

Model: TBA-4G-2G**Telecommunication Network (grid) Control System Board****Product Type:** RAN Grid Control**Application:**

RAN Processing Units for multi-band cellular systems/ Hybrid 4G/2G communication platforms/ Private and enterprise wireless network infrastructure

Description:

This processing board is a high-performance hardware module designed to enhance the computational and fronthaul capabilities of radio access equipment operating in Band 3 and Band 8.

It functions as an intelligent interface between the digital processing section and the RF subsystem, handling intensive real-time signal operations and enabling efficient high-speed data transport over CPRI/eCPRI links.

The board integrates advanced DSP, FPGA, and network acceleration technologies to execute waveform processing, protocol handling, and fronthaul management with low latency and high reliability.

Its modular design supports scalable deployment across various telecom processing units, reducing the load on the central controller while providing consistent multi-band performance.

**Part No.: TBA-4G-2G****Key Features**

- Engineered for multi-band 4G/2G communication processing
- Multiple CPRI interface for direct connection to remote radio units
- High-performance multicore processor for time-critical control and signal tasks
- Compact module optimized for processing chassis installation
- Cooling options: conduction or forced-air via chassis airflow
- Secure chassis-mounted design for industrial telecom environments
- Power-efficient architecture for improved thermal stability
- High-speed PCIe interface for integration into system control backplanes
- Modular hardware form factor allowing expansion with multiple boards
- Fully optimized for Band 3 and Band 8 FDD operation

Functional Description

- System Controller: Manages operational control, startup sequencing, monitoring, and health reporting
- Timing & Sync: Supports IEEE 1588v2 PTP, SyncE, and external GPS timing inputs
- Communication Interface: Provides high-bandwidth links to processing modules and remote radio units

Mechanical Specifications

Parameter	Min	Typ.	Max	Unit
Input Voltage	-	12	-	VDC
Dimensions	100 × 135			mm

Mechanical Specifications

- Form Factor: Compact plug-in module for telecom processing chassis
- Cooling: Forced-air cooling via system fan tray
- Connector Options: PCIe edge connector / RJ45 / SFP

