LCK54-WRD

LTE-A Cat 6
M.2 Module

42.0 mm
30.0 mm
2.3 mm
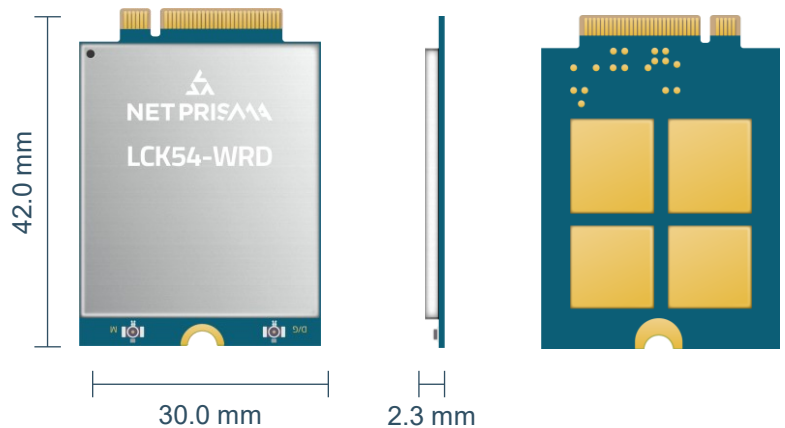
Product Features

- LTE-A Cat 6 module with M.2 form factor

- Support DL 2 Carrier Aggregation and 64QAM

- Worldwide LTE-A and UMTS/ HSPA+ coverage

- Built-in eSIM (optional), DSSA

- Low power mode

- Multi-constellation GNSS receiver available for applications requiring fast and accurate fixes in any environment

- MIMO technology meets demands for data rate and link reliability in modem wireless communication systems

LCK54-WRD is an LTE Advanced Category 6 module. Adopting the 3GPP Release 12 technology, the module supports a theoretical peak data rate of 300 Mbps in the downlink and a theoretical peak data rate of 50 Mbps in the uplink.

LCK54-WWD is designed for the global market and nearly covers all the mainstream carriers worldwide. The module supports Qualcomm® IZat^{TM} location technology gpsOne 9HT (GPS, GLONASS, BDS and Galileo). The integrated GNSS greatly simplifies product design, and provides quicker, more accurate and more dependable positioning capability.

A rich set of Internet protocols, industry-standard interfaces and abundant functionalities (USB drivers for Windows, Linux, Android/ optional built-in eSIM) extend the suitability of the module to a wide range of applications such as industrial routers, home gateways, set-top boxes, industrial laptops, consumer laptops, industrial PDAs, rugged tablet PCs, and digital signage, etc.

4G Cat 6
DL: max. 300 Mbps
UL: max. 50 Mbps

3G DL: max. 42 Mbps
UL: max. 5.76 Mbps

M.2 form factor

Embedded abundant protocols

USB 2.0 interface

Multi-constellation GNSS

Enhanced AT commands

Version: 1.0.0
Status: Preliminary

LCK54-WWD

Mechanical Data

Region/operator	Global
Package	M.2 Package, Key-B
Dimensions (mm)	30.0 × 42.0 × 2.3
Weight (g)	6.2

Temperature Range

Operating temperature	-25 °C to +75 °C
Extended temperature	-40 °C to +85 °C

Frequency Bands

LTE	**LTE-FDD:** B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12/ 13/ 14/ 17/ 18/ 19/ 20/ 25/ 26/ 28/ 29[1]/ 30/ 32[1]/ 66/ 71 **LTE-TDD:** B34/ 38/ 39/ 40/ 41 **DL 2CA:** intra-band and inter-band **QAM:** DL 64QAM/ UL 16QAM
UMTS	**WCDMA:** B1/ 2/ 3/ 4/ 5/ 6/ 8/ 19
GNSS	GPS/ GLONASS/ BDS/ Galileo

Data Transmission

LTE data rate		Max. 300 Mbps (DL)/ 50 Mbps (UL)
UMTS data rate	**DC-HSDPA**	Max. 42 Mbps (DL)
	HSUPA	Max. 5.76 Mbps (UL)
	WCDMA	Max. 384 kbps (DL/UL)

Interfaces

(U)SIM interfaces (1.8/ 3.0 V)	× 2
USB 2.0	× 1
Control and indication interfaces*	× 6 (Airplane mode control, GNSS control, wake-up control, RF status indication, etc.)
Antenna tuner control interfaces*	× 2
Configuration pins	× 4
Antenna interfaces	× 2 (Main, Rx-diversity/ GNSS)

Enhanced Features

MIMO	DL 2 × 2
Built-in eSIM	Supported
DSSA (Dual SIM, Single Active)	Supported
Embedded GNSS	Supported

Certifications

Carrier*	**Europe:** Vodafone/ Swisscom/ EE/ Deutsche Telekom/ Telefonica **America:** Verizon/ AT&T/ T-Mobile **China:** China Mobile/ China Unicom **Japan:** NTT DOCOMO/ Softbank/ KDDI/ Rakuten
Regulatory*	NCC/ Anatel/ SRRC/ NAL/ CCC/ CE/ FCC/ IC/ RCM/ PTCRB/ GCF/ UKCA/ KC/ JATE/ TELEC/ NBTC/ IMDA/ ICASA
Others*	WHQL/ RoHS Compliant

Electrical Features

Supply voltage (V)	3.135–4.4 V, typ. 3.3 V
Power consumption @ USB mode	**Power down:** 62 µA **Sleep:** 2.71 mA **Idle:** 16.75 mA

1: LTE-FDD B29/ 32 support Rx only and are only for secondary component carrier.

*: Under development/ planning.