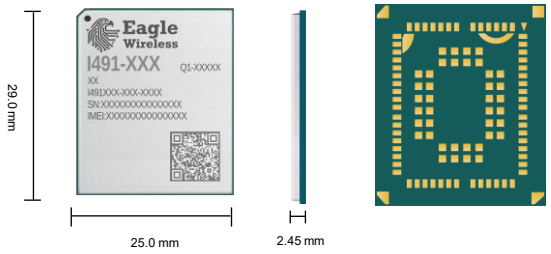
Eagle I491 Series

IoT/M2M-optimized LTE Cat 1 Module



Eagle I491 series contains 4 variants: I491-NAX, I491-NAXD, I491-NAXDGB, I491-JP and it is a series of LTE Cat 1 modules optimized specially for M2M and IoT applications. Adopting 3GPP Rel-11 LTE technology, it delivers maximum data rates up to 10 Mbps downlink and 5 Mbps uplink. These make I491 series an ideal solution for numerous IoT applications that are not reliant on high speed connectivity but require the longevity and reliability of LTE network.

A rich set of Internet protocols, industry-standard interfaces and abundant functionalities (USB serial drivers for Windows 10/11, Linux and Android, etc.) extend the applicability of the module to a wide range of M2M and IoT applications such as smart metering, wearable devices, environmental monitoring, asset tracking, fleet management, smart safety and alarm systems.

Key Features

- ✔ Cost-effective and low-power LTE connectivity optimized for broadband IoT applications
- ✔ Multi-band LTE, UMTS/HSPA(+) coverage
- ✔ Compact SMT form factor ideal for size-constrained applications with extended operating temperature range
- ✔ Embedded power management unit (PMU) featuring ultra-low deep-sleep current consumption
- ✔ Simple migration from 3G to 4G with a flexible and scalable platform

LTE Cat 1
Max. 10 Mbps (DL)
Max. 5 Mbps (UL)

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

LGA Package

Embedded Abundant Protocols

Compact Size

Enhanced AT Commands

USB 2.0 High Speed Interface

USB Drivers

EMAIL US: info@eaglewireless.com VISIT US: www.eaglewireless.com

Eagle I491 Series

LTE Cat 1	I491-NAXD (Data-only)	I491-NAXDGB (Data-only)	I491-NAX	I491-JP
Region/Operator	North America	North America	North America	Japan
Dimensions (mm)	29.0 × 25.0 × 2.45	29.0 × 25.0 × 2.45	29.0 × 25.0 × 2.45	29.0 × 25.0 × 2.45
Temperature Range				
Operating Temperature	-35 °C to +75 °C	-35 °C to +75 °C	-35 to +75 °C	-35 °C to +75 °C
Extended Temperature	-40 °C to +85 °C	-40 °C to +85 °C	-40 to +85 °C	-40 °C to +85 °C
Frequency Bands				
LTE-FDD	B2/4/5/12/13/25/26	B2/4/5/12/13/25/26	B2/4/5/12/13/25/26	B1/3/8/18/19/26
WCDMA	B2/4/5	B2/4/5	B2/4/5	-
GNSS (Optional)	GPS/GLONASS/BDS/Galileo/QZSS	GPS/GLONASS/BDS/Galileo/QZSS	GPS/GLONASS/BDS/Galileo/QZSS	GPS/GLONASS/BDS/Galileo/QZSS
Certifications				
Carrier	**America:** Verizon/AT&T/T-Mobile	**America:** Verizon*/AT&T **Canada:** Telus	**America:** Verizon/AT&T/T-Mobile	**Japan:** NTT DOCOMO/KDDI/SoftBank*
Regulatory	**Global:** GCF **North America:** PTCRB **America:** FCC **Canada:** IC	**Global:** GCF **North America:** PTCRB **America:** FCC **Canada:** IC	**Global:** GCF **North America:** PTCRB **America:** FCC **Canada:** IC	**Japan:** JATE/TELEC*
Others	WHQL/RoHS	WHQL/RoHS	WHQL/RoHS	WHQL/RoHS
Max. Data Transmission Rates				
LTE-FDD (Mbps)	10 (DL)/5 (UL)	10 (DL)/5 (UL)	10 (DL)/5 (UL)	10 (DL)/5 (UL)
DC-HSPA+ (Mbps)	42 (DL)/5.76 (UL)	42 (DL)/5.76 (UL)	42 (DL)/5.76 (UL)	-
WCDMA (kbps)	384 (DL)/384 (UL)	384 (DL)/384 (UL)	384 (DL)/384 (UL)	-
Interfaces				
(U)SIM	× 2	× 2	× 2	× 2
UART	× 2	× 2	× 2	× 2
USB 2.0	× 1	× 1	× 1	× 1
Audio Digital (PCM)	× 1	× 1	× 1	× 1
I2C	× 1	× 1	× 1	× 1
NETLIGHT	× 1	× 1	× 1	× 1
SPI	× 1	× 1	× 1	× 1
Main Antenna	× 1	× 1	× 1	× 1
Rx-diversity Antenna	× 1	× 1	× 1	× 1
GNSS Antenna	× 1	× 1	× 1	× 1
PWRKEY	× 1	× 1	× 1	× 1
RESET_N	× 1	× 1	× 1	× 1
USB_BOOT	× 1	× 1	× 1	× 1
GRFC (Optional)	× 1	× 1	× 1	× 2
Voice				
Speech Codec Modes	-	-	AMR/AMR-WB	AMR/AMR-WB
Echo Arithmetic	-	-	Echo Cancellation/Noise Suppression	Echo Cancellation/Noise Suppression
Audio (Optional)	-	-	Digital Audio and VoLTE (Voice over LTE)	Digital Audio and VoLTE (Voice over LTE)
Enhanced Features				
DTMF	-	-	●	●
DFOTA	●	●	●	●
QMI/RmNet	●	●	●	●
Audio Playback/Audio Recording	Optional	Optional	Optional	Optional
(U)SIM Card Detection	●	●	●	●
EagleFile	●	●	●	●
SMS	●	●	●	●
eSIM*①	●	●	●	●
Drivers				
USB Serial Driver	Windows 10/11, Linux 2.6–6.7, Android 4.x–14.x	Windows 10/11, Linux 2.6–6.7, Android 4.x–14.x	Windows 10/11, Linux 2.6–6.7, Android 4.x–14.x	Windows 10/11, Linux 2.6–6.7, Android 4.x–14.x
GNSS Driver	Android 4.x–14.x	Android 4.x–14.x	Android 4.x–14.x	Android 4.x–14.x
RIL Driver	Android 4.x–14.x	Android 4.x–14.x	Android 4.x–14.x	Android 4.x–14.x
USB NDIS Driver	Windows 10/11	Windows 10/11	Windows 10/11	Windows 10/11
USB MBIM Driver	Windows 10/11, Linux 3.18–6.7	Windows 10/11, Linux 3.18–6.7	Windows 10/11, Linux 3.18–6.7	Windows 10/11, Linux 3.18–6.7
USB GobiNet Driver	Linux 2.6–6.7	Linux 2.6–6.7	Linux 2.6–6.7	Linux 2.6–6.7
USB QMI_WWAN Driver	Linux 3.4–6.7	Linux 3.4–6.7	Linux 3.4–6.7	Linux 3.4–6.7
Electrical Features				
Supply Voltage Range	3.3–4.3 V, 3.8 V Typ.	3.3–4.3 V, 3.8 V Typ.	3.3–4.3 V, 3.8 V Typ.	3.3–4.3 V, 3.8 V Typ.
Power Consumption	9 μA @ Power off 1.1 mA @ Sleep, Typ. 16.7 mA @ Idle	9 μA @ Power off 0.94 mA @ Sleep, Typ. 15.3 mA @ Idle	9 μA @ Power off 1.1 mA @ Sleep, Typ. 16.7 mA @ Idle	10 μA @ Power off 0.8 mA @ Sleep, Typ. 14.6 mA @ Idle

NOTE:
1. *: Under development / In progress.
2. ●: supported.
3. ①: eSIM function can be supported by software, but an external eSIM chip is required.

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