TJ1400-7 eNodeB

Broadband Access

Converged Multi-service Platform with 4G and 5G RAN Access

TEJAS® NETWORKS

DATA SHEET

TJ1400-7 with RAC card

RRH

Product Highlights

3GPP compliant eNodeB

5G upgradable

Band FDD (1,3,5), TDD (38, 39, 40, 41, 42)

4x4 MIMO (or act as dual 2x2 MIMO system)

40W per port RF output power

GPS Synchronization support

Configurable bandwidths: 5/10/15/20 MHz

64 QAM uplink capable

Up to 30 carriers in one ½-depth, 2U rack

Backhaul transport integration

Redundant Power Supply, FAN, Controller

Overview

- Tejas high capacity, macro FDD+TDD LTE eNodeB RAN on the converged access TJ1400-7 platform with 5G Release 15 upgrade support
- Can be scaled cost-effectively for all deployment scenarios from sparse rural to high density urban coverage requirements.
- Small footprint, low power consumption, fully re-programmable hardware.
- Support for all security and synchronization requirements

Key Benefits

Efficient upgradation and scalability: Cell sites with fibre backhaul can seamlessly integrate transport and LTE access with the added benefit of unified OAM, space and power savings.

Flexible: The RAC card can act as a coordinated 3-sector eNodeB or as three independently deployed single sector eNodeBs with configuration flexibility in the MIMO order, carrier bandwidths and carrier aggregation options. The RAC card is band agnostic and can support TD-LTE or FD-LTE radios, with appropriate RRHs.

Customized Access Scheduling: Customizable scheduling profiles available for operator to optimize and prioritize throughput, latency, coverage or capacity on a per cell basis.

Backhaul Optimization: Optical backhaul can be integrated in order to maximize end-to-end LTE performance.

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Technical Specifications

Technology
3GPP LTE eNodeB
3GPP Release 15 NSA*

Carriers
Dual carrier support up to 40 MHz per sector
Flexible multi-carrier options
Up to 30 carriers on the fully populated Baseband

MIMO
4X4 (TM1, TM2, TM3, TM4 supported)
Transmit power: 40W per port

Baseband to RRH Radio Interface
CPRI I&Q interface over 1310 nm Fibre
Up to 20 km, RAC to RRH

UE support
64 QAM uplink capable
1800 UEs per Baseband card
Up to 1500 connected UEs per Baseband card
Services include data, VoLTE with CSFB/SRVCC with full mobility

U-Plane Latency
Less than 10msec (RAN latency)

Synchronization
GPS, IRNSS, IEEE 1588**

Backhaul
Two GigE SFP ports (optical or electrical)

Power Efficiency
40% at 64 QAM

Surge Protection
20KV built-in at RRH head end

Antenna Tilt
AISG 2.0 capable

Power Supply
Baseband
-48 V DC nominal, -36 V to –60 V
Power consumption per slot < 75W
RRH
-48V DC nominal, -36V to -60V
Power consumption per RRH
<250W

Environmental and EMI-EMC
RAC Card
Operating Temperature: 0ºC to 50ºC.
Relative Humidity: 10% to 90%, non-condensing.
EN301489-1, 301489-19, 301489-23
EN55022 Class A
FCC Part 15 Class A
EN61000-4-2 to 4-6
RRH
Operating Temperature: -15ºC to 55ºC
Relative Humidity: 10% to 90% non-condensing
Dust and Water Resistant as per IP67
EN301489-1
EN55022 Class A
EN61000-4-3
CISPR 16-1-1, 1-2, 1-4, 2-1, 2-3, 2-4
ETSI EN 301 908-14, TS 136 141

* *Future Upgrade*
** *Network dependent*
E & O.E. Specifications subject to change without notice

Software-Enabled Transformation

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