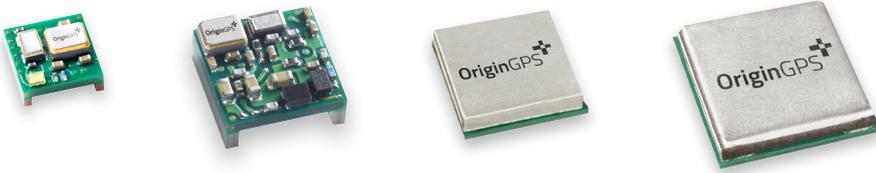


Spider Family

GPS / GNSS Modules



Smallest, High Performance, Fully-Integrated

OriginGPS' Spider family breaks the size barrier, offering the industry's smallest fully-integrated, highly-sensitive GPS/GNSS modules. Designed to support ultra-compact applications such as smart watches, wearable devices, trackers and digital cameras, Multi Micro Spider is a miniature multi-channel receiver that continuously tracks all satellites in view (GPS and GLONASS/BEIDOU simultaneously with SBAS, QZSS and other regional overlay systems), providing real-time positioning data in standard NMEA format.

Fully integrated in a small form factor

Measuring only 4.1x4.1 mm, the Nano Spider is world's smallest fully integrated GPS module. Unlike GPS modules of similar size, it includes LNA, SAW Filter, TCXO, RTC crystal and a power management unit.

Outstanding performance and sensitivity

The Spider module offers superior sensitivity and outstanding performance, achieving rapid time to first fix (TTFF) in less than one second, accuracy of approximately one meter, and tracking sensitivity of -165dBm.

Low power consumption

Spider's patented architecture can detect changes in context, temperature, and satellite signals by maintaining and opportunistically updating its internal fine time, frequency, and ephemeris data, thereby achieving a state of near continuous availability, while consuming mere microwatts of battery power.

Overcomes challenging and marginal conditions

The Spider family features OriginGPS' proprietary Noise-Free Zone System™ technology for high sensitivity and noise immunity even under marginal signal conditions, commonly found in urban canyons, under dense foliage or when the receiver's position in space rapidly changes.

Straightforward design

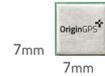
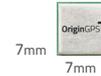
Designed to commit versatile and simple integration features for high volume cost sensitive applications, Spider offers a complete SiP (System-in-Package) with extremely small SMT (Surface Mount Technology) footprint. OriginGPS enables the shortest TTM (Time To Market) with minimal design risks. Just connect an antenna and power supply on a 2-layer PCB.

Spider Family

GPS / GNSS Modules

Basic Information

Actual size:



	Nano Spider	Multi Micro Spider	Micro Spider	Multi Spider	Spider
Ordering Code	ORG4400	ORG4033	ORG4475	ORG4572	ORG4472
Dimensions	4.1mm x 4.1mm	5.6mm x 5.6mm	5.6mm x 5.6mm	7mm x 7mm	7mm x 7mm
Height	2.1mm	2.65mm	1.4mm	1.4mm	1.4mm
Weight	0.1gr	0.13gr	0.1gr	0.2gr	0.2gr
Frequency band	GPS	GPS + GLONASS + Beidou, Galileo ready	GPS	GPS + GLONASS	GPS
Sensitivity	-163dBm	-165dBm	-163dBm	-165dBm	-163dBm
Power Consumption	< 9mW	< 9mW	< 9mW	< 9mW	< 9mW
Accuracy	<2.5m	< 2.5m	<2.5m	<1.5m	<2.5m
TTF	<1sec	<1sec	<1sec	<1sec	<1sec
Interface	UART/SPI/I ² C	UART	UART/SPI/I ² C	UART/SPI/I ² C	UART/SPI/I ² C
Protocol	NMEA/OSP	NMEA	NMEA/OSP	NMEA/OSP	NMEA/OSP
MEMS Interface				✓	✓
A-GPS	✓	✓	✓	✓	✓
Interference Detector and Remover	✓	✓	✓	✓	✓
Operating Temperature	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
GNSS processor	SiRFStar IV™	MT3333	SiRFStar IV™	SiRFStar V™	SiRFStar IV™
EMC Compliance	FCC, CE, VCCI	FCC, CE, VCCI	FCC, CE, VCCI	FCC, CE, VCCI	FCC, CE
RoHS Compliance	RoHS II	RoHS II	RoHS II	RoHS II	RoHS II

For ultimate compatibility and best-in-class performance use our Spider's modules together with Spider's antennas.



Active Antenna



Passive Antennas



Antenna Elements

About OriginGPS

OriginGPS is a world leading designer, manufacturer and supplier of miniaturized GNSS modules, antenna modules and antenna solutions. OriginGPS introduces unparalleled sensitivity and

noise immunity by incorporating its proprietary Noise Free Zone technology for faster position fix and navigation stability even under challenging satellite signal conditions.

For Our entire portfolio visit www.origingps.com or contact marketing@origingps.com