# Combination Antenna - 5G Cellular, WiFi, and GNSS

GLLPDLTE-B, GLLPDLTE-W, GLLPDLTEWI-B, GLLPDLTEWI-W

### Description

Low profile dual port 5G/4G GNSS multiband antenna covering sub 6 GHz 5G FR1 upper frequencies, with a dual band WiFi port option. Includes a built-in ground plane for maximum installation flexibility.

#### **Technologies**

- 5G FR1
- CBRS
- 4G LTE
- Dual band WiFi
- GNSS L1

#### **Features**

- Durable 1-1/3-inch tall housing for permanent mount IIoT installations requiring minimum overhead clearance
- Proprietary GNSS technology with superior out-of-band rejection
- Easy through-hole mount installation for fixed indoor or outdoor cabinet-top IIoT or Enterprise networks







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The Medallion<sup>™</sup> II 5G FR1 low profile antenna is ideal for cabinet mount industrial IoT applications. This GNSS multiband antenna includes two 5G FR1 ready ports, and an optional dual band 2.4/5 GHz port for WiFi coverage. Its proprietary, built-in GNSS technology features superior out-of-band rejection filtering for optimal operation with industrial IoT wireless networks. This antenna platform is housed in a rugged, UV-stable housing, available in black or white color options.

#### **Features**

- Dual cellular ports for 5G FR1 networks, including CBRS bands
- Low Profile 1-1/3-inch tall housing for permanent mount installations with limited overhead clearance
- GNSS compatibility, covering global systems: 1565-1608 MHz (GPS L1; GALILEO E1; GLONASS L1; QZSS L1; BEIDOU B1)
- Superior rejection of out-of-band signals with proprietary filtering technology for optimal GNSS performance
- Optional dual band 2.4/5 GHz WiFi port
- Simple through-hole mount installation for fixed indoor or outdoor, cabinet-top IIoT or Enterprise networks
- Durable, UV-stable white or black radome options
- Ingress protection: IPX7 rating



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### **Standard Configurations**

Model	Elements	Cable	Connector <sup>2</sup>	Mount	Housing Color
GLLPDLTE-W	LTE (2) GNSS (1)	Two- 3 foot RG-316 pigtails (Cellular) One- 3 foot RG-316 (GNSS)	SMA Plug (Cellular) SMA Plug (GNSS)	M18X2 threaded stud (18 mm long)	White
GLLPDLTE-B	LTE (2) GNSS (1)	Two- 3 foot RG-316 pigtails (Cellular) One- 3 foot RG-316 (GNSS) SMA Plug (Cellular) SMA Plug (GNSS)		Bla	Black
GLLPDLTEWI-B	LTE WiFi GNSS	Two- 3 foot RG-316 pigtails (Cellular) One- 3 foot RG-316 pigtails (WiFi) One- 3 foot RG-316 (GNSS)	SMA Plug (Cellular) Reverse Polarity SMA Plug (WiFi) SMA Plug (GNSS)	-	Black
GLLPDLTEWI-W	LTE WiFi GNSS	Two- 3 foot RG-316 pigtails (Cellular) One- 3 foot RG-316 pigtails (WiFi) One- 3 foot RG-316 (GNSS)	SMA Plug (Cellular) Reverse Polarity SMA Plug (WiFi) SMA Plug (GNSS)	-	White

### **Electrical Specifications – RF Antennas**

F1	F2	<b>SWR</b> <sup>3</sup>	Gain (dB) <sup>3</sup>		Effi	ciency <sup>3</sup>	Polarization	Nominal	Maximum	
(MHz)	(MHz)		Max	Typical	Range (±)	Avg	Range (±)		Impedance	Power
LTE Prim	nary Port 1									
617	698	3.2	2.4	1.6	0.9	42%	9%			
698	802	2.0	4.5	3.5	1.0	45%	6%			
824	960	2.7	5.1	3.9	1.2	51%	11%			
1710	2200	1.7	5.6	5.0	0.6	64%	4%	Linear	50 ohms	50 watts
2300	2690	1.6	5.2	5.0	0.2	60%	2%			
3400	3800	1.9	6.1	5.3	0.8	49%	2%			
5150	5950	2.2	4.9	4.2	0.8	41%	5%			
LTE Prim	nary Port 2									
617	698	4.6	0.5	0.4	0.1	35%	15%			
733	802	1.8	0.5	0.5	0.0	49%	1%	-		
824	960	2.9	0.5	0.5	0.0	50%	4%			
1805	2200	2.1	0.6	0.6	0.1	56%	6%	Linear	50 ohms	50 watts
2300	2690	2.3	0.5	0.5	0.1	46%	5%			
3400	3800	1.4	0.6	0.6	0.0	57%	1%			
5150	5950	1.3	0.5	0.5	0.0	48%	4%			
WiFi Por	t 3									
2400	2500	1.6	6.0	4.5	1.4	58%	3%			
	5900	2.2	6.7	4.6	2.1	48%	7%			

#### Minimum Isolation (dB)<sup>3</sup>

	LTE Primary (1)		LTE Seco	ndary (2)	WiFi (3)	
LTE Primary (1)	690-960 MHz		698-960 MHz	5.5	617-960 MHz	34.0
	1710-2700 MHz		1.71-2.7 GHz	15.0	1.71-2.7 GHz	16.0
	3300-4200 MHz		3.3-5.9 GHz	24.0	3.3-5.9 GHz	25.0
LTE Secondary (2)			690-960 MHz		617-960 MHz	32.0
			1710-2700 MHz		1.71-2.7 GHz	19.0
			3300-4200 MHz		3.3-5.9 GHz	22.0

<sup>3</sup> Measurements taken with 3-ft cables on a 2-ft ground plane.



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### **Electrical Specifications – GPS Antenna**

Frequency Band	1565-1608 MHz			
Amplifier Gain	@ 3.0 VDC: 26 dB (typical)			
Output VSWR	2.0:1 (maximum)			
DC Current	25 mA (typical)			
DC Voltage	2.8-6.0 V (operating) ≤ 12.0 V (survivability)			
Noise Figure	< 2.0 dB (typical)			
Out-of-Band Rejection	f0 = 1586 MHz / f0 ± 50 MHz: ≥ 60 dBc / f0 ± 60 MHz: ≥ 70 dBc			
Nominal Gain	3 dBic @ 90° -2 dBic @ 20°			
Polarization	Right hand circular			
Nominal Impedance	50 ohms			

### **Mechanical Specifications**

#### **Physical**

Dimensions (W x H)	5.19 L x 4.0 W x 1.3 H inches (13.2 x 10.2 x 3.4 cm)
Weight	0.67 lbs (10.8 oz)
Radome Construction	UV-Stable Rugged Thermoplastics
Operating / Storage Temperature	-40°C to +85°C

# For more information about this product contact your sales representative or visit > pctel.com/antenna-products

#### **Solving Complex Wireless Challenges**

PCTEL is a leading global provider of wireless technology, including purpose-built Industrial IoT devices, antenna systems, and test and measurement solutions. Trusted by our customers for over 25 years, we solve complex wireless challenges to help organizations stay connected, transform, and grow.



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