2008 Product Showcase

DPS Telecom

"Your Partners in Network Alarm Monitoring"
800-622-3314 · www.dpstelecom.com

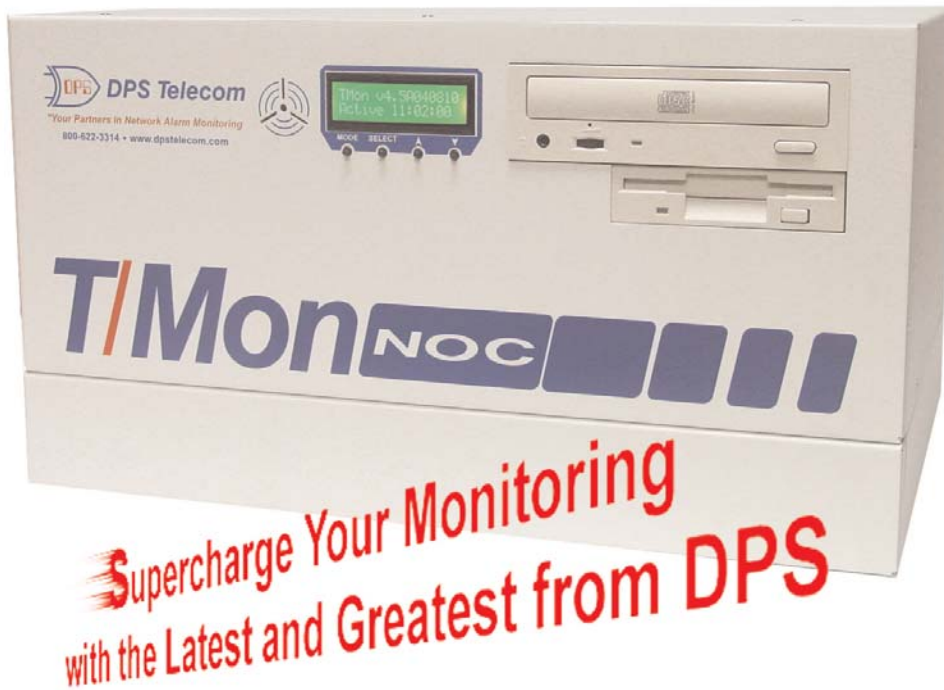**T/Mon NOC**

Supercharge Your Monitoring with the Latest and Greatest from DPS

This product showcase for 2008 features the newest and most popular products from DPS Telecom. Inside you'll find:

• **Innovative new products that lower costs and boost revenue**

• **Success Stories from real DPS clients**

• **Tech Tips from our expert engineers**

• **White Papers focused on answering your most pressing questions**

DPS products are created to solve the real-world needs of real-world companies. They've helped DPS clients add millions to their bottom line by reducing unnecessary expense and protecting revenue-generating operations.

NEW

NetGuardian 832A G5 Wireless

RoHS 5/6

High-Capacity Alarm Collector
pg. 18

Building Access System

Secure Your Remote Sites
pg. 31

NEW

NetGuardian 216T

SNMP RTU with T1 Transport
pg. 34

NEW

NetGuardian E16

Bi-Directional Echo of 16 Alarms,
pg.40

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www.dpstelecom.com · 1-800-622-3314

"We protect your network like your business depends on it"

Why Should You Come to
DPS Telecom Factory Training?

Hands-on training on advanced T/Mon techniques, taught by professional engineers.

DPS Telecom Factory Training is the fast way to learn everything you need to know about your T/Mon system and DPS remotes. If you work with DPS equipment, or train or manage those who do, you need DPS training.

This in-depth course will make you an expert T/Mon user in just four days, saving you weeks of trying to teach yourself with a manual. Plus you'll learn advanced T/Mon techniques — tips and tricks that will save you hours of work and make your monitoring much more effective.

"This training is worth a lot more because it's taught by the people who actually work with the system, not some corporate trainer."
—Larry Hamilton, U.S. Telepacific

Personal Instruction in a Friendly Atmosphere

Anyone who's attended a DPS Factory Training Event will tell you that it's not like any other training course. Here's the difference:

- **Personal instruction in small classes**: Classes are capped at nine people, so your instructor can focus on you. If you want to spend more time on a topic, your instructor or a DPS engineer will be happy to meet with you in a one-on-one breakout session.

- **Learn from engineers with real-world experience:** Your DPS instructors are skilled engineers who have worked on DPS product design and field implementations. They know your equipment and how you use it.

- **Work hands-on with real-world equipment:** At a DPS Factory Training Event, you'll work directly with the equipment — and you'll get the unique know-how that only comes with personal experience.

- **Complete access to DPS Telecom:** You'll talk to the engineers who designed your equipment, tour the factory where it's built, and see the latest DPS products. If you've got a suggestion on how we can improve our products or services, we'll listen to you — and act to meet your needs.

- **Friendly, welcoming atmosphere:** The entire DPS staff will make you feel welcome. Hosted lunches and dinners will give you a chance to casually unwind with your classmates. You'll be able to share telemetry tips and experiences, and you'll get to know people you can relate to. Come to Fresno a day or two early and you can explore the splendors of nearby Yosemite, Sequoia, and Kings Canyon National Parks

1-800-622-3314
www.dpstelecom.com/training

Welcome to the World of Network Monitoring

This product showcase features our most powerful network monitoring solutions that give you the visibility you need to better manage your network.

If you're new to DPS Telecom, let me provide a brief introduction. We've been around for over 20 years. Providing network monitoring solutions isn't one of the things we do, it's the only thing we do.

Our solutions are based on multi-generational hardware & software that evolved to meet the changing needs of our client base. You directly benefit from the years of field-proven designs and client suggested enhancements. Speaking of our clients, we've included several of their thoughts, providing insight into their experience working with DPS.

Regardless of your sites' capacity, power requirements, transport, or legacy gear, we most likely have the perfect monitoring solution for you. If you need something really unique, our engineering department specializes in creating custom products.

Please keep in mind that this showcase is intended to introduce some of our new products as well as feature some of our most popular products. If you would like to find out more about our product line, please feel free to call our Sales Engineers (800) 622-3314 or visit our website at www.dpstelecom.com (a great source of information, featuring tutorials, user manuals, firmware updates, and more).

Best Regards,

Eric Storm
President
DPS Telecom

Alarm Monitoring Solutions

Alarm Collection Devices

Find The Perfect RTU For Your Needs and Budget

		Discretes	Analogs	Controls	Serial Ports	Protocols	Protocol Mediation	Transport	Free Updates	Windows Config	Paging	Email Notification	Web Interface	Dual NIC	RoHS
Page 16	NetGuardian 832A G5	32-176	8	8	8	T/Mon, SNMP (v1, v2c, and v3)		LAN, Dial, Serial 202	✓	✓	✓	✓	✓	✓	✓
	NetGuardian 832 G4	32-176	8	8	8	T/Mon, SNMP		LAN, **Wireless**, Dial, Serial 202	✓	✓	✓	✓	✓	✓	✓
	NetGuardian 864A	64-208	8	8	8	T/Mon, SNMP (v1, v2c, and v3)		LAN, **Wireless**, Dial, Serial 202	✓	✓	✓	✓	✓	✓	✓
Page 12	NetGuardian-16S	32 to 176	8	8	16	T/Mon SNMP		LAN, Dial, Serial, 202	✓	✓	✓	✓	✓	✓	
Page 34	NetGuardian 216T	16	7	2	1	T/Mon, SNMP		T1 Frame Relay, LAN, Serial	✓	✓	✓	✓	✓		
Page 22	NetGuardian 480	80		4	1	T/Mon, SNMP, TL1		LAN, Serial, 202	✓	✓					✓
Page 28	NetMediator T2S	32-176	8	8	8	T/Mon, TABS, SNMP, TBOS	✓	LAN, Dial, Serial, 202	✓	✓	✓	✓	✓		
Page 38	NetGuardian DX G4	48		8					✓			✓			✓
Page 24	Remote Block Alarm 176	176		4		T/Mon, SNMP		LAN, Serial, 202	✓	✓					
Page 20	NetGuardian 216	16	2	2	1	T/Mon, SNMP		LAN, Dial, Serial	✓	✓					✓
	NetDog 82IP G2	8	0-4	2		T/Mon, SNMP		LAN, Dial	✓		✓	✓	✓		
Page 40	NetGuardian E16	16		16 Echoed	1	DCPx									
Page 19	NetGuardian 3288 Test Fixture	1-24	8												
Page 26	AlphaMax	8		2	1	T/Mon		Dial	✓	✓					
	DPM/DCM	2-16		2-16		T/Mon, TL1, TBOS		LAN, Dial, Serial, 202			✓				

To order, call 1-800-622-3314 or visit www.DpsTelecom.com/info

T/Mon NOC

Support All Your Equipment, No Matter What Protocol.

Never miss an alarm. If there's a problem anywhere in your network, T/Mon will see it. And T/Mon's advanced notification features will make sure you know about it.

How many different kinds of devices do you monitor? How many different screens do you have to watch? If you're tired of the confusion and clutter of multiple alarm consoles, you need T/Mon NOC.

T/Mon NOC is uniquely designed to monitor all your equipment, no matter what protocol, no matter what manufacturer. T/Mon shows your whole network on one screen, so problems can't hide.

"Anything that has a discrete or an analog alarm, we tie into T/Mon. It's sped up maintenance and made everything a lot easier."

- Kelly Heier
Network Specialist
Northwest Communications

With T/Mon NOC you can:

- **Monitor alarms in over 25 protocols**: ASCII, Badger, Cordell, DCM, DCP, DCPf, DCPx, DCM, E2A, Larse, Modbus, NEC, Pulsecom, SNMP, TABS, TBOS and TL1.

- **Display your entire network on one screen:** Know the status of your network with 100% certainty.

- **Mediate alarm data to different protocols:** T/Mon is a master translator.

- **Forward alarm data to other masters:** Use T/Mon as an interrogator to gather data from more than 25 protocols.

- **Send pager and email alarm notifications:** Notify your technicians if a problem arises.

- **Connect multiple Remote Access users simultaneously:** Via LAN, dial-up, or serial port.

- **Control remote site equipment:** Utilize T/Mon to manually or automatically respond to alarm inputs.

- **Administer a centralized configuration database:** Create a central master for your whole network.

- **Maintain alarm history logs:** Create reports of alarm events with a history log.

Because of its multiprotocol capability, T/Mon NOC is the perfect system to:

- Integrate diverse equipment to your SNMP or TL1 manager.

- Save your older equipment instead of replacing it — a huge cost savings to you.

- Manage large, complex networks from one T/Mon station, dramatically reducing staff and training costs
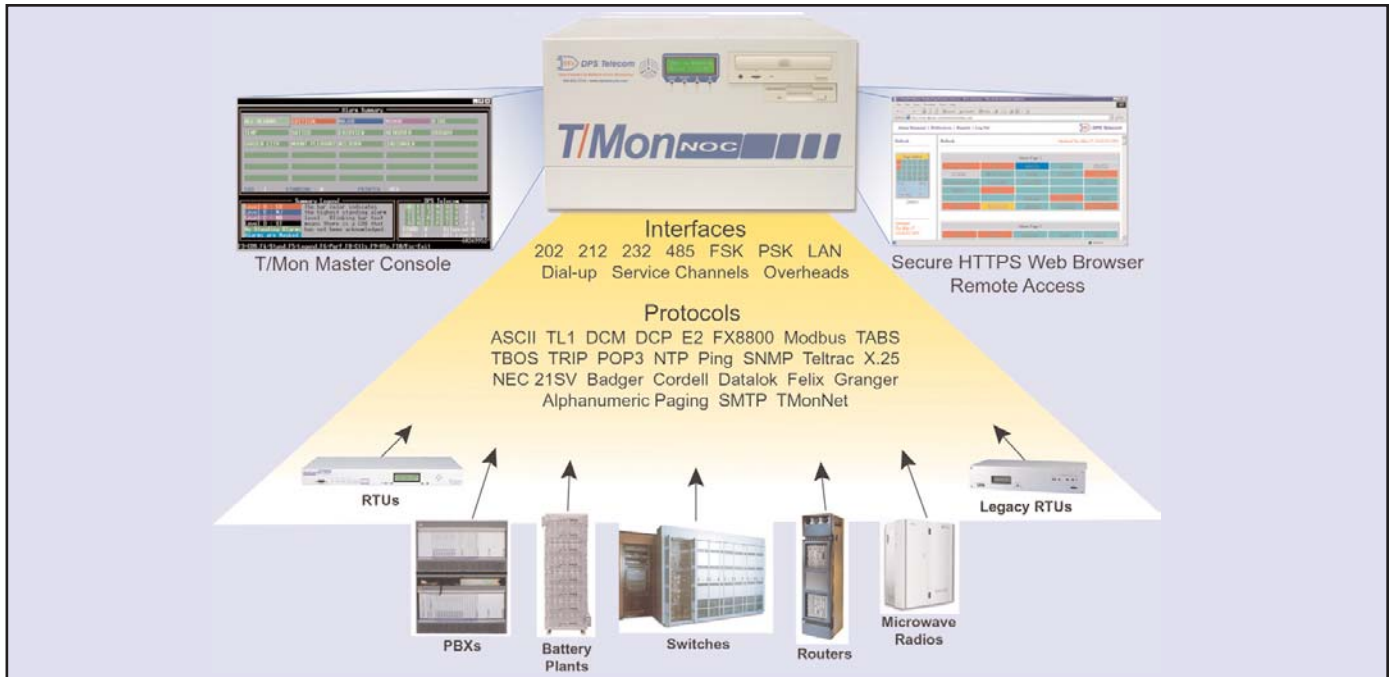
Five ways T/Mon NOC speeds repairs and makes maintenance easier:

1) Monitor proactively, not reactively. T/Mon tells you everything you need to know to fix problems on the very first site visit — which site, which device, alarm severity, and a plain-English description of the alarm. You'll eliminate unnecessary and overtime truck rolls for a dramatic reduction in windshield time costs.

2) T/Mon's customizable text messages enable you to database detailed explanations and instructions for handling every alarm. Everyone on your staff, no matter what their skill or training, will know exactly what to do when an alarm happens.

3) T/Mon gives you three ways to filter nuisance alarms: alarm tagging (ignore alarms until user un-tags them), alarm silencing (temporarily ignore alarms for specified time), and alarm qualification times (ignore momentary and self-correcting alarms).

4) T/Mon's Derived Alarms help you track complex events by combining alarm inputs and date/time statements. If you need to know when a site's generator and battery have both failed ... or you want to know if a generator doesn't run its weekly self-test ... or any other combination of events ... Derived Alarms will tell you.

5) All your alarms from all your devices — no matter what protocol — can access all of T/Mon's advanced features. Even your oldest devices can use pager and email alerts, Derived Alarms and Controls and nuisance alarm filtering. T/Mon NOC is a complete upgrade of your alarm monitoring in just one unit.

T/Mon NOC Specifications

Fuse: Two 5-Amp GMT fuses

Operating Temperature: 32° to 95° F (0° to 36° C)

Operating Humidity: 0% to 95% (non-condensing)

Modem: 56K baud internal modem (for dial-up console access)

LAN Interface: 10/100 BaseT

Polling Ports: 24 user-selectable ports

Polling Interfaces: RS-232, RS422/485, 202 modem, 33.6K modem, FSK modem, PSK modem

T/Access COM Port: 1

Processor: 2.8 GHz Intel Pentium 4

Hard Drive: 80GB (7200 RPM)

Slots: 6 PCI, 1 AGP

Fans: 2 internal

Removable Storage: 1.44 floppy disk drive, CD drive

Visual Display: Front-panel LCD, SVGA monitor connection available

Unit Controls: 4 LCD menu control buttons

Hardware Warranty: 2 years

Expand Your Capabilities with T/Mon Software Modules

- **SNMP Trap Processor:** Receive traps from SNMP devices and use all of T/Mon's powerful alarm processing features to sort, filter, page, and forward alarms.

- **SNMP Agent:** Forward all or a selected set of T/Mon alarms to up to 8 SNMP managers. Send traps to MOM systems and redundant masters, forward filtered specific traps to separate managers.

- **ASCII Alarm Processor:** Extract detailed information from any device that exports ASCII text: channel banks, PBXs, SONET equipment, digital switches, logging devices, servers and more.

- **TL1 Responder:** Convert all or a selected range of your T/Mon alarms to TL1 autonomous messages and forward them to your TL1 manager.

- **Modbus Interrogator:** Monitor Modbus-protocol industrial sensors from T/Mon NOC. Supports discretes, analogs, controls and remote provisioning of Modbus remotes and sensors.
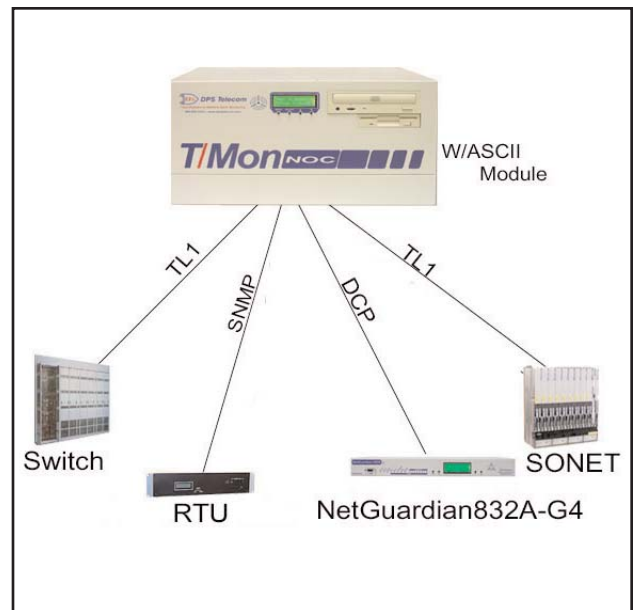
Monitor alarms in over 25 protocols with T/Mon

Third-Party and Legacy Support Solutions

- **Larse Interrogator:** Monitor Larse™ and Badger™ 1200 and 1400 series remotes. Supports discretes, analogs, and controls; includes predefined alarm descriptions for fast and easy databasing.

- **Badger Interrogator:** Monitor Badger™ 400 series and Badger/CentraLine™ 475 remotes. Supports discretes, analogs, and controls; includes predefined alarm descriptions for fast and easy databasing.

- **NEC 21SV Interrogator:** Monitor NEC™ 21SV remotes directly with T/Mon; eliminate NEC hard masters.

Back Panel Diagram

"One of the best things about T/Mon is the ability to customize each individual company's alarm inputs."

-Gary Evans
Network Engineer
Vision Net
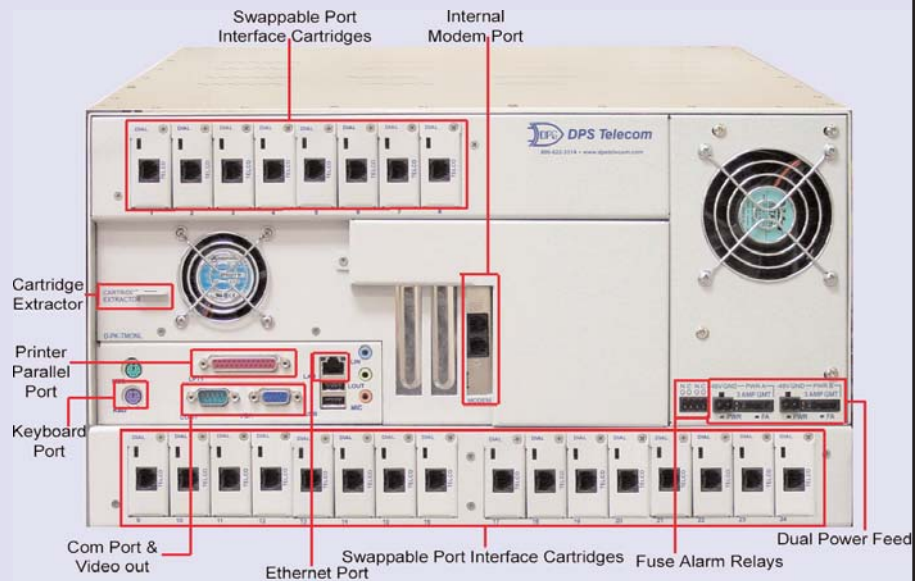
Additional T/Mon References
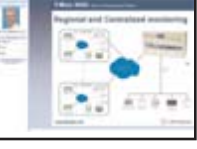
Address: http://www.dpstelecom.com/

T/Mon NOC Product Summary: Learn even more about this advanced network management platform. www.DpsTelecom.com/TMon

Live Meeting Room A DPS Live Meeting Room combines a slideshow presentation with a conference call. Learn everything you need to know about T/Mon NOC in as little as 30 minutes. www.DpsTelecom.com/Meetings/

White Paper: T/Mon NOC-The Next Generation Hardware Platform for the T/Mon Remote Monitoring System Learn how to make the right choice when selecting a network monitoring system. Download this and over 25 other white papers at www.DpsTelecom.com/White-Papers/

Success Story: Northwest Communications Reduces Windshield with T/Mon NOC T/Mon NOC helped this telco to reduce costly windshield time - the time high-paid technicians spend driving to remote sites. Read the whole story at www.DpsTelecom.com/DpsNews/Success_Stories/

Tech Tip: Configure pager alarm notifications in T/Mon?
Learn how to use the advanced paging features of T/Mon to send automatic alarm notifications to technicians' pagers and phones. Learn this tech tip and more by visiting www.DpsTelecom.com/MyDps/

To order, call 1-800-622-3314 or visit www.DpsTelecom.com/info

T/MON SLIM

Real-Time Visibility of Local & Regional Networks

If you're tired of waiting for the central NOC to tell you about alarms happening in your own backyard, T/Mon SLIM is the local visibility solution you've always wanted.

T/Mon SLIM is a complete network alarm monitoring system in a 1-RU package. It's the full power of the T/Mon NOC Remote Alarm Monitoring System, scaled to the needs of small, local, and regional networks.

Cost-effective and easy to install, T/Mon SLIM puts high-quality network alarm monitoring within the reach of any company and any maintenance department.

With T/Mon SLIM, you can:

- **Consolidate alarms from several sites into a single local/regional network view**
- **Monitor alarms in SNMP, TL1, ASCII and over 25 standard, proprietary, and legacy protocols (with optional software modules.)**
- **Send automatic pager and email alarm notifications to technicians in the field**
- **Remotely access alarms via Web browser**
- **Forward alarms to a T/Mon NOC or SNMP manager at a centralized location**
- **Maintain alarm history logs**
- **Analyze past alarms to identify network weak spots and anticipate future problems**
- **Use Derived Alarms to track complex network problems**
- **Use Derived Controls to program flexible automatic corrections for complex network problems**

T/Mon SLIM Benefits

- **Alarm monitoring that you control**
- **Real-time visibility of the alarms you're responsible for**
- **Monitor up to 64 individual network devices and up to 10,000 alarm points**
- **Monitor small networks or local/regional sections of large networks**
- **Consolidate alarms from several sites into a single local/regional network view**
- **Filter and forward alarms to a higher-level T/Mon NOC or SNMP manager**
- **Support SNMP, TL1, ASCII and more with optional Software modules**
- **Monitor telecom gear and modern DPS RTUs, plus legacy RTUs from Badger, Dantel, Larse, and more**
- **Send automatic pager and email alarm notifications to technicians in the field**
- **No-Risk, Money-Back Guarantee**
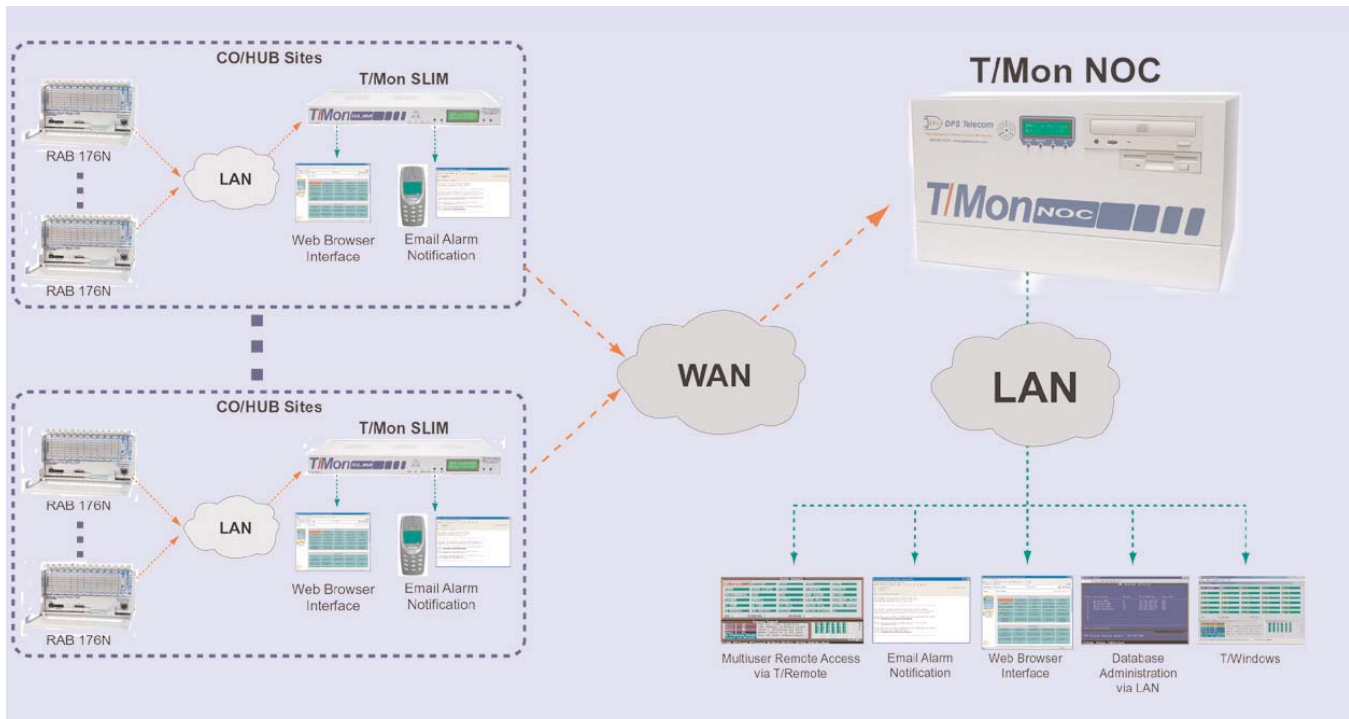
Local and Central Network Visibility: T/Mon SLIM collects alarm data from your remote sites and provides local visibility via Web, pager and email; T/Mon NOC collects alarms from multiple T/Mon SLIMs for centralized alarm management.

Why Do You Need T/Mon SLIM?

If you manage a small network, or a local/regional section of a large network, you probably don't have immediate, real-time access to all the alarms you need to see — even when they're alarms from your own office and remote sites.

Being dependent on a central corporate NOC means you don't always get timely notification of alarms as they happen. And if you work for a small company, the cost barriers to setting up a 24/7 manned NOC can prevent you from having any alarm visibility at all.

Either way, not having real-time monitoring increases service restoration times and maintenance costs.

T/Mon SLIM changes all that. T/Mon SLIM puts visibility and control of your alarms directly into your hands, giving you the power to proactively manage the equipment and remote sites you're responsible for.

Is T/Mon SLIM right for you?

T/Mon SLIM is designed for medium-level users who want a one-screen view of a limited number of network sites, but don't need the full capacities of T/Mon NOC. T/Mon SLIM is a great solution for you if you:

- **Manage a local or regional section of a large network**
- **Want to monitor the alarms your department is responsible for, independent of your network's central NOC**
- **Manage a small network**
- **Have outgrown monitoring individual sites using the NetGuardian's stand-alone capabilities and now want a single view of your sites**

The power of T/Mon, scaled to your needs

T/Mon SLIM monitors up to 64 network devices and up to 10,000 points — exactly the right capacity for monitoring the sites your

department is responsible for, without forcing you to pay for more capacity than you need.

T/Mon SLIM monitors DPS Telecom remotes, including the full-featured NetGuardian 832A, the light-capacity NetGuardian 216 and the 176-alarm-point Remote Alarm Block 176N. T/Mon SLIM also monitors SNMP devices, any telecom equipment that outputs ASCII text or TL1, and legacy RTUs from Badger, Dantel, Larse, NEC, and Pulsecom.

Slim 1 RU design

T/Mon SLIM is slim, 1 RU unit that fits into any 19" or 23" rack, in any telco environment, without taking space away from revenue-generating equipment. Dual -48 VDC power inputs allow T/Mon SLIM to be powered from the same battery power as the rest of your equipment — and give you a backup power supply in case of a primary power failure.

You don't have to trip over bulky alarm consoles — you can set up T/Mon SLIM in any equipment room and not worry about it. Up to five users can simultaneously connect to T/Mon SLIM using its built-in Web Browser Interface or T/Windows.

T/Mon SLIM is primarily built for modern, LAN-based network environments. The unit's 10/100 BaseT Ethernet port provides a LAN connection for receiving alarm reports from devices; forwarding alarms to T/Mon NOC or an SNMP manager; and downloading T/MonXM software updates. Four RS-232 ports provide legacy polling of serial devices

You can have a new, fully capable advanced monitoring system and still keep your legacy remotes.

All the capabilities you need to proactively monitor your local/regional network

Despite its compact form, T/Mon SLIM has everything you need to effectively monitor your sites.

The 1RU T/Mon SLIM fits into any 19" or 23" rack without taking space from revenuegenerating equipment.

T/Mon SLIM Specifications

Standard Input Protocols: DCP, DCPf, DCPx, Ping

Standard Output Protocols: DCP, DCPf, DCPx

Optional Input Protocols*: ASCII, Badger, Cordell, DCM, E2A, Granger, Larse, Modbus, NEC, NTP, Ping, Pulsecom, SNMP, TABS, TBOS, Teltrac, TL1

Optional Output Protocols*: ASCII, SNMP, TABS, TL1

Monitoring Capacity: 64 devices/10,000 alarm points

Dimensions: 1.75" H (1RU) x 17" W x 12 "D (4.45 cm x 43.18 cm x 30.48 cm)

Mounting: 19" or 23" rack

Power Input: Dual –48 VDC, Dual –24 VDC (optional)

Fuses: Two 2 Amp GMT

Serial Ports: 4

Serial Port Interface: RS-232, 485, 202, 33.6 high speed modems

LAN Interface: 10/100 BaseT

Processor: 400 MHz

Visual Display: Front panel LCD, 8 bicolor LEDs

Unit Controls: 4 LCD menu control buttons

Hardware Warranty: 2 years

Operating Temperature: 32°–140° F (0°–60° C)

Operating Humidity: 0%–95% noncondensing

*Optional T/Mon Software Module(s) required to support optional input/output protocols.

Additional T/Mon SLIM References

Success Story: Utah InterLinx Finds the Visibility They Need With T/Mon SLIM

"I had techs down in St. George who needed to be notified immediately when events occured, and the T/Mon SLIM did exactly that."

-Warren Stringham
VP of Network Engineering
Utah Linex

For more information about the T/Mon SLIM and DPS Success Stories visit www.DpsTelecom.com

NetGuardian-16S

Reach Through 16 Ports
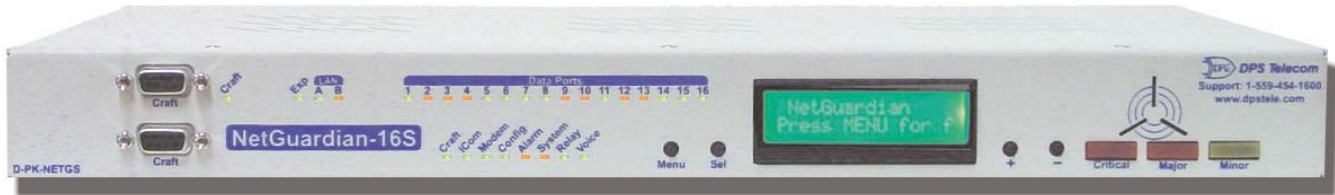
With 16 serial ports, integrated local audiovisual notification, two separate NICs, powerful alarm collection, and versatile alarm reporting via SNMP Trap, email, and pager, the NetGuardian-16S can handle any alarm monitoring need.

NetGuardian-16S Overview

The new NetGuardian-16S is DPS Telecom's most powerful RTU ever. Based on the proven hardware and software of the popular NetGuardian 832A, the NetGuardian-16S provides greatly expanded functionality — including a 16-port terminal server, an integrated Building Status unit, and more.

This high-capacity SNMP alarm collector incorporates many functions that previously required several separate units. But the NetGuardian-16S occupies only 1 RU on any standard 19" or 23" equipment rack, freeing valuable rack space for revenue-generating equipment.

With the NetGuardian-16S, you can:

- Connect multiple concurrent users via Telnet over LAN to up to 16 serial devices
- Notify on-site personal of Critical, Major, and Minor alarms via the integrated audiovisual Building Status Unit
- Connect the NetGuardian-16S to two separate Ethernet connections, each with its own IP address
- Monitor 32 discrete alarms, 32 ping alarms, and 8 analog alarms
- Control remote site equipment via 8 control relays
- Monitor your remote site from anywhere using the NetGuardian-16S's built-in Web Browser Interface
- Automatically send pager and email alarm notifications 24 hours a day, seven days a week

NetGuardian-16S Benefits

- **16-port terminal server provides LAN Telnet access to remote equipment**
- **Integrated Building Status Unit provides local alarm visibility**
- **Dual NIC for multiple network support**
- **32 discrete alarms, 32 ping alarms, 8 analog alarms, and 8 control relays**
- **Web interface: monitor without a master**
- **24/7 alarm notification via email and alphanumeric pager**
- **Expand to 176 discretes/32 control relays with NetGuardian Expansion Units**
- **NEBS compliant**
- **Supports SNMP v2c Informs, v2c Traps, and v1 Traps**
- **Free lifetime firmware upgrades**
- **2-year hardware warranty**
- **No-risk, money-back guarantee**

Additional NetGuardian-16S References

Tech Tip: Proxy Through a NetGuardian to Another Device
NetGuardian RTUs features terminal server functionality, allowing you to Telnet into attached site devices. Learn how you can reduce windshield time by remotely connecting to your serial devices. Download this tip at www.DpsTelecom.com/MyDps/
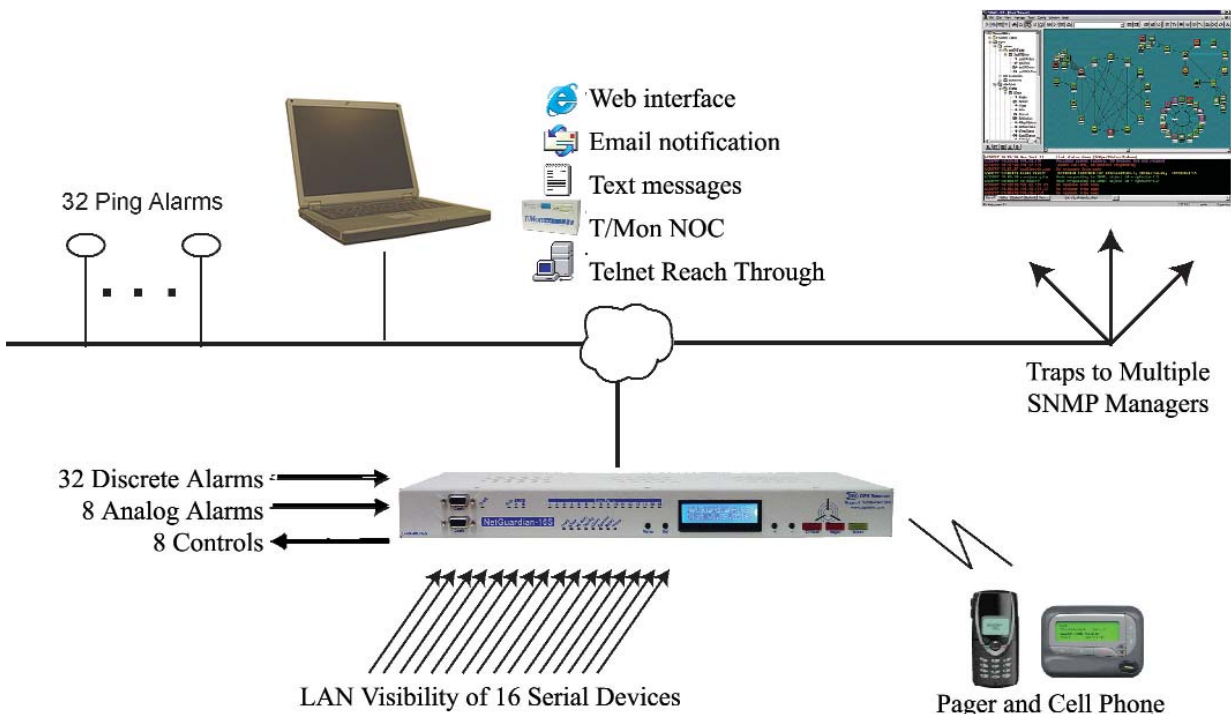
Connect to 16 different devices with LAN-based terminal server.

Connect via LAN to remote site equipment

The NetGuardian-16S's 16 reach-through serial ports provide LAN-based terminal server access to up to 16 serial devices. Multiple users can connect to the NetGuardian-16S simultaneously via Telnet over LAN to connect and control telecom switches, servers, radios, multiplexers, PBXs, and many other types of remote site equipment.

Dedicated NetGuardian DX Expansion port

The NetGuardian-16S features a dedicated NetGuardian DX Expansion Unit port, so you can expand your alarm monitoring capacity without sacrificing one of your 16 serial ports.

Integrated Building Status Unit

The NetGuardian-16S incorporates an audiovisual alarm status panel that provides on-site personnel with immediate notification of Critical, Major and Minor alarms, incorporating the functions of DPS Telecom's popular Building Status Unit (BSU).

The NetGuardian-16S's integrated BSU, along with its powerful alarm collection and versatile alarm reporting, makes it the ideal RTU for any application that requires local alarm notification.

Dual-NIC Security Model

For enhanced security, the NetGuardian-16S has two separate NICs. This allows you to connect the NetGuardian-16S to two different networks and allows users on separate networks to access the same unit.

Complete site management

Designed to help you manage every aspect of your remote sites, the NetGuardian-16S gives you versatile tools to collect and display alarm data:

- Large discrete alarm capacity to monitor all your remote site equipment and infrastructure: switches, routers, multiplexers, radios, generators, batteries, commercial power, rectifiers, HVAC equipment and anything else you've got.

- Sophisticated analog alarms to monitor temperature, humidity, battery voltage levels and other environmentals factors. The NetGuardian-16S's analog alarms support four separate threshold alarms (Major Under, Minor Under, Minor Over and Major Over) plus live readings of current analog measurements.

- 16 Telnet-over-LAN reach-through ports provide multiple users with easy visibility and control of remote site serial devices.

Stand-alone Monitoring via Web Interface

You don't need an alarm master unit to monitor your site with the NetGuardian-16S. With the NetGuardian-16S's built-in Web Browser Interface, you can access the NetGuardian-16S, view and acknowledge alarms and control remote site devices from any computer anywhere in your network.

24/7 Pager and Email Aerts

Out of the box, the NetGuardian-16S supports 24/7 pager and email reporting. Send alarms directly to maintenance technicians in the field, even when no one's in the office.

The NetGuardian front panel provides audiovisual notification, an LCD menu, and LED status indicators for simple, detailed, and fast problem diagnosis.

Front panel LCD provides local alarm descriptions

Integrated Building Status Unit provides local audiovisual notification
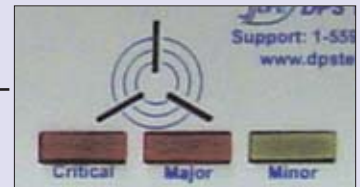
Front panel LEDs indicate alarm and communication status

Reports to Multiple SNMP Managers and T/Mon NOC Simultaneously

The NetGuardian-16S reports to both the T/Mon NOC Alarm Monitoring System and any SNMP manager. You can send alarms from the NetGuardian-16S to T/Mon NOC and multiple SNMP managers at multiple IP addresses simultaneously.

NEBS-compliant for Guaranteed Reliability

The NetGuardian-16S is compliant with NEBS Level 3 electrical, environmental, and safety standards. NEBS-certified NetGuardian-16S models are available.

SNMP v2c Informs for Robust Message Delivery

The NetGuardian-16S supports SNMP v2c Informs, as well as SNMP v2c and v1 Traps. SNMP v2c Inform messages provide confirmed delivery of alarms. When an SNMP manager receives an Inform message, it sends a confirmation response to the SNMP agent. If the agent doesn't receive the confirmation response, it will resend the Inform.

Alarm Point Grouping: Severity levels, Custom Virtual Alarms and More

Each NetGuardian-16S alarm can be assigned to any of 8 user-defined groups, adding amazing flexibility to how you view and use your alarm data:

- **Custom Alarm Grouping:** Organize your alarms by location, equipment type, severity, or any other criteria
- **Alarm Severity Levels:** Alarm severity levels are included in the SNMP Traps and Informs, so you can sort alarms by severity even if your SNMP manager doesn't.
- **Custom Virtual Alarms:** Create custom virtual alarms based on easy formulas like "Critical power alarms."
- **Custom Derived Controls:** Create control formulas like "Turn on generator if any battery analog alarm reaches minor low threshold."
- **Granular Pager and Email Notification**: Assign alarm points to specific pager and email recipients. Get paged only for Critical or Major alarms, send power alarms to repair technicians, and send intrusion alarms to security.

*Monitor & provision your NetGuardian through Windows-based Edit16S software
Create custom derived controls, alarm grouping, and pager notification with user-friendly navigation.*

To order, call 1-800-622-3314 or visit www.DpsTelecom.com/info

Grounding Post · Data Ports · Connector for Optional NetGuardian Expansion · Ethernet Port A · Ethernet Port B · Dual Power Feeds · ¾ Amp GMT Fuse · Alarm and Control Relay Connectors · Telco Jack
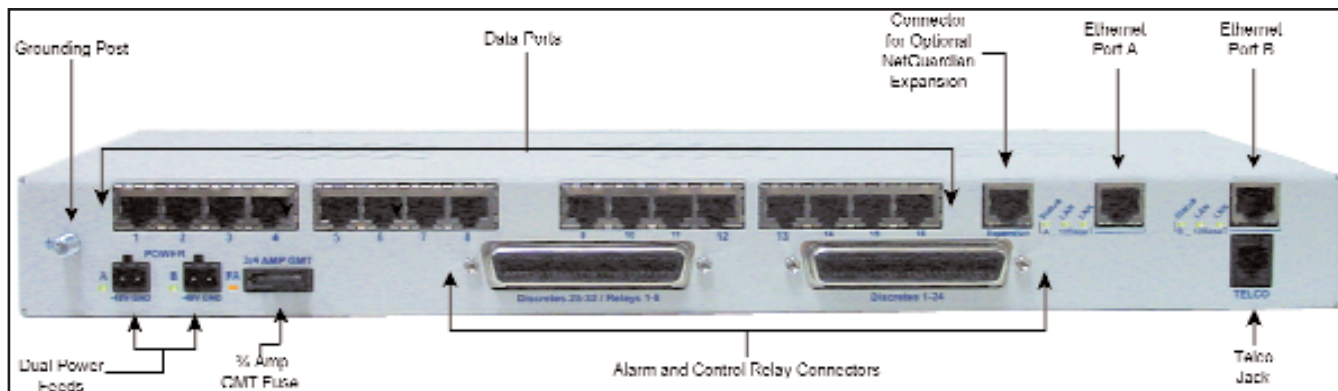
NetGuardian-16S Specifications

Discrete Alarm Inputs: 32 (reversible)

Analog Inputs: 8

Analog Input Range: -94 to +94 VDC or 4 to 20 mA

Control Relays: 8 Form C

Maximum Voltage: 60 VDC/120 VAC

Maximum Current: 1 Amp, AC/DC

Expansion Options: 80, 138, or 176 discrete alarms, and 16, 24, or 32 control relays

Protocols: SNMP, DCPx (T/Mon NOC)

Interfaces: 16 RJ45 RS-232 serial ports

2 50-pin connectors

2 RJ45 10BaseT Ethernet ports
1 RJ45 NetGuardian DX port
1 RJ11 telco jack
2 DB9F craft ports

Dimensions: 1.75" H (1RU) x 8" W x 6" D
(4.5 cm x 20.3 cm x 15.2 cm)

Mounting: 19" or 23" rack

Power Input: Dual -48 VDC (-40 to -56VDC)

Current Draw: 200 mA (350 mA at power-up)

Fuses: ¾ Amp GMT

Modem: 33.6K Internal

Visual Interface: LCD Display
3 alarm status lights
30 bicolor LEDs
7 unicolor LEDs

Audible Notification: Alarm speaker

Unit Controls: 4 LCD menu control buttons

Hardware Warranty: 2 years

Operating Temperature: 32°-140° F (0°-60° C)

Operating Humidity: 0%-95% noncondensing

> *"The NetGuardian does everything we need it to do. It has the ability to interface with all our equipment, whether it's a CSU/DSU or a Class 4 switch."*
>
> -**Andrew Melton**
> Senior Director
> Global Network Operations
> NOS Communications, Inc.

Additional NetGuardian-16S References

Tech Tip: Change Your Password to the NetGuardian: Increase your security on your Netguardian by changing the user password. Learn this and more by visiting www.dpstelecom.com/mydps

Ron Stover
Technical Support

NetGuardian 832A G5

A Versatile, High-Speed SNMP Alarm Collector

With 8 serial ports, two separate Ethernet cards, SNMP v2c support, powerful alarm collection and versatile alarm reporting via SNMP Trap, email and pager, the NetGuardian 832A G5 can handle any alarm monitoring need.

The NetGuardian 832 G5 **mediates contact closures and analog voltages to SNMP traps** — but it also serves as a **reach-through terminal server**, a **self-contained all-in-one alarm monitoring system**, a **24/7 email and paging system**. — and then there's still more functionality ...

EXPANSION OPTIONS
Learn how to increase your visibility by adding the NetGuardian 480 (pg. 22) or NetGuardian DX G4 (pg.38)

The NetGuardian 832A G4 provides all the tools you need for complete remote site management:

- •Mediate **32 discrete inputs, 32 ping alarms, and 8 analog alarms to SNMP traps.**

- • Report alarms to **multiple SNMP managers** or T/Mon NOC

- • Supports LAN or dial-up transport - immediately implement SNMP monitoring without LAN or use dial-up as a backup path in case of LAN failure.

- • Monitor legacy telephony gear, battery plants, generators, security locks, temperature sensors, and all your other remote site equipment.

- • Expand your monitoring capacity up to **176 discrete inputs** with the NetGuardian Expansion Unit.

- • Control site equipment with **8 control relays**.

- • Control switches, routers, PBXs and other telecom gear through the NetGuardian's 8 terminal server reach-through ports.

- • Integrated **Web Browser interface** for stand-alone alarm monitoring.

- • Email and pager alerts for **24/7 alarm monitoring** without a master.

- • Live streaming video **surveillance of remote sites** with the NetGuardian SiteCAM.

- • Included **Windows configuration** utility.

- • **Free** lifetime firmware upgrades.

Stand-alone monitoring via Web Interface

The NetGuardian offers a Web Browser interface for easy and convenient alarm management and unit configuration via Internet or Intranet. The user friendly interface allows complete access to all the functions of the unit and enables the user to quickly set up alarm point descriptions, view alarm status, issue controls, and configure paging information, as well as additional options.

TTY Interface

In addition to the Web Browser interface, the NetGuardian provides a menu-style TTY interface for basic configuration, which may be accessed via the craft port, dial-up port or Telnet session via LAN.

NG Edit 5

NG Edit 5 allows you to create configuration files without being connected to the NetGuardian. Download the files to the NetGuardian via LAN or upload current files for backup.

Unique Secirity Flles for Up To 4 Users

The NetGuardian 832A G5 supports unique security profiles for up to four users. Each user can be assigned a unique set of security parameters, including authentication and/or privileged access. You can generate authentication keys with your choice of MD5 or SHA For maximum security and flexibility.

Entry-control unit with audible alert

Building access system gives netowrk alarm managers the ability to control and regulate door entry access.

Data Ports · Sensor Power Supply · Optional Switch

Dual Power Feeds · Dual Fuses · Alarm & Relay Connectors · Dedicated Accessory Port · Telco Jack · Dual 10/100BaseT Ethernet Ports
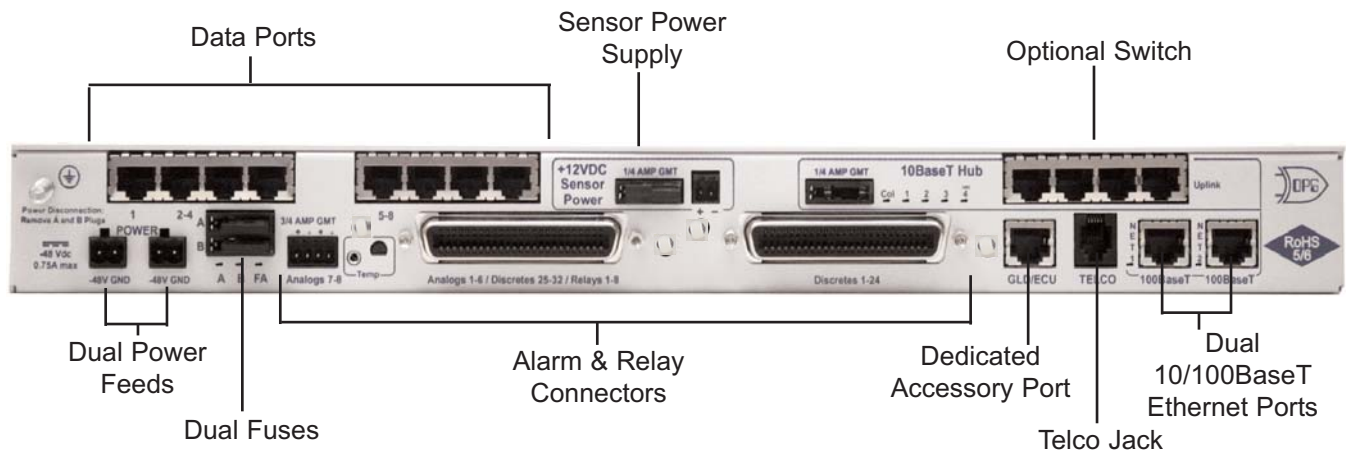
NetGuardian 832A G5 rear view featuring easy-to-use connectorization.

NetGuardian 832A G5 Specifications

Dimensions:	1.75" H x 17" W x 12" D (4.5 cm x 43.2 cm x 30.5 cm)
Weight:	4 lbs. 3 oz. (1.9 kg)
Mounting:	19" or 23" rack
Power Input:	–48VDC (–40 to –56VDC) (Optional) –24 VDC (–18 to –36 VDC), (Optional) Wide Range –24/–48 VDC (–18 to –72 VDC)
Current draw:	200mA
Interfaces:	8 RJ45 Yost RS-232 ports (Other RS-485 and 202 modem options available) 2 RJ45 Ethernet 10/100BaseT port 1 RJ11 Telco jack 2 50-pin amphenol connectors (discretes, controls, and analogs)
Protocols:	SNMPv1, SNMPv2c, SNMPv3 or DCP (depending on firmware ordering options), TAP (Alpha) paging, and Numeric paging
Modem:	33.6K internal
Discrete Alarm Inputs:	32
Control Outputs:	8 FormC
Max. Voltage:	60 VDC/120 VAC
Max. Current:	1 Amp, AC/DC
PPP:	Permanent, Backup, or On-demand
Ping Alarms:	32
Analog Alarms:	8
Input Range:	–92 to +92 VDC or 4 to 20 mA
Operating Temperature:	32° to 140°F (0°- 60°C)
Operating Humidity:	0% to 95% non-condensing
Fuse:	3/4 Amp GMT for power inputs 1/4 Amp GMT for external sensor power outputs and integrated Ethernet hub

Local display descriptively presents alarm conditions.

The front panel speaker provides audible notification of alarms.
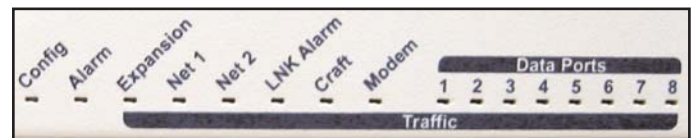
Front panel LEDs give status indication of alarms, communication, and other activities.

The NetGuardian front panel provides audible notification, an LCD menu, and LED status indicators for simple, detailed, and fast diagnosis.

NetGuardian 832A G5 - Wireless

Achieve Monitoring Where You Never Could Before

A Wireless, Full-Featured RTU That Works Where Others Can't

The NetGuardian 832 G5 wireless offers a **completely wireless monitoring solution with SNMP v3 support**. In the case of a LAN failure, sites **remain protected** with its complete, backup reporting system. Choose between permanent, on-demand or backup wireless settings. The G5 reports alarms as SNMP traps, while the **8 high-speed serial ports** allow multiple-user reach through access.

What's New In the NetGuardian 832A G5 Wireless

- **Wireless alarm reporting via either GSM or CDMA**
- **Fastest processing speed of any previous NetGuardian model**
- **Dual power feeds with separate A and B fuses for increased reliability**
- **8 RS232 ports and 1 RS485 port for increased terminal server functionality**
- **Increased RAM and flash memory for future software applications**
- **Supports SNMP v1, v2c, & v3 (Traps & Informs)**
- **Firmware upgradeable via LAN**

Wireless Connectivity (GSM/CDMA)

The Wireless NetGuardian 832A G5 includes a **wireless IP modem and antenna** (GSM or CDMA, depending on build option) for alarm reporting and remote access. **"This is an excellent alternate path option for any site,"** says DPS Director of Engineering Mark Carberry. "And it can serve as the primary reporting path at very remote sites where no other connection is readily available."

Optional Features

- **Built-in sensor and power supply -** Eliminates the need for an additional power supply for your sensors –12 or –24V).
- **Dual Power Feeds** - Provides an alternate power input in the event one power source fails.
- **Integrated temperature and batery sensors -** Eliminates the cost and setup time of installing external sensors.
- **External temperature sensor** - Allows you to attach a probe with a long lead to monitor temperatures from a specific area in your site- up to 50 feet away.

TTY Interface
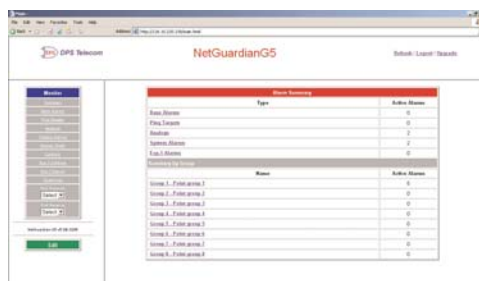
View and configure the NetGuardian via a Web Browser over LAN.
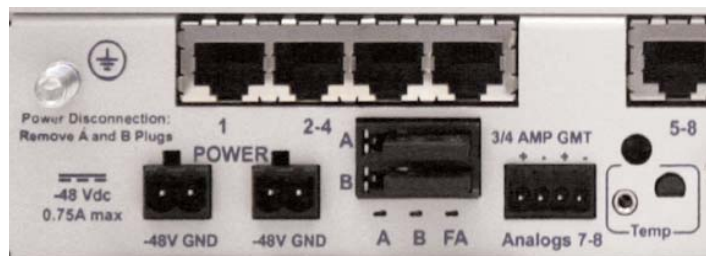
The next generation of NetGuardian offers you dual fuses with separately fused A and B power feeds.

NetGuardian 3288 Test Fixture
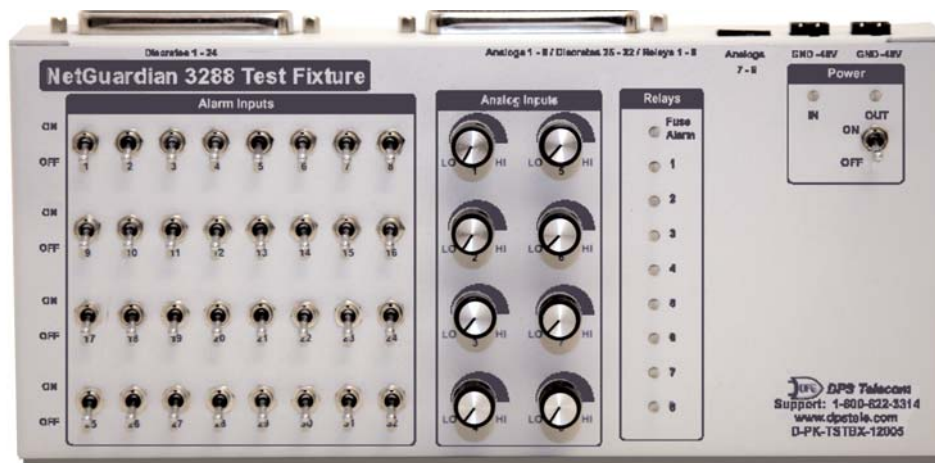
A Lightweight, Compact Test Box for Your RTUs

NetGuardian Test Box Benefits

Diagnose Problems Right From the Field:

If an alarm point fails, it's important to know if the problem lies with your NetGuardian, your site equipment, or your analog sensor. With the NetGuardian Test Box, minimize windshield time driving to remote sites by diagnosing problem while you're on-site.

Get Exact Control with Labeled Alarm Points:

The labeled toggles and knobs on the NetGuardian Test Box are easier than working with probes directly on amphenol connectors. With a Test Box, you can easily set all of the alarms you want.

Test Your Alarm Inputs - And the Rest of Your Monitoring System:

A standard use of the NetGuardian Test Box is to test the discrete and analog inputs of a NetGuardian before attaching your mission-critical devices to it. You can send test discrete alarms to each input simply by flipping one of the 32 toggles. You can also send voltages (0-to-input voltage) to each analog input by turning one of 8 knobs. If your master receives the appropriate alarm data from your NetGuardian, you will know that your network, serial, or dial-up connection is fully functional. By testing your alarm inputs during setup, you can check for connectivity issues and verify that your RTU was installed and provisioned correctly.
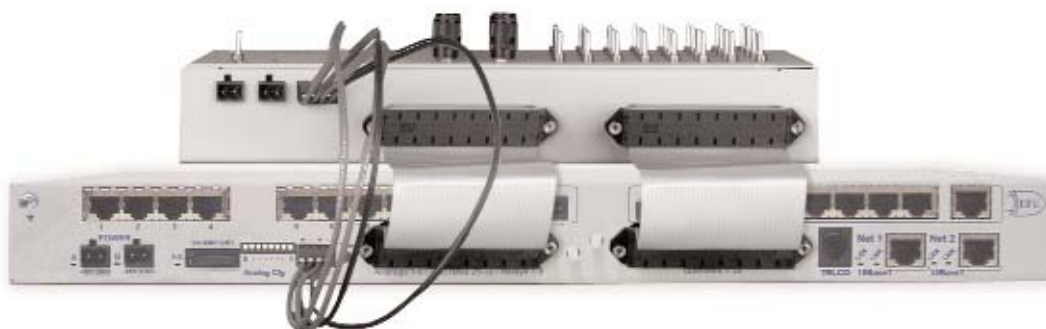
As shown above, the NetGuardian 3288 Test Fixture is connected directly to a NetGuardian 832A G4. With just a few connections, you can test every discrete alarm point, analog input, and control relay.

NetGuardian 216

Affordable Monitoring for Smaller Sites

Are you monitoring your small sites? Do you think you can't afford to? The light-capacity LAN-based NetGuardian 216 for SNMP, TL1, and DCP makes it possible to install network monitoring anywhere in your network, without spending a fortune on excess alarm capacity.

- Right-size capacity for small sites: **16 discrete alarms, 2 analog alarms, 2 controls and 1 terminal server port**

- Reports alarms over **SNMP** or to **T/Mon NOC**.

- Reports to up to 2 SNMP managers — great for reporting alarms to different departments

- 4-threshold analog monitoring (Major Over, Minor Over, Minor Under, and Major Under).

- Terminal server port for LAN access to switches, routers, PBXs and other serial-interface devices.

- Order Option **–48 VDC or 110 VAC power input**.

- Small-footprint form factor for rack or wall mounting.

- Included Windows configuration utility for quick, easy turnup.

- **Free** lifetime firmware upgrades
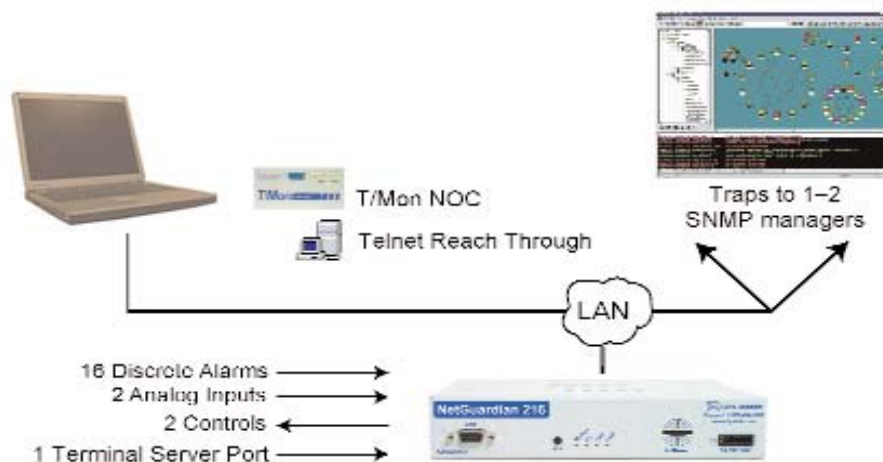
The NetGuardian 216 monitors exactly enough to monitor your small sites — without expensive extras — and reports to up to 2 SNMP managers and T/Mon NOC.

NetGuardian 216 Specifications

Protocols: SNMP, DCP, DCPf, DCPx, DCP1

Discrete Inputs: 16 (reversible)

Analog Inputs: 2

Analog Input Range: –90 to 90 VDC

Analog Thresholds: 4 per analog input

Control Outputs: 2

Maximum Voltage: 60 VDC/120 VAC

Maximum Current: 1 Amp AC/DC

Interfaces: RJ45 10BaseT Ethernet port
      50-pin alarm input connector
      4-pin analog input connector
      DB9 RS-232 terminal server port
      DB9 craft port

Audio: Speaker with volume control

Visual Interface: 9 LEDs

Dimensions: 1.720" H x 10.489" W x 6.636" D

Mounting: 19" or 23" rack

Power Input: –48VDC (–40 to –70 VDC)

(Optional) Dual –48VDC inputs

(Optional) 9 VDC from 110 VAC wall transformer

Current Draw: 50 mA

Fuse: 0.5 amp GMT

Operating Temperature: 32°–140° F (0°–60° C)

Operating Humidity: 0%–95% noncondensing

Configuration and Monitoring Utility Included

Downloadable Firmware via Craft Port

NEBS Level 3 Compliant

Learn more about the cost-effective NetGuardian 216.

White Paper Download:
How to Monitor Every Small Site in Your Network ... Without Breaking Your Budget

www.DpsTelecom.com/White-Papers

"With 16 discrete points, 2 analogs, 2 controls and a reach through port, the NetGuardian 216 gives us a great window into a remote location."

Nolan Baldwin
CO Tech
DIckey Rural

NetGuardian 480

RoHS 5/6

The Low-Cost, Easy-to-Implement Solution to Monitoring

The NetGuardian 480 is a specialized member of the NetGuardian family, optimized for use as a high-capacity discrete-only responder. The result is a highly cost-effective solution for gathering the diverse equipment at your remote site and integrating it into a single modern network management system.

With **80 discrete alarm inputs** — 2½ times as many as the NetGuardian 832A- you can easily forward all the alarms of a small to medium-sized site. This dense alarm coverage gives you the convenience of a single-box solution, saves you the cost of buying multiple low-capacity RTUs, and offers you the lowest possible cost per point.

- **• 80 discrete inputs — cover your entire site with a single unit**

- **• Convenient single-box solution saves costs of buying multiple units — economical cost per point**

- **• Reports to multiple SNMP managers, TL1 manager(optional), or T/Mon NOC**

- **• TL1 over TCP/IP (optional)**

- **• Four control relays for controlling site equipment and security devices**

- **• Configurable alarm descriptions include detailed, actionable alarm data in SNMP traps or TL1 autonomous messages**

- **• Free Windows 2000/XP software for editing TL1 database, configuration, monitoring, diagnostics, and testing**

- **• Standard dual –48 VDC power inputs for redundant power facilities**

- **• Free lifetime firmware upgrades**
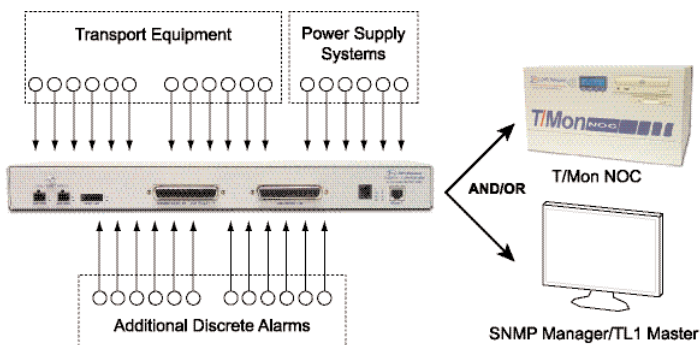
Versatility and power: The NetGuardian 480 collects alarms from all the diverse equipment at your remote site and reports to multiple SNMP managers, your TL1 manager or T/Mon NOC.

Now, Use Your NetGuardian 480 in Stand-Alone OR Expansion Mode!

By combining the NetGuardian 480 with the NetGuardian 832A, you get 80 additional inputs and 4 control relays - ALL AT THE FLIP OF A DIPSWITCH! That's a total of 112 alarm points in just two racks!

Tech Tip:Download the Latest Firmware. Enhance your monitoring with free firmware updates. Learn more at www.DpsTelecom.com/MyDps

Updated firmware is downloadable at DpsTelecom.com and allows you to get even more out of your monitoring

Dual Power Inputs **Discretes 49-80, Discretes 1-48** **Ethernet Port**

1/2 Amp GMT Fuse **Serial Jack**
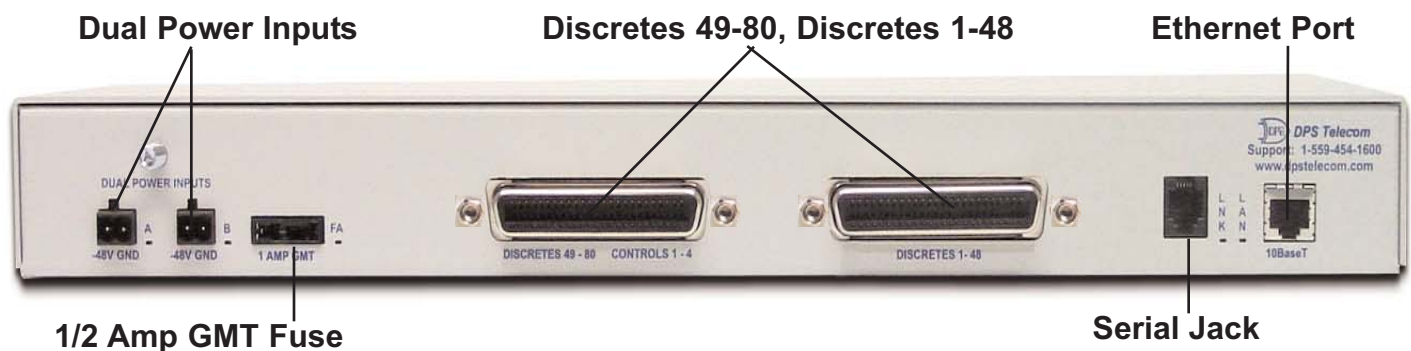
NetGuardian 480 Specifications

Protocols: SNMP, TL1(optional), DCP, DCPx, DCPf, DCP1

Discrete Inputs: 80

Alarm Detection Speed: Configurable to 100-9000 msec (1/10 second to 9 seconds)

Control Outputs: 4 relay contacts, 2 Form A, 2 Form C

Maximum Voltage: 60 VDC/125 VAC

Maximum Current:0.5Amp,125 VAC1 Amp, 24 VDC

Interfaces: Two 50-pin connectors for discrete alarms and control relays

- 1 RJ45 Ethernet jack
- 1 DB9 craft port
- 1 RJ11 serial port jack

Visual Display: 6 LEDs

Dimensions: 1.75" H x 17" W x 12" D

                          (4.5 cm x 43.2 cm x 30.5 cm)

Weight: 4 lbs. 3oz. (1.9 kg)

Mounting: 19" or 23" rack

Power Input: –48VDC (–40 to –70 VDC)

Current Draw: 250 mA

Fuse: 0.5 Amp GMT

Operating Temperature: 32°–140° F (0°–60° C)

Operating Humidity: 0%–95% non-condensing

Remote Alarm Block 176N

176 Discrete Alarm Inputs
Examples: Intrusion, Fire, Mux, Circuit Switches

4 Controls
Examples: Turn on back-up generators, open doors and gates, Reboot equipment

SNMP UDP/IP — LAN — NOC

RAB 176N — Private Line Network

Serial Port DCPx, TBOS RS-232, RS-485

Convert Contact Closures to SNMP Traps

Ordinarily, if you want to get SNMP Traps from your Main Distribution Frame, you're looking at hours of work and a hefty price in technicians' time and overtime pay.

First, you've got to collect all the wires at your Main Distribution Frame and tie them down to a terminal block. Then you've got to cross-connect the wires from the terminal block to an SNMP RTU — and that means running the wires over an equipment ladder and sewing them down.

There's an easier way - the Remote Alarm Block 176N. It's a remote alarm block and SNMP RTU in one unit. The RAB installs right in your Main Distribution Frame. Tie all the wires to the RAB — and the only thing you've got going out is a nice, clean Ethernet cable … straight to your LAN and your SNMP manager.

- **176 alarm inputs for dense alarm collection in the smallest possible space.**

- **Compact design frees space for revenue-generating equipment**

- **4 control relays for instant response to system integrity threats**

- **Selectable alarm qualification times separate nuisances from emergencies**

- **Free Windows configuration software included**

- **Free lifetime firmware upgrades**

- **Easy hardware replacement without having to disconnect wire-wrap dressing**

- **Mounts on rack or wall**

Make Your Monitoring Easier
Take Advantage of DPS Telecom Client Services

Lifetime Tech Support
All DPS Telecom clients are entitled to 24/7/365 Tech-Support for the lifetime of their DPS products. DPS Tech - Support is rated the best 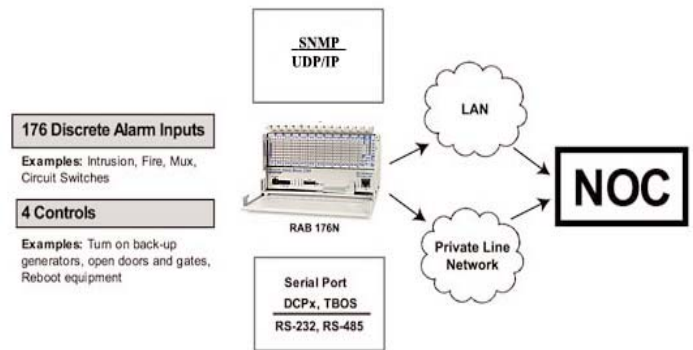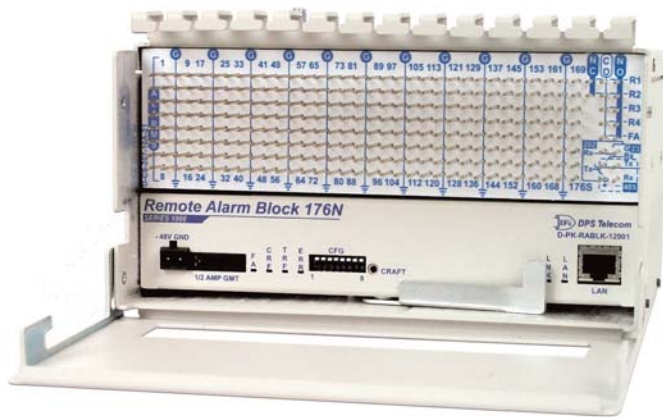in the industry by our clients, with a problem resolution rate of over 90%. There's no maze of voicemail, no hours wasted on hold - you'll be connected to a DPS engineer who can solve your problem.

Turn-Up and Installation Assistance
This is absolutely the quickest and easiest way to get your network monitoring system up and running. Our on-site turn-up assistance team will help you to install and configure your system and train your staff to use it.

Databasing Services
Defining your database is the most complicated aspect of configuring your alarm monitoring system. But you don't have to worry about it when we can do it for you. This service is especially helpful if you're upgrading to DPS Telecom equipment from legacy gear - we can convert your existing database from your legacy master.

T/Mon Gold Plan Maintenance Agreement
A T/Mon Gold Plan is an added layer of security for your network. It's the safest way to ensure that your equipment is always protected by the latest and greatest DPS solutions. The T/Mon Gold Plan entitles you to 50% off T/Mon hardware upgrades, free attendance at DPS Telecom Factory Training Events, priority tech support, and more.

DPS Factory Training Events
DPS Factory Training is the fast way to learn everything you need to know about your T/Mon system and DPS remotes. This is the class that will make your job easier. For more information, see page 2.

To order, call 1-800-622-3314 or visit www.DpsTelecom.com/info
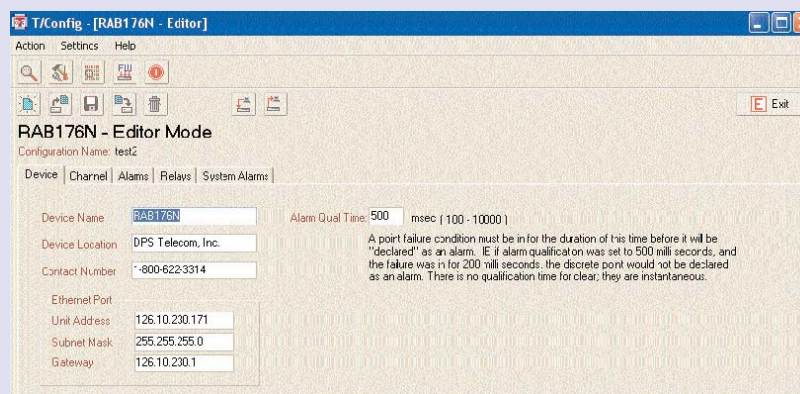
The Remote Alarm Block's included software utility allows you to monitor alarms and control relays, analyze traffic, and upload the latest firmware.
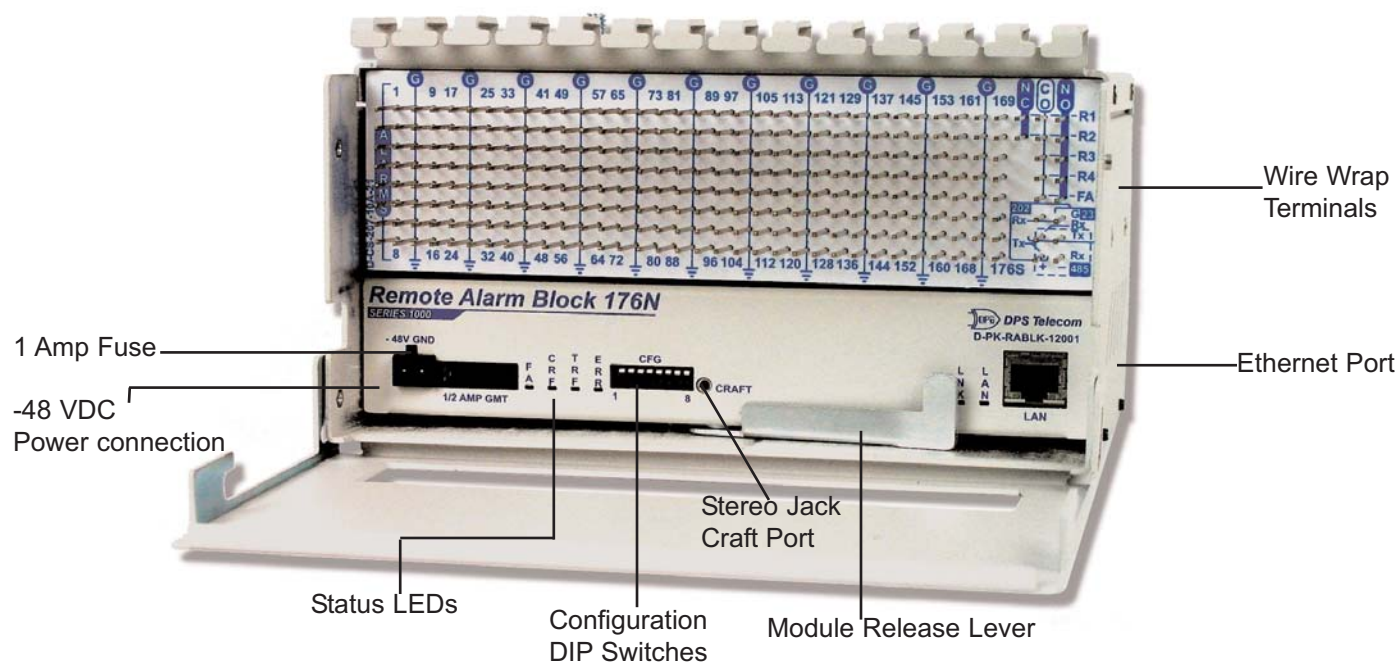
Protocols: SNMP, DCPx, DCPf, DCP, and DCP1

Discrete Point Inputs: 176

Alarm Detection Speed: Configurable to 100–10,000 msec

Control Outputs: Relay contacts, 2 Form A, 2 Form C

Maximum Voltage: 60 VDC/120 VAC

Maximum Current: 1 Amp, AC/DC

Interfaces:

• 1 RS-232 or RS-485 serial port, 202
• 1 stereo jack craft port
• 1 RJ-45 10BaseT Ethernet port

Visual Display: 6 bicolor LEDs

Dimensions: 4"x 8"x 5"

(10.2 cm x 20.3 cm x 12.7 cm)

Weight: 4 lbs (1.8 kg)

Mounting: 19" rack, 23" rack, or wall mounting

Power Input: –48VDC (–40 to –70 VDC)

Current Draw: 50 mA

Fuse: 1 Amp GMT

Operating Temperature: 32° –140° F (0° – 60° C)

Operating Humidity: 0%–95% noncondensing

AlphaMax
Install Alarm Monitoring Anywhere
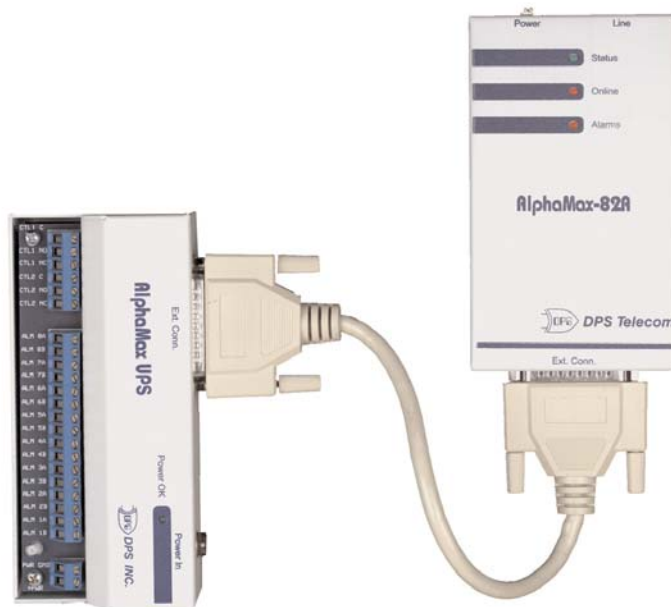
The Alphamax can be deployed anywhere it is needed and provides critical alarm monitoring.

Summary of Benefits

The AlphaMax is the easiest way to install alarm monitoring anywhere you need it: cell towers, railroad crossings, or anywhere else. A complete alarm system in one unit, the AlphaMax sends alarms directly to your numeric or alpha pager. DTMF control lets you acknowledge alarms and operate control with just a phone call. The AlphaMax can also report to ASCII terminals or the T/Mon NOC Remote Alarm Monitoring System.

With **8 discrete alarms and 2 control relays,** the AlphaMax is the perfect alarm unit for any small-site application.

- Sends alarm pages directly — no master or extra equipment needed

- Compact and cost-effective

- Easiest way to install alarm monitoring wherever you need it

- **8 discrete alarms, 2 control relays (controlable with derived equations)**

- Reports to numeric and alpha pagers, ASCII terminals, and T/Mon NOC

- **DTMF control** — operate relays and ack alarms with just a phone call

- Correct alarms automatically with derived controls

- Easy install with your choice of screw-lug or wire-wrap connector blocks

- Easy configuration with included Windows software

- **AC or DC power**

- 3 hours of backup power with optional UPS

- Dial-up access to a PBX, switch, server, or radio through optional reach-through port

To order, call 1-800-622-3314 or visit www.DpsTelecom.com/info

Client Letter: The Alphamax Prevents UPS Damage and Halon Discharge

DPS Telecom,

Your product has already paid for itself many times over in the short time it has been in operation here. Last Friday evening I got an alpha page from the unit notifying me of a general summary alarm on the UPS. I drove to the office to discover our UPS room air conditioner wasn't operating and the temperature in the UPS room was about 120 degrees. This extreme heat caused an inverter in the UPS room to overheat and generate an alarm. This heat also caused our halon fire suppression system to go into a zone 1 alarm state (which is one sensor away from a halon discharge and a visit from the fire department).

If no remote monitoring was in place at the time of the incident, the UPS could have been seriously damaged and shut down, leaving our servers unprotected, and the halon system could have discharged, causing a costly inspection and recharge and an unexpected visit from the fire department.

Again, thank you for your help in getting TSW squared away with an AlphaMax. DPS will be the first company we call with future remote monitoring needs.

Sincerely,
Gallen Armistead
Information Technology
TSW International Inc.

Alphamax Specifications

Protocols: TRIP, TAP, ASCII

Discrete Point Inputs: 8

Control Outputs: 2 Form C relay contacts

Maximum Voltage: 60 VDC/120 VAC

Maximum Current: 1 Amp, AC/DC

Interfaces: 1 DB25, 1 RJ12

Modem: 212 AT Type 300/1200 baud DTMF/Pulse dial internal modem with DTMF receiver

Optional 2400 baud modem.

Dimensions: 5.3" H x 3.1" W x 1.25" D (13.5 cm x 7.9 cm x3.2 cm)

Mounting: wall, frame or rack.

Power Input: +9 to +27 VDC, 133 mA@ 9VDC (1.2 Watts), –48 VDC

Use the AC adapter provided with the AlphaMax or power by DC input. Battery backup available on an external UPS connector block.

Heat Dissipation: 4.1 BTU, maximum

Operating Temperature: 32°–140° F (0°–60° C)

Operating Humidity: 0%-95% non-condensing

NetMediator T2S

Send TBOS Alarms Directly to Your SNMP or TL1 Manager

The NetMediator T2S works for you

The NetMediator T2S mediates up to 8 ports of 8 displays each of TBOS alarm data to SNMP traps — enabling more productive monitoring of microwave radios and other TBOS devices from contemporary SNMP-based network operation centers.

With the NetMediator, you don't have to rely on uninformative major/minor summary alarms to monitor your radios. The NetMediator fully captures TBOS data and converts it to highly detailed, informative SNMP traps.

You'll be able to diagnose equipment problems with a high degree of accuracy. You can send the right technician with the right tools on the very first truck roll, reducing maintenance costs and windshield time.

And there's a lot more to the NetMediator, like its built-in terminal server functionality through four reach-through serial ports. You'll be able to access, configure, and reboot on-site equipment through a remote Telnet session.

What can the NetMediator T2S do for you?

- **Mediate 8 TBOS devices to SNMP and DCP(x) alarm managers**
- **Update your TBOS monitoring to contemporary standards**
- **Mediated TBOS provides more detailed, useful information than major/minor alarms — isolate equipment problems before the first dispatch**
- **4 reach-through serial ports for Telnet operation of network elements**
- **32 reversible discrete alarms, 8 analog inputs (voltage/current), and 8 controls**
- **Remote access**
- **Monitor actual analog temperature and battery level**
- **Easy configuration**
- **Local audible and visual alarm notification**
- **Slim 1 RU form factor saves rack space**
- **FREE lifetime firmware upgrades**
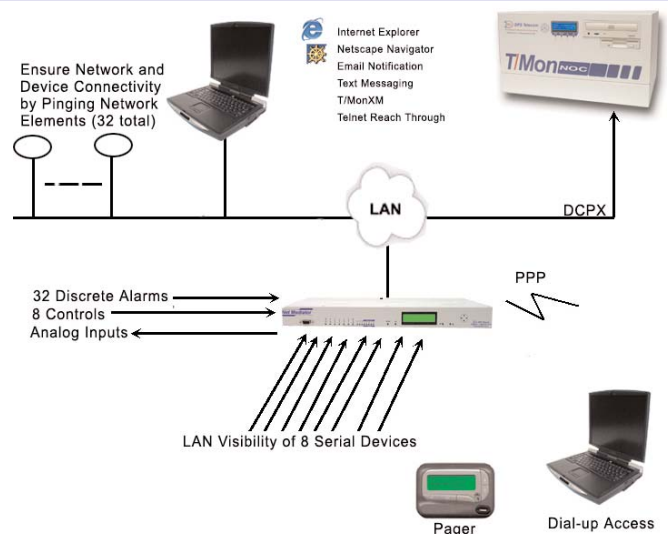- **30-day no-risk money-back guarantee**

"We discovered that the NetMediator had TBOS and TABS, and that it was a simple, soft migration to integrate them."

-Warren Hochman
Senior Director
New York City Transit

The NetMediator T2S captures TBOS alarm data from your network elements and mediates them to your SNMP or TL1 Manager.

The Medium-Capacity RTU that Takes Care of Your Monitoring Needs in 1 RU

The NetMediator also serves as a medium-capacity RTU, so you can take care of your monitoring needs with just this one unit.

The NetMediator's 32 discrete inputs bring back the contact closure alarms you need to monitor in your facility saving you the expense of buying additional RTUs. Eight analog inputs monitor voltage or current and report live values of temperatures and battery levels. And the NetMediator's 8 control relays give you control over additional remote site equipment.

Remote Access

All of the NetMediator's functions can be accessed remotely — giving you an alternate back-up method of monitoring alarms and checking the status of your TBOS radios. A built-in security permissions feature ensures that only authorized users get access.

The NetMediator requires only minimal configuration — just specify your type of TBOS equipment from a predefined list. (Current NetMediator firmware supports Alcatel MDR-6000, MDR-4000E DS-3, MDR-7000, MDR-8000 DS-3, and MDR-8000 DS-1 microwave radios. If you need support for other devices, please call us at 1-800-622-3314 and ask about firmware options.)

Firmware upgrades are free for the life of the unit and are downloadable via the front-panel craft port. A simple download can add new capabilities to your NetMediator at any time, without altering the hardware.

Local visibility features include audio and visual notification of alarms, including an LCD display that shows alarm descriptions in plain English.

All this functionality comes in a slim 1 RU unit that will save your rack space for your revenue-generating equipment. Plus, you'll get all the advantages of a DPS Telecom product, including a 2-year warranty, 24-hour technical support, and a 30-day no-risk money-back guarantee.
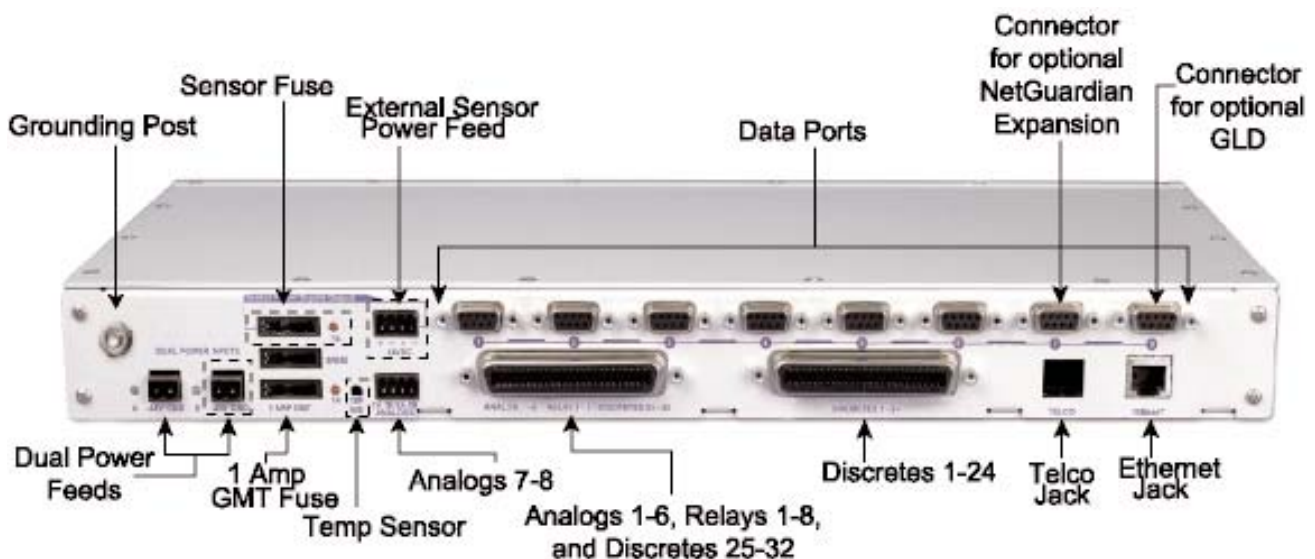
3 Functions in 1 Unit: Up to 4 TBOS devices can be connected to the *4* TBOS ports; *4* additional serial devices can be connected to the terminal server reach-through ports; plus **discretes, analogs, and controls.**

Additional NetMediator T2S References

White Paper: Demystifying the MIB
Learn the purpose and function of MIB, how to read ASN.1 code, and how to evaluate SNMP equipment.

Download at: www.DpsTelecom.com/White-Papers

NetMediator Specifications

Visual Display: 18 LEDs, LCD Display

Dimensions: 1.75" H x 17" W x 12" D
(4.5 cm x 43.2 cm x 30.5 cm)

Weight: 4 lb. 3 oz. (1.9kg)

Mounting: 19" or 23" rack

Power Input +24VDC

Current draw: 200 mA

Fuse: ¾ Amp GMT

Operating Temperature: 32° to 140°F (0° to 60°C)

Operating Humidity: 0% to 95% noncondensing

Downloadable Firmware via Craft Port

Protocols: TBOS — inbound
SNMP, DCP(x) — outbound

Discrete Point Inputs: 32 (reversible)

Analog Alarm Inputs: 8 (voltage/current)

Analog Input Range: –94 to 94 VDC or 4–20mA

Control Outputs: 8

Maximum Voltage: 60 VDC/120 VAC

Maximum Current: 1 Amp AC/DC

Interfaces: 4 RS-422/RS-485 TBOS ports
4 RS-232 serial reach-through ports
2 50-pin connectors
1 RJ45 10BaseT Ethernet port
1 4-pin communication connector
1 RJ11 POTS jack
1 DB9 craft port

Building Access System

Monitor and Control Access to Your Remote Sites

The DPS Building Access System provides advanced access control for your valuable remote sites. With user-level access control, keypad and proxy reader options, and total integration with your alarm monitoring system, it's an excellent way to monitor and control site access throughout your network.
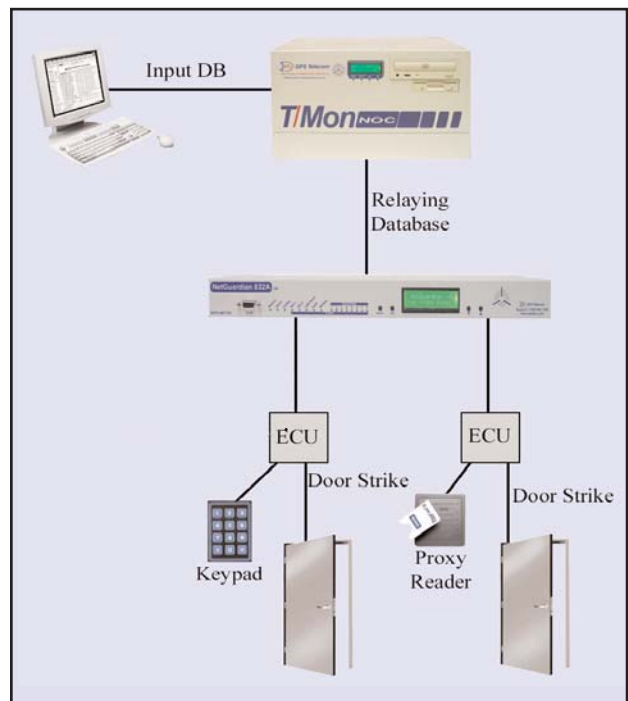
The DPS Building Access System allows access to be granted to specific users for specific doors. This minimizes your site vulnerability by granting no unnecessary access. All entries and exits are also logged to give you complete visibility of who is coming and going.

And because the the DPS Building Access System is integrated with your alarm monitoring, deployment can be very quick. You also won't have to add another terminal to your NOC. Alarms generated by the Building Access System will appear on the same convenient T/Mon interface that you use to monitor the rest of your alarms.

The DPS Building Access System is built on a foundation of NetGuardians and T/Mon, giving you complete integration of access control and alarm monitoring.

Keypad or Proximity Card Reader:
When you install the Building Access System at your sites, you may choose between numeric keypads and proximity card readers. Both options are weather-resistant and support all advanced Building Access System features.

Entry Control Unit (ECU):
This device is mounted on the interior of the site near the entry point. The ECU accepts data from the attached keypad or proxy reader and passes it upward for validation. If a correct code is received, the ECU will release the door strike, unlocking the door. Up to 16 ECU's may be attached to a single NetGuardian 832A G4.

NetGuardian 832A G4:
The NetGuardian serves as a site manager, supporting up to 16 entry points. It downloads a complete user database from T/Mon, allowing continued access control if the connection with T/Mon is lost.

T/Mon:
T/Mon is the central access control and monitoring device. Up to 1300 user profiles may be databased from within T/Mon, and T/Mon processes and logs all entries and exits. In the event of an acces-related alarm, T/Mon will notify you with any of its standard notification options.

Building Access System Specifications

Proxy Reader
Dimensions: 3"x 5" x 2.5"

Mounting: Wall Mountable

Environmentally Sealed: Yes

Entry Control Unit
Dimensions:6.5" x 6" x 1.5

Mounting: Wall Mountable

Fuse: GMT 1/4 Amp

Power Input: -48VDC

Temperature Range: 32 to 140 F

Humidity Range: 0% to 95% non-condensing

Interfaces: RS422

Fault Tolerance For Disaster Recovery

This property enables a system to continue operating in the event of the failure of some of its components. Each of the three main components of the system (T/Mon, NetGuardian, and the ECU) retain a set of entry codes. These codes operate as a fallback system in the event that a link in the system is severed.

The T/Mon contains over 1,300 entry codes, but if that link was severed, the Netguardian has a duplicate backup which it can transmit to the ECU. In the unlikely event that both T/Mon and the NetGuardian were severed the ECU still will preserve a single emergency key to allow access to the site. The redundance of the system is what makes it so crucial to any security operation center looking to establish a secure access system.

9 Key Building Access System Features

1.) Integrated With Alarm Monitoring-You don't have to add another terminal to your NOC, and your access alarms appear on the same management platform with the rest of your alarms.

2.) Detailed Logging-A complete log records time, entry point, and user.

3.) Proximity Reader Support (Wiegand + Custom)- Proximity cards cannot be shared freely and are easily deactivated if lost.

4.) Power Source- The Building Access System operates on battery or commercial power.

5.) Durable Keypad- The Keypad is environmentally sealed, offering protection from harsh conditions.

6.) Support for Large and Growing Networks- The Building Access System supports up to 1300 access codes.

7.) Access Scheduling (Weekend, Holiday, Expiring KeyCodes)- Access rights may be given automatic activation and expiration dates.

8.) Multiple Transport (IP, Dial-Up)- The Building Access System support multiple upstream communication paths.

9.) Fault-Tolerance- In the event of a communication loss from T/Mon or the NetGuardian, your entry points will continue to control access to your site.

Additional Building Access References

Success Story: All West Communications Eliminates Costly & Dangerous Windshield Time With Advanced Alarm Monitoring

"By watching our technicians, we can help step them through what is going on. It can also help if we have an intrusion alarm or a fire alarm. We can instantly see what's going on."

Darcy Kunz
V.P. of IT Operations
All west Communications

Visit www.TheProtocol.com to read the full story

SiteCAM
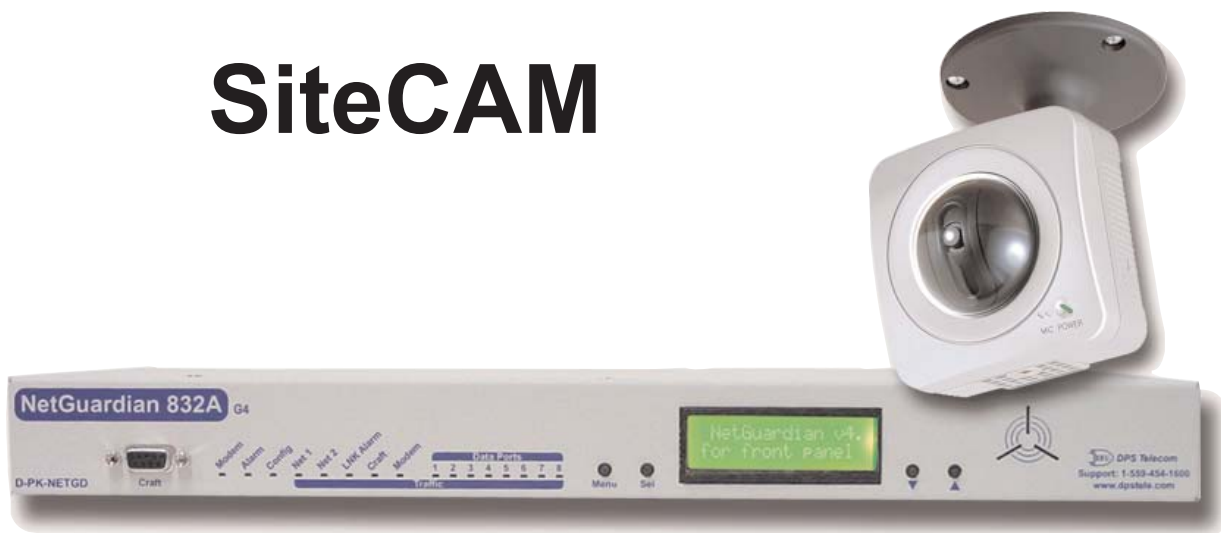
Achieve <u>Visual</u> Remote Site Visibility

With the NetGuardian SiteCAM, you don't have to wonder what's happening at your sites. You can see for yourself.

The SiteCAM connects directly to your NetGuardian and delivers high-quality live video of your remote site. This is great for co-location sites, where chances for interference with your equipment are particularly high. It's also valuable for walking technicians through repairs from the comfort of your central office.

SiteCAM Benefits:

• **Capture images of unauthorized facility access**

• **Visually confirm who is at a door before giving them access to the facility.**

• **Visually check critical environmental conditions**

• **Assist technicians at remote facilities**

• **Check the weather status of remote sites.**

• **Connect Up to 4 cameras per NetGuardian**

• **45º field of view**

• **Focus range 1m to infinity**

The NetGuardian 216T
Monitor and Extend Your LAN Over T1

With FrameRelay/T1 support, an integrated 7-port hub, industrial temperature rating, and powerful alarm collection and reporting, the NetGuardian 216T can effectively monitor outdoor enclosures and provide Ethernet to sites without existing LAN.

NetGuardian 216T Benefits

- FRAMERELAY/T1 & PPP/T1 SUPPORT FOR ADDED VERSATILITY AND RESPONSIVENESS TO DYNAMIC NETWORK GROWTH

- LAN ACCESS FOR 7 NETWORK ELEMENTS

- REMOTE ACCESS TO SERIAL EQUIPMENT

- SUPPORT FOR SNMP V2C INFORMS, V2C TRAPS AND V1 TRAPS PERMITS ROBUST MESSAGE DELIVERY

- INDUSTRIAL TEMPERATURE RATING

- FIRMWARE NOW UPGRADEABLE VIA LAN OR T1 WAN

- 16 DISCRETE ALARMS, 32 PING ALARMS, 7 ANALOG ALARMS (4 GENERAL, 1 TEMP, 2 BATT) AND 2 CONTROL RELAYS

- WEB INTERFACE: MONITOR WITHOUT A MASTER

- 24/7 NOTIFICATION VIA EMAIL AND ALPHANUMERIC PAGER ENSURES YOU WILL NEVER MISS A CRITICAL ALARM

- ABILITY TO EXPAND TO 160 DISCRETES/26 CONTROL RELAYS WITH NETGUARDIAN EXPANSION UNITS

- FREE LIFETIME FIRMWARE UPGRADES

- 2-YEAR HARDWARE WARRANTY

- 30-DAY NO-RISK MONEY-BACK GUARANTEE

Overview

The NetGuardian 216T is a powerful, compact LAN- and T1-WAN-based alarm collector that provides network managers with remote visibility of their network elements. With FrameRelay/T1 support, LAN access for 7 network elements, 16 discrete alarms, 32 ping alarms, 7 analog inputs (4 general, 1 temp, 2 batt), and 2 controls, this versatile unit is the ideal network monitoring solution for outdoor enclosures in areas without existing LAN.

When a problem occurs, the NetGuardian 216T notifies personnel with a complete status message. Notification types include SNMP Traps, text message, TCP text, T/MonXM, email, and paging through email. The unit also stores up to 100 events in its event log.

In addition to network and environmental alarms and controls, the NetGuardian also includes a 1-port terminal server, allowing remote Telnet access to an external serial device.

The NetGuardian 216T is easy to install, with connectors for all serial and LAN ports, as well as alarm, analog, and control wiring. A back panel with all wire wrap connections is also available for other installation options. The unit mounts quickly in either 19" or 23" equipment racks while occupying only one rack unit of space.

Provisioning of the NetGuardian 216T can be easily accomplished using any Web Browser or generic TTY terminal. This can be done on-site, using the front-panel craft port, or remotely via LAN, T1 WAN. The entire configuration is saved on the NetGuardian 216T, where it remains secure through power outages in non-volatile RAM.

Additional options include an external temperature sensor and a wire-wrap back panel for alternate connectivity options.

The versatility and reliability of the NetGuardian 216T make it an excellent choice for both inside- and outside-plant operations.

"It gives our technicians access to the network to check email, do testing, or look up records, and it saves time on truck rolls because now we can access it remotely."

-**Billy Young**
Central Office Engineer
Consolidated Communications

NetGuardian 216T Application

- Ethernet Connectivity for 7 External Devices
- LAN Visibility of an External Serial Device
- 16 Discrete Alarms
- 7 Analog Inputs (4 general, 1 temp, 2 batt)
- 2 Controls
- T1 to IP Router
- T1 WAN
- Traps or Informs to Multiple SNMP Managers
- LAN
- 32 Ping Alarms
- PC
- Internet Explorer
- Netscape
- Email Notification
- T/MonXM
- Telnet Reach Through
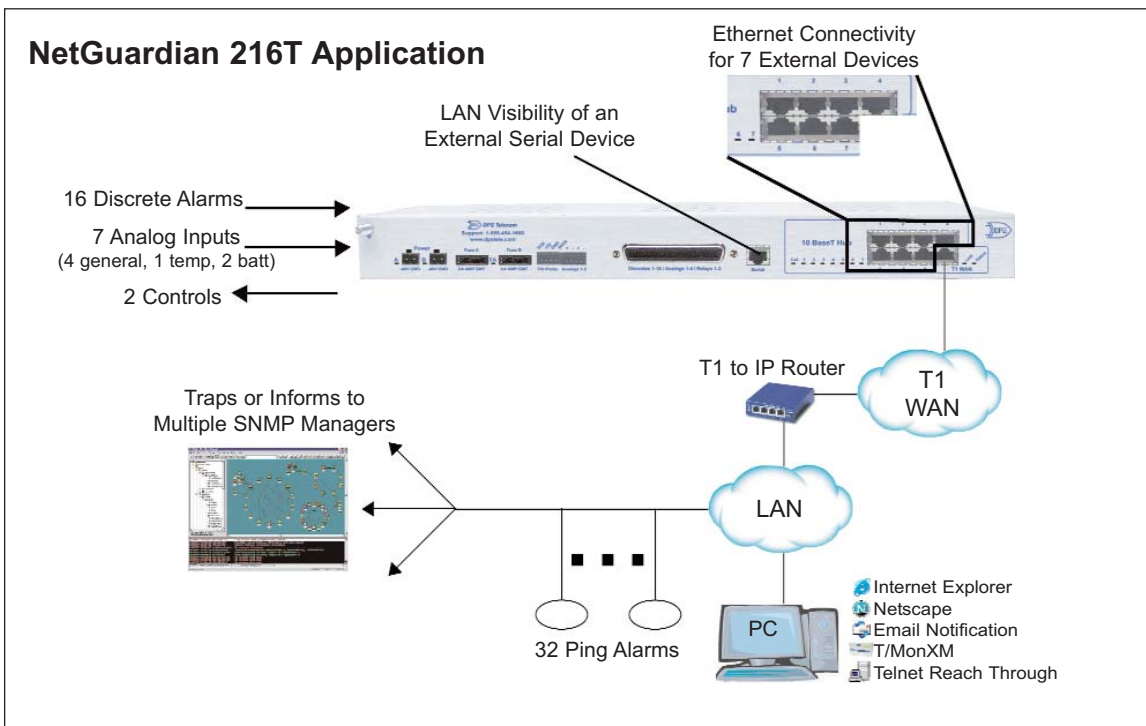
In addition to LAN, the NetGuardian 216T supports FrameRelay/T1, providing detailed monitoring and Ethernet connectivity at remote sites. It also supports remote Telnet connections to an external serial device.

Reach-Through Port

The NetGuardian's reach-through serial port permits Telnet sessions to connect to the administration port of an external network component. This gives your staff the ability to assess and repair your network faster without having to be physically present at the network site. It is also cost-effective because there is no need to purchase a dedicated terminal server.

SNMP v2c Informs for robust message delivery

The NetGuardian 216T supports SNMP v2c Informs, as well as SNMP v2c and v1Traps. SNMP v2c Inform messages provide confirmed delivery of alarms. When an SNMP manager receives an Inform message, it sends a confirmation response to the SNMP agent. If the agent doesn't receive the confirmation response, it resends the Inform.

24/7 email and paging alerts

Out of the box, the NetGuardian 216T supports 24/7 email and paging (through email) reporting. Send alarms directly to maintenance technicians in the field, even when no one's in the office.

Edit 216T

Edit216T allows you to create configuration files without being connected to the NetGuardian. Download the files to the NetGuardian via LAN or T1 WAN, or upload current files for backup.

Call 1-800-622-3314 for Pricing

T1 testing
(Jack-in a T1 test set to check line conditions; supports loop-up and loop-down CSU commands)

LED status indicators

LCD menu (optional)

Audible notification speaker (optional)

Craft port for direct PC connection
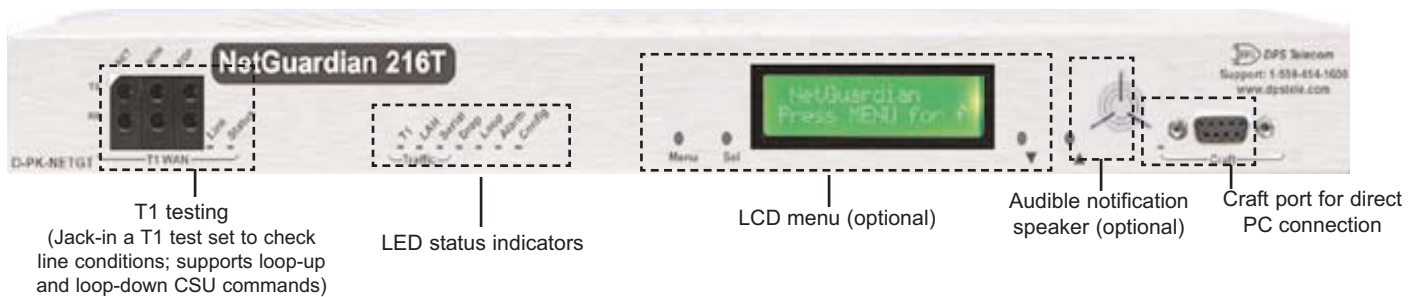
The NetGuardian front panel provides T1 testing, audible notification (optional), an LCD menu (optional), and LED status indicators for simple, detailed, and fast diagnosis.
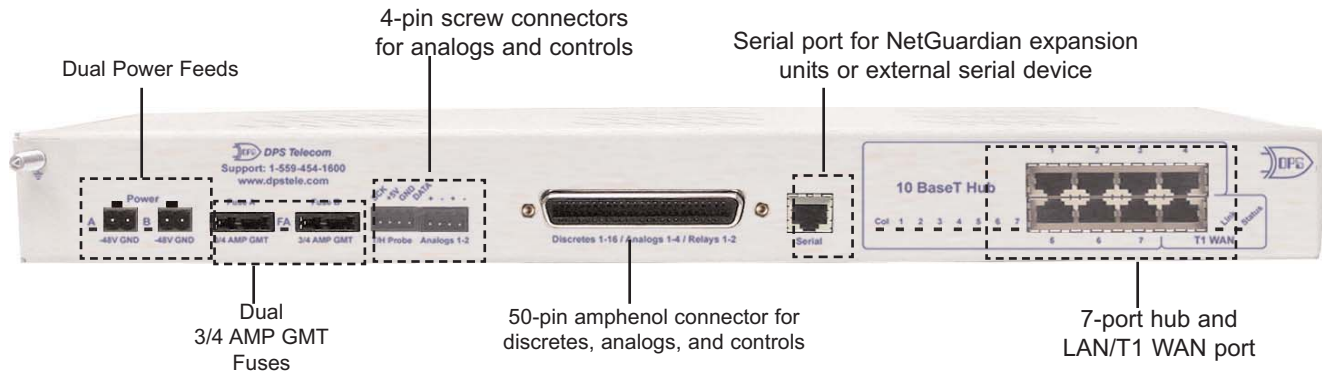
Dual Power Feeds

4-pin screw connectors for analogs and controls

Serial port for NetGuardian expansion units or external serial device

Dual 3/4 AMP GMT Fuses

50-pin amphenol connector for discretes, analogs, and controls

7-port hub and LAN/T1 WAN port

Stand-alone monitoring via Web Interface

The NetGuardian offers a Web Browser interface for easy and convenient alarm management and unit configuration via Internet or Intranet. The user-friendly interface allows complete access to all the functions of the NetGuardian and enables the user to quickly set up alarm point descriptions, view alarm status, issue controls, setup paging alerts, and configure additional options.
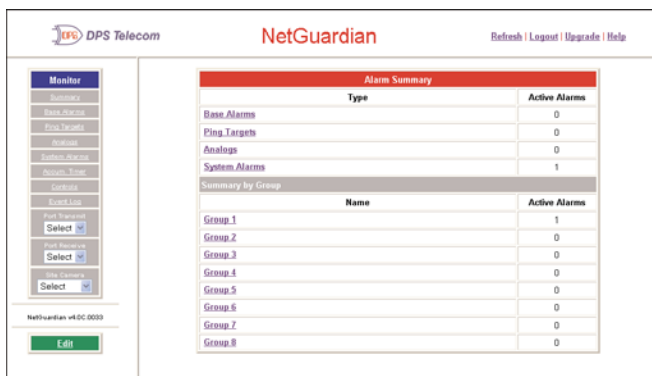

View and configure the NetGuardian via a Web Browser over LAN or T1 WAN.

TTY Interface

In addition to the Web Browser interface, the NetGuardian provides a menu-style TTY interface for basic configuration , which may be accessed via the craft port or in a Telnet session via LAN or T1 WAN.

Dual-Mode Operation

The NetGuardian 216T supports both Ethernet and FrameRelay/T1 WAN connectivity for both outside- and inside-plant applications.:

• *WAN Mode* - When no existing LAN infrastructure is available at the remote site, the NetGuardian connects via T1, extending LAN to the site. This 1.544 Mbps of Ethernet connectivity is usable by up to 7 external devices connected to the NetGuardian's hub.

• *LAN Mode* - When the network expands to reach the NetGuardian, the same remote can connect via LAN, providing the same monitoring benefits without requiring additional purchasing.

Alarm Reporting

The NetGuardian 216T reports discrete alarms, relay status, analog alarms, and network equipment failures over the LAN or T1 WAN to an SNMP manager or the DPS Telecom T/Mon NOC Network Alarm Management System.

• *SNMP Trap Reporting* - The NetGuardian can report directly to an SNMP Manager and will respond to SNMP queries and commands. Multiple SNMP managers at multiple IP addresses are also supported by the NetGuardian. Communication may be achieved via LAN or T1.

• *T/Mon NOC Support* - The NetGuardian 216T can also report to a T/Mon NOC Network Alarm Monitoring System via LAN or T1 WAN.

NetGuardian 216T Specifications

Dimensions: 1.75" H x 17" W x 12" D
(4.5 cm x 43.2 cm x 30.5 cm)

Weight: 4 lbs. 3 oz. (1.9 kg)

Mounting: 19" or 23" rack

Power Input: –48VDC (–40 to –56VDC)

Current draw: 250mA

Interfaces: 1 RJ45 for T1 WAN
1 T1 WAN access jack panel
7 RJ45 10BaseT Ethernet ports
1 DB9 RS-232 Craft port
1 RJ45 Yost RS-232 port (5-port option available)
1 50-pin amphenol connector (discretes, controls, and analogs)
1 4-pin screw connector (ext. temp. sensor)
1 4-pin screw connector (analogs)

Protocols: SNMPv1, SNMPv2c, DCPx, DCPf, SMTP

Discrete Alarm Inputs: 16

Control Outputs: 2 FormC

Max. Voltage: 60 VDC/120 VAC

Max. Current: 3/4 Amp, AC/DC

Ping Alarms: 32

Analog Alarms: 7 (4 general, 1 temp, 2 battery)

Input Range: –94 to +94 VDC or 4 to 20 mA

Operating Temperature : -22° to 158°F (-30°- 70°C)

Operating Humidity: 0% to 95% non-condensing

Fuses: 2 (3/4 Amp GMT) for power inputs

NetGuardian 216T Accessories

External Temperature Sensor
With a 10-ft lead, the external digital temperature sensor allows placement at a specifically targeted critical zone.

Wire-Wrap Back Panel
The NetGuardian 216T's Wire-Wrap back panel allows for wire-wrap connections for the discrete alarms, analog alarms, and control relays.

Additional NetGuardian 216T References

Tech Tip: Creating Derived Controls in NetGuardian
Use this tech tip to create derived controls with the Netguardian. Start your generators, turn on backup lights, activate environmental controls automatically when an alarm comes in with derived controls.

www.DpsTelecom.com/MyDps

NetGuardian DX G4
Expand Your Alarm Point Coverage

Figure 1 - The NetGuardian Discrete Expansion unit with integrated hub provides an additional 48 alarm points per unit (3 max.), an 8-port 10BaseT hub, and 8 controls to extend capacity of the NetGuardian 832A

Summary of Benefits

- **Integrated 8-port 10BaseT hub eliminates the costs and rack space associated with installing a separate hub**

- **Provides an economic way to incrementally increase alarm capacity as your site grows**

- **Convenient alarm viewing and configuration via the NetGuardian's Web Browser**

- **Great for sites with higher alarm point requirements**

- **Easy daisy-chaining between units**

- **Increases reliability with dual power-feed inputs**

Overview

The NetGuardian Expansion unit with integrated hub is the ideal solution for sites with higher alarm point requirements. The unit complements the already powerful NetGuardian and provides 48 discrete alarms per unit with capacity for up to 3 units per NetGuardian (176 alarm point total), an 8-port 10BaseT hub, and 8 additional controls.

The single connection point between the NetGuardian and the Expansion unit makes setup a snap and it mounts easily in a 19" or 23" rack. The Expansion unit's alarm information can be viewed and configured via the NetGuardian's Web Browser or TTY interface.

The reliability, versatility, and capacity of the NetGuardian family of RTUs makes them the standard for network monitoring.
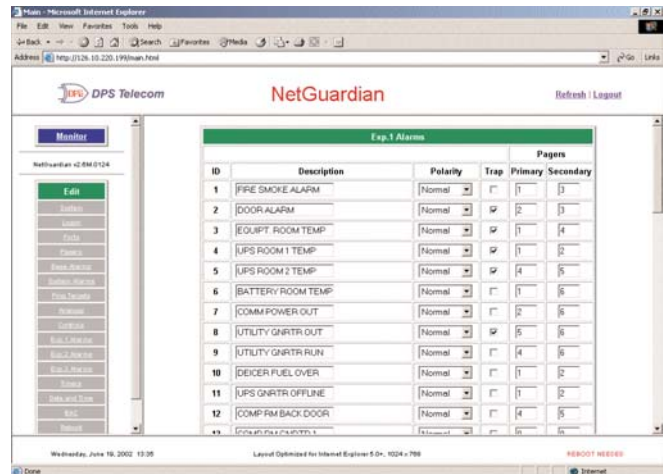

Figure 2 - *View and configure the NetGuardian Expansion alarms from the NetGuardian's Web Browser.*

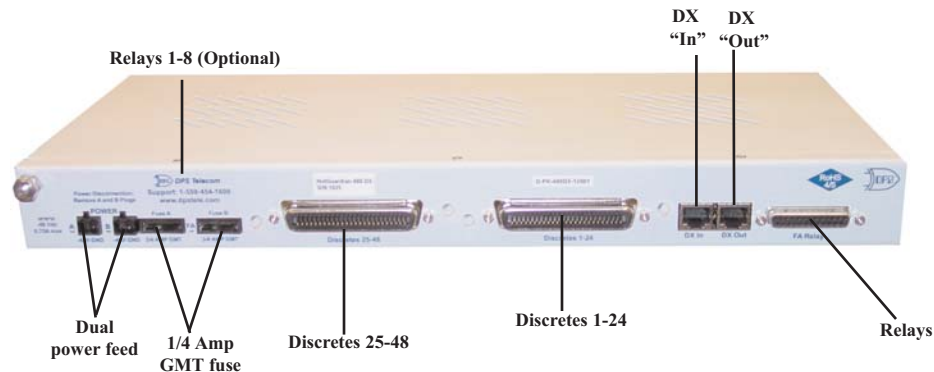**To order, call 1-800-622-3314 or visit www.DpsTelecom.com/info**

Figure 3 - The back panel offers easy connectorization for power feeds, discrete alarms, relays, and 10BaseT hub.

Specifications

Dimensions: 17" W x 8.625" L x 1.75" H

Weight: 3 lbs. 15 oz. (1.8 kg)

Mounting: 19" or 23" rack

Power Input: -48VDC (-40 to -70VDC),-24VDCor Wide range (-18 to -70VDC)

Current draw: 140mA (dual power feeds *standard*)

Interfaces: 2 DB9 DCE RS232 port, 1 DB25 port

Protocols: DCPX

Hub: Eight 10BaseT ports with Uplink jack

Alarm Point Inputs: 48

Control Outputs (Optional): Relay contacts, 8 each
　　　　　　　　　　Form A (N/O, N/C selectable)
　　　　　　　　　　Max. Voltage = 60 VDC/120 VAC
　　　　　　　　　　Max. Current = 1 Amp, AC/DC

Fuse: 1/4 Amp GMT

Operating Temperature: 0° to 60°C (32° to 140°F)

Extended Opt: -40C° to +70°C (-40° to 158°F)

Operating Humidity: 0% to 95% non-condensing
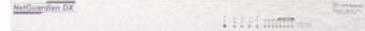
Unit	Capacity
Base NG	32
1 DX	80
2 DX	128
3 DX	176

Figure 4 - Up to 3 NetGuardian Expansion units can be connected to the base NetGuardian.

Client Letter: Tech Support That Won't Let You Fail

DPS Telecom,

I am writing this letter to draw attention to one of your best technical support people, Brian Shaffer. I have had to deal with him quite extensively on the phone. I am impressed with his technical expertise with the DPS product line. Every time I have dealt with Brian he has been most helpful and always willing to go "the extra mile." He does what it takes to get the job done and has always has a friendly demeanor. I would hope that you will recognize his hard work and dedication. Employees like Brian are few and far between...

R. Thomas - TX

NetGuardian E16

New Bi-Directional Echo Technology Responds to Alarms Automatically

NetGuardian E16 Benefits

•**16 Discrete Alarm Inputs** - Just the right amount for your medium-sized sites.

•**16 Control Relays** - More controls than have ever been included in a NetGuardian RTU.

•**Bi-directional Echo** - In a bi-directional echo configuration, a pair of RTUs are installed at separate sites. The 16 alarm inputs of each remote are associated on a one-to-one basis with the 16 controls of the other. As alarms are received at one site, the associated controls latch at the other site to respond automatically. This powerful functionality can be achieved using LAN, serial, or dial-up communication.

•**1 RU Form Factor** - Despite packing in a lot of functionality, this RTU fits comfortably in just a single rack unit.

•**AC Power Option** - As an alternative to traditional -48 vdc power, a build option is also available featuring a standard AC power supply.
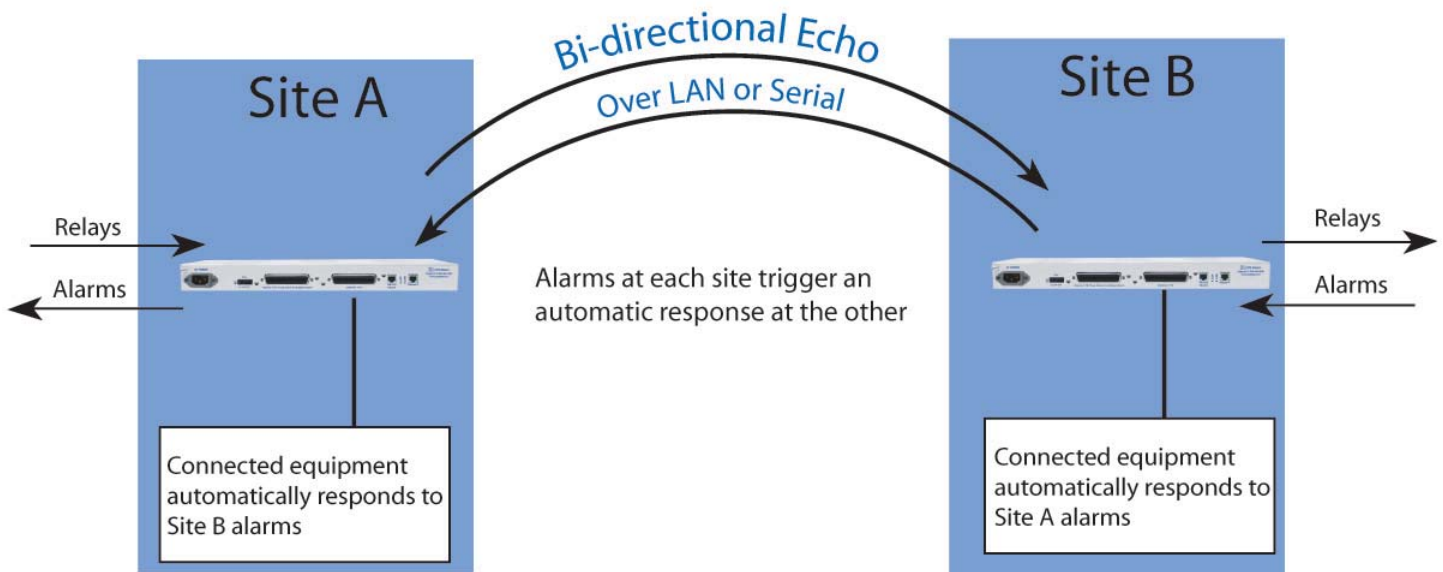
Two sister units are placed at alternative sites. Utilizing the bi-directional echo, the alarms at each site will trigger an automatic response from the sister device.

To order, call 1-800-622-3314 or visit www.DpsTelecom.com/info

NetGuardian E16 Specifications

Dimensions: 1¾" H x 17" W x 12" D

Weight: 4 lbs. 3oz. (1.9 kg)

Mounting: 19" rack, 23" rack, or wall mounting

Power Input: -48VDC (-40 to -56 VDC)

Current Draw: 250 mA

Fuse: (2) 3/4 Amp GMT

Operating Temperature: 41°-95° F (5°-35° C)

Operating Humidity: 0%-95% non-condensing

Protocols: DCPx

Interfaces: Two 50-pin connectors for discrete alarms and control relays
1 RJ45 Ethernet jack
1 RJ45 RS-232 jack
1 DB9 craft port
1 USB connection

Discrete Point Inputs: 16

Alarm Detection Speed: Configurable to 100-9000 msec (1/10 second to 9 seconds)

Control Outputs: 16 echoed, 1 link, 1 FA

Visual Display: Dual and Mono Color LED

Dual Power Inputs

Controls 1-16

RS-232 Jack

Dual 3/4 Amp fuses

Alarms 1-16/ Fuse Alarm/ Link Down Alarm

10BaseT Ethernet Jack
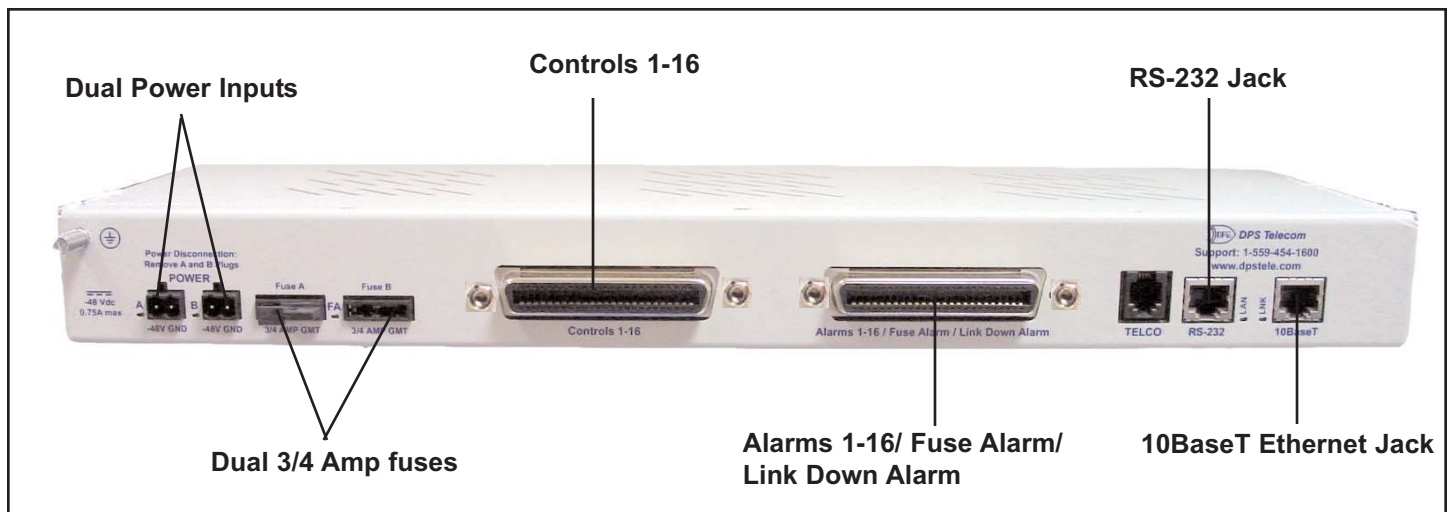
Connectors for power feeds, alarm inputs, control outputs, dial-up, serial, and Ethernet are all found on the back panel of the NetGuardian E16.

Tech Support

When you call DPS you're NEVER trapped in a maze of voicemail. You'll be connected to a live engineer who understands your equipment and can solve your problem.

When you purchase a DPS solution, we won't let you fail!

Chris Hower
Senior Technician

Travis Mock
Technical Support

Auto-DB ASCII Module

The Auto-Databasing ASCII software module gives T/Mon the ability to monitor any equipment that uses ASCII to report alarm or status events.

What is ASCII?

ASCII is plain, readable English text. If you can read an alarm message that comes directly from a device via a printer or dumb terminal, then that device is considered an ASCII device. Unlike most other communication protocols, which are dedicated to work over a narrow set of restrictions, ASCII itself has no such limitation. Messages can come in many different formats, lengths, and syntaxes. Some devices may have cryptic alpha/numeric sequences and others might resemble a form or a columnar report.

Common types of equipment that often use ASCII are: CHANNEL BANKS, PBXs, SONNET, TL1, DIGITAL SWITCHES, LOGGING DEVICES, REMOTE ALARM EQUIPMENT (RTUs), ROUTING PLATFORMS, COMPUTERS, NETWORK ELEMENTS, DSUs, CSUs & NIUs

The T/Mon ASCII Interrogator is a rules-based system that works with virtually any equipment.

"With ASCII, we got a very detailed alarm within seconds, showing which fiber ports had lost their connection. So there wasn't any doubt what was happening"

Rick Jacobson
Network Technician
3 Rivers Telephone

Auto-DB ASCII Benefits

- **Auto-Databasing Eliminates the Need to Database Every Alarm Point**

- **Converts text-based "English" alarms to standard T/MonXM alarms, integrating all of your alarms onto one screen.**

- **Eliminates the need to pay staff to monitor printer logs - and the chance that they will miss a critical alarm**

- **Monitors a wide variety of devices**

- **Supports multi-line messages**

- **Extensive ASCII parsing tools**

- **Captures Alarm Triggering Text**

- **Automates Alarm Processing**

- **Provides "CRAFT" Access to ASCII Devices**
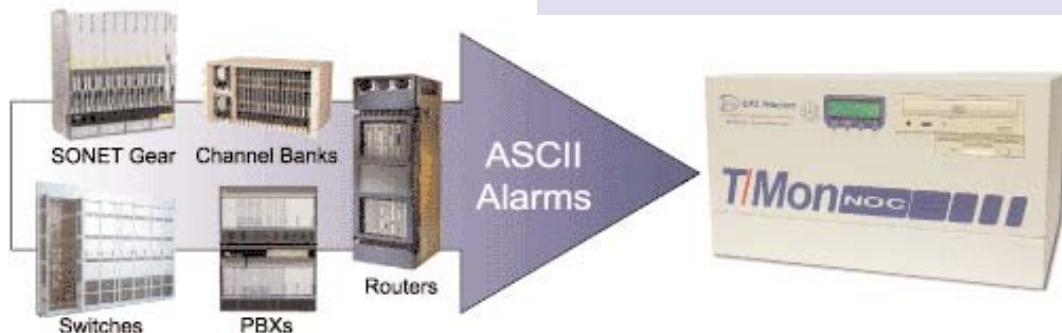
T/Mon NOC ASCII Alarm Module supports hundreds of standard telecom devices.

To order, call 1-800-622-3314 or visit www.DpsTelecom.com/info

T/Mon NRI Synchronization Module
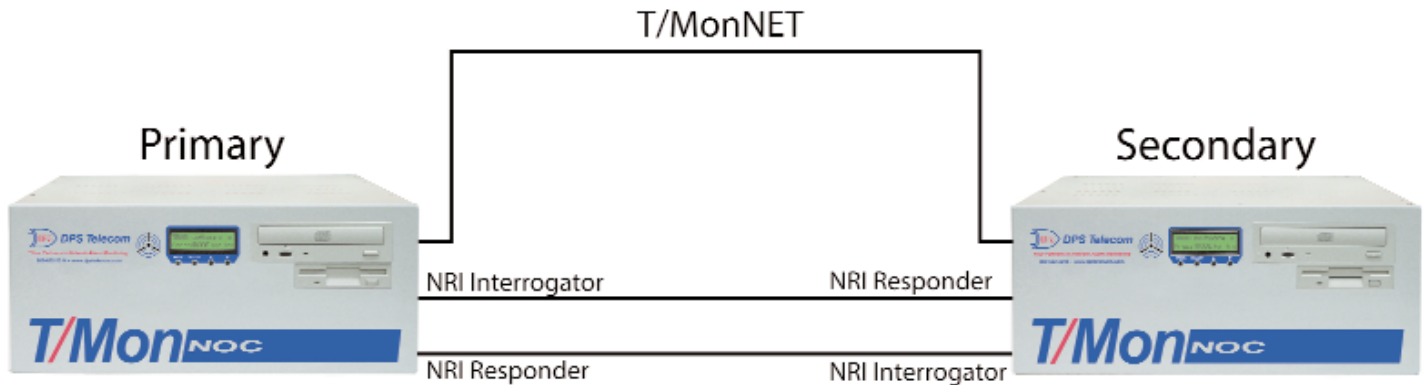
T/Mon NRI Overview

T/Mon NRI is an enhancement to the existing T/MonNET Redundant Master Technology. T/Mon NRI is designed to automatically synchronize a Primary and Secondary system (T/Mon NOC, T/Mon Slim, IAM, T/MonXM, etc). In an NRI configuration, the Secondary will be almost instantly ready to take over monitoring after a Master failure. Without T/Mon NRI, the Secondary can still take over monitoring, but its alarm data will not be in sync with the Primary's alarm data.

Automatic Synchronization

T/Mon NRI consists of a Primary unit and a Secondary unit. Both units have the same database and when both are online, the Primary is active and the Secondary is passive. When a unit is active, it means that it is polling and responding as if it were operating on its own. When a unit is passive, it is only polling the Primary unit for any updates. The primary keeps track of COSes, new alarms and ACKs that need to be sent over to the secondary unit. This is done to keep all alarm data in sync at all times.

If the Secondary unit were to go down, the Primary unit will continue to queue up everything that it needs to send over to the Secondary. Once the Secondary comes back online, it will start polling the Primary again and receive everything in the Primary's send queue. The Primary has a maximum of 100,000 entries that it can queue up before it stops adding to the queue.

Intelligent Change-of-Ownership

When the primary unit goes offline and the Secondary unit is still online, it will go active and take over for the Primary.

The Secondary will start polling and responding. It also starts building its own queue to send to the Primary when it comes back up. once the Primary comes back up, it will start off passive and poll the Secondary for any changes that occurred while it was offline. After it receives everything and the Secondary's queue has been depleted, it will send a command to the Secondary telling it to go passive. The primary will go active after the Secondary sends a response to the passive request.

T/Mon NRI Benefits

- **Automatic synchronization between a Primary and redundant T/Mon system**

- **Avoid acknowledging recent alarms again after the backup NOC takes over monitoring.**

- **Store up to 100,000 entries for data synchronization between NOCs**

- **Fail-over T/Mon provides an up-to-the-minute picture of alarm events**

- **Primary T/Mon can go offline while Secondary takes over**

- **No-Risk, Money-Back Guarantee**

NOTE: NRI Requires Dual-T/Mon Configuration

Live Meeting Rooms

Live Meeting Rooms combine Web-based video, teleconferencing, and instant messaging to create a virtual conference room.

A Web demonstration is a convenient, low-pressure way for the you to learn about key monitoring concepts. The benefits of using a Live Meeting room are:

• You have a direct connection to the DPS Sales team
• A comprehensive slideshow displays clear, informative data and application drawings.
• The DPS Engineering Team is on-hand to answer any of your questions

"It was a great way of presenting the information we needed to make a decision. Rick had the entire staff at his fingertips, so if there was a question that came up, he could bring them online and answer our questions immediately."

-Darcy Kunz
V.P. of IT Operations
All West Communications

In a Live Meeting Room, You'll Get Answers to All Your Questions

In a Live Meeting Room, you'll see the full range of DPS solutions for network reliability management, including T/MonXM, the NetGuardian 832A, the Remote Alarm Block 176N, the Advanced Telemetry System, and more. Your Applications Engineer will help you find the solution with the right capacity, protocol, and data transport for you. You can view presentations & application overviews from Applications Engineers and ask questions for more details on the topics you're most interested in.

The DPS Telecom Sales Department
Monitoring Consultants Who Put You First

"We're not your typical sales department," says Joel Soto, DPS Telecom's Director of Sales.

"We don't rush the client. We don't recommend solutions until we have a good understanding of the client's requirements and ultimate goal. We're design consultants."

What makes Soto and his sales staff different is their sincere, no-nonsense commitment to putting their clients first.

Soto's primary goal is making sure you have the right solution to meet your needs.

"That goes back to the DPS philosophy of creating complete client satisfaction. We customize our solutions to make it the right fit without the client having to buy a lot of extraneous hardware and software.

"The bottom line is, if you're not 100% happy with the solution we've provided, we've done something wrong. My personal promise is that when you order from DPS, you'll get the exact solution you're looking for, or you'll get your money back," said Soto.

The DPS Telecom sales process is a systematic guarantee of Soto's promise. With every client, Soto and his sales staff follow a standard procedure that's designed to safeguard the client's best interests at every step.

Step 1: Consultation

When he first talks to a client, Soto's only immediate goal is to determine the client's real needs, both for the present and the future.

"First we look the challenges you're facing right now. What are you currently working with, and why isn't it working for you? What are your current solutions shortcomings and pitfalls?

"We have an extensive site survey we work from to understand your network - what equipment do you monitor, what alarm equipment do you currently have, what protocols and interfaces do you use," said Soto.

"But we also look at where you want to be in the future, five or ten years down the road. We want to find out what a perfect long-term system for you would look like. We don't want to provide you with something you'll have to re-do two years from now."

Step 2: Design

The next step is to design an alarm monitoring application that will serve as a bridge between the client's current state and future objective. The goal here, Soto said, is to create a "perfect-fit" solution.

"A perfect-fit solution is different for everybody's application. It might mean visibility of network systems you haven't been able to monitor before. It might mean consolidating visibility of your whole network to one console. The key is creating a solution that's simpler for you to manage from your operational standpoint," said Soto.

Joel Soto
DPS Telecom
Director of Sales

In most cases, the client's needs can be served with an existing DPS product. But if current products don't provide that perfect-fit solution, Soto will work with the DPS Engineering Department to develop a custom solution that meets the client's exact requirements.

"From a design aspect, perfect fit means we match our existing products against your requirements. A lot of times, an off-the-shelf solution will meet your needs. But if it doesn't, we modify our hardware and software so it fits your needs exactly. Our hardware is modular and the intelligence is built into the software, so we can tweak it pretty easily until it's the absolute best fit for you," Soto said.

Step 3: Web Demonstration

When a preliminary design has been created, Soto contacts the client for a Web demonstration. Using a shared browser connection and a conference call, Soto explains the basics of the application and familiarizes the client with the technical features of the equipment that will be used.

The Web demo is a convenient, no-pressure way for the client to get a very personalized demonstration of the proposed alarm monitoring solution, covering both the broad application and the fine technical details.

Step 4: Quote

If the client approves the initial presentation, Soto's staff prepares an in-depth written quote that details the client's existing situation, how the proposed solution will improve that situation, and the technical functionality of the equipment.

"First, we reiterate our understanding of your as-is situation, and we explain how where going to take you from where you are right now to your desired end results. Then we get into the nuts-and-bolts aspect of how it's going to work in your network," said Soto.

"We also provide extensive application drawings with the quote. We spend a lot of time creating the drawings, because they really help you connect the dots and see what we're proposing.

"The quote also includes a price page that breaks down the cost on a line-by-line basis, and a list of referrals to existing DPS clients. These are companies in your industry, sometimes even in your geographical area, that use similar equipment to what you have now and similar equipment to what we're proposing. We want you to see you're not buying something that's untested or unproven."
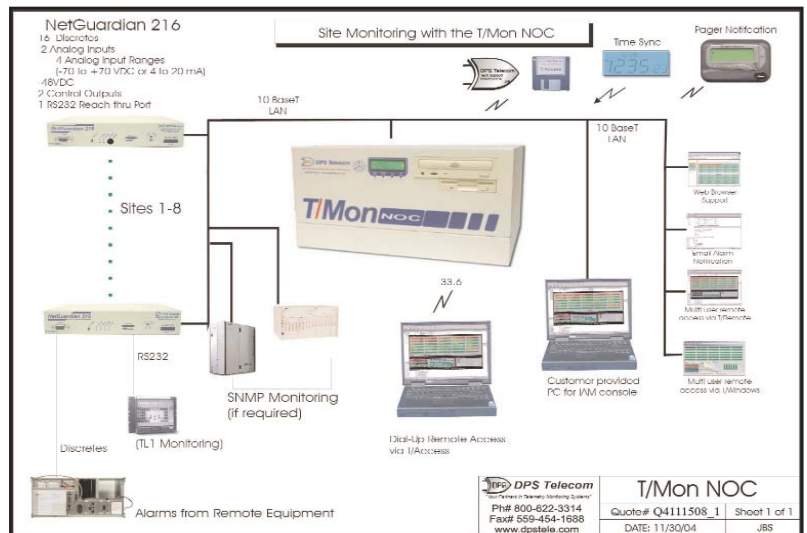
A custom-created sales diagram will be included in your quote

Step 5: Installation, Training and Support

Soto emphasized that DPS clients aren't on their own after they purchase. DPS Telecom continues to support the client with installation services, training and 24/7 tech support.

"Our installers are subject-matter experts in the product they're installing - in fact, they're the same guys who teach classes at DPS Factory Training Events. For a full-system install, your installer will make sure everything is working right and he'll train you and your staff on the system," said Soto.

"We provide training with installation so that you have full control over your own alarm monitoring system and your own destiny. We want you to be as self-sufficient as possible - but we also provide a high level of support. For the lifetime of your DPS alarm monitoring solution, you're entitled to 24/7 technical support."

Step 6: Evaluation, Backed by a Money-Back Guarantee

Every alarm monitoring solution from DPS Telecom, including custom-engineered solutions, is backed by a 30-day, no-risk, money-back guarantee.

"Clients love this, because it basically removes all risk from buying our equipment. And that's only right. If you're going to commit a portion of your budget, you should be sure the product delivers a huge amount of value," said Soto.

"We guarantee that your alarm monitoring solution will work as promised, and if it doesn't, you're not on the hook for anything. After your system is installed, you can try it for 30 days, and if you're not happy for any reason, you can send it back, and you're not on the hook for the equipment, for the training, for the shipping, for anything. It's just 100% money back."
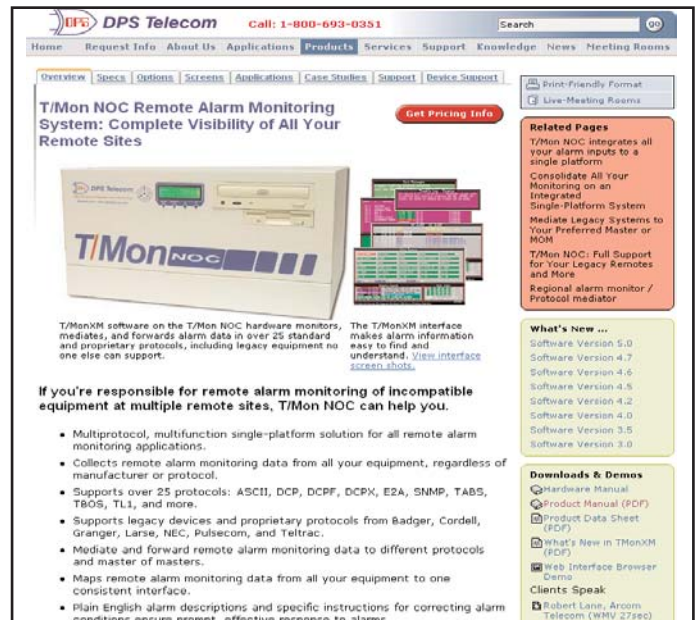
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The Protocol is a free alarm monitoring ezine emailed directly to your inbox every month. Every issue is filled with information critical to your everyday operations:

•**"Tech Tips"** from expert engineers make it easy to use the advanced features of DPS equipment.

•**White Papers** deliver fast, informal tutorials on SNMP, TL1, and other alarm monitoring technologies.

•**New Products and upgrade announcements** will keep you up-to-date about cutting-edge monitoring technology.

•**Client Success Stories** share how DPS product perform in the real world.

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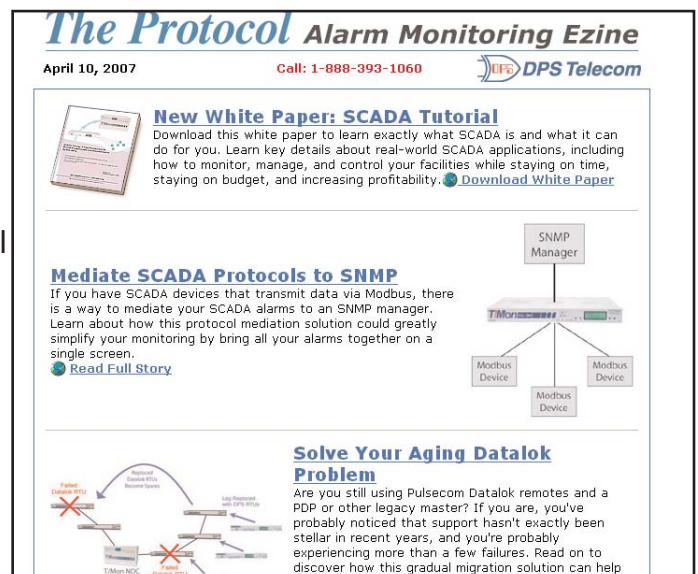
DPS is Committed to Meeting Your Exact Needs

DPS Telecom is an industry-leading manufacturer of customized alarm management products. Our custom engineering and agile manufacturing capabilitiees allow create custom monitoring products that meet your exact needs.

"Considering the very strict AT&T OS systems compatibility requirements we placed on you, and the short project timelines we both faced on this project, we are very pleased with the remarkable end results. DPS Telecom has done a fantastic job, and your entire team has far exceeded our very high expectations."

—Walter E. Dziama
AT&T

"We wanted to replace all the masters with one master. We also wanted to add native IP remotes and migrate as many sites as possible to IP network monitoring."

"DPS was the only one that said it could do it all, either through hardware or software. Everyone else had an exception."

—John Mullen and Daniel Jackson
Dominion

"As a telecom provider, uptime is becoming more critical every day. A 99.9% uptime is considered bad. In order to achieve 100% we turned to DPS. The whole experience was very impressive."

—Rich Abalos
Calaveras Telephone

"It was very important for us to find a vendor who was willing to customize the alarm system to meet our needs. Like many carriers, we have a mix of equipment — everything from microwave radio systems to high capacity dense wave division multiplexing systems. We needed an alarm system that could pull in TBOS alarms, discrete alarms, SNMP ... DPS has products that meet our needs."

—Paul Mankins
Norlight Telecommunications

Get the Facts Before You Purchase Your Next Network Monitoring System

If you found the information in this white paper useful, you'll also be interested in the other white papers in the DPS Telecom Network Monitoring Guide series. Each paper is a complete guide to an essential aspect of network monitoring. These are the facts you need to know to make an informed purchase of your next network monitoring system.

The 3 Fatal Mistakes Telecom Executives Commonly Make When They Attempt To Maintain Service Levels at Remote Sites In the Face Of Reduced Staffing ... And How You Can Avoid Them
Your network monitoring can be an asset to your business, or it can be a threat. Here are the three fatal mistakes telecom executives make in planning their network monitoring-and how you can avoid the mistakes and gain a competitive edge. To receive this report, send an e-mail to:
3fatalmistakes@dpstelecom.com.

SNMP Tutorial: A Fast Track Introduction to SNMP and its Practical Use in Network Alarm Management
An introduction to SNMP from the perspective of network alarm management. It summarizes the history and structure of the protocol, and offers some concrete applications for using SNMP for network alarm management. To receive this report, send an e-mail to: snmpfasttrack@dpstelecom.com.

Unsupported Legacy Network Alarm Monitoring Equipment: Why It's a Problem - What You Can Do About It
Many companies are dependent on legacy network monitoring equipment that is no longer supported by the manufacturer. This guide to legacy support issues explains why legacy equipment is a dead-end-and how you can escape the legacy trap. To receive this report, send an e-mail to:
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Give Us Your Feedback
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This all sounds great, but where can I get product details?

If you would like to know more about the products and services mentioned in this white paper, visit www.dpstelecom.com and click "Applications." or "Products."

About the Authors

Robert Berry is founder and CEO of DPS Telecom, an industry-leading developer of network alarm management solutions. Two decades' experience designing remote telemetry systems have taught Berry that technology is most powerful when it meets real-world business needs. DPS Telecom clients have grown to appreciate Berry's dedication to developing technology solutions that lower costs and raise revenue.

Andrew Erickson is Lead Writer for The Protocol, the monthly alarm monitoring ezine from DPS Telecom (www.TheProtocol.com). Experience writing website content and product documentation have prepared him to capture the expertise of the DPS Engineering team in a clear and concise product showcase.

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