

Combo Antennas >

Combo antennas offer a combination of long-range connectivity, high power efficiency and easy integration advantages for IoT, GPS and M2M applications

FEATURES AND ADVANTAGES (SERIES 216942)

Feeding pad for the 2.4/5GHz (Wi-Fi) band

Feeds electrical signals from the transmission line on the PCB to the Antenna for Wi-Fi band irradiation

Grounding pad

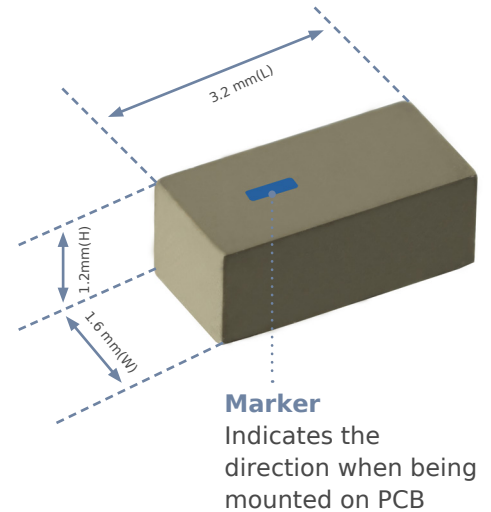
Provides electrical grounding of Antenna onto the application PCB

Ceramic Antenna Housing

Compact, inexpensive and easy to integrate into applications subject to high reflow temperatures

Feeding pad for GNSS band

Feeds electrical signals from the transmission line on the PCB to the Antenna for GNSS band irradiation



Marker

Indicates the direction when being mounted on PCB

FEATURES AND ADVANTAGES (SERIES 201932)

Pick-and-Place Feature

Facilitates automatic placement during assembly

Antenna Radiator

Acts as a transducer to converts unguided electromagnetic waves to guided electromagnetic waves and vice versa

Feeding Pad

Connects to the radio transceiver via a 50-Ohm transmission line on the PCB. Electrical signals from the transmission line are fed through this pad on the PCB

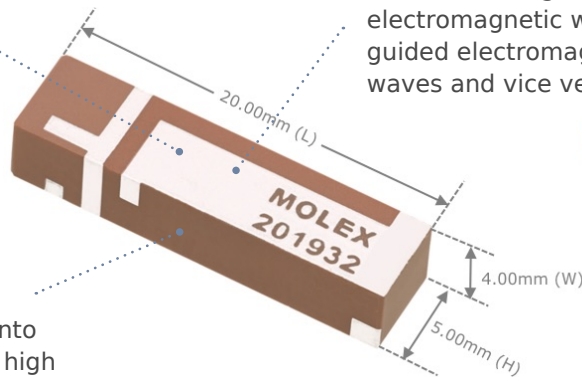
Grounding Pad

Provides electrical grounding of antenna onto the application PCB

Ceramic Antenna Housing

Compact, inexpensive and easy to integrate into applications subject to high reflow temperatures

2.4/5GHz/900MHz
Triple-band Ceramic
Antenna (series 201932)

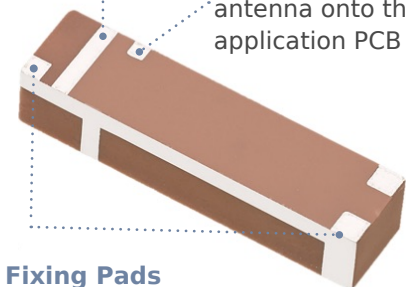


Balanced Antenna

Offers consistent performance throughout antenna; antenna resonance not affected by cable length

Fixing Pads

Firmly anchor antenna housing onto the SMT pad of the PCB



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FEATURES AND ADVANTAGES (SERIES 213353)

Double-sided 3M adhesive

Enables easy “peel and stick” mounting

698 to 8500MHz frequency range in 3 micro coaxial cable lengths with custom options
Provides design flexibility



LTE+GNSS Combo FPC Cabled Antenna (series 213353)

UFL-type Connector

Secures to the application's device radio

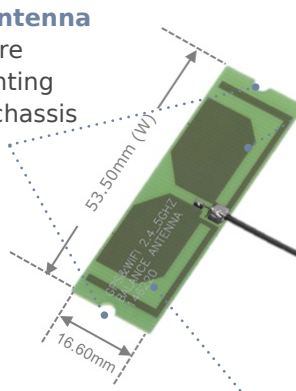
FEATURES AND ADVANTAGES (SERIES 146220 [LEFT] AND 146186 [RIGHT])

Balanced Antenna with Wi-Fi 6E support

Offers consistent performance throughout 2.4/5/6GHz band;
Antenna resonance not affected by cable length and routing

Two holes on the sides of the antenna

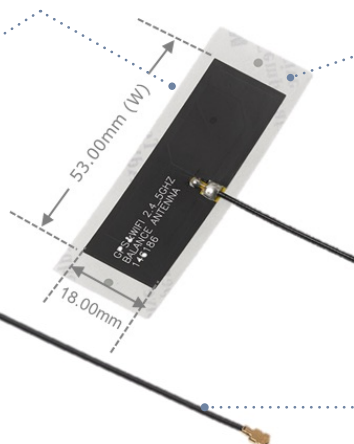
Facilitates secure screw-nut mounting on application chassis



Wi-Fi 6E+GNSS PCB Cabled Balanced Antenna (series 146220)

Tape Liner

Facilitates easy peel-and-stick mounting



Wi-Fi 6E+GNSS Flex Cabled Balanced Antenna (series 146186)

Compact PCB Antenna

Combines space saving advantages with mechanical robustness for rigid mounting

6 Micro Coaxial Cable Length (50, 100, 150, 200, 250, 300mm)

Ensures maximum design flexibility in meeting connectivity needs

SPECIFICATIONS

REFERENCE INFORMATION

Packaging: PET film (146186, 146220)
Tape and Reel (201932, 213353)
Use with: Combo Wireless devices
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes
Glow Wire Compliant: No

ELECTRICAL

Frequency Range: Refer to Product Specifications
Return Loss: Refer to Product Specifications
Average Total Radiation Efficiency(%): Refer to Product Specifications
Peak Gain (dBi): Refer to Product Specifications
Polarization: Linear
Input Impedance (ohms): 50

MECHANICAL

Refer to Product Specifications for relevant antennas

PHYSICAL

Material: Ceramic (201932, 216942)
PCB (146220)
Flexible Material (146186, 213353)
Plating: Silver (Ag) 11±4microns (201932, 216942)
Operating Temperature:
-40 to 125°C (201932)
-30 to 85°C (146220, 146186, 213353)
-40 to 85°C (216942)

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MARKETS AND APPLICATIONS

Automotive

Connected vehicles
Dashboard cameras

Industrial

Tracking devices
Logistic infrastructure
Machine to machine devices

Consumer

Mobile devices

Navigation devices

Satellite-based positioning systems

Data/Telecom

Portable Wi-Fi routers



Drones



AR/VR



Consumer



Routers

ORDERING INFORMATION

Series No.	Substrate	Mounting	Dimensions (mm)	Standard
216942	Ceramic	SMT	3.20(L) by 1.60(W) by 1.20(H)	Wi-Fi 2.4/5 + GNSS
201932	Ceramic	SMT	20.00(L) by 4.00(W) by 5.00(H)	Wi-Fi 4/5/6 + ISM900
146220	PCB	Screw Nut	53.50 by 16.60	Wi-Fi 4/5/6/6E + GNSS
146186	Flexible	Peel-and-Stick	53.00 by 18.00	Wi-Fi 4/5/6/6E + GNSS
213353	Flexible	Peel-and-Stick	119.40 by 19.40	LTE + GNSS

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