



# K801 HIGH-PRECISION POSITIONING GNSS MODULE

Module		K801	K801S
			
Specification	Size	16mm×12mm×2.2mm	16mm×12mm×2.2mm
	Feature	Mini Size, Multi-system, Multi-frequency ,Combination Navigation	Mini Size, Multi-system, Multi-frequency
	Frequency	Multi-frequency	Multi-frequency
Signal tracking	BDS	B1I, B2a	B1I, B2a
	GPS	L1C/A, L5	L1C/A, L5
	GLO	G1	G1
	GAL	E1, E5a	E1, E5a
	QZSS	L1C/A, L5	L1C/A, L5
	SBAS	L1C/A	L1C/A
Time to First Fix	Cold Start	< 24s	< 24s
Signal Capture	Signals Tracking Sensitivity	-165dBm	-165dBm
	Signal Capture Sensitivity	-148dBm	-148dBm
Accuracy	Time Accuracy (RMS)	5ns	5ns
	SPP Accuracy	H ≤ 1.5m, V ≤ 3m (1σ, PDOP≤4)	H ≤ 1.5m, V ≤ 3m (1σ, PDOP≤4)
	Speed Accuracy	≤ 0.02m/s (PDOP ≤4)	≤ 0.02m/s (PDOP ≤4)
IMU Gyroscope*	Range	±250°/s	-
	Zero bias stability	3.5°/h	-
IMU Accelerometer*	Range	±8g	-
	Zero bias stability	25μg (x, y)	-
		100μg (z)	-
RTK	RTK Initialization Time	< 15s (baseline < 10km)	< 15s (baseline < 10km)
	Initialization Reliability	> 99.9 %	> 99.9 %
	RTK Accuracy	H: ± (10 + 10 <sup>-6</sup> × D) mm	H: ± (10 + 10 <sup>-6</sup> × D) mm
		V: ± (15 + 10 <sup>-6</sup> × D) mm	V: ± (15 + 10 <sup>-6</sup> × D) mm
Data Rates	Measurements & Position	5Hz (Optional)	5Hz (Optional)
	RTK: Positioning	5Hz (Optional)	5Hz (Optional)
	IMU*	50Hz (Optional)	50Hz (Optional)
Electrical	Voltage	+ 3.3V~3.45V DC	+ 3.3V~3.45V DC
	Power	0.15 W (Anti-Interference on)	0.15 W (Anti-Interference on)
Environmental	NMEA-0183	GPGGA, GPGSV, GPGLL, GPGSA, GPGST, GPRMC, GPVTG, GPZDA , GPNTX etc.	GPGGA, GPGSV, GPGLL, GPGSA, GPGST, GPRMC, GPVTG, GPZDA , GPNTX etc.
	RTCM3.X	1005, 1019, 1020, 1042, 1044, 1046	1005, 1019, 1020, 1042, 1044, 1046
		MSM4: 1074, 1084, 1094, 1114, 1124	MSM4: 1074, 1084, 1094, 1114, 1124
Antenna Interface	Impedance Matching	50Ω	50Ω
	Antenna Power	15dB ~ 35dB	15dB ~ 35dB
Hardware Interface		LGA (24Pin)	LGA (24Pin)
		UARTx2, PPSx1, I2Cx2, USBx1	UARTx2, PPSx1, I2Cx2, USBx1
Physical	Weight	1.0g	0.9g

\*Due to factors such as product iteration or technical updates, the product information provided in this document includes but is not limited to product names, parameters, and specifications that may change from time to time without prior notice. Please refer to the latest version of the specification file or consult with the staff