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

**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

**Ceramic Antenna Housing**
Compact, inexpensive and easy to integrate into applications subject to high reflow temperatures

**Tape Liner**
Facilitates easy peel-and-stick mounting

**Two holes on the sides of the antenna**
Facilitates secure screw-nut mounting on application chassis

**Grounding pad**
Provides electrical grounding of antenna onto the application PCB

**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

**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

**Double-sided 3M adhesive**
Enables easy “peel and stick” mounting

**UFL-type connector**
Secures to the application’s device radio

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

**Flexible Antenna**

**LTE/GPS combo**

**Grounding pad**
Provides electrical grounding of antenna onto the application PCB
Combo Antennas

Applications

Consumer
  Smart Homes
  IoT
Automotive
  Connected Vehicle
Industrial
  Smart Cities

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

Ordering Information

<table>
<thead>
<tr>
<th>Series No.</th>
<th>Substrate</th>
<th>Mounting</th>
<th>Dimensions (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>201932</td>
<td>Ceramic</td>
<td>SMT</td>
<td>20.00(L) by 4.00(W) by 5.00(H)</td>
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<tr>
<td>146220</td>
<td>PCB</td>
<td>Screw Nut</td>
<td>53.50 by 16.60</td>
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<td>146186</td>
<td>Flexible Material</td>
<td>Peel-and-Stick</td>
<td>53.00 by 18.00</td>
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<tr>
<td>213353</td>
<td>Flexible Material</td>
<td>Peel-and-Stick</td>
<td>120.00 by 20.00</td>
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www.molex.com/link/standard_antennas.html

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APS04/GF/2020.02s
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