

2.4/5GHz, Combo GPS*/Wi-Fi† PCB and Flexible Antennas with Balanced Transmission

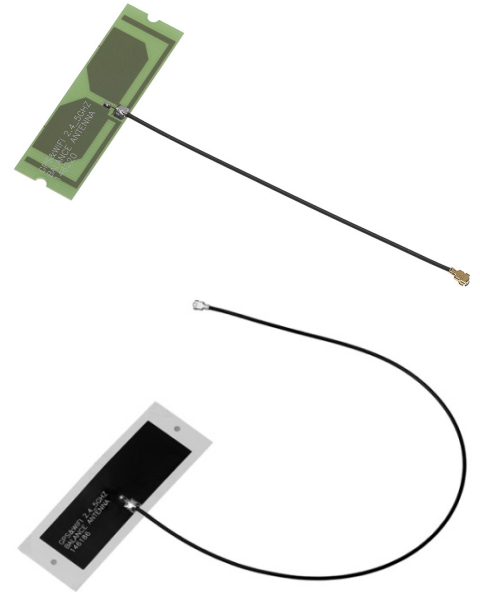
RoHS-compliant, Halogen-free



Compact and easy-to-install, transmission-balanced GPS/Wi-Fi antennas combine ground-plane independence with high-radiation efficiency to support wide operating frequencies in a variety of wireless applications

Features and Benefits

Balanced antenna with ground-plane-independent design	Reduces engineering resources and costs needed to mitigate PCB ground-induced radiation
High radiation efficiency antennas	Support high-performance RF application needs
Compact rigid PCB antenna	Combines greater space savings with secure mounting to the application device chassis
Poly-flexible, double-sided adhesive tape on antenna	Enables easy peel-and-stick mounting anywhere within the device casing
Cable to antenna attachment with over 18.0N of pull force	Ensures robust antenna reliability and connectivity to radio device
Wide selection of micro coaxial cable lengths from 50 to 300mm	Extends connectivity for maximum design flexibility



The GPS/Wi-Fi-ready Combo Antennas are available in PCB (top picture) and Flexible Tape (bottom picture) versions

Applications

Telecommunications/Networking

- Wi-Fi devices
- Wireless LAN (WLAN)
- IEEE 802.11b/g/n devices
- GLONASS ‡/BeiDou/UWB/WiMax devices (146186)
- GPS devices

Industrial applications

- Machine to machine (M2M) communication
- Smartmeters
- 2.4 GHz and 5 GHz Industrial, Scientific and Medical (ISM) band systems and wireless devices
- Product tracking systems

Consumer Electronics (CE) Applications

- Cameras
- Mobile gaming devices
- Personal navigation devices
- Wireless internet TV and audio devices

Smart Home

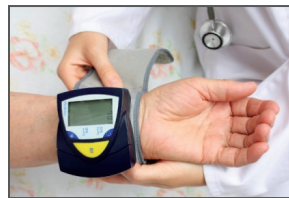
- Exercise and health monitors
- Pet care and pest control devices
- Home theaters
- Kitchen TV and bathroom built-in TV systems

Medical

- Telemedicine and telehealth devices

Automotive applications

- Bluetooth devices
- Infotainment devices
- Mobile hotspots
- Car Audios
- Smart rear-view mirrors



Telehealth devices



Smartmeters



Infotainment devices



Wireless Internet TV

*GPS - Global Positioning System. Civilian GPS uses the L1 frequency of 1575.42 MHz in the Ultra High Frequency (UHF) band spanning 300MHz to 3GHz

†Wi-Fi is a registered trademarks of the Wi-Fi Alliance

‡GLONASS, an acronym for Globalnaya Navigatsionnaya Sputnikovaya Sistema is a Russian space-based satellite navigation system working alongside GPS

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molex®

Specifications

Reference Information

Packaging: PE film

Mates With: Surface-mount, microcoaxial jack (Part Number: 73412-0110)

Designed In: mm

RoHS: Yes

Halogen Free: Yes

Glow Wire Compliant: No

Mechanical

Pull Force: > 18.0N

Physical

Thickness: 0.81mm (Series 146220)

: 0.10mm (Series 146186)

Operating Temperature: -30 to +85°C

Ordering Information

Order No.	Antenna Dimension	Micro-coaxial Cable Length (mm)	Frequency Range (GHz)	Polarization	Input Impedance	Return Loss S11 (dB), Total Efficiency (dB) and Peak Gain (dBi)
146220	53.50 by 16.60mm	50 to 300	1.575 to 1.602	Linear	50 ohms	Refer to Application Specs
			2.4 to 2.5			
			5.15 to 5.85			
146186	53.00 by 18.00mm		3 to 6			

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www.molex.com/link/standard_antennas.html