

Access Navigator™

GR-303 + Data Host



CAC's Access Navigator/

GR-303 + Data Host

Operational Description

offers an integration of:

- **GR-303 host controller with modular expansion to 32 T1 ports**
- **1/0 digital cross connect system**
- **T1 CSUs and demarcation testing**
- **Access Bank II remote control**
- **SNMP/Ethernet, Telnet and RS-232 management**
- **Redundancy, protection, and alarming for carrier or customer premises installations**

CAC's Access Navigator™/GR-303 + Data Host offers a highly integrated solution for combining multi-line voice and data services on customer T1 access circuits. Using the Bellcore® standard GR-303 switching protocol, the Access Navigator dynamically assigns up to 768 DSOs to Class 5 local digital switch on a call-by-call basis. In addition to the concentration and management of CLASS® voice services, the Access Navigator grooms fractional T1 data connections from customer locations.

T1 local voice and data services from up to 28 customers are combined by the Access Navigator, saving both recurring back-haul transmission costs, and switch or router port costs by several factors. T1 voice service connections from customer PBXs and key systems may be concentrated into the GR-303 interface group selectively.

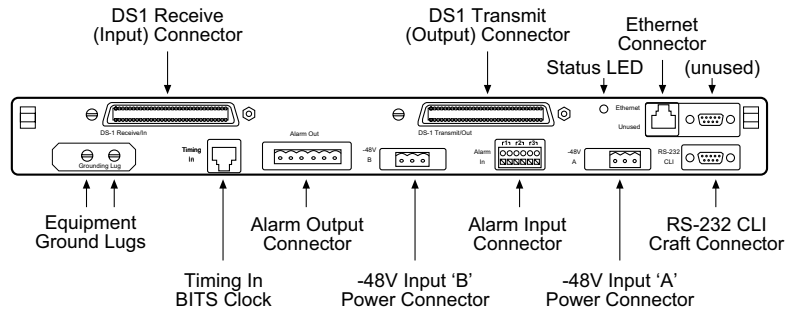
With CAC's Access Bank® II at the customer premises, CAC provides carriers with an end-to-end distributed voice and data digital loop carrier and remote management system. Flow-through provisioning and T1 testing from the Access Navigator to CAC's Access Bank II remote terminals reduce truck rolls and improve voice and data service availability at customer locations. Access Navigators provide service management access via Ethernet SNMP, Telnet CLI, and RS-232 CLI. Software may be updated in-service via Ethernet or RS-232.

With both NEBS and customer premises certifications, the Access Navigator can be located in carrier racks, or on customer walls. Integrated testing and common equipment redundancy assure carrier-class service availability. Additional Quad T1 cards can be installed while the Access Navigator is in service to provide from 4 to 32 T1/CSU connection ports to either customer access lines, Class 5 voice switches or data switches and routers.

The power of a 32 T1 port GR-303 system occupies only 1.5 rack units of space. Space, power, and installation labor are dramatically reduced in comparison to old-generation GR-303 digital loop carriers and CSU or NIU shelves. These reductions enable the carrier to deploy switching and concentration at the edge of the network, where the economics of reducing back-haul transmission are realized.

CAC's Access Navigator GR-303 + Data Host, together with the Access Bank II CPE, brings cost-effective concentration and remote management to competitive local carriers, with a new level of scalability and labor savings.

Technical Specifications



GR-303 Operation

- Up to 32 T1s per system
- Primary and redundant protection for EOC and TMC
- Alarm and maintenance support for DS1 terminations
- Compatible with Lucent, Nortel, and Siemens switches
- Configurable voice concentration ratios
- Redundant controller and power feed

DS1 Interface

- Quad T1s per line card, hot swappable
- Line rate: 1.544 Mb/s \pm 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

- GR-303 ABCD robbed-bit signal codes
- FXS loop-start and ground-start

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°C to +45°C (23°C 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



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