



NetPerformer 9360

► Branch/Regional Office Solution

The SDM-9360 is a versatile voice and data integrated access device for the branch or regional office. It packetizes and compresses voice, fax and modem traffic and transports it along with LAN, SNA or serial data over a Frame Relay network, saving cost on intra-enterprise voice communications.

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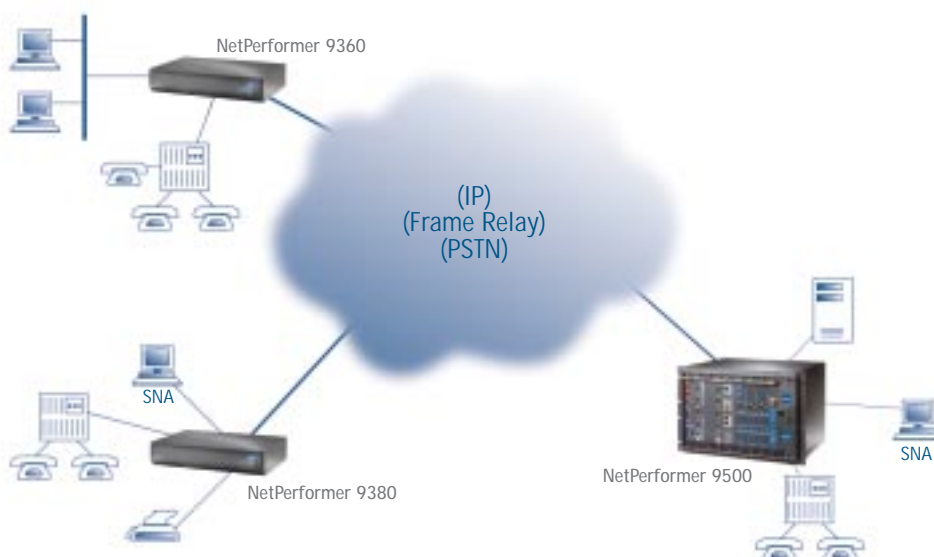
16 Analog or 30 Digital Telephony Channels

ACT Networks' SDM-9360 multi-service integrated access device is a packetized voice and data solution, and the most cost-effective digital telephony model in the NetPerformer family – a suite of products that has been optimized for the needs of complex, distributed enterprise networks. Typically these networks include a wide variety of data and telephony requirements, with various sites needing differing amounts of functionality, density and performance.

The SDM-9360 is designed for the branch or regional office, supporting up to 30 voice channels. By packetizing and compressing voice traffic, then delivering it with data over a Frame Relay network, the SDM-9360 allows companies to save money on their monthly telephony service. PVC bundling and switching also saves money on monthly service fees by eliminating the need for a fully meshed PVC architecture.

The SDM-9360 can support up to 16 analog or 30 digital voice channels. Supported analog interfaces include E&M (Types I, II and V), FXS and FXO. Digital channels are connected via PBX through T1 or E1 ports. Ethernet LAN support is included, and integrated fractional T1 and E1 WAN connections are available as options.

All voice and data entering the unit is prioritized by protocol then combined for transport over a single Frame Relay or IP connection via private or public networks. This functionality is provided by PowerCell – ACT Networks' award-winning, cell-based prioritization technology.



Features & Benefits

Scalability – means the SDM-9360, in conjunction with the rest of the NetPerformer product line, allows each individual site to be configured with just the right combination of services, performance and scalability, avoiding unnecessary cost.

Support for modem and fax – means the SDM-9360 can support all the telephony needs of today's distributed enterprise networks, saving cost by integrating all types of traffic onto a single network.

Digital voice support – with 30-channel capacity and support for key signaling standards, the SDM-9360 connects to the world's most popular PBX units.

Any-to-any voice switching – integrates the disparate phone systems of individual sites. This eliminates the need for consistency among sites, saving cost and increasing flexibility.

PowerCell support – ACT's award-winning technology for voice and data integration and prioritization. This allows the entire network to operate at optimal performance for all supported traffic types.

SNMP-compliant MIBs and graphical management – through ACTview 2000, including integration with Hewlett Packard's OpenView for Windows 95/NT, let the SDM-9360 be managed using today's most popular and universal network management system.

Adherence to standards – lets the SDM-9360 seamlessly integrate with any public network, and ensures compatibility with leading Frame Relay switches.

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Specifications

System Details

2 serial ports (user or link), one 10/100BaseT,
4 slots for line expansion modules
Serial connectors: HD-26
Serial interfaces: RS-232C, X.21/V.11, V.35/V.11,
RS-530, RS-449/RS-422 (software configurable)
Power: autosensing 100-240 VAC, 50/60 Hz
Network Topology: public and private Frame Relay,
mesh, hierarchical, star, and point-to-point

Expansion Options

IM-T1: T1 interface module for PBX or WAN
connection (RJ48 connector)
IM-E1-75: E1 interface module for PBX or WAN
connection (75 ohm) (BNC connector)
IM-E1-120: E1 interface module for PBX or WAN
connection (120 ohm) (RJ48 connector)
IM-EM: 4-port E&M module
(2- or 4-wire: types I, II, or V)
IM-FXS: 2-port FXS module
(loop start with battery reversal detection)
IM-FXO: 2-port FXO module
(loop start with battery reversal detection)
SIMM-1: 1-DSP voice processing module, supporting
3-5 voice channels, depending on algorithm
SIMM-3: 3-DSP voice processing module, supporting
9-15 voice channels, depending on algorithm
SIMM-6: 6-DSP voice processing module, supporting
18-30 voice channels, depending on algorithm
Up to 2 SIMMs per unit

Network Connections

Circuits: leased, switched or Frame Relay
Link port protocols:
• Synchronous full duplex HDLC, Frame Relay
RFC-1490, user-UNI, network-UNI, PowerCell
Link port maximum speed without
compression: 2.048Mbps
Link port maximum speed with compression: 512Kbps
Frame Relay:
• Local management interface: LMI, ANSI T1.617/
annex D, ITU-T Q.933/annex A, CLLM or disabled
• PVCs: 300 per node
Automatic node discovery and rerouting with least
cost metric routing
Automatic load balancing, bandwidth on demand
(over leased line), dial back-up, time-of-day connect
Dialing protocols: V.25bis, X.21, AT and control leads

Telephony Features

Maximum telephony channels: up to 8 FXS or FXO,
or 16 E&M, or 30 digital channels per chassis
Voice compression algorithms:
• ACELP-CN: 8Kbps (with 6Kbps fallback),
5 channels per DSP, 4.2 MOS
• G.729: 8Kbps, 3 channels per DSP, 4.1 MOS
• G.729(a): 8Kbps, 5 channels per DSP, 3.3 MOS
• G.711: 64Kbps, 5 channels per DSP, 4.4 MOS
Digital telephony channels:
• T1: B8ZS/B7ZS/AMI line coding, Mu-law or A-law coding,
D4/ESF framing, robbed bit signaling,
100-ohm impedance
• E1C signaling: CAS, R2, transparent channel 16
• E1 line coding: HDB3
Analog line impedance: 600, 900 ohms and complex
Group III FAX: 2.4, 4.8, 7.2, 9.6, 12.0, 14.4Kbps
Modem Relay: up to 14.4Kbps, V.32bis modulation

LAN Support

One 10/100BaseT
Ethernet interfaces: Ethernet II and IEEE 802.2,
802.3, SNAP
Standards: IP RIP v2 or Static, BootP/DHCP relay,
OSPF, IPX RIP and SAP, Source Routing, Source
Routing Transparent, 802.1D Spanning Tree
Protocol (STP), MAC Layer, Transparent Bridging
Filter criteria: based on protocol, address (source,
destination or SAP) or custom filtering
8 classes of service, 16 priority weights

Data Features (Non-LAN)

Maximum speed: 2.048Mbps
Protocols:
• SNA: SDLC, LLC2 or Frame Relay RFC-1490
(BAN, BNN), maximum of 64 PUS per data
module, (types 1, 2.0, 2.1, 4/5)
• Local SDLC and LLC2 spoofing, SDLC/LLC2
conversion
• Legacy Sync: BDLC, HDLC, SDLC, X.25, X.25 over
Frame Relay (annex F/G), COP, BSC, DDCCMP, VIP,
ALC, IBM/RJE, Uniscope, Poll/Select, Siemens
Nixdorf, JCA, Zengin
• Frame Relay: RFC-1490, UNI-DTE, UNI-DCE
• Asynchronous: ENQ/ACK, XON/XOFF, transparent,
CTS/DTR
• 8 classes of service, 16 priority weights

Physical Characteristics

Height: 3.5" (9.2 cm)
Width: 17.5" (44.5 cm)
Depth: 12.3" (31.1 cm)
Weight: 13 lbs. (5.9 kg)
Shipping weight: 17 lbs. (7.7 kg)

Environmental Tolerances

Operating Temperature: 0° to 45° Celsius
Relative Humidity: 10% to 90%, non-condensing

Emissions and Immunity

EN 55022: 1995
EN 50082-1: 1997
AS/NZS 3548
CE Mark: EC Directive 89/336/EEC, 'Electromagnetic
Compatibility Directive'

Safety Compliance

UL 1950
CSA C22.2 No. 950
ACA TS 001 – 1997
EN 60950 : 1992 / A1 : 1993 / A2 : 1993
/ A3 : 1995 / A4 : 1996 / A11 : 1997
CE Mark: EC Directive 73/23/EEC,
'Low Voltage Directive'

Network Compliance

CTR 1
CTR 12/A1
CTR 13
CTR 21
NTR 4 (UK)
FCC Part 68
IC CS03
CE Mark: EC Directive 98/13/EEC,
'Telecommunications Terminal Equipment Directive'

CE Marking

EC Directive 93/465/EEC, 'CE Marking Directive'

Network Management

SNMP management via ACTview 2000 Network
Management System for HP OpenView
Menu driven async console port (VT-100) via DB9
male connector, autosensing DTE/DCE
Remote Telnet access to command port
FTP upload and download of software
and configuration
Traps, traces and extended statistics
Username/password security control,
administrative filtering