier-class service protection and management at either carrier or customer T1 access points.

Operational Description

CAC's Access Navigator™/DCS Service Manager provides a complete solution for managing 4 to 32 T1 access connections in one highly integrated product. With the functions of a 1/0 digital cross connect system, plus demarcation testing, carriers are able to decrease maintenance costs and labor, while increasing service availability. Fractional voice and data services from multiple customers are combined by the Access Navigator to save recurring transmission costs, and capital costs on switch or router ports.

With both NEBS and customer premises certifications, the Access Navigator can be located in carrier racks or on customer walls. The 32 port system occupies only 1.5 rack units. Integrated testing and optional common equipment redundancy ensure carrier-class service availability. Space, power, and installation labor are dramatically reduced in comparison to old generation digital cross connect and CSU or NIU shelves. Additional Quad T1 Cards can be installed while the Access Navigator is in service to provide from 4 to 32 T1/CSU connection ports.

Access Navigators provide management access via Ethernet SNMP, Telnet CLI, and RS-232 CLI. Software is up-dated in-service via Ethernet or RS-232. Flow-through provisioning and testing control over ESF T1 connections, from the Access Navigator to CAC's Access Bank® II units, reduce truck rolls and improve voice and data service availability at customer locations.

DCS Service Manager Applications

- T1 Service POP-In-A-Box:

  Fully integrated T1 access management for carriers to reduce recurring costs and improve T1 service protection at customer locations

- Branch Office Bandwidth and Connectivity Management:

  Bandwidth consolidation, provisioning and protection to reduce line costs and implement T1 back-up

- DCS Host Control of Access Bank IIs:

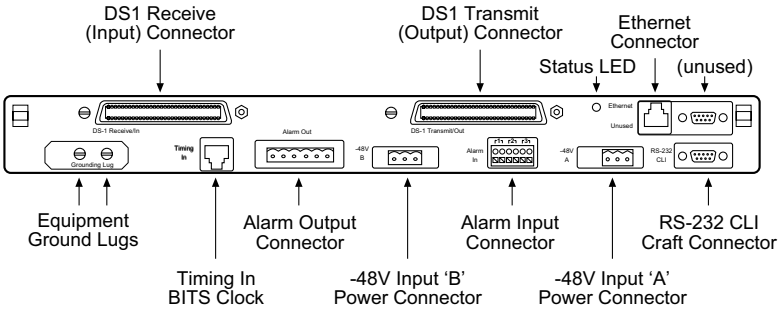
  Flow-through remote management and bandwidth grooming of Access Bank IIs to reduce installation and service labor of voice and fractional T1 data services

- PCS and Cellular Site T1 Bandwidth Management:

  Drop, groom, and test multiple T1 connections between cell sites and hubs to save transmission costs and service labor

CARRIER ACCESS CORPORATION®

Technical Specifications



DCS Operation
- Up to 32 T1s per system
- Cross connects at DS0 level
- Cross connects up to 24 contiguous DS0s between T1s
- Redundant controller and power feed

DS1 Interface
- Quad T1s per line card, hot swappable
- Line rate: 1.544 Mb/s ±32ppm
- Line code: B8ZS and AMI
- Framing: D4 (SF) and ESF
- DS1 receive sensitivity: -28dB to +3dB
- Line build-outs: DSX-1 (0 - 550 ft) CSU (0 dB, -7.5 dB, -15 dB, -22.5 dB)
- ANSI T1.403 Sec 6 & 7 (jitter, pulse mask transmission, receive sensitivity, framing formats)
- Built-in CSU with loopback and BERT for testing the T1s

System Clocking
- Primary and secondary sources from DS1s, external clock source (e.g. BITS) or internal clock (minimum Statum 4)
- Automatic system clock switching and hold-over

Signaling
- Robbed-bit and clear channel connections at DS0 level
- Supports FXS/FXO loop-start and ground-start robbed bit signaling
- Supports E&M robbed bit signaling

Management
- Command Line Interface (CLI) for provisioning and maintenance
- Ethernet SNMP uses Bellcore® standard MIB for DS1 interfaces (RFC-1406)
- Ethernet Telnet support for remote CLI
- RS-232 interface for local CLI
- TFTP and Xmodem support for flash memory software upgrades

Alarms
- Critical, Major and Minor alarm levels
- DS1 alarms for LOS, LOF, receive AIS, and receive RAI
- Output signal: relay contact closures, and LED indication
- Alarm inputs from dry contact closures

Compliance
- FCC Part 15 and Part 68
- UL 1950 Edition 3
- Bellcore® GR-63 (NEBS)
- Bellcore® GR-1089 (NEBS) for equipment Type 2 and 4
- AT&T 62411 (Stratum 4 enhanced T1 CPE)
- ANSI T1.403 and T1.107a

Power
- Input power: -42 to -60 VDC @ 1.5A
- Dual feed DC power inputs
- Power dissipation: 65 watts, fully equipped
- Solid-state (fuseless) overvoltage and overcurrent protection

Environmental
- Operating temperature: -5°to +45°C (23°to 113°F), up to +55°C short term (NEBS)
- Solid-state over-temperature protection
- Relative humidity: 0 to 95%, non-condensing
- No fans; passive thermal management

Cables
- Two (2) 10 ft. DSX-1 cables per Access Navigator (CAC P/N 005-0025)

Physical
- Dimensions: 17" x 13.5" x 2.63"
- Mounts in 19" and 23" racks
- Optional wall mount brackets

CARRIER ACCESS CORPORATION®

5395 Pearl Parkway, Boulder, CO 80301

303-442-5455 fax 303-546-9724

800-495-5455

http://www.carrieraccess.com

99001-B 5/99