

Keystone's Remote Site Monitoring System: A modular approach to site monitoring

Keystone Electronic Solutions' Remote Site Monitoring System (RSM) delivers intelligent site management through the use of Internet of Things functionality

The RSM is easy to install and maintain, as the connectors are all RJ-type crimp connectors or pluggable screw terminal connectors. System configuration is just as user friendly, done through an on-board web interface that is accessible over LAN/WAN port or USB. Furthermore, users can also configure the system using a dedicated Android Bluetooth application, which has proven to be a drop-in replacement for many site management solutions.

A considerable advantage that Keystone's RSM offers is that it reduces the number of wiring harnesses needed for site monitoring, through the use of the built-in monitoring

and alarm capability of on-site equipment. This is done via standard management protocols without proprietary software and can be easily installed on any site. It also eliminates the need to wire non-standard harnesses which may potentially interfere with the operation and warranty of the equipment.

Keystone's RSM solution interfaces seamlessly to elements such as rectifiers, network equipment and switches. A range of standard protocols such as DLMS Smart Power meters, as well as SNMP Modbus-enabled devices like Genset controllers, inverters and PLCs, can be monitored over LAN or RS485.

Scalability | Integration | Control applications Installation & Maintenance | Networking capabilities

Scalability

Keystone's RSM is modularly designed and built which enables organisations to start off with a new remote monitoring system with a number of controllers and interfaces that suit their budget and requirements, while offering them the flexibility to expand these as needed. Using a selection of these stand-alone units, it is possible to build a system that can satisfy any site configuration.

Platform Integration

RSM communicates on a variety of development protocols and management frameworks. At the RSM site we are able to integrate with devices using industrial protocols such as SNMP MODBUS, DLMS

along with vendor proprietary protocols. We also integrate with management frameworks by providing all information on open REST APIs. With these APIs we can integrate with billing tools and security frameworks.

Control applications

There is a wide selection of control applications which can be selected, installed and activated remotely, enhancing controller functionality as required by the project. Control services that are already available include a logic engine, climate control, asset management, video surveillance, amongst others.

Installation & Maintenance

All connectors are either screw terminal or RJ connectors, greatly reducing the number of tools needed by an installation technician and facilitating faster installations.

All configuration and commissioning is done through a web interface, which can be accessed either through any of the LAN ports, USB port (enumerated as an Ethernet connection) or the WAN port. This means that the configuration site is also accessible from a central management location and changes can be both updated and applied remotely. For example, the set-point for the air-conditioning unit can be changed remotely and technicians do not have to be on-site. The configuration settings can be accessed via an Android

application connected through Bluetooth or the mobile device's WAN or Wi-Fi.

Networking capabilities

The RSM allows for standard IP LAN set-up for specific sites, even as external addresses will differ from site to site. Internal addresses can be identical. Physical interfaces include several LAN Ethernet ports (for switch configuration), WAN Ethernet port (for network management backhaul), as well as GSM backhaul capabilities. The RSM also supports a VPN capability for secure backhaul of data over WAN or GSM. On-board comprises of full capabilities of Linux routing network functionality as well as complete Linux iptables firewall capabilities.

About Keystone Electronic Solutions

Keystone Electronic Solutions is an electronics research and development company, offering organisations the opportunity to outsource their design and product requirements to a highly skilled team of electronic engineers.

The company's team of experts is able to create new and innovative ways of creating electronic products, making use of the best available technology and maximising efficiencies to substantially reduce manufacturing and implementation costs. Their expertise includes both electronics and IT hardware and software, enabling them to develop a total solution for their clients' product creation, as well as

integrating the resulting product into any existing manufacturing or IT environment.

Founded in 2007 by two Directors, John Eigelaar and Ivan Popov, Keystone provides local support and design updates to clients, resulting in quick turnaround time, cost savings and reduce the time to market.

Contact:

Keystone Electronic Solutions
469 Julius Jeppe Street
Waterkloof
Pretoria
Tel: 012 460 4135
Email: info@kses.net

