

NetPerformer™ Satellite Routers: SDM-9220 & SDM-9230 Integrated Access Routers SDM-8400 Serial Port Extender

WAN Optimization



SDM-9220



SDM-9230



SDM-8400

Overview

Memotec's NetPerformer Satellite Routers combine the functionality of a data router, a multiplexer and a voice gateway in a single device, enabling customers to create converged networks and transport any type of traffic over any type of satellite or terrestrial links.

Designed to provide maximum network performance in low-bandwidth environments, the NetPerformer reduces network infrastructure costs and simplifies WAN connectivity. The NetPerformer's compression technology, prioritization and multiplexing capabilities and the ability to route all traffic over a high efficient cell-relay based protocol, make it the product of choice for converged voice and data applications over satellite networks. NetPerformer Quality of Service (QoS) supports IP Precedence TOS bit and 802.1p/q to provide end-to-end QoS. Users can define up to eight classes of service with 16 different levels of prioritization to ensure that mission-critical applications always receive sufficient bandwidth.

The SDM-9220 and SDM-9230 Integrated Access Routers maximize network performance and provide superior convergence capabilities to ensure efficient and secure transport of multiple communications services. With support for up to three expansion slots, the NetPerformer protects your investment, ensuring network scalability that matches your expansion requirements.

The SDM-8400 Serial Port Extender enables SDM-9220 or SDM-9230 users to increase serial port connectivity allowing those products to scale linearly with either 4 or 8 port extenders. The SDM-8400 supports all the same protocols and capabilities as the SDM-9220 and SDM-9230 Integrated Access Routers.

Its ability to support legacy protocols, specialty voice applications and IP data make it ideal for government, military, oil and gas, civil and military aviation authorities, industrial and multi-service VSAT applications.

Features

Efficient and Reliable PTT communication:

High quality transmission of Push-to-talk (PTT) interface provides complete transparency and supports a variety of analog and digital VHF systems deployed today. The signaling information can be handled either in-band, as FSK tones, out-of-band through a V24 serial interface, or directly processed from the E&M lead signals. Support of PTT is essential in civil or military air traffic and coastal authorities, and other industries.

Switched (any-to-any) Voice Support:

Supporting both analog and digital interfaces with standard protocols (ISDN, QSIG, MFCR2, DTMF), NetPerformer allows interconnection to any PABX or PSTN. While supporting both VoIP and VoFR with integral voice routing plans, NetPerformer allows calls to be placed from anywhere in the network to any other site.

IP Support:

Supporting new applications and traffic growth: NetPerformer's solution has the right built-in feature set to address new IP-based applications. Featuring a state-of-the-art IP routing protocol suite (including NAT, dynamic and static virtual routing groups and IP tunneling), the NetPerformer platform guarantees IP data transport.

Serial Support:

In addition to supporting industry standard recognized protocols such as X25, Frame Relay, HDLC and PPP, the NetPerformer also support, with QoS, serial bit transparent interface over packetized network. This is particularly effective when dealing with low speed links which are particularly delay sensitive.

Increase Reliability:

NetPerformer offers 1+1 system redundancy using a standard SNMP controlled A/B switch. The backup system can take over primary system(s) in the event that a system or bearer interface(s) should fail.

Benefits

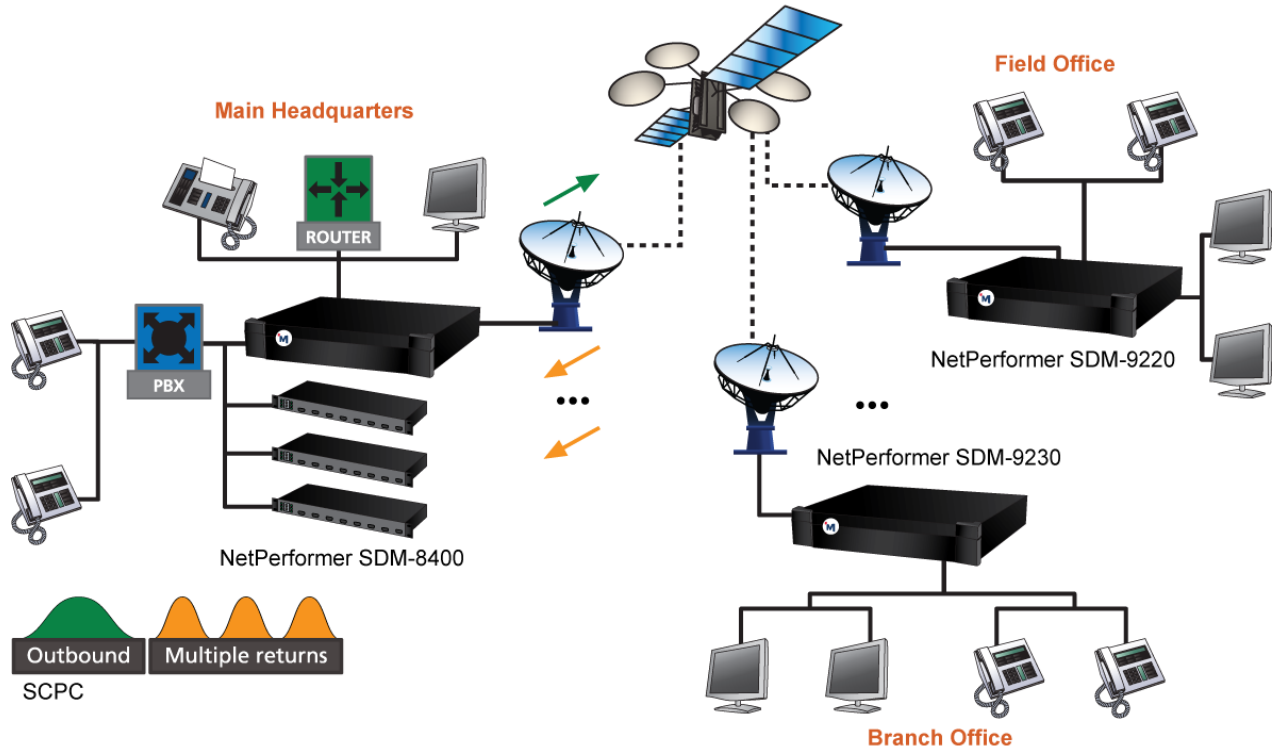
SDM-9220 & SDM-9230

- Delivers the services you need, wherever you need them
- Alleviates bandwidth constraints & maximizes quality of service and reliability
- Supports multiple services
- Lowers capital expenditures and operating costs

SDM-8400

- Delivers up to 8 serial ports either on SDM-9220 or SDM-9230 Integrated Access Routers
- Provides unlimited port extension through IP daisy-chains
- Offers multiple connectivity options and simple network integration

Point-to-Multipoint Satellite Links

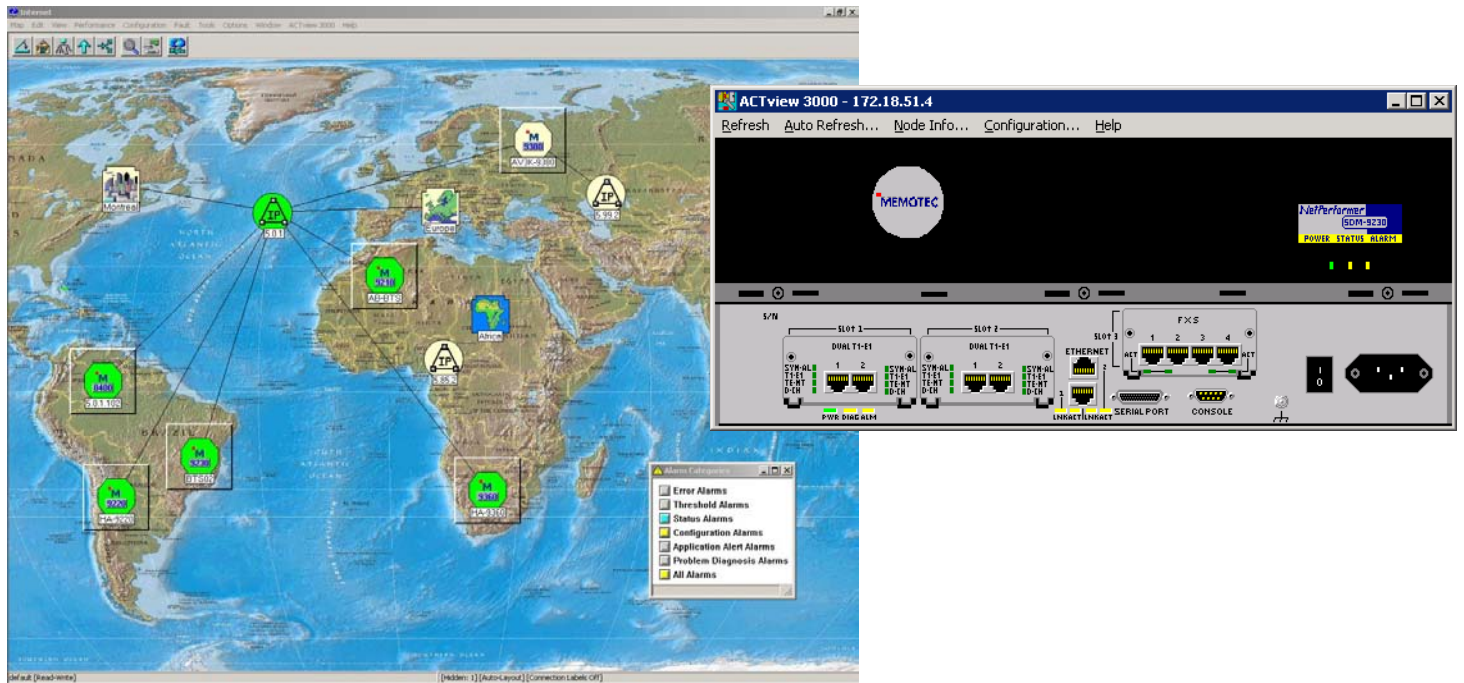


ACTview3000 Network Management and Reporting

ACTview3000 is designed to manage the entire line of NetPerformer multi-service convergence products, with tools that help monitor telephony and data traffic, configure nodes and expansion cards, upgrade software, configure systems, view maps, call detail records and management reports, and monitor the health of your overall network.

Benefits of using the ACTview3000 with NetPerformer

- Maximizes ROI with seamless integration to HP OpenView management systems
- Converges monitoring and configuration of voice and data services into a single, integrated network management solution.
- Provides a detailed network view via a user-friendly Graphical User Interface (GUI)
- Simplifies software upgrades through scheduled and on-demand download/upload capabilities



Specifications – SDM-9220, SDM-9230 and SDM-8400

		NetPerformer SDM-9220	NetPerformer SDM-9230	NetPerformer SDM-8400
Capacity	Telephony channels	Up to 8 FXS/FXO or E&M channels per unit	Up to 12 FXS/FXO or E&M, or 120 T1/E1 CAS/PRI digital channels per unit	Not Applicable
	Data channels	Up to 3 serial data ports, or 1 serial and 4 T1 or E1 data interfaces (up to 124 logical ports)	Up to 3 serial data ports, or 1 serial and 6 T1 or E1 data interfaces (up to 124 logical ports)	Available in 4 or 8 serial port extensions
Link Port	Speed	<ul style="list-style-type: none"> With data compression disabled: 8 Mbps/1 port, 2 Mbps/other ports With data compression enabled: Up to 2 Mbps <i>*Maximum speed is protocol dependent</i>	<ul style="list-style-type: none"> With data compression disabled: 8 Mbps/1 port, 2 Mbps/other ports With data compression enabled: Up to 4 Mbps <i>*Maximum speed is protocol dependent</i>	<ul style="list-style-type: none"> With data compression disabled: 8 Mbps/1 port, 2 Mbps/other ports With data compression enabled: Up to 2 Mbps <i>*Maximum speed is protocol dependent</i>
	ATM (optional license required)	Not Available	T1/E1 full or fractional, WAN over AAL5 UBR using up to 32 PVCs, RFC1483 Multiprotocol Encapsulation over AAL5, RFC2364 PPP over AAL5, FRF.8 Service Interworking, AAL0 transparent transport	Not Applicable
Physical	System Details	<ul style="list-style-type: none"> Auto-sensing power 100-240 VAC, 50/60 Hz, 65 W maximum -48 VDC 1 serial port (user or link), DTE or DCE, HD26F connector, compatible with RS-232/V.24, V.35, X.21/V.11, RS-449/V.36, RS-530, internal/external clocking 2X 10/100Base-T Ethernet (RJ-45 connectors) 1 DSP connector per unit 2 expansion slots 	<ul style="list-style-type: none"> Auto-sensing power 100-240 VAC, 50/60 Hz, 65 W maximum -48 VDC 1 serial port (user or link), DTE or DCE, HD26F connector, compatible with RS-232/V.24, V.35, X.21/V.11, RS-449/V.36, RS-530, internal/external clocking 2X 10/100Base-T Ethernet (RJ-45 connectors) 1 DSP connector per unit 3 expansion slots 	<ul style="list-style-type: none"> Auto-sensing power 100-240 VAC, 50/60 Hz, 30 W maximum 4/8 serial port (user or link), DTE or DCE, HD26F connector, compatible with RS-232/V.24, V.35, X.21/V.11, RS-449/V.36, RS-530, internal/external clocking 1X 10/100Base-T Ethernet (RJ-45 connectors)
	Chassis	Stand-alone base unit, 19" rack mount	Stand-alone base unit, 19" rack mount	Stand-alone base unit, 19" rack mount
	Dimensions (height x width x depth)	3.5" x 16.8" x 12.2" (89 x 427 x 310 mm)	3.5" x 16.8" x 12.2" (89 x 427 x 310mm)	1.75" x 16.8" x 8" (44 x 427 x 205 mm)
	Weight	9.9 lbs (4.5 kg)	9.9 lbs (4.5 kg)	5.9 lbs (2.7 kg)
Environmental	Operating Temperature	0° to 45° C / 32° to 113° F	0° to 45° C / 32° to 113° F	0° to 45° C / 32° to 113° F
	Storage Temperature	-20° to 65° Celsius / -4° to 149° F	-20° to 65° Celsius / -4° to 149° F	-20° to 65° Celsius / -4° to 149° F
	Relative Humidity	0% to 95%, non-condensing	0% to 95%, non-condensing	0% to 95%, non-condensing
Software Option		SkyPerformer & TCP/IP acceleration	SkyPerformer, TCP/IP acceleration and ATM	SkyPerformer
Optional Interfaces/Modules	Analog telephony	<ul style="list-style-type: none"> 2 and 4-port FXS and FXO modules with on-board DSP (software controllable impedance, RJ-11 connector) 4-port E&M module with on-board DSP (2 or 4-wire, types I, II, or V, 600 ohms, RJ-48 connectors) 4-wire Push to Talk (PTT) option available 		Not Applicable
	Digital	<ul style="list-style-type: none"> Single & dual port T1/E1 (software configurable, RJ-48 connectors, adapter cable required for BNC E1-75, NT/TE) 		Not Applicable
	Data	<ul style="list-style-type: none"> 2-port universal serial WAN interface (user or link), DTE or DCE, HD26F connector, interface compatible with RS-232/V.24, V.35, 21/V.11, RS-449/V.36, RS-530, internal/external clocking 		Not Applicable

	DSP (Internal)	<ul style="list-style-type: none"> DSP modules supporting up to 120 voice channels 	Not Applicable
Network	<ul style="list-style-type: none"> Network topology: Mesh, hierarchical, star, point-to-point, satellite point-to-point/multipoint 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 QoS: 8 classes of service, 16 priority weights, association to 802.1p and DiffServ TOS bits 		
Data	<ul style="list-style-type: none"> Sync: PPP, BDLC, HDLC, SDLC, X.25, X.25 over Frame Relay annex F/G Legacy Sync: COP, BSC, VIP, IBM/RJE, Uniscope, Poll/Select, Siemens Nixdorf, JCA, Zengin Frame Relay: RFC-1490, UNI-DTE, UNI-DCE Asynchronous: ENQ/ACK, XON/XOFF, transparent 		
Telephony	<ul style="list-style-type: none"> Voice compression algorithms (5 channels per DSP): ACELP-CN (8 K/6 K), LDCD (16 K), G.711, G.723.1, G.726, G.729 and G.729a FAX Relay: Group 3 FAX, Super G3 configurable to pass through or fallback to G3, Group 4 FAX and other non-voice bearer ISDN channel at 64 K Modem Relay: V.32bis demodulation up to 14.4kbps, STU-III secure phone, modem pass through (G.711) for other modems Network signaling: Transparent point-to-point and any-to-any switching, including end-to-end QSIG/ISDN Analog telephony channels: <ul style="list-style-type: none"> FXS - loop and ground start, forward disconnect, caller ID and local billing tone generation FXO - loop start, forward disconnect and caller ID detection E&M - immediate and wink start, custom Pulse, DTMF and MF tone dialing Voice traffic routing with alternates destinations and digits manipulation using local mapping tables, locally switched TDM calls (hairpin) 		Not Applicable
LAN	<ul style="list-style-type: none"> Two IP address per Ethernet port Ethernet interfaces: Ethernet II and IEEE 802.2, 802.3, SNAP Standards: IP RIP V1/V2 or Static, OSPF, NAT, IP Multicast IGMP V1/V2 PIM-DM, BootP/DHCP relay, DHCP client, IPX RIP and SAP, LLC2, 802.1p/q prioritization and VLAN, 802.1D Spanning Tree Protocol (STP), MAC Layer Filter criteria: Based on protocol, address (source, destination or SAP), TOS bit/diffServ or custom filtering 		
Digital Telephony	<ul style="list-style-type: none"> ISDN and QSIG T1/E1 PRI and BRI signaling: Euro ISDN/ETSI, National and Japan T1 signaling: robbed bit signaling, CCS transparent, SS7 transport with idle filtering and spoofing E1 signaling: CAS, CCS transparent, SS7 transport with idle filtering Digital CAS Signaling types: Immediate, Wink, FXO, FXS, FXO ground, FXS ground, E1/R2 (compelled, semi-compelled, DTMF), PLAR, custom (9230 only) Mu-law or A-law coding 		Not Applicable
Compliance and Agency Approval	<p>Complies with or has obtained regulatory agency approval at least the following standards:</p> <ul style="list-style-type: none"> EMC - Emission FCC Part 15, Class B EN 55022:1998 + A1 + A2, AS/NZS CISPR22 EMC - Immunity EN 55024:1998 + A1 + A2 Safety IEC 60950-1, EN 60950-1, UL 60950-1, CSA C22-2 N°60950-1, AS/NZS 60950 Telecom - Digital FCC Part 68 + TIA-968-A, IC CS-03 Issue 9 - Part 2 and Part 6, AS/ACIF S016, AS/ACIF S038, TBR 1 + TBR 2, TBR 3, TBR 4, TBR 12 + TBR 13 Telecom - Analog FCC Part 68 + TIA-968-A, IC CS- 03 Issue 8 - Part 1, AS/ACIF S002, TBR 15 + TBR 17, TBR 21 		
Network Management	<ul style="list-style-type: none"> SNMP management via ACTView 3000 for HP OpenView NNM for Windows Menu driven async console port (VT-100) via RJ-45 connector, auto-sensing DTE/DCE, speed up to 115,200 bps Remote Telnet access to command port Traps, traces and extended statistics 		



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