


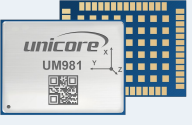



UNICORE NEBULAS SERIES PRODUCTS

	 UB9A0 All-constellation GNSS High Precision Board	 UM980 GPS/BDS/GLONASS/Galileo/QZSS All-constellation Multi-frequency High Precision RTK Positioning Module	 UM982 GPS/BDS/GLONASS/Galileo/QZSS All-constellation Multi-frequency High Precision Positioning and Heading Module	 UM981 GPS/BDS/GLONASS/Galileo/QZSS All-constellation Multi-frequency RTK/INS Integrated Positioning Module	 UM960 GPS/BDS/GLONASS/Galileo/QZSS All-constellation Multi-frequency High Precision RTK Positioning Module	 UT986 GNSS All-constellation Multi-frequency High Accuracy Timing Module
Quality Certificates	RoHS, REACH, CE, FCC, IC, RED	RoHS, REACH, CE, FCC, IC, RED	RoHS, REACH, CE, FCC, IC, RED	RoHS, REACH, CE, FCC, IC, RED	RoHS, REACH, CE, FCC, IC, RED	RoHS, REACH, RED
Application Areas	CORS; GBAS; High-precision Surveying and Mapping	Surveying and Mapping; Precision Agriculture	UAV; Precision Agriculture; Autonomous Machine	Surveying and Mapping; Precision Agriculture	Robotic Lawn Mower; Robots; Drone Light Show; GIS Handheld	Telecom Base Station Timing; Electrical Power Grid Timing; Network Time Synchronization
Dimensions, Packaging and Weight	60 × 100 × 11.4 mm 40 pin 46.5 ± 2.5 g	17.0 × 22.0 × 2.6 mm 54 pin LGA 1.88 ± 0.03 g	16.0 × 21.0 × 2.6 mm 48 pin LGA 1.82 ± 0.03 g	17.0 × 22.0 × 2.6 mm 54 pin LGA 1.91 ± 0.03 g	12.2 × 16.0 × 2.6 mm 24 pin LGA 1.11 ± 0.03 g	17.0 × 22.4 × 2.4 mm 28 pin LCC 1.9 g
Single Point (RMS)	Hor: 1.5 m Ver: 2.5 m	Hor: 1.5 m Ver: 2.5 m	Hor: 1.5 m Ver: 2.5 m	Hor: 1.5 m Ver: 2.5 m	Hor: 1.5 m Ver: 2.5 m	Hor: 1.5 m Ver: 2.5 m
DGPS (RMS)	Hor: 0.4 m Ver: 0.8 m	Hor: 0.4 m Ver: 0.8 m	Hor: 0.4 m Ver: 0.8 m	Hor: 0.4 m Ver: 0.8 m	Hor: 0.4 m Ver: 0.8 m	—
RTK (RMS)	Hor: 0.8 cm+1 ppm Ver: 1.5 cm+1 ppm	Hor: 0.8 cm + 1 ppm Ver: 1.5 cm + 1 ppm	Hor: 0.8 cm + 1 ppm Ver: 1.5 cm + 1 ppm	Hor: 0.8 cm + 1 ppm Ver: 1.5 cm + 1 ppm	Hor: 0.8 cm + 1 ppm Ver: 1.5 cm + 1 ppm	—
Heading (RMS)	—	—	0.1° / 1 m baseline	—	—	—
Frequency	GPS L1C/A, L1C, L2C, L2P(Y), L5 BDS B1I, B2I, B3I, B1C, B2a, B2b GLONASS G1, G2, G3 Galileo E1, E5a, E5b, E6 QZSS L1C/A, L1C, L2C, L5 NavIC L5 SBAS L1C/A L-Band*	GPS L1C/A, L1C, L2C, L2P(Y), L5 BDS B1I, B2I, B3I, B1C, B2a, B2b GLONASS G1, G2, G3 Galileo E1, E5a, E5b, E6 QZSS L1C/A, L1C, L2C, L5 NavIC L5 SBAS L1C/A L-Band*	GPS L1C/A, L2C, L2P(Y), L5 BDS B1I, B2I, B3I, B1C*, B2b* GLONASS G1, G2 Galileo E1, E5a, E5b, E6* QZSS L1C/A, L1C, L2C, L5 SBAS L1C/A	GPS L1C/A, L1C, L2C, L2P(Y), L5 BDS B1I, B2I, B3I, B1C, B2a, B2b GLONASS G1, G2, G3 Galileo E1, E5a, E5b, E6 QZSS L1C/A, L1C, L2C, L5 NavIC L5 SBAS L1C/A	GPS L1C/A, L2C, L2P(Y), L5 BDS B1I, B2I, B3I, B1C, B2a GLONASS G1, G2 Galileo E1, E5a, E5b QZSS L1C/A, L2C, L5 SBAS L1C/A	GPS L1C/A, L2C, L5 BDS B1I, B1C, B2a GLONASS G1 Galileo E1, E5a, E5b QZSS L1C/A, L2C, L5
IMU	—	—	—	●	—	—
Dual Antenna	—	—	●	—	—	—
RTK/Initialization Time (s)	< 5	< 5	< 5	< 5	< 5	—
Cold Start (s)	< 12	< 12	< 30	< 12	< 30	< 30
Data Update Rate (Hz)	50*	50*	20	50*	20	1
Output Latency (ms)	< 25	< 25	< 20	< 10	< 20	< 20
Interface	Serial Port	1 × RS-232 2 × LVTTTL	3 × LVTTTL	3 × LVTTTL	3 × LVTTTL	2 × LVTTTL
	Ethernet Port (10/20 M)	1	—	—	—	—
	1PPS	1	1	1	1	1
	External Clock	1	—	—	—	—
Page	14	10	9	12	11	13