

5G iCore® Network in a Box®

ALL-IN-ONE INDOOR/OUTDOOR 5G NETWORK

Tecore's 5G iCore® Network in a Box® (NIB) is the industry's leading NIB product that supports a ready-in-minutes 5G network solution. Integrated into this single unit is all the hardware and software required to support 5G standalone (SA), 5G non-standalone (NSA), or 4G LTE operations. The NIB comes integrated with a 5G Core and an optional 4G EPC, along with an integrated eNodeB and gNodeB to provide comprehensive support for voice, text, video, and packet data services through standards-based network elements that are developed to current 3GPP standards.

With the expansion of packet data services to improve latency, provide higher bandwidth, and high peak data rates, 5G networks offering these benefits have never been more straightforward to implement, thanks to Tecore's NIB product.

The 5G NIB is a robust all-in-one integrated solution enabling comprehensive management and operations of networks. It has been successfully deployed in commercial, government, and private networks on a global basis. It provides high operational availability through continued network coverage in a small, compact, portable form factor to meet critical public safety needs when a backhaul connection to the macro network is lost.



5G NIB Capabilities

Feature Capabilities

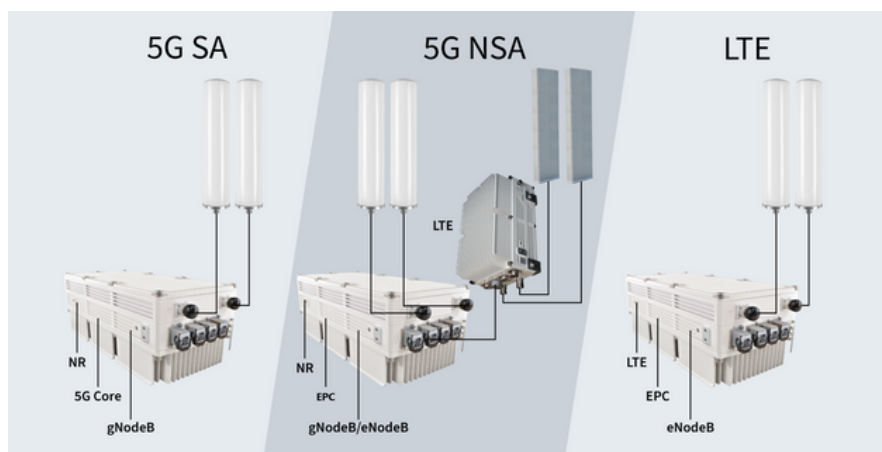
- Lightweight Core
- Support VoLTE/VoNR
- Configurable Logging
- Remote API
- Multi-PDU Session Support
- URLLC – Ultra Reliable Low Latency Communication
- eMBB – Enhanced Mobile broadband

Integrated 5G SA Functional Elements and Capabilities

- AMF, UDM/AUSF, SMF, UPF
- Support broadcast and multicast PDU session
- Integrated gNodeB

Optional 5G NSA and LTE Elements and Features

- MME/SAE Gateway
- HSS/AuC/AAA
- EPC/eHSS/IMS + PCRF
- eNodeB



5G NIB Specifications

Software

Dimensions	16.91" H x 7.87" W x 6.16" D 42.95 x 19.98 x 15.65 cm
Weight	32.0lbs / 14.5kg
Power Consumption	300W max, 250W typical
Voltage	-48V DC
RF Output Power	40W (20W per port)
Antenna Connector Port	2 x 4.3/10
Operating Frequency	Available in select 3GPP Bands*
Bandwidth Supported	LTE 1.4-20MHz NR in 5-50MHz**
Duplex Method	FDD/TDD
AISG Support	RET Control AISF v2.0
Operating Temperature	-40 to +131°F -40 to +55°C

Throughput Capacity Data

Active Users	Scalable up to 1,000 SAU per baseband unit
Downlink Peak L1 Throughput	LTE: 200 Mbps with 2x2 MIMO in 20 MHz bandwidth (DL 256QAM) NR: 500Mbps with 2x2 MIMO in 50MHz bandwidth (DL 256 QAM)
Uplink Peak L1 Throughput	LTE: 75 Mbps in 20 MHz bandwidth (UL 64QAM) NR: 250Mbps in 50MHz bandwidth (UL 64 QAM)

Integrated Features

Integrated Digital Pre-Distortion (DPD)
Integrated Crest Factor Reduction (CFR)
Integrated alarm and fault management including forward power, VSWR, and operating status

Environmental Data

Relative Humidity	+20% to 80%
Options	Standard and Milspec

Benefits

- Self-contained, secure Network-in-a-Box (NIB)
- Scalable to support thousands of provisioned subscribers
- Requires no existing infrastructure
- Operates as Secure Standalone or Integrated
- 3GPP Compliant on Core and RAN services
- Operates in select frequency bands
- Scalable to meet customer requirements
- Adaptable for air, ground, maritime, dismounted, and Network On-The-Move Operations

Interface Data

OAM	In band via CPRI Out of band via LMT
MIMO	2x2
Fiber Links	2 CPRI interfaces supporting up to CPRI rate 8
Data Interface	1 Gigabit Ethernet port
Integrated GPS Receiver and Antenna	Local or GPS Clock

Optional Accessories

Deployable Mast
SIM Cards
Handsets
Ruggedized Laptop
Antennas
View live camera feed
View real-time Sensor Data Integration
Integrate with C4ISR and Situational Awareness platform
Emergency location capabilities

*Please contact Tecore for details
**Depending on Frequency Band

To learn more about our technology, products, and services, call us at **+1.410.872.6500** or visit us at **www.Tecore.com** © Tecore Inc.