

CAPELIX 2000

SAN SWITCH



FEATURES

- INDUSTRY-LEADING PERFORMANCE USING 12 GBPS SWITCH ENGINE
- 8 PORTS EXPANDABLE TO 11 NON-BLOCKING PORTS WITH OPTIONAL GBIC PLUG-IN MODULE
- 3 MODELS - 8 GBIC PORTS, 8 HSSDC PORTS, AND 8 DUAL SC PORTS
- FULLY INTEROPERABLE WITH EXISTING SAN DEVICES
- REFLEX™ II NAME SERVER ENSURES NETWORK STABILITY
- VENTANA™ SANTOOLS™ OPEN MANAGEMENT ENABLES SEAMLESS INTEGRATION INTO MANAGEMENT FRAMEWORKS

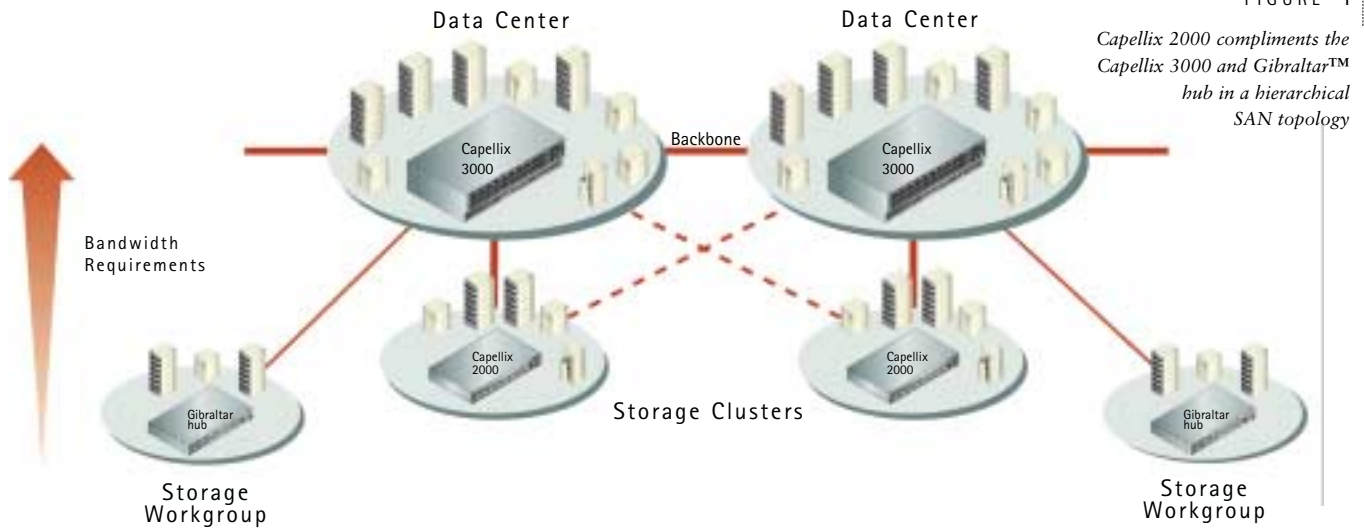
OVERVIEW

The Gadzoom® Networks Capellix™ 2000 series is the industry's first affordable line of SAN switches. Comprised of three models, each with eight ports and a versatile expansion slot, the Capellix 2000 series offers a choice of entry-level SAN switches with high-end expandability and extensibility. The choices include:

- **Capellix 2000G:** Eight GBIC ports provide pay-as-you-grow flexibility and port-to-port media selection. Best for a configuration with mixed requirements or when upgrading from a GBIC-based Fibre Channel hub.
- **Capellix 2000F:** Eight dual-SC integrated optical ports offer the best value when three or more optical ports are needed. Integrated transceivers provide link reliability and connectivity up to 500 meters.
- **Capellix 2000C:** Eight HSSDC integrated copper ports offer an entry-level price for building cost-effective clusters. Enables use of SAN switching in place of hubs or underpowered SCSI bus implementations. Best for intracabinet connectivity or price-sensitive installations.

CAPELLIX 2000

FIGURE 1



Each Capellix 2000 series model is designed to accommodate port expansion capabilities via a plug-in module (PIM). Based on the same switch engine as the Capellix 3000 modular switch, the Capellix 2000 series provides an optimum blend of price, performance, and scalability for Windows®, Linux®, and NetWare® environments.

PERFORMANCE

The Capellix 2000 series is an extension of Gadzoox Networks' market-leading Capellix family of switch products. Powered by a 12 Gbps switch engine, the Capellix 2000 series has the bandwidth to support additional ports, which can be added via the

plug-in module expansion slot. In addition to non-blocking throughput, the Capellix 2000 series' native, hardware-based, FC-AL switching has the lowest latency of any SAN switch on the market today, which is a key attribute for demanding, high-transaction rate applications.

MODULAR FLEXIBILITY

The Capellix 2000 series can scale from 8 to 11 ports without the need to create complex meshes which result in inter-switch performance bottlenecks and unnecessary expense. To support enterprise-class, campus-wide SANs, the Capellix 2000 series can be cascaded together within the application cluster and can also



FIGURE 2

Capellix 2000 Flexibility

Add three more ports to expand cluster connectivity to 11 ports of non-blocking throughput (up to 10km).

Cascade Capellix switches together for higher port count in cluster environments.

Connect the Capellix 2000 to any fabric switch (FL port) to expand to the SAN backbone.

support links to fabric switches. Unlike fixed-configuration switches that lack expansion options, the Capellix 2000 series grows with the needs of the SAN environment (Figure 1).

- If you need an extra port or two, add the 3-port GBIC PIM to expand any Capellix 2000 model to an 11-port switch.
- If you need even more ports within the local SAN, you can cascade a Capellix 2000 series switch for up to 20 ports of Fibre Channel connectivity.
- If remote backup or mirroring for high availability are a requirement, add the 3-port PIM to connect SAN clusters to the SAN backbone or other clusters up to 10km away, and still have eight ports available for cluster connectivity.
- If Fabric uplink is required, connect the Capellix to any standard Fabric (FL Port) switch for added flexibility.

No other eight-port switch on the market offers the flexibility of the Capellix 2000 SAN switch series (Figure 2).

INTEROPERABILITY

The Capellix 2000 series is a native FC-AL switch that uses the most common Fibre Channel protocol to enable “plug and play” solutions. No software upgrades or keys are required to get the switch up and running. The unique design enables the switch to work with current and future Fibre Channel fabric and loop HBAs, RAID controllers, switches and storage devices.

RESILIENCY

Moves, adds, changes, power cycles and bad cables are all events that can cause the complete reset of the typical Fibre Channel switch. To help ensure network stability and to contain normally disruptive events that would compromise data streaming applications, the Capellix 2000 series incorporates the Reflex II Name Server with intelligent, policy-based state change notification. The name server provides management of LIP events and address conflict resolution with selective state change notification. Unlike typical switches which support FC-AL through software emulation without an active name server, the Capellix 2000 is designed to provide unmatched stability for environments that use the FC-AL protocol. This capability makes the Capellix 2000 series with the Reflex II Name Server the optimum solution for streaming environments such as tape backup and digital video.

MANAGEMENT

The Capellix 2000 series is managed by Gadzoox Networks’ proven Ventana SAN management software. Ventana SANtools GX, the basic version of the management software, comes pre-configured with every Capellix 2000 series switch. Once configured, intelligent agents monitor the link health, helping systems and network administrators to meet customers’ expectations for high levels of service to ensure access to business critical applications.

Ventana SANtools GXS, an advanced version of the management software, offers a value-added software package for SAN administrators who require web-based management. Also provided in Ventana SANtools GXS is the SNMP support required to manage a Capellix 2000 series switch from third-party enterprise and storage management frameworks.

RELIABILITY AND SERVICEABILITY

Ventana SANtools Management	GX	GXS
FC-AL Support	✓	✓
PIM Support	✓	✓
Reflex II Name Server	✓	✓
Zoning	✓	✓
Telnet	✓	✓
Menu-driven Interface	✓	✓
FC MIB 2.2		✓
Web Management		✓
SNMP		✓
Third-Party Snap-ins		✓

Embedded agents in the Capellix 2000 series enable the user to configure and monitor the fans, power supply, PIM, GBICs, and ports. Performance monitoring includes per-port statistics on frames transmitted and received, link utilization and tenancy counts. Ventana SANtools upgrades are supported via a direct ethernet network interface or TFTP downloads.

CAPELIX 2000

TECHNICAL SPECIFICATIONS

FUNCTIONAL SPECIFICATIONS:

SWITCH ENGINE : 12 GBPS
COMMUNICATIONS MODES: FULL DUPLEX, DPLEX
DATA TRANSFER LATENCY: <500 NANoseconds, 280 NANoseconds TYPICAL
NUMBER OF PIM SLOTS: 1
PROTOCOLS SUPPORTED: FC-AL, FC-AL-2, FC-PH, FC-PH-2, FC-PH-3, FC-PLDA, FCP
MANAGEMENT ACCESS: LOCAL CONSOLE VIA RS232, SNMP VIA 10BASE-T, TELNET
MANAGEMENT INTERFACE: ASCII VIA RS232, VENTANA SANTOOLS VIA 10BASE-T
MANAGEMENT STANDARDS: IETF FIBRE CHANNEL MANAGEMENT MIB, FABRIC ELEMENT MIB

MODEL OFFERINGS:

CAPELIX 2000G: 8 GBIC PORTS
CAPELIX 2000C: 8 HSSDC PORTS (COPPER)
CAPELIX 2000F: 8 DUAL SC PORTS (MULTIMODE FIBER OPTIC)

CHASSIS PHYSICAL SPECIFICATIONS:

1U, RACKMOUNTABLE
H)1.66IN/42MM W)17.3IN/439MM D)16.26IN/413MM
WEIGHT: NET - 10.9LBS (4.94KG)

CHASSIS ELECTRICAL SPECIFICATIONS:

AC VOLTAGE: 100-240 VAC, 50-60 HZ
POWER SUPPLY: (1) 1.5A, 100W, FIXED

PIM OPTION:

MODEL 210: 3-PORT GBIC 1GBPS FIBRE CHANNEL SWITCH PIM

ENVIRONMENTAL SPECIFICATIONS:

OPERATING TEMPERATURE: +10°C TO +40°C
STORAGE TEMPERATURE: -30°C TO +60°C
OPERATING HUMIDITY: 20% TO 80% NON-CONDENSING

SAFETY COMPLIANCE:

USA: UL 1950, 1995 3RD EDITION
CANADA: CSA C22.2 NO. 950-95, 3RD EDITION
EU & NORDIC: EN 60950:1992 A1/A2/A3/A4/A11
EMKO - TSE (74- SEC) 207/94
OTHER COUNTRIES: IEC 60950: A1/A2/A3/A4
CB SCHEME REPORT TO BULLETIN 94A1

EMC COMPLIANCE:

USA: CFR 47, PART 15, SUBPART B:1998, CLASS A
CANADA: ICES-003, CLASS A
EUROPEAN UNION (EU): EN 55022:1994 CLASS A;
EN 61000-3-2: 1995
EN 61000-3-3: 1995
EN 50024: 1998
JAPAN: VCCI V3: 1997, CLASS A
JEIDA GUIDELINE FOR THE SUPPRESSION OF HARMONICS: 1993
AUSTRALIA/NEW ZEALAND: AS/NZS 3548/95, CLASS A
OTHER COUNTRIES: CISPR 22: 1997, CISPR 24: 1997

GADZOOX NETWORKS

888.423.3222 TOLL-FREE

408.360.4950 PHONE

408.360.4951 FAX

www.gadzoos.com