
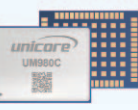






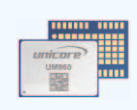





# 和芯星云 NebulasIV 系列产品选型表

	 UM980	 UM980C	 UM981	 UM981C	 UM981S	 UB9A0	 UM982	 UM982C	 UM960	 UM960E	 UT986	 UM680P	
	BDS/GPS/GLONASS /Galileo/QZSS 全系统全频高精度 RTK定位模块	BDS/GPS/GLONASS /Galileo/QZSS 全系统全频高精度 RTK定位星增强模块	BDS/GPS/GLONASS /Galileo/QZSS 全系统全频RTK/INS组合定位模块	BDS/GPS/GLONASS /Galileo/QZSS 全系统全频RTK/INS组合定位星增强模块	BDS/GPS/GLONASS /Galileo/QZSS 全系统全频RTK/INS组合定位模块	全系统全频高精度板卡	BDS/GPS/GLONASS /Galileo/QZSS全系统全频高精度定位定向模块	BDS/GPS/ GLONASS /Galileo/QZSS全系统全频双天线高精度RTK定位定向星增强模块	BDS/GPS/GLONASS /Galileo/QZSS 全系统全频高精度RTK定位模块	BDS/GPS/GLONASS /Galileo/QZSS 全系统全频高精度RTK定位模块	GNSS全系统多频高精度授时模块	车规级多系统多频高精度定位模块	
认证	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, POPS, TSCA	RoHS, REACH, CE, FCC, IC, RED, POPS, TSCA	RoHS, REACH, RED	RoHS, REACH, CE, FCC, IC, RED	
应用领域	测量测绘、精准农业		精准农业	测量测绘	测量测绘	CORS、地基增强系统、测量测绘	无人机、精准农业、自主机器		割草机、手持GIS、表演无人机、机器人	割草机	通讯基站授时、电力授时、网络时间同步	智能驾驶	
尺寸封装重量	17.0 × 22.0 × 2.6 mm 54 pin LGA 1.88 g ± 0.03 g		17.0 × 22.0 × 2.6 mm 54 pin LGA 1.91g ± 0.03g			60.0 × 100.0 × 11.4 mm 40 pin 46.5 g ± 2.5g	16.0 × 21.0 × 2.6 mm 48pin LGA 1.82g ± 0.03 g		12.2 × 16.0 × 2.6 mm 24 pin LGA 1.11g ± 0.03g	12.2 × 16.0 × 2.6 mm 24 pin LGA 1.11g ± 0.03g	17.0 × 22.4 × 2.4 mm 28 pin LCC 1.9 g	17.0 × 22.0 × 2.6 mm 54 pin LGA 2.30g ± 0.05 g	
单点定位(RMS)	平面:1.5m 高程:2.5m		平面:1.5m 高程:2.5m			平面:1.5m 高程:2.5m	平面:1.5m 高程:2.5m		平面:1.5m 高程:2.5m	平面:1.5m 高程:2.5m	平面:1.5m 高程:2.5m	平面:1.5m 高程:2.5m	
DGPS(RMS)	平面:0.4m 高程:0.8m		平面:0.4m 高程:0.8m			平面:0.4m 高程:0.8m	平面:0.4m 高程:0.8m		平面:0.4m 高程:0.8m	平面:0.4m 高程:0.8m	—	平面:0.4m 高程:0.8m	
RTK(RMS)	平面:0.8cm+1ppm 高程:1.5cm+1ppm		平面:0.8cm+1ppm 高程:1.5cm+1ppm			平面:0.8cm+1ppm 高程:1.5cm+1ppm	平面:0.8cm+1ppm 高程:1.5cm+1ppm		平面:0.8cm+1ppm 高程:1.5cm+1ppm	平面:0.8cm+1ppm 高程:1.5cm+1ppm	—	平面:0.8cm+1ppm 高程:1.5cm+1ppm	
定向精度(RMS)	—		—			—	0.1° /1 m 基线		—	—	—	—	
信号	BDS B1I, B3I, B1C, B2a, B2b, B3I GPS L1C/A, L1C, L2C, L2P(Y), L5 GLONASS G1, G2, G3 (UM980) GLONASS G1, G2 (UM980C) Galileo E1, E5a, E5b, E6 QZSS L1C/A, L1C/B, L1C, L2C, L5, L6 SBAS L1C/A L-Band (UM980C)		BDS B1I, B3I, B1C, B2a, B2b GPS L1C/A, L1C, L2C, L2P(Y), L5 GLONASS G1, G2, G3 Galileo E1, E5a, E5b, E6 QZSS L1C/A, L1C, L2C, L5, L6 NavIC L5 SBAS L1C/A L-Band (UM981C)			BDS B1I, B3I, B1C, B2a, B2b GPS L1C/A, L1C, L2C, L2P(Y), L5 GLONASS G1, G2, G3 Galileo E1, E5a, E5b, E6 QZSS L1C/A, L1C/B, L2C, L5, L6 NavIC L5 SBAS L1C/A L-Band*	BDS B1I, B3I, B1C*, B2a, B2b* GPS L1C/A, L1C, L2C, L2P(Y), L5 GLONASS G1, G2 Galileo E1, E5a, E5b, E6* QZSS L1C/A, L1C/B, L2C, L5, L6* SBAS L1C/A L-Band (UM982C)		BDS B1I, B3I, B1C, B2a, B2b GPS L1C/A, L2C, L2P(Y), L5 GLONASS G1, G2 Galileo E1, E5a, E5b, E6 QZSS L1C/A, L2C, L5 SBAS L1C/A	BDS B1I, B3I, B1C, B2a, B2b GPS L1C/A, L2C, L2P(Y), L5 GLONASS G1, G2 Galileo E1, E5a, E5b, E6 QZSS L1C/A, L2C, L5	BDS B1I, B1C, B2a GPS L1C/A, L2C, L5 GLONASS G1 Galileo E1, E5a, E5b QZSS L1C/A, L2C, L5	BDS B1I, B3I, B1C, B2a, B2b GPS L1C/A, L2C, L5C GLONASS G1, G2 Galileo E1, E5a, E5b, E6* QZSS L1, L2, L5, L6* NAVIC L5 SBAS L1C/A L-Band*	
IMU	—		●			—	●		—	—	—	—	
双天线	—		—			—	●		—	—	—	—	
RTK初始化时间(s)	<5		<5			<5	<5		<5	<5	—	<5	
冷启动时间(s)	<12		<12			<12	<30		<30	<30	<30	<10	
数据更新率(Hz)	50		100Hz (IMU Raw Data) 50 Hz (RTK)			50	20		20	20	1	20、50*	
输出延时(ms)	<25		<10			<25	<20		<20	<20	<20	<20	
功能接口	串口	3 x LVTTTL		3 x LVTTTL			1 x RS-232 2 x LVTTTL		3 x LVTTTL	3 x LVTTTL	3 x LVTTTL	2 x LVTTTL	2 x LVTTTL
	网口 (10/20 M)	—		—			1		—	—	—	—	—
	1PPS	1		1			1		1	1	1	1	
	外部时钟	—		—			1		—	—	—	1	1
页码	11	12	13	14	15	19	09	10	16	17	18	20	

● 为支持；— 为不支持；\* 为可选配置

# 和芯火鸟 UFirebird 系列产品选型表

型号	规格		尺寸	系统							单频	双频	接口					功能					页码			
	工规级	车规级		BDS	GPS	GLONASS	Galileo	NavIC	QZSS	SBAS			UART1	UART2	UART3	SPI	I <sup>2</sup> C	内置 flash	数据更新率	DR	AGNSS	精密授时		RTK		
<b>UFirebird IV 系列</b>																										
芯下类	UC7510A	●	4.0 X 4.0 X 0.75 mm	●	●	●	●	○	●	●	●	●	●	○	●	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	24		
	UC7510I	●	4.0 X 4.0 X 0.75 mm	●	●	●	●	○	●	●	●	●	●	○	●	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	24		
模块类	UM761	●	12.2 × 16.0 × 2.4 mm	●	●	●	●	○	●	○	●	●	●	○	●	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	25		
	UM761A	●	12.2 × 16.0 × 2.4 mm	●	●	●	●	○	●	○	●	●	●	○	●	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	26		
	UM760	●	12.2 × 16.0 × 2.4 mm	●	●	●	●	○	●	●	●	●	●	○	●	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	27		
	UM760A	●	12.2 × 16.0 × 2.4 mm	●	●	●	●	○	●	●	●	●	●	○	●	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	28		
<b>UFirebird II 系列</b>																										
芯下类	UC6580A	●	5.0 X 5.0 X 0.85 mm	●	●	●	●	○	●	●	●	●	●	○	●	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	29		
	UC6580I	●	5.0 X 5.0 X 0.85 mm	●	●	●	●	○	●	●	●	●	●	○	●	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	29		
模块类	UM680	●	17.0 × 22.0 × 2.6 mm	●	●	●	●	○	●	●	●	●	●	○	○	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	31		
	UM680A	●	17.0 × 22.0 × 2.6 mm	●	●	●	●	○	●	●	●	●	●	○	○	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	32		
	UM681	●	17.0 × 22.0 × 2.6 mm	●	●	●	●	○	●	●	●	●	●	○	○	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	33		
	UM681A	●	17.0 × 22.0 × 2.6 mm	●	●	●	●	○	●	●	●	●	●	○	○	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	34		
	UM670A	●	17.0 × 22.0 × 2.6 mm	●	●	●	●	○	●	●	●	●	●	○	○	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	35		
	UM671A	●	17.0 × 22.0 × 2.6 mm	●	●	●	●	○	●	●	●	●	●	○	○	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	36		
	UM620A	●	12.2 × 16.0 × 2.4 mm	●	●	●	●	○	●	●	●	●	●	○	○	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	37		
	UM620	●	12.2 × 16.0 × 2.4 mm	●	●	●	●	○	●	●	●	●	●	○	○	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	38		
	UM621A	●	12.2 × 16.0 × 2.4 mm	●	●	●	●	○	●	●	●	●	●	○	○	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	39		
	UM621	●	12.2 × 16.0 × 2.4 mm	●	●	●	●	○	●	●	●	●	●	○	○	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	40		
	<b>UFirebird 系列</b>																									
	芯下类	UC6226NAS	●	5.0 X 5.0 X 0.75 mm	●	●	○	●	○	●	●	●	●	●	○	●	●	●	1Hz	●	●	●	●	●	41	
UC6226NIS		●	5.0 X 5.0 X 0.75 mm	●	●	○	●	○	●	●	●	●	●	○	●	●	●	1Hz	●	●	●	●	●	41		
模块类	UM220-INS NL	●	12.2 × 16.0 × 2.6 mm	●	●	○	●	○	●	●	●	●	●	○	●	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	42		
	UM220-INS NF	●	12.2 × 16.0 × 2.6 mm	●	●	○	●	○	●	●	●	●	●	○	●	●	●	1Hz/5Hz/10Hz	●	●	●	●	●	43		
	UM220-IV NV	●	12.2 × 16.0 × 2.4 mm	●	●	○	●	○	●	●	●	●	●	○	●	●	●	1Hz/5Hz	●	●	●	●	●	44		
	UM220-IV NL	●	12.2 × 16.0 × 2.4 mm	●	●	○	●	○	●	●	●	●	●	○	●	●	●	1Hz	●	●	●	●	●	45		
	UM220-IV M0	●	9.7 × 10.1 × 1.9 mm	●	●	○	●	○	●	●	●	●	●	○	●	●	●	1Hz	●	●	●	●	●	46		
	UM220-IV NK	●	12.2 × 16.0 × 2.4 mm	●	●	○	●	○	●	●	●	●	●	○	●	●	●	1Hz	●	●	●	●	●	47		
	UM220-IV L	●	17.0 × 22.4 × 2.4 mm	●	●	●	●	○	●	●	●	●	●	○	●	●	●	1Hz	●	●	●	●	●	48		

●：支持；○：固件升级或发送指令配置