FN980/FN980m

5G/LTE

Product Description

The Telit FN980 and FN980m data cards enable a new generation of 5G state-of-the-art data cards featuring both sub-6 and mmWave (FN980m only) technologies with LTE, WCDMA and GNSS support. These data cards lay the foundation for businesses worldwide to future-proof IoT, enterprise applications and video while leveraging all 5G's and Gigabit LTE's benefits immediately.

The industrial-grade M.2 form factor is suitable for many high-performance and bandwidth-intensive enterprise and industrial applications. Use cases include high-power fixed wireless access, enterprise routers and gateways, indoor and outdoor CPE, and professional broadcasting and surveillance.

Designed for global use, the FN980 and FN980m incorporate support for all scenarios prescribed by the 3GPP deployments of 5G, including non-standalone (NSA) LTE-5G NR dual connectivity (EN-DC), dynamic spectrum sharing between LTE and 5G, and full 5G NR standalone (SA) mode.

Leveraging the full feature set of the groundbreaking second-generation Qualcomm® Snapdragon™ X55 5G Modem-RF System, the Telit data cards support the latest 5G deployments.

The FN980 and FN980m supports all major sub-6 GHz frequency bands, giving users maximum deployment flexibility. The FN980m 5G data card supports the Qualcomm QTM525 mmWave antenna module for near-the-ground, low-power indoor and outdoor applications. Additionally, the FN980m also supports the Qualcomm QTM527 mmWave extended-range antenna module for high-mount outdoor applications.

Key Benefits

- Support of 5G sub-6 FDD and TDD and mmWave (FN980m only) for global deployment

- Two-in-one mmWave antenna connectors (FN980m only) reduce the number of insertions required in production to a maximum of four

- Support of NSA operation, 5G core network Opt. 3a/3x and Opt. 2 for full network compatibility

- Latest generation 4G/5G Rel. 15

- 4G Cat 20 up to 7 CA

- Intraband and interband UL CA supported on 4G networks for better throughput performance for uplink-centric applications, like surveillance cameras and 4K/8K video streaming

- 3G HSPA+ Rel. 8 for fallback to legacy networks

- Standard M.2 (NGFF) data card form factor

- Support for both PCIe Gen 3 and USB 3.1 Gen 2 for maximum application design flexibility

- State-of-the-art GNSS receiver with double frequency GPS (Band L1/L5) for better accuracy

- Dedicated/shared (switchable) RF path/connector for GNSS L1 to allow total flexibility in the design phase and low losses whenever high sensitivity is required

- Internal GNSS L1 LNA allowing the use of less expensive passive antennas, lowering the total cost of ownership

AVAILABLE FOR

NA

EMEA

APAC

FN980/FN980m

Variants

	FN980	FN980m
Market	North America, EMEA, APAC	North America, EMEA, APAC
5G FR1	n1, n2, n3, n5, n7, n8, n12, n20, n25, n28, n38, n40, n41, n48, n66, n71, n77, n78, n79	n1, n2, n3, n5, n7, n8, n12, n20, n25, n28, n38, n40, n41, n48, n66, n71, n77, n78, n79
5G FR2		n257, n258, n260, n261
LTE	1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 28, 29DL, 30, 32, 34, 38, 39, 40, 41, 42, 43*, 46(LAA), 48(CBRS), 66, 71	1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 28, 29DL, 30, 32, 34, 38, 39, 40, 41, 42, 43*, 46(LAA), 48(CBRS), 66, 71
WCDMA	1, 2, 3, 4, 5, 6, 8, 9, 19	1, 2, 3, 4, 5, 6, 8, 9, 19
Approvals	CCC, FCC, JATE/Telec, KCC, RCM, RED, GCF, PTCRB, AT&T, FirstNet, KDDI, NTT Docomo, Orange, Rogers, Telstra, T-Mobile EU and US, Vodafone, VzW	CCC, FCC, JATE/Telec, KCC, RCM, RED, SKT

Product Features

- 5G sub-6 and mmWave FDD and TDD, NSA operation
- 5G core network Opt. 3a/3x and Opt. 2
- 4G: 7 CA, up to 20 layers DL/2 CA UL, 256-QAM DL/UL
- 3G: HSPA+ Rel. 8 (DL/UL 42/11 Mbps)
- GNSS: gpsOne Gen 9 Band L1 on dedicated RF connector, L5 shared with cellular
- Voice support: VoLTE, VoNR (under evaluation), PCM audio over USB
- Four antenna connectors for LTE/sub-6
- Four mmWave antennas supported
- 4x4 MIMO support on bands:
  4G: B1, 2, 3, 4, 7, 25, 30, 66, 38, 39, 40, 41, 42, 43, 48, 46
  5G: n1, 2, 3, 7, 25, 38, 40, 41, 48, 66, 77, 78, 79
- Antenna types: four LTE/sub-6 and mmWave antenna types: four QTM525/527
- FOTA support

Hardware and Electrical Specifications

- Dimensions: 30 × 50 × 3.4 mm
- 1.8/3 V SIM Interface
- USB 3.1 Gen 2
- PCIe Gen3
- Drivers support: Windows 10, Linux
- Operating temperature range:
  -40 °C to +85 °C
- LTE/5G sub-6 output power 23 dBm (Power Class 3)
- Supply voltage
  - Nominal: 3.3 V dc

Data Throughput

- 5G up to 5.5 DL/1.5 UL Gbps
- 4G up to 2 Gbps DL/211 Mbps UL
- 3G up to 42 DL/11 UL Mbps

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