

TJ 1400-7 eNodeB

Broadband Wireless Access
Converged Multi-service Platform with eNodeB



DATA SHEET



Product Highlights

TD-LTE eNodeB

Band 38, 39, 40, 41 (Band 42 under development)

Configurable bandwidths: 5/10/15/20 MHz

Dual 2X2 /4x4 MIMO

Up to 30 carriers in one 1/2-depth, 2U rack

Up to 20+20 MHz Multi-Carrier per port

Support 64 QAM uplink

Backhaul transport integration

Redundant PSU, FAN, Shelf Controller option

Overview

The TJ 1400 platform now supports optical transport with multi-service access and LTE. LTE support is provided using the Radio Access Controller - Baseband card (RAC). Each RAC card supports 6 TD-LTE carriers.

One 2U rack can house 5 such RAC cards with

redundancy protection on the PSU, Fan and Controller for high capacity, centralized deployments.

Typically 1 RAC is connected over CPRI to 3 Remote Radio Heads which can be wall, pole or tower mounted. Both short (2 km) and long (20 km) CPRI spans are supported.

Key Benefits

Efficient up gradation 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.

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

TDD Bands 38, 39, 40, 41, 42

Carriers

6 Component Carriers per slot

Dual carrier support up to 40 MHz per sector

Flexible multi-carrier options

MIMO

2X2 (Transmit Diversity, Open Loop and Closed Loop Spatial Multiplexing)

Transmit power: 10W per port, up to 20 W

depending on band and number of carriers

Spurious Emissions as per 3GPP Cat-B

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

U-Plane Latency

Less than 10msec (RAN latency)

Synchronization

GPS, IEEE 1588*

Backhaul

Two GigE SFP ports (configurable as optical or electrical)

Power Efficiency

40% at 64 QAM

Surge Protection

20KV built-in at head end

Antenna Tilt

AISG 2.0 capable

Management

SNMP on both EMS and northbound interfaces

Full Remote Management Capability

NMS, EMS, FCAPS Controllable via SNMP, HTTP, CLI

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

<120W (2x2)

Physical Dimensions (HxWxD)

Baseband Chassis (TJ1400-7)

88 mm x 444 mm x 235 mm

RRH

104 mm x 345 mm x 435 mm

Environmental and EMI-EMC

RAC Card

Operating Temperature: 0°C to 50°C.

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: -15°C to 55°C

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

* Network dependent

E & O.E. Specifications subject to change without notice



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