

# How is the 5G base station power module doing recently



## Overview

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Will a 5G power amplifier module be used in mmimo base stations?

TOKYO, September 14, 2023 – Mitsubishi Electric Corporation (TOKYO: 6503) announced today that it will begin shipping samples of a new Gallium Nitride (GaN) power amplifier module for use in 5G massive MIMO1 (mMIMO) base stations on September 21. Power amplifier modules help reduce the power consumption of 5G mMIMO base stations.

How much power does 5G mmimo use?

MIMO uses multiple antennas at both the transmitter and receiver end Mitsubishi Electric will commence sample shipments of a GaN power amplifier module for 5G mMIMO base stations that can deliver an average output power of 8W (39 dBm) over wide frequencies ranging from 3.4GHz to 3.8GHz.

Which countries are leading the 5G base station market?

Globally, 5G is being deployed at two different paces, with China supporting half of the base transceiver station (BTS) market while the rest of Asia, Europe, the U.S. and late 5G entrant India dominate the balance of the market. Figure 1 shows our latest base station forecast by region. Figure 1 Macro/Micro regional BTS forecast.

What is 5G & how does it work?

**MARKET DRIVERS COME OUT OF MNO REQUIREMENTS** 5G is bringing massive network capacity improvements by using new spectrum in the sub-6 GHz frequency band while reusing legacy 4G bands. 5G architectures leverage traditional remote radio heads (RRHs) and active antenna systems (AAS).

Does Mitsubishi Electric have a 5g-advanced Pam?

Mitsubishi Electric successfully verified its new PAM's performance in a demonstration using 5G-Advanced communication signals for the first time in the world. Mitsubishi Electric developed its 7GHz GaN PAM using proprietary

matching-circuit technology and high-performance GaN transistors.

How does 5G improve network capacity?

5G is bringing massive network capacity improvements by using new spectrum in the sub-6 GHz frequency band while reusing legacy 4G bands. 5G architectures leverage traditional remote radio heads (RRHs) and active antenna systems (AAS). The use of massive MIMO (mMIMO) is a crucial technology to improve AAS spectral efficiency and throughput.

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