

# CoreCell-E LTE eNodeB

## 4G LTE Radio Access Network

**T**ecore 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.

### 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.

# CORECELL-E Specifications

## BASEBAND UNIT



### CAPACITY DATA

Active Users	Scalable up to 1,000 SAU per baseband unit
Downlink Peak L1 Throughput	150 Mbps with 2x2 MIMO in 20 MHz bandwidth
Uplink Peak L1 Throughput	75 Mbps with 2x2 MIMO in 20 MHz bandwidth

### INTERFACE DATA

OAM	via CPRI or 10GbE
MIMO	2x2
Fiber Links	3 CPRI

### ENVIRONMENTAL DATA

Relative Humidity	+8% to +100%
Options	Standard and Milspec
Operating Temperature	23-113° F

## REMOTE RADIO HEAD

### FEATURES

Integrated Digital Pre-Distortion (DPD)

Integrated Crest Factor Reduction (CFR)

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



### SPECIFICATION

#### MACRO SITE

#### MICRO CELL

#### SMALL CELL

RF output power	40W (20W per port)	10W (5W per port)	1W (0.5W per port)
Antenna connector port	2 x 4.3/10	2 x 4.3/10	2 x 4.3/10
Operating frequency	380 MHz to 4400 MHz	380 MHz to 4400 MHz	380 MHz to 4400 MHz
Bandwidth supported	1.4, 3, 5, 10, 15, 20 MHz	1.4, 3, 5, 10, 15, 20 MHz	1.4, 3, 5, 10, 15, 20 MHz
3GPP compliance	3GPP Release 12	3GPP Release 12	3GPP Release 12
Duplex method	FDD/TDD	FDD/TDD	FDD/TDD
Dimension (inches)	11.6 x 7.9 x 6	11.6 x 7.9 x 4.7	11.6 x 7.9 x 3.15
Power consumption	200 watts	90 watts	50 watts
Weight	26.4 lbs	22 lbs	11 lbs
Voltage	DC 27V or -48V	DC 27V or -48V	DC 27V or -48V
Operating temperature	-40 F to +131 F	-40 F to +131 F	-40 F to +131 F
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