

Communication Green Base Station Quality Inspection

What is a green base station solution?

The green base station solution involves base station system architecture, base station form, power saving technologies, and application of green technologies. Using SDR-based architecture and distributed base stations is a different approach to traditional multiband multimode network construction.

Are green cellular base stations sustainable?

This study presents an overview of sustainable and green cellular base stations (BSs), which account for most of the energy consumed in cellular networks. We review the architecture of the BS and the power consumption model, and then summarize the trends in green cellular network research over the past decade.

What is base station conformance testing?

The solutions range from high-performance signal generators and signal analyzers to turnkey test systems including shielded chamber environments. Typically, base station conformance testing is performed with a combination of a vector signal generator and a signal and spectrum analyzer.

What are 3GPP base stations conformance standards?

Based on the 3GPP base station conformance specifications, regional standardization bodies, local regulators and network operators implement test standards according to their needs. Base stations need to pass conformance tests in the region where they will be installed before they can start operation in the field.

Why is base station performance important?

Base station (BS) performance is vital for delivering expected quality of experience to end users. To ensure this, it is important that the base station conformance criteria is met and that they fulfill the requirements in the region in which they operate. These criteria are specified by the mobile communication standardization body 3GPP.

What should a base station do in a wireless communications network?

In a wireless communications network, the base station should maintain high-quality coverage. It should also have the potential for upgrade or evolution. As network traffic increases, power consumption increases proportionally to the number of base stations. However, reducing the number of base stations may degrade network quality.

The answer often lies in overlooked communication base station inspections. With 5G deployments accelerating globally, 78% of telecom operators report unexpected downtime due ...

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The construction of the information management concept of inspection report is realized, and a set of solutions that can be implemented on the ground is provided to improve the efficiency of ...

The article 35 of the Regulations stipulates that " for the establishment of large-scale wireless radio stations (stations) and ground public mobile communication BS, their ...

Abstract. With the development of 5G mobile networks, the number of mobile communication base stations in China has increased rapidly, and regular inspection and maintenance are ...

This system not only greatly reduces the work-load of base station maintenance personnel, but also improves the reliability of system operation and realizes the scientific management of the ...

Energy efficiency and renewable energy are the main pillars of sustainability and environmental compatibility. This study presents an overview of sustainable and green cellular ...

We compare these components with their counterparts in 4G base stations, and explain why replacing base stations is necessary to provide the reduction in latency and improvement in ...

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