

Polled Device Monitor (PDM)

Mobile network operators leverage distributed antenna systems (DAS), RF repeaters, and bi-directional amplifier systems to increase coverage in high density wireless service areas. These deployments are often outside of the network operations center's (NOC) control, providing limited or no visibility to the equipment. This results in customer complaints due to network failures.

The Polled Device Monitor (PDM) solution by Kentrox proactively monitors these systems, providing real-time status and remote diagnostics, ensuring service quality and reducing truck rolls and mean time to repair. PDM enables mobile operators to remotely monitor wireless repeaters, distributed antennas, and bi-directional amplifiers.

PDM also supports mobile asset monitoring for portable generators, cell site on wheels (COW), and cell site on trucks (COT) which, due to mobility, often have limited network monitoring capabilities. Mobile asset monitoring enables operators to proactively manage remote assets by monitoring usage, network status, location issues, and performance. PDM improves placement efficiencies, usage of mobile assets, record keeping, and reporting.

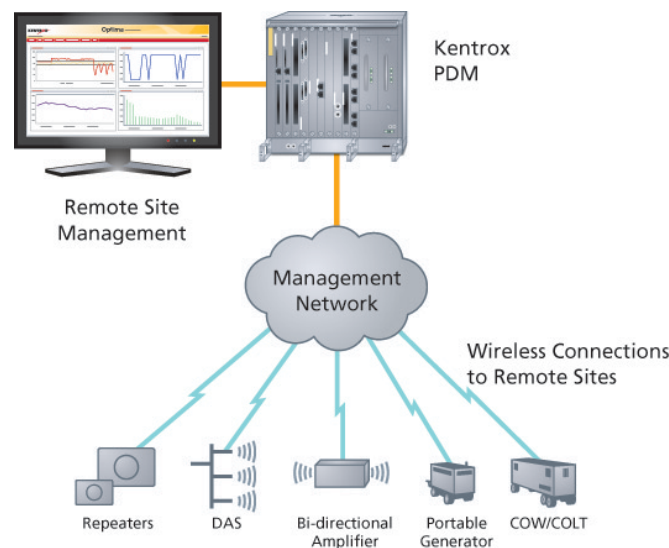
PDM's flexible architecture supports multi-vendor environments and a wide variety of devices and technologies. PDM resides on the internal operator network and is modular to easily accommodate growth. PDM polls remote devices on a selectable interval to identify alarm information, real-time status, and can provide communication access to intelligent remote devices. Wireless or wireline modem-based communication kits that provide third party access are deployed remotely to monitor the wireless repeater or mobile asset, including physical connectivity using Ethernet, a serial interface, or discrete contacts to the remote equipment.



Polled Device Monitor central site module

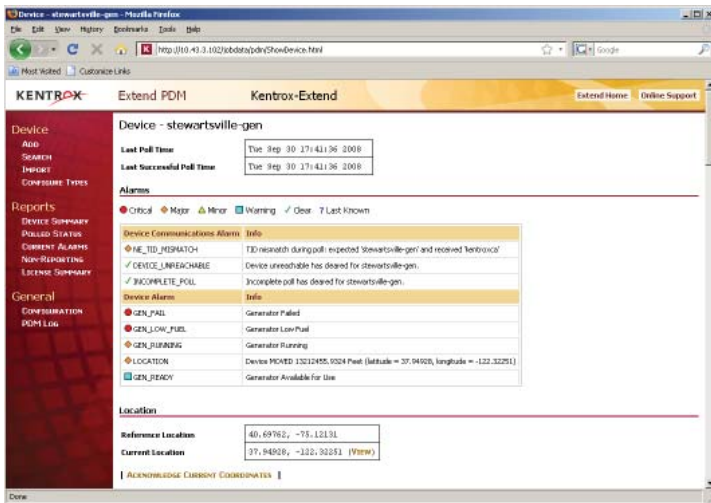
Polled Device Monitor remotely monitors wireless repeaters, distributed antennas, and bi-directional amplifiers. PDM highlights include:

- Easy-to-use web-based GUI
- Outbound polling to remote devices
- Flexible polling and remote connectivity options
- IP and SNMP-based polling protocols
- Remote device alarms, status, and reporting



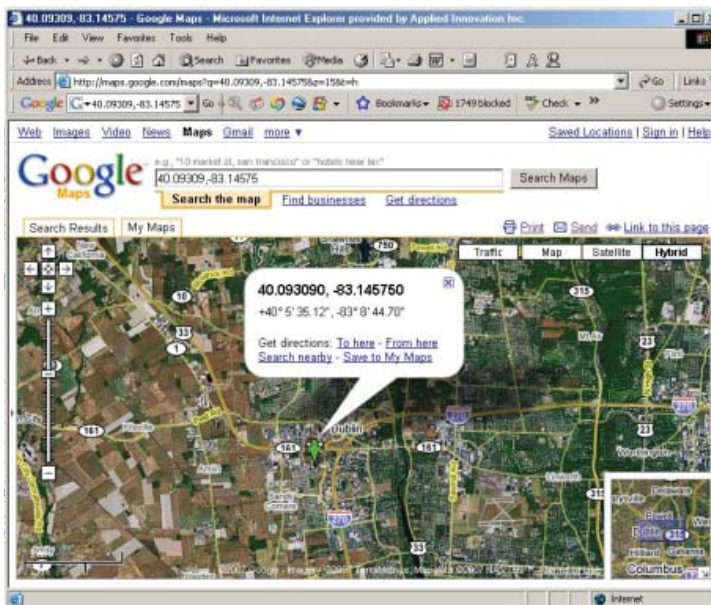
PDM remotely monitors wireless repeaters and other mobile assets to identify and repair network problems quickly.

Polled Device Monitor (PDM)



PDM provides remote monitoring of a mobile generator including location using the optional GPS feature.

PDM's easy-to-use graphical interface enables technicians to view alarm notifications, detailed status, diagnostic information, and polling success rates for remote equipment. Alarm notifications can be groomed by the Kentrox Optima Site Manager system or forwarded to third-party SNMP platforms, enabling network operations center visibility of previously unmanaged equipment. Using the Kentrox redirect software utility, vendor-specific GUI software can be used, communicating through the system, to further diagnose the remote equipment. GPS-enabled sites also provide location coordinates and export to mapping programs with a mouse click, providing real-time location when a truck roll is required.



Remote equipment is easily viewed on third-party map programs such as Google Maps, using the optional GPS feature.

Description

Central site
 Chassis (supports up to 8 PDM blades)
 PDM hardware blades
 PDM software
 Device licenses (simple systems)
 Device licenses (high-end systems)

Remote site

Wireless modem kits (Ethernet, serial, or bi-state)*
 * For a complete list of compatible devices and matching modem kits, contact Kentrox.

180-SC physical specifications

Height: 15.84 in. (40.23 cm)
 Width: 16.81 in. (42.69 cm)
 Depth: 9.93 in. (25.22 cm)
 Capacity: Up to 8 Extend PDM blades
 Mounting: Mounts in a standard 19-inch or 23-inch rack (includes brackets)
 Power: Dual input (A/B feed) 48VDC; 100W (max) in PDM configuration
 Temperature: 41° to 104°F (5° to 40°C)
 Relative humidity: 5% to 85%
 Weight: 30 lb (13.5 kg) approximately, fully loaded
 Certifications: NEBS3 certified; FCC certified; UL 60950

Polled Device Monitor (PDM) features

Hot-swappable modules
 Each blade supports 100 simple systems or 10 high-end systems
 Easy to use web-based GUI interface
 Ethernet and RS232 craft interfaces
 Outbound polling to remote devices is firewall-compatible
 Flexible polling and remote connectivity
 IP and SNMP-based polling protocols
 Optima Management Portal or SNMP management system compatible
 Remote device alarms, status and reporting
 View location and export to web map program (GPS option only)
 Configuration backup and restore

Wireless modem features

Utilize always-on network connectivity
 Static IP address for regular polling
 Non-Internet routable security options
 Polling method is firewall friendly
 Wide range of modem/cabling kits
 Ethernet options
 Serial interface options
 Bi-state contacts for non-intelligent devices
 Redirect feature support for intelligent devices
 IP enables access to remote serial ports
 Use vendor GUI software natively to control and further diagnose remote equipment

Sample of monitored equipment**

ADC	G-wave
ADRF	Juni
Andrew	LGC
Bird	MobileAccess
CCI	Portable Generators
Cellvine	Powerwave
CSI	RFS
DekoLink	Spotwave

** PDM is multi-vendor compatible and has been widely deployed by operators for dozens of equipment types. Contact Kentrox for additional applications.

For more information, visit www.kentrox.com, email info@kentrox.com or call (800) 733-5511 or +1 (614) 798-2000.