

Outdoor base station specification parameter requirements

What are base station active antenna system standards?

Our latest "Recommendation on Base Station Active Antenna System Standards" provides the industry with an updated set of parameter definitions, measurement methodologies and reporting processes. This enables a uniform way to describe the electrical and mechanical characteristics of the network side of the radio link (the "base station antenna").

How high should a base station antenna be?

Per ITU-R P.1410 recommendations, base station antenna heights typically range between 15-60 meters. Urban deployments favor 25-35m, rural coverage requires 40-55m, while 5G mmWave systems operate efficiently at 15-25m. Critical factors include propagation models, terrain, and frequency bands.

What is the operating environment of a base station antenna?

The operating environment of base station antennas is classified as remote, stationary, outdoor, uncontrolled and not weather-protected. The electromagnetic environment includes close proximity to intentionally radiating devices and installation on structures prone to lightning strikes.

What are RF requirements for a base station?

In the base station specifications, there is one set of RF requirements that is generic, applicable to what is called "general purpose" base stations. This is the original set of UTRA requirements developed in 3GPP release 99. It has no restrictions on base station output power and can be used for any deployment scenario.

How much power does a base station have?

Maximum base station power is limited to 38 dBm output power for Medium-Range base stations, 24 dBm output power for Local Area base stations, and to 20 dBm for Home base stations. This power is defined per antenna and carrier, except for home base stations, where the power over all antennas (up to four) is counted.

What is the maximum base station Power?

Maximum base station power is limited to 24 dBm output power for Local Area base stations and to 20 dBm for Home base stations, counting the power over all antennas (up to four). There is no maximum base station power defined for Wide Area base stations.

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Sep 10, 2021 · The Base Station shall be able to assess whether the medium is busy or idle with at least 90% probability, using a channel access procedure with the parameters in Table 5.1.1-1.

Nov 3, 2025 · This specification is intended to cover complete design, engineering,



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assembling, testing at manufacturer"s works, substation ...

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