Minimize DAS Downtime

Reliable public safety DAS communication is critical when faced with in-building emergencies. As a result, first responders rely upon public safety distributed antenna systems (DAS) to provide essential high-quality radio coverage and network performance. To ensure the readiness of mission-critical communications, Microlab provides innovative public safety DAS and wide-area, land mobile radio (LMR) dispatch network solutions, such as the System Monitor Alarm Report Technology (SMART) Passives System. Enabling real-time monitoring of DAS cabling, RF components, and antennas, the SMART Passives System examines the health of critical DAS infrastructure. The SMART Passives System, along with Microlab's broad range of high-performance RF components, drastically minimize DAS downtime and maintain public safety DAS integrity.

Downtime is detrimental to public safety DAS systems providing life-safety radio coverage, where an emergency can strike anywhere at any time. Delivering real-time in-building monitoring for public safety wireless networks, the SMART Passives System is comprised of a network of SMART Couplers in communication with a SMART Gateway, which is located at the head-end's main RF source of an off-air bidirectional amplifier (BDA) or a building's dedicated repeater and control head. The SMART Gateway generates a continuous wave (CW) tone within the Industrial, Scientific, Medical (ISM) band, which is used by each SMART Coupler to report the voltage standing wave ratio (VSWR) at each port. The specially developed, broadband, passive, 130 – 960 MHz SMART Couplers, which are enclosed with active IoT circuitry for communications and diagnostics, compare the reference VSWR over time to identify any system faults. In the instance where a failure like an open or short circuit is detected, this proactive monitoring technique provides an alarm with the failure's location, which is based on the detecting SMART Coupler's MAC address. The alarm will be sent by the SMART Gateway via email or SMS through SNMP traps. The SMART Gateway's front panel alarm may connect to the building's fire alarm panel for notification as well. Through technical ingenuity and real-time monitoring, the SMART Passives System is able to detect performance deterioration before catastrophic failures compromise public safety DAS integrity, which can lead to detrimental system downtime.

Used as a metric to gauge component reliability, mean time between failures (MTBF) is the average elapsed time between system failures under normal operations. Microlab's overall product MTBF is more than 10 million hours, which minimizes the likelihood of system downtime since higher MTBF components enable more reliable systems. In addition to providing solutions and components that are built to stand the test of time, Microlab's wide bandwidth product portfolio future-proofs system deployments by covering all major commercial wireless and public safety bands, as well as delivers guaranteed specifications, including low dissipative loss, RF insertion loss, VSWR, and passive intermodulation (PIM). Microlab components are also supported by industry-standard software tools, such as Ranplan and iBwave, which reduces timely design engineering support, and consequently, further decreases public safety DAS downtime.

With a manufacturing facility located in Parsippany, NJ, Microlab resolves customer questions without delays through timely customer support. Microlab's 70 years of industry experience providing life-safety DAS solutions is not only accessible through its robust, high-performance

products, but is also available through application engineering design consultation, which can quickly troubleshoot any unique challenge. Customization options are offered as well to swiftly provide solutions to client-specific requirements. To learn more about Microlab's public safety DAS and wide-area, LMR dispatch network solutions that minimize DAS downtime potential, head over to https://microlabtech.com/lmr-public-safety.