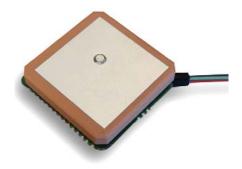
## **GPS Smart Antennas with Integrated Receivers**





### **GPS Receiver Performance**

	quency: 1, 1575.42 MHz
0	nnels: 6 channels parallel
Α	sitivity: cquisition: -146dBm racking: -159dBm
2	uracy: m (autonomous) 1 metre (SBAS)
C W H	e to First Fix: old start: 39 sec /arm start: 34sec ot start: 2.5 sec eacquisition <1 sec
O B fi U	al Protocol: utput: NMEA 0183 aud Rate: 4800 bps (default), user con- gurable up to 115kbps pdate Rate: 1Hz MEA Message: GGA, VTG, GSA, GSV, RMC
R B W	ing Information: ed: VCC lack: Ground /hite: Tx reen: Rx

# 5012D-CE Embedded High Sensitivity Tracking & Timing GPS Receiver + Antenna

The 5012D-CE Embedded GPS Receiver + Antenna incorporates a highly sensitive 16-channel, very quick time to fix GPS Receiver as well as a high performance active/filtered GPS antenna. It features the STMicroelectronics STA8058 Teseo™ high performance GPS Engine with embedded flash memory, an LNA, SAW filter, as well as a precisely tuned ceramic patch element for maximum GPS signal reception. The 5012D-CE High Sensitivity GPS Receiver + Antenna is ideal for embedded applications and comes with CMOS flying leads.

#### **Features**

- Integrated GPS receiver + antenna (active)
- Very High Sensitivity:-159dBm tracking
- · Quick Time to Fix: 39 sec cold start
- 16 channel ST Teseo™ GPS Engine
- Flash memory: upload embedded GPS Firmware, settings & history
- Standard NMEA 0183; GPS output
- 1PPS output: 50n second accuracy
- · WAAS and EGNOS supported
- Low current: 80 mA typ., 3.3V operation
  Compact form factor: 25.76 mm square
- Ideal for embedded applications
- · RoHS compliant

## **Antenna Response Specifications**

Center	Nominal	Polarization	Out-of-Band
Frequency	Gain		Rejection
1575.42 MHz ± 10 MHz	3 dBic @ 90° -2.0 dBic @ 20°	Right Hand Circular	+15 MHz: 10 dB/- 15 MHz: 30dB +20 MHz: 20 dB/- 20 MHz: 30dB +40 MHz: 40 dB/- 40 MHz: 40dB

## **Antenna Electrical Specifications**

Voltage	Current Draw
3.3V ±10% (CMOS version)	85 mA max (CMOS version)

## Mechanical/Environmental Specifications

Antenna Dimensions	Weight	Mounting	Shock
1.0" x 1.0" x .33" (25.76 x 25.76 x 8.4 mm)	14 g (0.49 oz)	Adhesive (not included)	Vertical axis 50G, other axes 30G

Vibration	Interface	Temperature Range	Humidity
3 axis, sweep = 15 min;	CMOS, 10cm	-40°C to +85°C operating	95% max (non-condensing)
10-200 Hz log sweep: 3G	4 x 26AWG	(-45°C to +85°C storage)	