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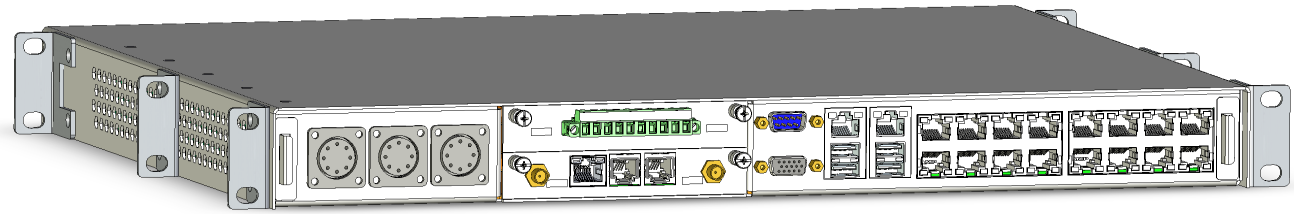
Datasheet

Site Commander-10

Remote Location Management for Wireless Carriers



Overview

The MRV Site Commander (SC) provides DC power control, power monitoring, antenna management and device management from a single platform. The device provides access via LAN based Ethernet IP, direct serial connection and\or wireless modem access to manage a wide variety of infrastructure devices such as switches, routers, gateway, WiMax and other support equipment. In addition to managing power and physical resources, the device also provides integrated AISG2.0 compatible interfaces providing a fully integrated remote site location monitoring and management platform. The MRV Site Commander gives you the power and flexibility you need to keep equipment running at your remote equipment sites and offer a flexible solution for remote broadband and wireless sites such are Base Transmission Sites (BTS) and other locations commonly deployed by emerging carriers, both land based and wireless, ILECs and IXCs.

Product Highlights

- DC power management to enable\disable\reboot devices
- RS 232 Console Management
- Sensor and Alarm Monitor providing environmental and physical infrastructure management
- Integrated AISG 2.0 Connectivity and Control
- Single 1 RU high form factor requires minimal rack space
- Expansion capability provides a scalable solution suitable for diverse locations

Power Monitoring and Control

The ability to proactively plan power resources is critical to any network planner's success. Troubleshooting equipment requires a detailed view of power usage and capacity to address many network availability issues. The SC-10 provides per outlet current utilization providing the granularity required to address planning and troubleshooting of network power resources.

The device supports ten power control outlets supporting nine 10A connections and one 30A connection via 115A -48V DC power input. Controlling switches, routers, radios, servers and other equipment is easily accomplished from one central device. Power cycle individual power outlets to remotely reboot servers and network devices from anywhere in the world. Power-off unused power receptacles to increase security and\or reduce energy and cooling costs. This remote control capability eliminates the need for resources to be on site to reboot defective devices, greatly increasing support staff efficiency.

Power Protection

Individual fuses per port protect equipment from failures from adjacent devices which could trigger more widespread outages. In-Rush overload failures are another common problem when enabling new equipment or recovering from a power outages. The SC-10 supports advanced power circuitry to minimize the risks using power up sequencing techniques to ensure proper start-up while still providing maximum protection during normal steady-state operation.

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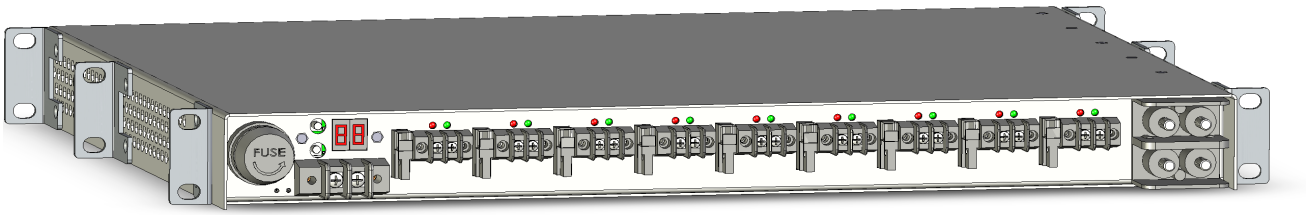
Deployment Flexibility

The SC-10 supports a wide range of service providers, carriers and network equipment manufacturers. Powered via -48VDC the device provides a wider operating environment range including expanded operating temperatures from -40 to +60C. The unit provides front, center, and back mounting options, easing installation across multiple locations.

Compact form factor

Rack Unit space is always a concern for any remote location installation. The SC-10 combines power management, remote console access, antenna management and environmental monitoring all in a single 1RU high form factor. The option to expand the system with additional power control is available via an additional 1 RU unit supporting 1 x 30A and 9 X 10A power control ports which can be managed via the primary SC-10 providing a single view of all twenty power ports from a single IP address, CLI and Web based interface.



Alarm Management

Many times network operation is affected by physical infrastructure, power and environmental conditions and not by "traditional" failures such as switches, routers, gateways, and servers. At unstaffed facilities that require lights-out management the SC-10 can be used to alert technical staff to a door opening, power outages, or low fuel levels in a back-up power generator or many other conditions. Advanced mangement allows operating conditions to be managed remotely reducing the need for on site visits. In the event that the condition can't be solved remotely and a site visit is required, preliminary remote fault analyis allows the proper resource to be deployed to address the problem again reducing complexity and cost.

Environmental Monitoring

The combination of next generation equipment and remote locations with limited size and cooling resources poses a formidable challenge for communications provides. The need to deploy equipment over a wide geographic area and physical locations in a variety of climates further emphasizes the need to monitor and control environmental conditions. Two dedicated remote temperature\humidity probe ports are available

- Monitor temperature and humidity via two external sensors
- Detect door and window openings via dry contact sensors
- Control devices such as relays via control output interfaces

Remote Device Management

New installations, troubleshooting, maintenance and upgrades require remote access to device command line interfaces. The ability to access equipment remotely is critical to maintain a high level of availability as well as reducing overall operational costs. Being able to remotely access a device allows highly skilled individuals to focus on high level problems and minimizes distractions caused by repitive tasks and site visits. RS 232 access provides the flexibility as a "lowest common dominator" allowing connectivity to any device with a console or "craft" port including radios, switches, routers, UPS devices, and other telecommunications and support equipment.

Mobile Asset Tracking

Integrated GPS support provides the location of the SC-10 providing a powerful solution to track equipment which is deployed in multiple stages and\or locations. The ability to track devices through their lifecycle from configuration, pre-staging, deployment and replacement reduces a very tedious and time consuming activity for communications providers.

Connectivity

The Site Commander features a number of communications methods providing a wide range of deployment options. Traditional LAN connectivity is provided via two 10/100 RJ45 Ethernet interfaces which can provide connectivity to multiple IP communications paths. The Site Commander can be accessed via a local RS232 console port, along with a number of modem options providing primary and\or backup connectivity to the device via GSM\GPRS and CSMA wireless networks. These options further expand the unit's deployment possibilities across many locations with varying types of access through an organization's network infrastructure.

In addition to traditional access methods the device also supports four USB interfaces. These interfaces provide storage and upgrade capabilities while providing a flexible common interface that can be used for future support of alternative connectivity methods as well as hardware based security devices.

Security and Alarm Notification

Many companies no matter their size, scale or age have a multiple management systems and notification mechanisms in place. Common notification methods in use in many organizations include email, SMS messages, SNMP traps and pagers which are easily supported by the device . Ensuring secure communications to network infrastructure equipment is more critical than ever. The Site Commander utilizes a number of security features and protocols including SSHv2, SSL, PPP, TACACS and RADIUS . This MRV solution supports an easy to use browser based GUI, powerful CLI, or SNMP based management. The standards based SNMP support allows the Site Commander to be managed via any standards based SNMP manager to provide administrators with the additional tools to quickly identify, manage, prioritize and resolve sensor events and fault conditions.

Integrated Antenna Management

Base Transmission Sites (BTS) incorporate a wide range of telecommunications equipment supporting voice and data transmission equipment and a host of gateway and other devices facilitating voice and data backhaul from GSM\GPRS, WiMax and other wireless technologies. The MRV Site Commander provides advanced consolidated management for power, physical infrastructure, and network equipment but also integrate antenna management via 3 AISG compliant connections. This integration allows a single device to manage all the assets at remote locations simplifying operations while conserving precious rack space all in a single 1 RU device.

Model	Description
SC-10-08-50	8 RJ45 Serial Ports, 1 x 30A and 9 x 10A DC Power Ports, 0 to +50C
SC-10-08-60	8 RJ45 Serial Ports, 1 x 30A and 9 x 10A DC Power Ports, -40 to + 60C
SC-10-16-50	16 RJ45 Serial Ports, 1 x 30A and 9 x 10A DC Power Ports, 0 to +50C
SC-10-16-60	16 RJ45 Serial Ports, 1 x 30A and 9 x 10A DC Power Ports, -40 to + 60C
SC-MODEM-01	No Modem, 1 GPS SMA Port, 1 RJ45 Expansion Port, 2 RJ11 Sensor Ports
SC-MODEM-02	GSM\GPRS SMA , 1 GPS SMA Port, 1 RJ45 Expansion Port, 2 RJ11 Sensor Ports
SC-MODEM-03	CDMA SMA, 1 GPS Port SMA , 1 RJ45 Expansion Port, 2 RJ11 Sensor Ports
Options	
SC-EXP-10-60	Power Expansion Unit 9 x 10A and 1 x 30A Power Ports
SC-ALARM-01	5 x 2 wire dry contact
SC-ALARM-02	2 x 2 wire and 2 x 3 wire
SC-TEMPHUM-01	Temperature Humidity Sensor

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Technical Specifications	
Network Interfaces	2 Ethernet RJ45 10/100 Ethernet Ports
Serial Interfaces	8 RJ45 RS232, 300bps to 230.4Kbps
Mgt Interfaces	DB9 RS232 Console, DB15 VGA
Alarm Module (optional)	
Module Option 1	5 x 2 wire dry contact
Module Option 2	2 x 2 wire dry contact and 2 x 3 wire control output
Modem Module	1 cell modem (GSM\GPRS or CDMA) 1 GPS antenna port 1 RJ45 expansion port 2 RJ11 temp\hum sensor ports
USB	4 x USB 2.0
Power	
Input	115A, -48VDC (-40 to 60VDC)
Output 30A	1 x 30A -48V DC KTK fuse
Output 10A	9 x 10A -48VDC GMT fuses
AISG Interfaces	3 x 8 PIN DIN, AISG 1.1/2.0

Technical Specifications	
Dimensions	19" W x 15" D x 1.75" H (1 RU)
Mounting Options	19" rack with front, center or rear mounting options
Operating Temperature	0 to +50 C (specific models) -40 to +60 C (specific models)
Humidity	5% to 85% (pending)
Safety	UL 60950-1; CSA C22.2 No. 60950-00; CB Scheme
Emissions\Immunity	FCC part 15, Class A
	ETS 301 489-8
	ETS 301 489-23
	ETS 300 342-2
	EMC Directive 83/336/EEC
	RTTE Directive 99/5/EEC
Lightning	IEC 61000-4-5
NEMA	IP52

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