



ANTENNAS FOR 5G APPLICATIONS (EMBEDDED, INTERNAL, EXTERNAL AND OUTDOOR)

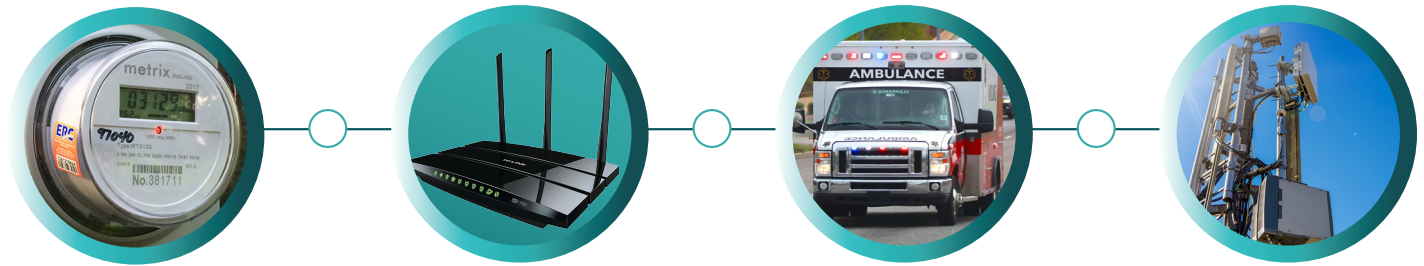
PCB, FPC, STICK, BLADES, STUBBY AND COMPOSITE

The 5th generation of wireless technology, 5G, is set to revolutionize our networking systems by providing bigger channels for higher data speeds, lower latency for more responsiveness and the ability to connect to significantly more devices for sensors and smart devices. To enable these improvements 5G will operate in three different bands (low-band, mid-band and millimeter-band) which greatly increases the number of nodes and complexity of the system. Within this complexity a robust and reliable antenna solution is key to system performance. Pulse's strong engineering capability allows us to provide high performance, compact antenna solutions to ensure your product operates effectively within the 5G ecosystem. Pulse's 5G antenna products include PCB/FPC antennas, composite antennas and stick antennas with multiple connector options to meet customer requirements. Applications include consumer devices, automotive electronics, industrial surveillance, enterprise router and small cell applications.

2021

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FEATURES & BENEFITS

- Wide range of antenna options for 5G applications including flexible circuit board (FPC), PCB, direct mount, magnetic mount
- Frequency Bands from 617Mhz to 7125MHz
- WiFi, Bluetooth, BLE, Zigbee, MiMo, GNSS
- Excellent Gain across bandwidth
- IoT, SmartGrid, Meters, Remote Monitoring, Sensor Networks
- Security, Video, Graphics
- TE Radios, Femto Cell, SOHO
- Telemetry, High Speed Data
- Smart Connected Vehicles; DSRC, CV2X

| | Pulse PN | Antenna Type | Frequency Range | Gain | Efficiency | Polarization | Radiation Pattern | Connector | Ingress Protection | Size (mm) |
|--|-------------------------------|---------------------------------|-----------------|-----------------|------------|--------------|-------------------|---------------------------|--------------------|---------------------|
| | W3415 | Embedded (SMT Composite) | 617 to 6000 MHz | -1.0 to 2.5 dBi | 55-75% | Linear | Omni | SMT Mounted | | 40 x 7 x 3 |
| | W6114xxxx | Internal (FPC) | 617 to 7125 MHz | 1.5 to 5.5 dBi | 38-62% | Linear | Omni | U.FL/MMCX | | 224.4 x 20.4 x 0.15 |
| | W3435xxxx | Internal (FPC) | 617 to 6000 MHz | 2.5 dBi | 50% | Vertical | Omni | U.FL | | 116 x 30 |
| | W3554xxxx | Internal (PCB) | 698 to 6000 MHz | 1.9 to 3.5 dBi | 37-66% | Vertical | Omni | U.FL/SMA/MMCX | | 30 x 120 x 0.2 |
| | W5150 | External / In-building (Blade) | 617 to 6000 MHz | 1.2 to 5.5 dBi | 45-70% | Vertical | Omni | SMA Male | IP65 | 229 x 30 |
| | W1096 | External / In-building (Stick) | 698 to 3800 MHz | -3.0 to 1.5 dBi | 30-60% | Linear | Omni | SMA Male | IP65 | 106 (length) |
| | W1696-M | External / In-building (Stubby) | 617 to 3800 MHz | -0.5 to 1 dBi | 30-45% | Linear | Omni | RP SMA Male | IP65 | 10 x 50 |
| | W1696 W1697 | External / In-building (Stubby) | 617 to 3800 MHz | -0.5 to 1 dBi | 30-45% | Linear | Omni | SMA Male | IP42 | 10 x 49.6 |
| | LPT600/71DMN LPT600/71DMNW | Outdoor (Single-Ant) | 617 to 7125 MHz | 2 to 6.1 dBi | 70-83% | Vertical | Omni | N-Female/ Direct mount | IP67 | Ø41 x 95.9 |
| | LPT600/71NMO LPT600/71NMW | Outdoor (Single Ant) | 617 to 7125 MHz | 2 to 4 dBi | 65-80% | Linear | Omni | NMO (Pogo Pin) | IP67 | Ø40.9 x 95.9 |

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|  | RO600/71NFKIT | Outdoor (Single Ant) | 617 to 7125 MHz | 2.3 to 3.7 dBi | 66-77% | Linear | Omni | N-Female | IP67 | Ø62.2 x 219.4 |
|  | ARM5GxxxxDM | Vehicular (MultiBand) | 617 to 6000 MHz (2x 4G/5G-FR1, 3x WiFi, 1x GNSS) | LTE/5G-FR1 = 3.3 to 5.2 dBi, WiFi = 5.4 to 6.3 dBi | 51-70% | Linear | Omni | Custom Connector Configurations Available | IP67 | 202.3 x 88.5 x 45 |
|  | TWC | Vehicular (MultiBand) | 617 to 6000 MHz (4x 4G/5G-FR1, 4x WiFi 6E, 1x GNSS) | LTE/5G-FR1 = 2 to 5 dBi, WiFi 6E = 6.5 dBi | 57-67% | Linear | Omni | Custom Connector Configurations Available | IP67 | 122.8 x 274.5 x 95.2 |
|  | DASLPP5GXMIMO | DAS (IDAS-PS-DAS) | 617 to 4200 MHz (2x MIMO) | 2.5 to 3 dBi | 55-85% | Linear | Omni | 4,3-10 Female or N- Female | Indoor | Ø250 x 8 |

Notes:

1. Operating Temperature Range for all products is -40°C to 85°C except W0196 (-40°C to 80°C) and W1696/W1697/W1696-M (-30°C to 85°C)

Other Great Products from Pulse Electronics



Embedded Antennas Ceramic/ Helical/FPC/Stamped

Embedded ceramic chip and patch, composite, Helical, FPC and Stamp metal antennas for effective miniaturization and simplicity



3D Antennas LDS/LAP/FluidANT

Get Inspired of 3D Shapes by using LDS, LAP & FluidANT antenna design and manufacturing process.



Internal Antennas FPC/ PCB/ NFC/WPC/LCP Antennas

Pre-optimized performance with common plastic housing. Compact dimensions and adhesive mount. Providing high efficiency solutions of NFC and WPC compliance



External/ In-Building Antennas

Reliable blade/ stick antennas for routers & gateways. Cutting edge design and performance proven DAS antennas for in-building wireless and public-safety.



IPD RF Components - LTCC

LTCC based BPF, LPF, Balun, Diplexer, Triplexer, Balanced BPF, and Coupler



Outdoor Antennas

Weather proof portable and fixed outdoor antennas for portable radio and data collecting purposes.



Vehicular Antennas

Extensive ruggedized, tamper-proof and aesthetically pleasing legacy Larsen and multiband antennas for public safety, transportation, and other applications.



Cable & Mounting Solutions

Support NMO and various mounting types with custom cable types and connector selections.