



NetPerformer 9380

### Regional/Central Site Solution

The SDM-9380 is a versatile voice and data integrated access device for the regional or central site. It packetizes and compresses voice, fax and modem traffic and transports it along with LAN, SNA or serial data over a Frame Relay or IP network, saving cost on intra-enterprise voice communications.



# NetPerformer 9380

## 16 Analog or 60 Digital Telephony Channels

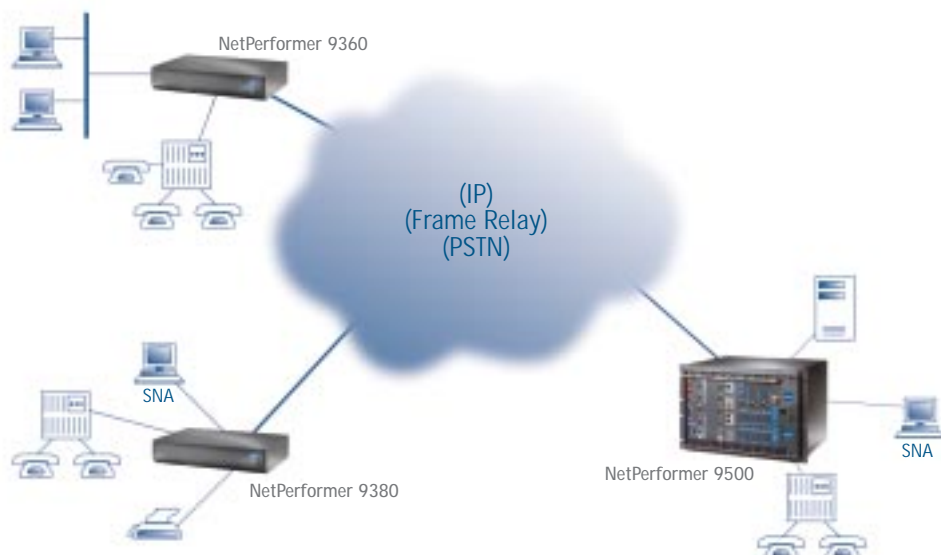
ACT Networks' SDM-9380 multi-service integrated access device is a packetized voice and data solution, and the highest performance standalone model in the NetPerformer family – a suite of products that has been optimized for the needs of complex, distributed enterprise networks. Typically these include a wide variety of data and telephony requirements, with various sites needing differing amounts of functionality, density and performance.

The SDM-9380 is designed for the regional or central site, supporting up to 60 voice channels. By packetizing and compressing voice traffic, then delivering it with data over a Frame Relay network, the SDM-9380 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-9380 can support up to 16 analog or 60 digital voice channels. Supported analog interfaces include E&M (Types I, II and V), FXS and FXO. The 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, patent-pending, cell-based prioritization technology.

The SDM-9380 is upgradable to future ATM interfaces.



## Features & Benefits

**Scalability** – means the SDM-9380, 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-9380 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 60-channel capacity and support for key signaling methodologies, the SDM-9380 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.

**The SDM-9380 supports PowerCell** – 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-9380 be managed using today's most popular and universal network management system.

**Adherence to standards** – lets the SDM-9380 seamlessly integrate with any public network, and ensures compatibility with leading Frame Relay switches.

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## Specifications

### System Details

3 serial ports (user or link), one 10BaseT Ethernet, 4 slots for expansion modules  
Network Topology: public and private Frame Relay, mesh, hierarchical, star, and point-to-point  
Power: autosensing 100-240 VAC, 50/60 Hz

### 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 3 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 60 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
- E1 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 10BaseT  
Protocols: 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  
Ethernet Interfaces: Ethernet II and IEEE 802.2, 802.3, SNAP  
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, DDCMP, VIP, ALC, IBM/RJE, Uniscope, Poll/Select, Siemens Nixdorf, JCA, Zengin
- Frame Relay: RFC-1490, UNI-DTE, UNI-DCE
- Asynchronous: ENO/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