

# CoreCell-E LTE eNodeB

## 4G LTE Radio Access Network

Tecore Networks CoreCell-E provides a radio access node for User Equipment (UEs) connecting to a 4G LTE network. The CoreCell-E is a nodal component of the Evolved UMTS Radio Access Network (E-UTRAN) and integrates seamlessly with Tecore's 4G LTE Evolved Packet Core (EPC) over an All-IP packet data network. This integration provides a complete LTE network solution for commercial, government, military, and emergency response applications. Wireless operators are demanding greater packet data throughput on their mobile devices and applications. Tecore's CoreCell-E addresses these requirements by providing scalable bandwidth options, enhanced modulation techniques, and MIMO, allowing for more energy per bit and more bits per hertz. These enhanced techniques translate into better quality of service, higher bit rates for packet data-intensive applications, an evolution path for existing 2G and 3G networks as well as Greenfield 4G LTE network deployments.

### INTEGRATED BASEBAND UNIT & REMOTE RADIO HEAD



### CAPACITY DATA

RF output power Scalable up to 1,000 SAU per baseband unit

Dimension 16.9 x 7.9 x 8 in  
43 x 20 x 20 cm

Power consumption (Typical) 430 watts

Weight 40.7 lbs / 18.5 kg

Active Users Scalable up to 1,000 SAU per baseband unit

Downlink Peak L1 Throughput 200 Mbps with 2x2 MiMIMO in 20 MHz bandwidth

Uplink Peak L1 Throughput 75 Mbps with 2x2 MIMO in 20 MHz bandwidth

Carrier Aggregation Supported

### REGULATORY

LTE Compliancy ETSI TS 136 104 Release 12 Wide Range BS Cat.

Electrical Safety CSA C22.2 No 60950

Environmental Conditions ETSI EN 300 019-1 Class 1.2  
ETSI EN 300 019-2 Class 2.3  
ETSI EN 300 019-4 Class 4.1  
IP67

Inflammability UL94

### SPECIFICATION

|                                |   |
|--------------------------------|---|
| MIMO                           | 2x2   |
| Antenna connector port         | 2 x 4.3/10  |
| Operating frequency            | 380 MHz to 4400 MHz   |
| Max. No. of carriers per TX/RX | 1 or 2  |
| Fiber Links                    | 2 CPRI to add 2 RRHs for 3-sector configuration   |
| OAM                            | via CPRI or 10GbE   |
| Bandwidth supported            | 1.4, 3, 5, 10, 15, 20 MHz   |
| 3GPP compliance                | 3GPP Release 12   |
| Duplex method                  | FDD/TDD   |
| Voltage                        | DC 27V or -48V  |
| Operating temperature          | -40 F to +131 F<br>-40 C to +55 C   |
| Management interface           | Local Gigabit Ethernet  |
| Rx Input Level                 | +35dBm Maximum  |
| LTE sensitivity (5,10, 20 MHz) | < -103dBm Typ.  |
| Integrated                     | <ul style="list-style-type: none"> <li>Digital Pre-Distortion (DPD)</li> <li>Crest Factor Reduction (CFR)</li> <li>Alarm and Fault Management-Including forward power, VSWR and operating status</li> <li>GPS Receiver</li> </ul> |

# CORECELL-E Specifications

## Compact Design

With an impressive footprint, the CoreCell-E's weight ranges from 11 to 26.4 pounds, including the uncompromising support of a rugged IP67 shell. The CoreCell-E is capable of delivering high-speed network access to provide vital information and extensive support for a variety of network requirements. By maximizing performance, Tecore has minimized tower loads and deployment time to meet strict operational requirements.

## Frequency Support and Compliance

The CoreCell-E provides support for all 3GPP specified bands in both TDD and FDD technologies, including Band 14 for Emergency Response. If required for the scope of the network, additional bands can be customized into the end-to-end solution. This wide range of frequency capabilities includes custom and unlicensed bands, allowing for easy deployments worldwide for a variety of applications.

## Performance

The CoreCell-E is offered in three different power variants ranging from 1 to 40 watts. The number of sites and overall system size typically required for similar networks is vastly decreased due to the high power output. Additionally, the CoreCell-E can be equipped with integrated eNodeB capacity to provide a complete self-contained LTE Radio Access Network platform. In turn, this reduces overall system cost (CAPEX), as well as site acquisition, installation and maintenance costs, and network efficiency, which help maximize return on investment for operators.

### REMOTE RADIO HEAD (CORECELL-RH)

## SPECIFICATIONS AND FEATURES



| SPECIFICATION        | MACRO SITE                                    | MICRO CELL                                     | SMALL CELL                                   |
|----------------------|---|--|--|
| RF output power      | 40W (20W per port)                            | 10W (5W per port)                              | 1W (0.5W per port)                           |
| Dimension (inches)   | 11.6 x 7.9 x 6 in<br>29.46 x 20.06 x 15.24 cm | 11.6 x 7.9 x 4.7 in<br>29.46 x 20.06 x 11.9 cm | 11.6 x 7.9 x 3.15 in<br>29.46 x 20.06 x 8 cm |
| Power consumption    | 200 watts                                     | 90 watts                                       | 50 watts                                     |
| Weight               | 26.4 lbs / 11.9 kg                            | 22 lbs / 9.97 kg                               | 11 lbs / 4.98 kg                             |
| i/Q connectivity     | CPRI or 10 GbE                                | CPRI or 10 GbE                                 | CPRI or 10 GbE                               |
| Management interface | Local Gigabit Ethernet                        | Local Gigabit Ethernet                         | Local Gigabit Ethernet                       |

## FEATURES

Integrated Digital Pre-Distortion (DPD)

Integrated Crest Factor Reduction (CFR)

Integrated alarm and fault management including forward power, VSWR, and operating status.