SmartRIM 5000 Gen 3

LoRa-enabled IoT Remote Infrastructure Management with Cloud-based MosaiQ NMS

OVERVIEW

The EION SmartRIM 5000 Gen 3 (Smart Remote Infrastructure Management) is a LoRa-enabled IoT platform to remotely monitor and manage primarily telecom towers, and monitor infrastructure like remote buildings, storage warehouses, remote campus environments etc. SmartRIM 5000 Gen 3 is an enterprise-grade, modular, sensor aggregation management platform that can be integrated with custom wireless sensors, solutions and infrastructure.

SmartRIM 5000 Gen 3 LoRa-enabled IoT sensor solution identifies tower swaying in heavy winds and sends alarms to the Network Operations Center (NOC) when there is a trigger, along with measuring guy-wire tension. The LoRa-based sensor solution offers a coverage range of up to 20 km. It also monitors and sends alerts on the infrastructure of telecom towers like the AC Power supply, temperature, humidity, water seepage in cabinets, ground fault issues, UPS battery alarm detection etc.

SmartRIM 5000 Gen 3 helps in the self-healing of the network with an auto-remote power relay system, eliminating truck rolls or manual resets. The remote power relay system enables identification of unreachable device IP addresses and triggers to turn ON/OFF or power cycle any of the devices connected to the eight ports.

SmartRIM 5000 Gen 3 works with EION's Network Monitoring System (MosaiQ) or any SNMP-based NMS. Using this, distributed remote infrastructure can be monitored with multiple SmartRIMs and managed by a centralized NOC. SmartRIM 5000 Gen 3 is powered by an AC Power Supply or on-site UPS. The primary communication is through a LAN/Ethernet interface. The form factor of SmartRIM 5000 Gen 3 is ideal to be mounted on a 19-inch Rack or Tray Tabletop at the site of Base Stations in telecom towers to monitor the status of the infrastructure.

PRODUCT FEATURES

- LoRa-enabled Smart Remote Infrastructure Management Device
- Cloud-based MosaiQ NMS
- Sensor Aggregation Platform
- Monitors and triggers alerts for the following:
    - Tower swaying
    - Guy-wire tension
    - Cabinet open/close
    - Temperature and Humidity
    - 8 Port Remote Power Relay System
    - Weather station for wind speed & direction and rainfall measurement.
- Auto Ping functionality
- Mosaid Dashboard; Customization Dashboard
- SNMP Traps for Device Alarms
- SNMP /v2/v3 Support
- Remote SSH Capabilities
- LEDs: Power and System
- 2xUSB 3.0 and 2xUSB 2.0
- Monitoring System Logs
- Easy Deployment and Operation
- 1U Rack mounting form factor

ORDERING INFORMATION

SRIM-5000-G3	**SmartRIM 5000 Gen 3 LoRa-Enabled IoT Remote Infrastructure Management**
SRIM-5000-G3-M100	**SmartRIM 5000 Gen 3 LoRa-Enabled IoT Remote Infrastructure Management MOQ100 units**
SRIM-5000-G3-M500	**SmartRIM 5000 Gen 3 LoRa -Enabled IoT Remote Infrastructure Management MOQ500 units**
SRIM-5000-G3-ACC	**LoRa-Accelerometer Sensor System**
SRIM-5000-G3-WS	**Weather Monitoring Station Sensor System**
SRIM-5000-G3-GFI	**Ground Fault Monitoring Sensor System**

SENSOR SYSTEM AND MONITORING

Sensor System	The following features can be ordered and monitored upon request: ● LoRa-Accelerometer Sensor System for Tower Sway Monitoring ● Weather Monitoring – wind speed, wind direction and rainfall measurement ● GFS ● Cabinet Door open/close ● Ambient Temperature & Humidity ● SmartRIM Device Health and Temperature ● Guy-wire Tension Sensor ● Wind Sensor
Cloud-based MosaiQ Network Monitoring System	● SmartRIM device can be monitored with MosaiQ NMS or any SNMP-based NMS. ● SNMP traps, OIDs and graphs in NMS. ● Very responsive, customizable Web-GUI dashboard sensor readings . ● System Trigger Alarms and graphs based on configured thresholds of sensor system. ● Multi-level organizational and roles-based access controls. ● Configurable SNMP and Networking ● Options of white labelling, rebranding with customizable Social Media links. ● Easy Google account login in MosaiQ Dashboard. ● Mobile-browser compatible. ● NTP Sync from Internet. ● System logs

Enhanced Control	● SmartRIM 5000 Gen 3
	   ○ Configure threshold limits through Graphical User Interface (GUI).
	   ○ GUI with dashboard, IP and remote management features.
	   ○ SmartRIM equipment self-diagnostics.
	● 8 Port Smart Power Relay System
	   ○ Cloud-based management system.
	   ○ GUI Can be accessed from anywhere.
	   ○ Register all relays based on location and IP address.
	   ○ A dashboard display of all relays based on criticality.
	   ○ Cycle/turn on/turn off individual ports or all ports with configurable cycle time.
	   ○ Compatible with 120V-15A devices.
	● Auto Ping
	   ○ Add IP addresses to auto ping.
	   ○ Delete IP addresses from auto ping.
	   ○ Configure auto ping properties.
	   ○ Scheduled power reset.

GUI Features	● Static and DHCP IP settings. ● VLAN IP management. ● NTP global and private support. ● Default or fallback IP address. ● Device health report including CPU usage.

LORA MODULE SPECIFICATIONS

LoRa module Frequency	915 MHz (for North America)
Antenna Gain	2.2 dBi (can be customized to accommodate between 2 dBi to 8 dBi antenna)

INTERFACE SPECIFICATIONS TO CONNECT EXTERNAL DEVICES

Network Connection	1 x Gigabit Ethernet ports; Auto MDI-X RJ45 10/100/1000 Mbps Ethernet ()
DHCP	DHCP Client
Operation Mode	Standalone or Group of SmartRIMs managed centrally
Cord Connector	Standard AC cord connector
External Sensor system	7 sensor input termination system
Other terminals	1x +5V terminal, 1x +3.3V terminal, 2x Ground terminals
Protocols	SNMP /v2/v3, TCP/IP, SSH

MANAGEMENT

Management Access	Over the Air & Wired
Remote Configuration	HTML Web-GUI, Controller
Remote Monitoring	HTML Web-GUI, SNMP Set, Get and traps with proprietary MIB files
Software Upgrade	Over the Air or local, Web-based upgrade
Services	Threshold configuration SNMP – MIBS, OID (Get and Set), Traps
SSH Access	Yes

PHYSICAL, ELECTRICAL & ENVIRONMENTAL

Power Consumption	Typ. < 20 Watts
Power Supply	100-240V, 50/60 Hz AC
LED Indicators	Device Power CPU Powered ON
ON/OFF Switch	Yes
Temperature Range	Operating: -30º C to +70º C
Relative Humidity	Operating: 0% to 100% (condensing)
Mounting Options	Rack/Tray mounting
Chassis	19" metal rack
Weight	<2 Kg
Dimensions	5 x 12 x 1.75 inches

STANDARDS COMPLIANCE

Materials Compliance	**RoHS/WEEE**

BOX CONTENTS

Each box contains the following items	- SmartRIM 5000 Gen 3 LoRa-Enabled IoT Remote Infrastructure Management. 100-240V AC Power Cable . - Ethernet LAN Cable with US Power Cord. - Sensors (optional, if sensor system is ordered).