



### Applications



Wi-Fi Enabled Lawn Mowers

Smart Speakers



Drones



Tablets



Smart TVs



Navigation Systems



Routers

### Overview

Amphenol RF offers a wide variety of internal FPC and PCB antennas designed for use inside connected devices. The antennas feature either a flexible pad or rigid printed circuit board which can be mounted inside a device. These antennas are commonly terminated to wireless modules featuring AMC or compatible ultraminiature connectors.

Internal antennas typically have a dipole design but are also available in both monopole and F-Type configurations. Common uses include tablets, autonomous or robotic appliances and portable entertainment devices.

### Features and Benefits

- Ideal for IoT, Wi-Fi and LTE applications
- Dual-band, multi-band and wide-band options available
- Secure adhesive mount backing for easy install
- Flexible options for use in compact IoT devices
- Low profile design
- Reliable RF performance

For more information on Internal RF Antennas, visit:

<https://www.amphenolrf.com/rf-antennas.html>

### Amphenol RF

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For more information visit [www.amphenolrf.com](http://www.amphenolrf.com)  
or call 800.627.7100



Security Cameras



Wireless Headphones



Payment Terminals

## Ordering Information



| Part Number               | ST0224-10-401-A                                    | ST1224-10-401-A                     | ST0412-20-001-A                       | ST0225-10-401-A                   | ST1225-10-401-A                     | ST1225-20-001-A                     | ST0425-20-401-A                       |
|---------------------------|----------------------------------------------------|-------------------------------------|---------------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|---------------------------------------|
| Frequency Range (GHz)*    | 2.4 – 2.5<br>5.15 – 5.85<br>Wi-Fi                  | 2.4 – 2.5<br>5.15 – 7.2<br>Wi-Fi 6E | 0.69 – 0.96<br>1.7 – 4.2<br>LTE 5G-NR | 2.4 – 2.5<br>5.15 – 5.85<br>Wi-Fi | 2.4 – 2.5<br>5.15 – 7.2<br>Wi-Fi 6E | 2.4 – 2.5<br>5.15 – 7.2<br>Wi-Fi 6E | 0.69 – 0.96<br>1.7 – 5.0<br>LTE 5G-NR |
| Material                  | FPC   PI   Adhesive 3M 467                         |                                     |                                       | PCB   FR-4   Adhesive 3M 467      |                                     |                                     |                                       |
| Return Loss (dB)          | < -10   < -10                                      | < -10   < -10                       | < -6   < -6                           | < -10   < -10                     | < -7   < -6                         | < -10   < -10                       | < -6   < -6                           |
| Power (W) 50 Ohm          | 1                                                  | 1                                   | 1                                     | 1                                 | 1                                   | 1                                   | 1                                     |
| Gain, Peak / Average (dB) | 2.1/3.1   -1.2/-1.5                                | 2.1/3.6   -1.2/-1.1                 | 3.1/2.7   -3.7/-2.0                   | 2.6/2.6   -3.8/-1.6               | 2.6/4.1   -3.5/-2.0                 | 3.4/4.2   -1.7/-1.6                 | 4.2/4.2   -3.0/-3.0                   |
| Efficiency / Average (%)  | 77   71                                            | 77   78                             | 42   63                               | 42   69                           | 44   65                             | 68   70                             | 50   51                               |
| Dimensions (mm)           | 30 x 10 x 0.2                                      | 30 x 10 x 0.2                       | 95 x 15 x 0.2                         | 25 x 7 x 0.85                     | 30 x 7 x 0.85                       | 50.4 x 13.8 x 0.7                   | 95 x 15 x 0.85                        |
| Cable Length              | 100 mm standard – Custom cable length upon request |                                     |                                       |                                   |                                     |                                     |                                       |
| Temperature Range (°C)    | -40 to 85                                          |                                     |                                       |                                   |                                     |                                     |                                       |
| Humidity                  | Non-condensing 65°C 95% RH                         |                                     |                                       |                                   |                                     |                                     |                                       |
| RoHS                      | RoHS Compliant                                     |                                     |                                       |                                   |                                     |                                     |                                       |



| Part Number               | ST1124-10-401-A                                    | ST1124-11-401-A                                          | ST1125-00-401-A            | ST1125-11-401-A                                          |
|---------------------------|----------------------------------------------------|----------------------------------------------------------|----------------------------|----------------------------------------------------------|
| Frequency Range (GHz)*    | 6.35 – 7.91<br>7.93 – 8.44                         | 3.18 – 4.74<br>4.76 – 6.33<br>6.35 – 7.91<br>7.93 – 8.44 | 6.35 – 7.91<br>7.93 – 8.44 | 3.18 – 4.74<br>4.76 – 6.33<br>6.35 – 7.91<br>7.93 – 8.44 |
| Material                  | FPC   PI   Adhesive 3M 467                         |                                                          |                            |                                                          |
| Return Loss (dB)          | < -10   < -10                                      | < -10   < -10   < -10<br>  < -10                         | < -10   < -10              | < -10   < -10   < -10<br>  < -10                         |
| Power (W) 50 Ohm          | 1                                                  | 1                                                        | 1                          | 1                                                        |
| Gain, Peak / Average (dB) | 6.0 / -0.9   5.1 / -0.8                            | 3.6 / -0.7   4.3 / -1.1  <br>4.3 / -1.4   4.5 / -1.5     | 3.8 / -1.4   3.7 / -0.8    | 3.8 / -0.7   5.0 / -1.1  <br>4.5 / -0.9   4.3 / -0.5     |
| Efficiency / Average (%)  | 81   91                                            | 86   78   72   71                                        | 72   83                    | 85   78   82   89                                        |
| Dimensions (mm)           | 15 x 17.4 x 0.2                                    | 24.1 x 34 x 0.2                                          | 13.1 x 16.4 x 0.45         | 23 x 35 x 0.45                                           |
| Cable Length              | 100 mm standard – Custom cable length upon request |                                                          |                            |                                                          |
| Temperature Range (°C)    | -40 to 85                                          |                                                          |                            |                                                          |
| Humidity                  | Non-condensing 65°C 95% RH                         |                                                          |                            |                                                          |
| RoHS                      | RoHS Compliant                                     |                                                          |                            |                                                          |

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