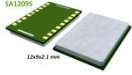
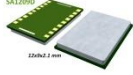
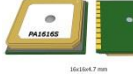





CDTop GNSS Product Comparison Table

Product Identification	Family	Standalone Module		Antenna Module	
	Product Name	SA1209S	SA1209D	PA1616S	PA1616D
	Picture				
	Chipset	MT3339	MT3333	MT3339	MT3333
	System	GPS	GPS+GLONASS	GPS	GPS+GLONASS

Physical Characteristics	Size(mm)	12x9x2.1	12x9x2.1	16x16x5.2	16x16x6.7
	Weight(grams)	0.6	0.6	4	6
	Pins	18 pins, QFN	18pins, QFN	20 pins, QFN	20pins, QFN
	Operation Temperature (°C)	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85
	Built-in Antenna	--	--	✓	✓

Channel	Acquisition	22	33	22	33
	Tracking	66	99	66	99
Sensitivity(dBm)	Acquisition	-148	-148	-148	-148
	Tracking	-165	-165	-165	-165
TTFF(seconds)	Cold Start	35	35	35	35
	Warm Start	33	33	33	33
	Hot Start	1	1	1	1
Positioning Accuracy (CEP)	Without Aid	< 3m	< 3m	< 3m	< 3m
	DGPS	< 2.5m	< 2.5m	< 2.5m	< 2.5m

Power Consumption (mA)	Acquisition	20	32	25	34
	Tracking	17	26	20	29
Power Supply (v)	Input Voltage	3.0~4.3	3.0~4.3	3.0~4.3	3.0~4.3
	Backup Voltage	2.0~4.3	2.0~4.3	2.0~4.3	2.0~4.3

Interface	UART	✓	✓	✓	✓
	RTCM	✓	✓	✓	✓
	External Antenna Input	✓	✓	✓	✓
	RF Detection Current Protection	--	--	✓	✓
	Reset Input	✓	✓	✓	✓
	1PPS output	✓	✓	✓	✓
	3D Fix output	✓	✓	✓	✓

Product Features	DGPS, SBAS	WAAS, EGNOS MSAS, GAGAN	WAAS, EGNOS MSAS, GAGAN	WAAS, EGNOS MSAS, GAGAN	WAAS, EGNOS MSAS, GAGAN
	Embedded Logger	✓	✓	✓	✓
	Protocols	NMEA, MTK RTCM	NMEA, MTK RTCM	NMEA, MTK RTCM	NMEA, MTK RTCM
	Update Rate (Default:1 Hz)	Up to 10Hz	Up to 10Hz	Up to 10Hz	Up to 10Hz
	Always Locate (Advance Power Periodic Mode)	✓	✓	✓	✓