

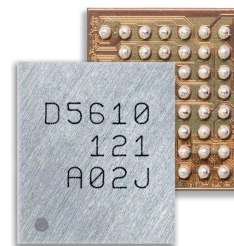
## GPS/GNSS Receiver and Positioning Engine Solution

Sony Semiconductor Solutions GPS/GNSS receiver/processor chips use high-frequency analog circuits and digital signal processing circuits with proprietary designs to deliver accurate positioning with the lowest power consumption level in the industry. This low power consumption performance helps to extend the operating times of the IoT and wearable products that use GPS/GNSS.



### Introducing the CXD5610GF

High-precision, stable positioning via dual-band operation with the industry's lowest power consumption\*1



Compared to the L1 band, the L5 band employs signals with 10 times higher ranging resolution, improving positioning precision and signal reception from the satellite. The combination of L1 and L5 signals enables highly precise positioning even in difficult signal reception conditions.

Fast acquisition delivered by Sony's advanced algorithms provides accurate positioning quickly even in challenging environments, like multipath conditions created by tall buildings, fast-moving tracking devices, and constantly changing acceleration of a sports wearable from the swinging arm.

Low power consumption and high sensitivity are delivered by Sony's analog circuit technology and innovative design techniques that enable low-voltage operation, along with digital circuits and software algorithms that enable the use of low clock frequencies.

### Product Features

- A dual-band (L1 band and L5 band) GNSS receiver
- Supports multi-constellation (GPS, GLONASS, QZSS, BeiDou, and Galileo)
- Ultra-low power consumption GNSS positioning
- Embedded noise filters and spectrum analyzer for speedy development
- Embedded NVM (16 Mbit) for firmware updates and embedded application SDK support
- Ultra-low leak current in the Deep Sleep state
- XFBGA 54-pin package

\*1 : In accordance with Sony research testing the CXD5610GF GNSS receiver LSI (as of August 19, 2020).

## Product Specifications

Power consumption	L1/L5 bands simultaneous reception : 9mW
	L1 band reception : 6mW
	L5 band reception : 8mW
Support Constellation	GPS
	GLONASS
	Galileo
	BeiDou
	QZSS
	SBAS
	NavIC
Sensitivity	Hot Start : -163dBm
	Tracking : -167dBm
	Hot Start Initial Positioning Calculation Time : Less
	than 1 second (at -130dBm)
TTFF	Cold start: 24 sec Hot start : 1 sec
UDR Support	Yes
Host Interface IO Voltatge	1.8V
	1.2V
Assisted GNSS	Yes
Package	3.66 x 3.15mm XFGBA
Ext. FLASH memory	Not Required
Operation Temperature	-40°C to 105°C

<https://www.sony-semicon.co.jp/e/products/lsi/gps/>