

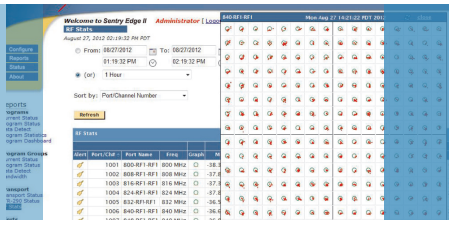

10 key factors to consider in developing a post-QAM Modulator RF monitoring strategy

1 Reduce subscriber calls regarding RF issues. Identify RF issues faster and sooner, before they reach the set top box.

An ideal monitoring approach would entail monitoring every carrier on every RF output. A practical approach should focus on a scalable, high density monitoring system with analyser-like RF performance on the maximum number of RF outputs possible.

2 More tuners means better coverage.

Traditional monitoring tools with fewer tuners require much more time to poll all the QAM channels in a round robin fashion. This means that there are extended periods when each QAM channel is not being monitored. With up to 8 tuners, Sentry Edge II is able to poll all QAM channels many times faster, leading to better coverage and less chance of missing critical issues.

3 Configuration flexibility would allow you to maximise the density of the RF monitoring inputs.

Sentry Edge II lets you manage the 8-tuner unit as a single group of 8 tuners with one RF input or as 2 groups, each with one RF input and 4 tuners. All the tuners can monitor QAM channels in a rotating “round robin” fashion, be dedicated to a QAM channel, or be used in a combination of these monitoring options. The choice of 4- or 8-tuner units with 1 RF physical input per 4 tuners enables faster round robin testing among QAM channels, so RF issues are found sooner and more of them can be corrected before subscribers start to call.

4 Better RF measurement performance would help you see the problems sooner.

Sentry Edge II offers analyser-like RF measurements that include RF lock indication, Input signal level (channel power), Modulation Error Ratio (MER), Error Vector Magnitude (EVM), Carrier-to-Noise Ratio (CNR), Carrier offset, Pre-FEC BER and Post-FEC uncorrectable Transport Stream packet rate. A constellation diagram is provided for diagnostics. MER measurements up to 41 dB ensure that signal quality is good enough for the set-top box to demodulate. A highly accurate MER measurement post-QAM lets you take action fast when you see that RF signal quality is in danger of becoming too degraded to be demodulated by the STB. With the ability to measure MER to 41dB, Sentry Edge II lets you see the problems sooner.

5 Achieving affordable monitoring density with limited rack space and power.

The need to monitor more of the video network edge to reduce the number of calls from subscribers cannot be met without a cost-effective monitor that effectively monitors all the edge locations. Sentry Edge II provides high density monitoring at a competitive price, reducing the cost of monitoring by up to 44% against other alternatives. Sentry Edge II uniquely offers 4 or 8-tuner models in a 1 RU form factor. High monitoring density at an affordable price lets you control operating costs through early detection of issues and buy more units to effectively monitor the network edge.

6 How to achieve scalability.

Multiple units can be managed by the Medius Application Manager. Remote management of RF and Transport Stream measurement collection allows you to avoid the time and expense of gathering measurements in the field, and includes 60-day historical reporting and graphing.

7 Once a suspect channel is identified, do you have the diagnostics to determine the root cause?

Once a problem QAM channel has been identified in the scan mode, dedicate one tuner for longer observation. Use the constellation diagram to troubleshoot RF problems. The TR101-290 measurements help to correlate Transport Stream and RF performance. Triggered capture lets you capture a stream for off-line analysis.

8 Detecting issues is one thing, but being alerted about them in the right way is just as important.

Sentry’s flexible alert and reporting capabilities allow you to be e-mailed with critical alerts and scheduled reports in CSV and PDF formats. Integration with NMS systems is critical and Sentry’s easy to understand MIB and northbound SNMP traps, which include the alert URL, allow easy and flexible integration into a broader monitoring platform.

9 Adding new digital services once your monitoring system is in place.

Sentry Edge II tunes up to 1 GHz, allowing you to monitor all your services, including new services added to grow your business. High tuner density means that as your line-up expands, you can expand your monitoring system in a scalable way.

10 How to monitor program quality from source to edge.

The Sentry family of Video Quality Monitors allows scalable monitoring of program QoS and QoE performance from the point of ingest through encoding and muxing across the core network, all the way to QAM distribution. The Medius Application Manager aggregates information from all Sentry family Video Quality Monitors to pinpoint the source of any errors, wherever they occur – and before they impact your viewer’s Quality of Experience.

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