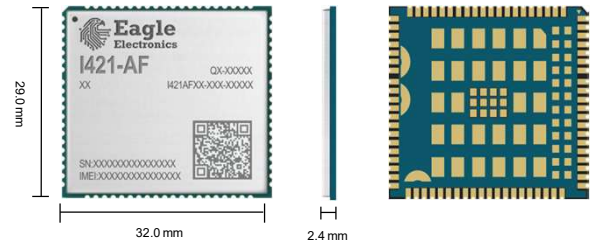


Eagle I421-AF

IoT/M2M-optimized LTE Cat 4 Module



Eagle I421-AF is an LTE Cat 4 module optimized specially for M2M and IoT applications. Adopting the 3GPP Rel.11 LTE technology, it delivers maximum data rates up to 10 Mbps downlink and 5 Mbps uplink. Designed in the compact and unified form factor, I421-AF is compatible with Eagle I425-AF and I42x-GL modules, which allows for flexible migration among them in design and use as well as a series of Quectel EC/EG2x modules.

I421-AF has two variants: I421-AFX and the I421-AFXD. The difference is the latter is data only and does not support any voice capabilities.

I421-AF supports Qualcomm® IZat™ location technology Gen8C Lite (GPS, GLONASS, BDS, Galileo and QZSS). The integrated GNSS greatly simplifies product design, and provides quicker, more accurate and more dependable positioning.

A rich set of Internet protocols, industry-standard interfaces and abundant functionalities (USB serial drivers for Windows 7/8/8.1/10/11, Linux, Android) extend the applicability of the module to a wide range of M2M and IoT applications such as industrial router, industrial PDA, rugged tablet PC, video transmission, and digital signage.



Key Features

- ✓ LTE Cat 4 module optimized for M2M and IoT applications
- ✓ Worldwide LTE, UMTS/HSPA(+) and GSM/GPRS/EDGE coverage
- ✓ Multi-constellation GNSS receiver available for applications requiring fast and accurate fixes in any environment
- ✓ Feature refinements: supports DFOTA and DTMF
- ✓ MIMO technology meets demands for data rate and link reliability in modem wireless communication system



LTE Cat 4
Max. 10 Mbps (DL)
Max. 5 Mbps (UL)



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



LCC Package



Embedded Abundant
Protocols



USB Drivers



Multi-constellation
GNSS (Optional)



USB 2.0 High Speed
Interface



Eagle Enhanced
AT Commands

Eagle I425-AF

LTE Cat 4	I425-AFX	I425-AFXD (Data Only)
Region/Operator	North America	North America
Dimensions (mm)	29.0 × 32.0 × 2.4	29.0 × 32.0 × 2.4
Weight (g)	Approx. 4.9	Approx. 4.9
Temperature Range		
Operating Temperature	-35 °C to +75 °C	-35 °C to +75 °C
Extended Temperature	-40 °C to +85 °C	-40 °C to +85 °C
Frequency Bands		
LTE-FDD	B2/4/5/12/13/14/66/71	B2/4/5/12/13/14/66/71
LTE-TDD	-	-
WCDMA	B2/4/5	B2/4/5
TD-SCDMA	-	-
GSM/EDGE	-	-
GNSS (Optional)	GPS/GLONASS/BDS/Galileo/QZSS	GPS/GLONASS/BDS/Galileo/QZSS
Certifications		
Carrier	America: Verizon/AT&T/T-Mobile	America: Verizon/AT&T/T-Mobile
Regulatory	Global: GCF North America: PTCRB America: FCC	Global: GCF North America: PTCRB America: FCC
Others	RoHS/WHQL	RoHS/WHQL
Max. Data Rates		
LTE-FDD (Mbps)	10 (DL)/5 (UL)	150 (DL)/50 (UL)
LTE-TDD (Mbps)	-	-
DC-HSPA+ (Mbps)	42 (DL)/5.76 (UL)	42 (DL)/5.76 (UL)
WCDMA (kbps)	384 (DL)/384 (UL)	384 (DL)/384 (UL)
EDGE (kbps)	-	-
GPRS (kbps)	-	-
Interfaces		
(U)SIM	× 1	× 1
UART	× 2 (Main & Debug UART)	× 2 (Main & Debug UART)
USB 2.0	× 1	× 1
SDIO	× 1	× 1
Digital Audio (PCM)	× 1	× 1
ADC	× 2	× 2
Voice		
Speech Codec Modes	HR/FR/EFR/AMR/AMR-WB	-
Echo Arithmetic	Echo Cancellation/Noise Suppression	-
VoLTE (Optional)	Digital Audio and VoLTE (Voice over LTE)	-
Enhanced Features		
DTMF	●	-
DFOTA	●	●
QMI/RmNet	●	●
Audio Playback/Audio Recording	Optional	-
QuecOpen®	-	-
QuecFile®	●	●
(U)SIM Card Detection	●	●

Eagle I425-AF

LTE Cat 4	I425-AFX	I425-AFXD (Data Only)
Software Features		
Protocols	TCP/UDP/PPP/FTP/HTTP/NTP/PING/QMI/NITZ/S MTP/MQTT/CMUX/HTTPS/FTPS/SMTPTS/SSL/M MS/FILE	TCP/UDP/PPP/FTP/HTTP/NTP/PING/QMI/NITZ/S MTP/MQTT/CMUX/HTTPS/FTPS/SMTPTS/SSL/M MS/FILE
Drivers		
USB Serial Driver	Windows 8/8.1/10/11 Linux 2.6–6.5 Android 4.x–13.x	Windows 8/8.1/10/11 Linux 2.6–6.5 Android 4.x–13.x
GNSS Driver	Android 4.x–13.x	Android 4.x–13.x
RIL Driver	Android 4.x–13.x	Android 4.x–13.x
USB NDIS Driver	Windows 8/8.1/10/11	Windows 8/8.1/10/11
USB GobiNet Driver	Linux 2.6–6.5	Linux 2.6–6.5
USB QMI_WWAN Driver	Linux 3.4–6.5	Linux 3.4–6.5
Electrical Features		
Supply Voltage Range	3.3–4.3 V, typ. 3.8 V	3.3–4.3 V, typ. 3.8 V
Power Consumption (Typ.)	7 μ A @ Power off 1.3 mA @ Sleep 15.7 mA @ Idle	7 μ A @ Power off 1.3 mA @ Sleep 15.7 mA @ Idle