



KHADAS

4G Module Performance Comparison

Comparing EM06 with EM060K

LTE Cat 6	EM06-E	EM06-A	EM060K-EA
Region / Operator	EMEA / APAC ^① / Brazil	North America / Mexico	EMEA / APAC ^① / Brazil
Package	M.2 Package, Key-B	M.2 Package, Key-B	M.2 Package, Key-B
Dimensions (mm)	30.0 × 42.0 × 2.3	30.0 × 42.0 × 2.3	30.0 × 42.0 × 2.3
Temperature Range			
Operating Temperature	-30°C to 70°C	-30°C to 70°C	-25 °C to 75 °C
Extended Temperature	-40°C to 85°C	-40°C to 85°C	-40 °C to 85 °C
Frequency Bands			
LTE-FDD	B1 / B3 / B5 / B7 / B8 / B20 / B28 / B32 ^②	B2 / B4 / B5 / B7 / B12 / B13 / B25 / B26 / B29 ^② / B30 / B66	B1 / B3 / B5 / B7 / B8 / B20 / B28 / B32 ^②
LTE-TDD	B38 / B40 / B41	B41	B38 / B40 / B41
DL 2CA	○	○	Intra-band and Inter-band
LTE 2× CA	B1+B1 / B5 / B8 / B20 / B28; B3+B3 / B5 / B7 / B8 / B20 / B28; B7+B5 / B7 / B8 / B20 / B28; B20+B32 ^② ; B38+B38; B40+B40; B41+B41	B2+B2 / B5 / B12 / B13 / B29 ^② ; B4+B4 / B5 / B12 / B13 / B29 ^② ; B7+B5 / B7 / B12 / B26; B25+B5 / B12 / B25 / B26; B30+B5 / B12 / B29 ^② ; B66+B5 / B12 / B13 / B29 ^② / B66; B41+B41	○
DL 64QAM / UL 16QAM	○	○	●
UMTS WCDMA	B1 / B3 / B5 / B8	B2 / B4 / B5	B1 / B3 / B5 / B8
GNSS (Optional)	GPS / GLONASS / BeiDou (Compass) / Galileo / QZSS (Optional)	GPS / GLONASS / BeiDou (Compass) / Galileo / QZSS (Optional)	GPS / GLONASS / BDS / Galileo / QZSS
Certifications			
Regulatory	Global: GCF Europe: CE China-Taiwan: NCC Australia / New Zealand: RCM South Africa: ICASA	Global: GCF North America: FCC / PTCRB Canada: IC	Global: GCF Europe: CE Australia / New Zealand: RCM
Data Rate (Max.)			
LTE (Mbps)	○	○	300 (DL) / 50 (UL)

LTE-FDD (Mbps)	300 (DL) /50 (UL)	300 (DL) /50 (UL)	○	
LTE-TDD (Mbps)	226 (DL) /28 (UL)	226 (DL) /28 (UL)	○	
UMTS	DC-HSDPA (Mbps)	○	○	42 (DL)
	DC-HSPA+ (Mbps)	42 (DL) /5.76 (UL)	42 (DL) /5.76 (UL)	○
	HSUPA (Mbps)	○	○	5.76 (UL)
	WCDMA (kbps)	384 (DL) /384 (UL)	384 (DL) /384 (UL)	384 (DL) / 384 (UL)
Interfaces				
(U)SIM (1.8 / 3.0 V)	× 2	× 2	× 2	
USB 2.0 / 3.0	× 1	× 1	× 1	
PCIe (Optional)	○	○	× 1 (RC mode: PCIe Gen 2, for Wi-Fi, ethernet functions)	
PCM*	× 1	× 1	× 1	
Antenna Interfaces	× 3 (Main, Rx-diversity, GNSS)	× 3 (Main, Rx-diversity, GNSS)	× 3 (Main, Rx-diversity, GNSS)	
Enhanced Features				
MIMO: DL 2 × 2	●	●	●	
(U)SIM Card Detection & Hot-plug detect	●	●	●	
Built-in eSIM	○	○	○	
DSSA: Dual SIM, Single Active	○	○	●	
DFOTA: Delta Firmware Over-the-Air	●	●	●	
Embedded GNSS	●	●	○	
Electrical Features				
Supply Voltage Range	3.135–4.4 V, typ. 3.7 V	3.135–4.4 V, typ. 3.7 V	3.135–4.4 V, typ. 3.7 V	
Transmitting Power (USB Mode)	○	○	LTE-FDD: Class 3 (23 dBm ±2 dB) LTE-TDD: Class 3 (23 dBm ±2 dB) WCDMA: Class 3 (23 dBm ±2 dB)	

Power Consumption (USB Mode)	Power down:	Power down:	Power down:
	0.050mA	0.050mA	0.064 mA;
	Sleep:	Sleep:	Sleep:
	4.1mA	3.8mA	3.42 mA;
	Idle:	Idle:	Idle:
	22.1mA	21.3mA	40.10 mA

Notes:

①: Excluding China and Japan

②: LTE-FDD B29 / B32 and LTE-TDD B46 support Rx only and are only for secondary component carrier.

●: Supported

○: Not mentioned

*: Under development / In progress.