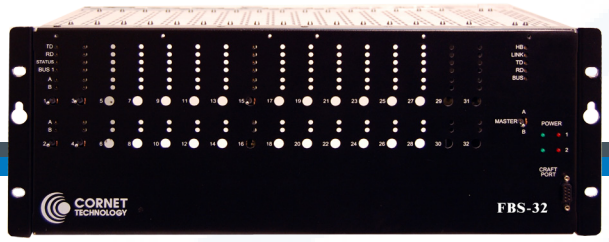
CORNET
SWITCHING SYSTEMS

Fallback Switches

FBS-16 and FBS-32



Fallback Switching System
The Cornet Switching Systems Fallback Switches (FBS) are economical, high bit-rate, high-bandwidth, electromechanical, 16 or 32 channel digital, and analog fiber A/B switches. These versatile switches are designed to locally or remotely switch an extensive range of electrical interfaces for datacom, telecom, and LAN topologies. Applications for the FBS switches include: SCADA Backup, Ethernet Switch/Hub redundancy, Fallback Switching, FEP/Router Sparing and Anti-Hacking Switching.

Design Overview
The FBS's rear-mount design is ideal for multi-interface environments (datacom, T1/E1, Analog/VF, and balanced electrical). Two-channel interface cards are also available. Each interface card is designed with interface appropriate connectors enabling multiple interface cards to reside in a single chassis. LEDs located on the front panel indicating A-position and B-position give the status of the interface and the switch condition. These LEDs indicate: A-position, B-position.

The chassis for the FBS switch measures 7" high (4 RU) and 8" deep. It fits into a standard 19" cabinet. Spring-loaded toggle switches to control the "Master A/B" switch function as well as individual card A/B switching are located on the front panel. Each chassis handles 16 cards. Cards are available in single- and two-switch per card versions. Both the one switch card and the two switch cards can be mixed in the FBS-32 chassis version.

Control
Both manual and remote control of the FBS are available. Communication to the switch is through TCP/IP or SNMP (via a private MIB). This MIB allows users to develop customized software for integration into their network management system. A TCP/IP server and an SNMP agent are built into the controller card allowing control from either source. This design allows all switch functions to be controlled remotely.

Control of the FBS is also provided through Cornet Switching Systems's CorScan®500 control software. Functions offered with CorScan500 include: setting trap conditions, switching, and status polling, and LED monitoring. CorScan automatically records switching events. The software also allows both group and scripted switching. For security, CorScan500 allows port control to be assigned to specific operators while others can control the entire system. For more details refer to the CorScan
data sheet.

In addition to SNMP and CorScan500 remote control, the FBS-16/32 can be controlled via a serial RS-232 interface from a local VT-100 terminal and via Telnet. A Control Interface Protocol is available. This protocol allows users to write their own system control and management software for incorporation into their Network Management Systems.

FBS controller cards support a user-defined IP address, that enables multiple FBS chassis to be chained together. In this configuration, one FBS switch acts as a primary with an IP address while the other co-located chassis are accessed and controlled via an Async RS-422 chain-in link. Up to 99 FBS chassis can be managed in this manner.

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Features

- Rear mounting of up to 16 interface cards
  - DB-25 WAN switching card allowing multiple interface types through adaptors
  - Dual RJ-45 switching card allowing LAN, WAN, VF switching
- Signal Types
  - RS.232/V.24
  - EIA-530
  - V.35
  - RS.449
  - X.21
  - DS1/E1/T1 PRI or BRI
  - 10/100BaseT Ethernet
  - 2-, 4-, 6-wire analog
- Multiple Control Mechanisms
  - VT-100 terminal
  - CorScan control
  - TCP/IP Ethernet
  - Telnet
  - Front panel toggle switch
- Switching via magnetic latching relays
- MTBF greather than 10 million switching actions
- 7" high (4 RU) 19" rackmount chassis
- Dual AC power supply

Specifications

Chassis:	16 card slots per chassis Two switches per card for FBS 32
Interfaces/Port:	One switch per card for FBS 16

CARDS
24 cct WAN Card

Connector:	DB-25 (f)
Leads Switched:	Pins 2 through 25: pin 1 hardwired (referenced to DB-25 (f) connector)
Bus:	None
Lead Alarming:	None
Lead Monitoring:	None
Switching Time:	< 10 msec.
Adaptors:	V.35 (f), X.21 (f), DB-15 (f)

RJ-45 Connector Card

Interfaces:	T1/E1, VF, 10/100BaseT Ethernet, Gigabit Ethernet
Connectors:	RJ-45 socket (A, B, and Common) two per card
Pins Switched:	All eight
CorScan Version:	CorScan500
Switching Time:	< 10 msec.

Switching Methods

Manual:	Master A/B
VT100:	Single channel switch (1 channel at a time)
SNMP:	Master channel switch (all channels simultaneously in one chassis) Single channel or TCP/IP Master Channel
CorScan500:	Group switch (defines a group of individual channels) Scripted switching

Control

Flash EPROM:	On controller card
CorScan500:	CTI control software interfaces with controlled devices via TCP/IP server and SNMP agent on each controller card through a private MIB Allows for sharing a single IP address across multiple chassis Heartbeat, TD, RD, Bus in use Local CorScan terminal or from frontmounted A/B switch

Power Requirements

AC Power Supply:	90/230 E 10% VAC, 47/63 Hz
Current:	1A
Power:	50 VA

Environmental

Operating:	0° to 50° C (32° to 122° F): 10-80% relative humidity (RH) non-condensing
Non-operating:	-20° to 70° C (-5° to 16-° F): 98% RH @ 65° C (150° F)

Mechanical

Dimensions:	7" H x 19" W x 8" D (17.7 cm H x 48.2 cm W x 20.3 cm H)
Weight:	Approx. 20 lbs (9 Kg)

Ordering Information

FBS-16/32 Chassis with redundant power supplies	CCHA41212-5
FBS A/B Controller Card IP, SNMP & Serial	C08055A-1
FBS A/B Card - DB-25	C08190A-1 with bus
FBS A/B Card – DB-25	C08190A-2 no bus
FBS A/B Dual RJ-45 Card	C08045A-1 no bus
Dual Redundant Power Supply card	CCHA41165-3
V.35F Adaptor	CON0142-2
X.21 (f) Adaptor	ADPB25M15F
X.21 (f) Adaptor – metric	ADPB25M15F-M
HD-15 (f) Adaptor	ADPA25MH15F
Blank Panels - covers 1 unused slot	199-43791-1
Blank Panels -- covers 2 unused slots	199-43792-1
Blank Panels - covers 4 unused slots	199-43793-1
Blank Panels -- covers 8 unused slots	199-43794-1
Blank Panels -- covers 12 unused slots	199-43795-1

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