

# GNSS

## Positioning & Synchronization



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### A GNSS positioning and synchronization solution

**Able to Lock to Communication Satellite Signals | Features Accurate Reference Frequency Sources and Time Synchronization Modules Even in Bad Weather | Low g-Sensitivity | Low Power**

Taitien provides TCXO and OCXO solutions to major international satellite communication companies looking for critical frequency components. Up/down converters are essential in satellite communication in Ka- and Ku bands, and critical components include oscillators with high-frequency, low-phase noise performance. With the coming of high-throughput satellites and LEOs on a large scale, the aerospace industry has entered the New Space Era and end-user ground receivers for satellite communications will be widely adopted in vehicles and ships in every corner of the world. Taitien's newly launched high frequency and low g-sensitivity TCXO, high-precision OCXO, timing module and atomic clock modules feature excellent frequency stability, ultra-low phase noise and ultra-low aging, making them optimal for ground station applications.



### Taitien Product Solution

Product Family	Product Features	Output Waveform	Product Size(mm <sup>2</sup> )	Frequency Range	Frequency Stability	Temperature Range (°C)	Phase Noise(P/N)	Accuracy	Power Consumption
<b>Timing Module</b> 	Ultra-High Precision	CMOS	<b>DT-5151</b> 50.8 x 50.8	5, 10 MHz	±0.1 ppb	-10 to 70°C	Max. P/N @10 MHz -135 dBc/Hz @100 Hz -145 dBc/Hz @1 kHz -150 dBc/Hz @10 kHz	Holdover : 1.5 uS / 24hr	< 5W
	Low Power GPSDO	CMOS	<b>GT-II</b> 25.4 x 25.4	10 MHz		0 to 60°C		1 PPS Accuracy: <±75ns RMS(1-Sigma) GPS Locked	< 0.6W
<b>OCXOs</b> 	Ultra Low g-Sensitivity (0.1 ppb/g)	Sine Wave	<b>NI-100M-6700</b> 36.3 x 27.2	100 MHz	±100 ppb	-40 to 85°C	Max. P/N @100 MHz -130 dBc/Hz @100 Hz -155 dBc/Hz @1 kHz -162 dBc/Hz @10 kHz		
	Low g-Sensitivity (1 ppb/g)	Sine Wave	<b>NA-100M-6800</b> 25.4 x 25.4	100 MHz	±20 ppb	-40 to 85°C	Max. P/N @100 MHz -138 dBc/Hz @100 Hz -163 dBc/Hz @1 kHz -172 dBc/Hz @10 kHz		
<b>VCTCXOs</b> 	Miniature	Clipped Sine Wave	<b>TZ</b> 2.0 x 1.6 <b>TY</b> 2.5 x 2 <b>TX</b> 3.2 x 2.5	10 to 52 MHz	±0.5 ppm	-40 to 85°C	Typ. P/N @26 MHz -140 dBc/Hz @1 kHz -153 dBc/Hz @10 kHz -160 dBc/Hz @100 kHz		
	High Precision High Frequency Low g-Sensitivity	Clipped Sine Wave, Sine Wave, CMOS	<b>TW</b> 5.0 x 3.2 <b>TL</b> 5.0 x 3.2 <b>TT-L</b> 7.0 x 5.0 <b>TK</b> 14.5 x 9.6	10 to 150 MHz	±0.1 ppm	-40 to 105°C	Typ. P/N @19.2 MHz -115 dBc/Hz @100 Hz -135 dBc/Hz @1 kHz -148 dBc/Hz @10 kHz		
	Low Power	CMOS	<b>OZ-D</b> 2.0 x 1.6 <b>OY-D</b> 2.5 x 2.0	32.768 KHz	±20 to 50 ppm	-40 to 105°C			1.4uA 1.5V, 1.8V
<b>XOs</b> 	Extended Temp. Range	CMOS	<b>OZ</b> 2.0 x 1.6 <b>OY</b> 2.5 x 2.0 <b>OX</b> 3.2 x 2.5	1.25 to 100 MHz	±30 to 50 ppm	-55 to 125°C	Typ. P/N @50 MHz -143 dBc/Hz @1 kHz -155 dBc/Hz @10 kHz -160 dBc/Hz @100 kHz		
	High Frequency Fast Delivery	CMOS	<b>PZ-U</b> 2.0 x 1.6 <b>PY-U</b> 2.5 x 2.0 <b>PX-U</b> 3.2 x 2.5 <b>OA-M</b> 3.2 x 2.5 <b>OW-M</b> 5.0 x 3.2	1 to 250 MHz	±15 to 50 ppm	-40 to 105°C	Typ. P/N @125 MHz -127 dBc/Hz @100 Hz -138 dBc/Hz @1 MHz -156 dBc/Hz @10 MHz		
	kHz		<b>XZ</b> 2.0 x 1.6 <b>XD</b> 3.2 x 1.5	16 to 60 MHz 32.768 kHz	±5 to 50 ppm ±20 ppm	-40 to 125°C -40 to 125°C			
<b>XTALs</b> 	Miniature								

Note : Not all combinations are available. Detailed specifications are available upon request.

#### About TAITIEN:

Taitien is a leading global manufacturer of frequency control products and offers a wide range of quartz crystals, oscillators, VCXOs, TCXOs, OCXOs, precision crystals, and thickness monitor crystals. The company is ISO 9001 and IATF 16949 certified, with design and application engineering resources in Taiwan, China, and the United States.

Taitien was founded in 1976 as one of the original manufacturers of the tuning fork. In the early 1990s, Taitien became a primary VCXO supplier for major telecommunication companies. In the following years, Taitien invested significant resources into R&D, becoming one of the leading producers of surface mount oscillators with CMOS and LVPECL outputs. To this day, Taitien continues to operate as a top tier manufacturer in the FCP industry, offering leading edge solutions to its customers worldwide.

