PRELIMINARY

FE990D60

5G/LTE-Advanced

Product Description

The Telit Cinterion FE990D60 LGA module family enables next-generation, high-performance 5G LGA modules. They feature 5G sub-6 technology with Gigabit LTE and WCDMA support, plus a state-of-the-art multiconstellation GNSS receiver.

This LGA module is ideal for applications that require feature and interface-rich modems with top-of-the line RF connectivity features.

It's ideal for high-performance enterprise and industrial applications, including:

- Indoor and outdoor fixed wireless access (FWA)
- Video streaming and surveillance devices
- Industrial routers and gateways

This module leverages Qualcomm Snapdragon® X85 5G Modem-RF System and is compliant with 3GPP 5G Release (Rel) 18 5G deployments, including:

- Non-stand-alone (NSA) LTE/5G NR dual connectivity (EN-DC)
- Full 5G NR stand-alone (SA) mode
- Dynamic spectrum sharing (DSS) between LTE and 5G
- Network Slicing
- Dual SIM Dual Active (DSDA)
- 8RX support for optimal receiver performance
- NB-NTN

The FE990D60 modules are available in two regional variants:

- **FE990D60-RWD:** Support key sub-6 frequency bands in Europe, the Middle East, South America and Oceania with LTE and WCDMA fallback technologies
- **FE990D60-NAD**: Support key sub-6 frequency bands in North America with LTE fallback technology

Key Benefits

- Available in two regional variants (EMEA and North America) with 5G sub-6 FDD and TDD bands
- Supports SA and NSA operations and 5G core network Opt. 3a/3x and Opt. 2 for full network compatibility
- Next-generation 5G Rel 18 networks
- 4 x 4 MIMO DL support on all bands
- 4G Category (Cat) 20 up to 5xCA
- Intraband and interband UL CA supported on 4G networks for better throughput performance for uplink-centric applications (e.g., surveillance cameras and 4K/8K video streaming)
- 3G HSPA+ Rel 8 for fallback to legacy networks (FE990D60-RWD only)
- Form factor: 52 x 52 x 2.9 mm
- Multiple PCIe interfaces: Gen 4 (one lane) or Gen 3 (two lanes) and USB 3.1 Gen 2 support for maximum application design flexibility
- GNSS L1 and L5 support with dedicated antenna pad and internal GNSS LNA to allow less expensive passive antennas, which lowers the cost of ownership
- An array of interfaces exposed (over 600 pads): USB, PCIe Gen 3, UART, Wi-Fi coexistence etc.
- High-performance quad-core CPU and Linux OpenWRT OS, ideal for router development without an external CPU
- Telit Cinterion IoT AppZone development environment to allow customers to implement applications that run on the module CPU

AVAILABLE FOR

NA
EMEA
APAC

Telit Cinterion

PRELIMINARY

FE990D60

Variants

	FE990D60-RWD	FE990D60-NAD
Market	EMEA, Oceania, South America	North America
5G FR1 Bands	n1, n3, n5, n7, n8, n18, n20, n26, n28, n38, n40, n41, n68, n75, n76, n77, n78, n79	n2, n5, n7, n8, n12, n13, n14, n25, n26, n29, n30, n38, n41, n48, n53, n66, n70, n71, n77, n78
5G FR1 Bandwidths	up to 350 MHz, 4CC CA DL	
5G FR1 4 x 4 MIMO DL Support	All bands	
5G FR1 2 x 2 MIMO UL Support	n38, n40, n41, n77, n78	n38, n41, n77, n78
8RX Support	n1, n3, n7, n38, n40, n41, n77, n78, n79	n2, n7, n25, n30, n38, n41, n48, n66, n70, n77, n78
LTE Bands	B1, B3, B5, B7, B8, B18, B19, B20, B26, B28, B32, B38, B40, B41, B42, B43, B68	B2, B4, B5, B7, B8, B12, B13, B14, B17, B25, B26, B29, B30, B38, B41, B42, B43, B48, B53, B66, B71, B106
LTE 4 x 4 MIMO DL Support	All bands	
NB-NTN	Yes	Yes
WCDMA Bands	B1, B5, B6, B8, B19	N/A
GNSS	Multiconstellation (L1 and L5)	
VoLTE, VoNR	Data only, voice support available on request	
Certifications	Anatel, CE/RED, GCF, Vodafone, Deutsche Telekom, VF*	FCC, IC, PTCRB, AT&T, T-Mobile U.S., Verizon*

**Planned*

Product Features

- 5G sub-6 FDD and TDD, SA and NSA operations
- 5G core network Opt. 3a/3x and Opt. 2
- 4G: 5xCA up to 20 layers DL, 2xCA UL;

  256-QAM DL/UL
- 3G: HSPA+ Rel 8; 42 Mbps DL, 11 Mbps UL (-RW variants only)
- GNSS: gpsOne Gen 9 with dedicated antenna pad, L1 and L5
- Antenna ports: four 5G sub-6/LTE and one GNSS
- Support of up to three Wi-Fi and two Ethernet transceivers
- Quad core ARM Cortex A55 @ 2.2 GHz
- Firmware over-the-air (FOTA) support

Hardware and Electrical Specifications

- Dimensions: 52 x 52 x 3.1 mm LGA
- Two 1.8 V SIM interfaces
- USB 3.1 Gen 2 and 2.0
- Up to three PCIe interfaces
- Two USXGMII interfaces
- Three UART ports
- Wi-Fi coexistence
- Driver support: Windows 11, Linux
- Operating temperature range:

  -40° C to +85° C

Data Throughput

FE990D60

- 5G NSA: up to 4.57 Gbps DL, 0.55 Gbps UL
- 5G SA: up to 10 Gbps DL, 0.9 Gbps UL
- 4G: 2Gbps DL, 210 Mbps UL
- 3G (HSPA+): 42 Mbps DL, 11 Mbps UL

QUESTIONS? VISIT WWW.TELIT.COM/CONTACT-US

Like Us on Facebook Follow Us on LinkedIn Follow Us on X Subscribe to Our Channel

[04.2026]

Telit Cinterion reserves all rights to this document and the information contained herein. Products, names, logos and designs described herein may in whole or in part be subject to intellectual property rights. The information contained herein is provided "as is." No warranty of any kind, either express or implied, is made in relation to the accuracy, reliability, fitness for a particular purpose or content of this document. This document may be revised by Telit Cinterion at any time. For most recent documents, please visit www.telit.com.

Copyright © 2026 Telit Cinterion