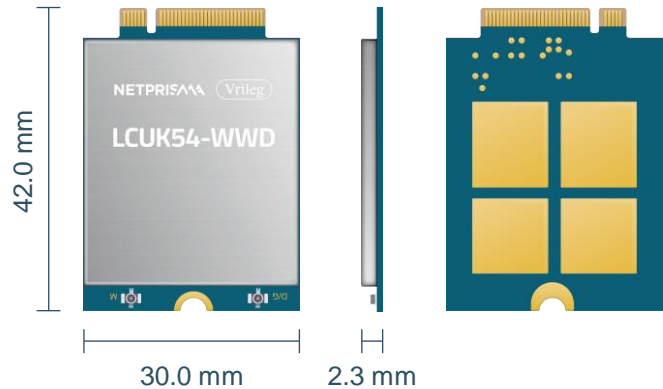


LCUK54-WWD

LTE-A Cat 6
M.2 module



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), DSSS (Dual SIM Single Standby)
- > 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

LCUK54-WWD is an LTE Advanced category 6 module. Adopting 3GPP Release 12 technology, the module supports a theoretical peak data rate of 300 Mbps downlink and a theoretical peak data rate of 50 Mbps uplink.

LCUK54-WWD is designed for the global market and covers nearly all of the mainstream carriers worldwide. The module is embedded with a multi-constellation and high-sensitivity GNSS (GPS, GLONASS, BDS, Galileo and QZSS) receiver for positioning. 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 and consumer laptops, industrial PDAs, rugged tablet PCs, and digital signage.



Max. 300 Mbps (DL)
Max. 50 Mbps (UL)



Max. 42 Mbps (DL)
Max. 5.76 Mbps (UL)



M.2 form factor



Embedded abundant protocols



USB 2.0/ 3.0 interface



Multi-constellation GNSS



Enhanced AT commands

Version: 1.0.0
Status: Preliminary

LCUK54-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/ 42/ 43/ 46 ¹ (LAA)/ 48 (CBRS) 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/ QZSS

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 (1.8/ 3.0 V)	× 2
USB 2.0/ 3.0	× 1
Configuration pins	× 4
Antenna interfaces	× 2 (Main, Rx-diversity/GNSS)

Enhanced Features

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

Software Features

3GPP	3GPP E-UTRA Release 12
AT command	3GPP TS 27.007; Enhanced AT commands
Protocols	QMI/ MBIM/ NITZ/ PING/ HTTP/ HTTPS

Certifications

Carrier*	Europe: Vodafone/ Deutsche Telekom/ Telefonica/ Swisscom America: Verizon/ AT&T/ T-Mobile Japan: NTT DOCOMO/ KDDI/ SoftBank British: British Telecom
Regulatory*	PTCRB/ GCF/ FCC/ CE/ JATE/ TELEC/ CST/ ICASA/ TDRA/ UKCA
Others*	WHQL

Electrical Features

Supply voltage (V)	3.135–4.4, typ. 3.7
Power consumption @ USB mode	Power down: 47 µA Flight mode: 1.64 mA Idle: 3.19 mA (USB suspend)

¹: LTE-FDD B29/ B32 and LTE-TDD B46 support Rx only and are only for secondary component carrier.

*: Under development/planning.

●: Supported; ○: Optional.