

A-Core Container

Base station power control board



Overview

What is a monitoring-and-control solution for a base station?

Monitoring and controlling the performance of a base station's PA makes it possible to maximize the output power while achieving optimum linearity and efficiency. This article discusses the elements of a monitoring-and-control solution for the PA using discrete components—and describes an integrated solution.

Where is the station system board located?

The station System Board is located on the Radio Panel Front Door and the receiver modules plug directly into the board. Along the edge of the System Board are two connectors which interconnect with the Remote Control Shelf and Power-Supply. Plug-in Channel Guard and Carrier Control ~ Timer option jacks are provided.

How can a base station's power amplifier be optimized?

By monitoring and controlling the performance of the base station's power amplifier (PA), for example, it is possible to maximize the PA's output power while achieving optimum linearity and efficiency.

How can a base station reduce energy consumption?

Significant efforts are being made to reduce the overall energy consumption of base stations to lessen their impact on the environment. Electrical energy is the principal source of everyday operating costs in a base station, and the PA can be responsible for more than half of the power dissipation.

Why do telecommunications companies need a base station?

For environmental reasons, optimizing a base station's power efficiency is also a key consideration for companies in the telecommunications industry. Significant efforts are being made to reduce the overall energy consumption of base stations to lessen their impact on the environment.

What determines the performance of a wireless base station?

The performance of wireless base stations—in terms of power dissipation, linearity, efficiency, and cost— is predominantly determined by the PA in the signal chain. The low cost and high-power performance of silicon laterally diffused metal-oxide-semiconductor (LDMOS) transistors make them well suited for modern cellular base-station PA designs.

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