

# U-BLOX AND TE CONNECTIVITY ANTENNA CROSS REFERENCE GUIDE

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# U-BLOX & TE CONNECTIVITY CROSS REFERENCE GUIDE

Welcome to the U-Blox and TE Connectivity (TE) cross reference guide for U-Blox modules and TE Connectivity antennas.

Here you will find some of the most popular antenna models cross-referenced with the appropriate U-Blox module. The content is organized by frequency/technology type and shows the relevant compliance for each cross reference.
















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## Compliance Types













The compliance level of the antennas listed in the document vary and the columns on the right side of the following tables list the compliance level the antennas achieve. A more detailed explanation of the compliance type is listed below:

- **FCC Test Report** - TE antenna meets the specifications as set out in the appropriate FCC Test Report
- **Max Gain** - Complies with all Max Gain limits including EIRP, FCC & IC MPE
- **Datasheet / Manual** - TE antenna meets the requirements as set out in the U-Blox module datasheet or manual
- **GNSS Spec** - TE antenna meets the GNSS specification/requirements for the appropriate U-Blox module
- **Meets Pre-Certified Antenna Spec** - TE antenna meets the same specifications and performance as other pre-certified antenna models
- **Certified with Module** - TE antenna has been pre-certified for use with the appropriate U-Blox module














# BLUETOOTH BLE

						ANNA-B4	NINA-B4	NORA-B1
								
Product Image	Part Number	Connection Type	Antenna Type	VSWR	Peak Gain (dBi)	Compliance		
	<b>001-0001-L</b> 2400 - 2500 MHz	RP-SMA	External Dipole	<2.5:1	2.0			
	<b>001-0010</b> 2400 - 2500 MHz	RP-SMA	External Dipole	<2.5:1	2.0	• Datasheet / Manual		
	<b>ANT-2.4-LCW Series</b> 2400 - 2485 MHz	SMA RP-SMA	External Dipole	<2.0:1	2.8	• Datasheet / Manual	• Datasheet / Manual	• Datasheet / Manual
	<b>ANT-2.4-CW-RCL Series</b> 2400 - 2485 MHz	SMA RP-SMA	External Monopole	<1.5:1	2.3		• Datasheet / Manual	
	<b>IN24-5RD Series</b> 2400 - 2485 MHz	SMA RP-SMA RP-TNC	External Monopole	<1.5:1	5.5			• FCC Test Report
	<b>ANT-2.4-CW-RAH Series</b> 2400 - 2485 MHz	SMA RP-SMA	External Monopole	<2.0:1	1.6			
	<b>ANT-2.4-CW-RH Series</b> 2400 - 2485 MHz	SMA RP-SMA	External Monopole	<2.0:1	-0.9			• FCC Test Report
	<b>ANT-2.4-RAH Series</b> 2400 - 2485 MHz	SMA RP-SMA	External Monopole	<2.0:1	1.6	• Datasheet / Manual		• FCC Test Report
	<b>1-2195935 Series</b> 2400 - 7125 MHz	U.FL MHF4	External Universal Antenna Module	<2.0:1	3.4			
	<b>2118059-1</b> 2300 - 3800 MHz	U.FL	Internal FPC	<3.0:1	4.0	• FCC Test Report • Datasheet / Manual	• FCC Test Report • Datasheet / Manual	
	<b>ANT-2.4-FPC-SF Series</b> 2400 - 2500 MHz	U.FL MHF4	Internal FPC	<1.9:1	3.9	• FCC Test Report • Datasheet / Manual	• FCC Test Report • Datasheet / Manual	• Datasheet / Manual
	<b>ANT-2.4-FPC-SH Series</b> 2400 - 2500 MHz	U.FL MHF4	Internal FPC	<1.4:1	4.0	• FCC Test Report • Datasheet / Manual	• FCC Test Report • Datasheet / Manual	• FCC Test Report • Datasheet / Manual
















# BLUETOOTH BLE

						ANNA-B4	NINA-B4	NORA-B1
								
Product Image	Part Number	Connection Type	Antenna Type	VSWR	Peak Gain (dBi)	Compliance		
	<b>1513504-1</b> 2400 -2483.5 MHz	Solder	Internal Stamped	<2.0:1	2.0	• FCC Test Report		• Datasheet / Manual
	<b>ANT-2.4-MSA-TH1</b> 2400 - 2500 MHz	Solder	Internal Stamped	<1.3:1	3.7	• FCC Test Report	• FCC Test Report • Datasheet / Manual	• FCC Test Report • Datasheet / Manual
	<b>1513353-1</b> 2400 -2483.5 MHz	Solder	Internal Surface Mount	<2.0:1	2.0		• Datasheet / Manual	• FCC Test Report
	<b>ANT-2.4-USP-T</b> 2400 - 2485 MHz	Solder	Internal Surface Mount	<2.0	3.8	• Datasheet / Manual		• Datasheet / Manual
	<b>2108789-1</b> 2400 -2483.5 MHz	Solder	Internal Surface Mount	<1.8:1	1.0	• Datasheet / Manual		
	<b>ANT-2.4-CPA</b> 2400 - 2485 MHz	Solder	Internal Surface Mount	<2.7:1	5.5			• FCC Test Report • Datasheet / Manual
	<b>ANT-2.45-CHP-T</b> 2400 - 2500 MHz	Solder	Internal Surface Mount	<2.0:1	0.5	• FCC Test Report • Datasheet / Manual		
	<b>2108832-1</b> 2400 - 2500 MHz	Solder	Internal Surface Mount	<2.8:1	1.8	• Datasheet / Manual		
	<b>2108838-1</b> 2400 - 2500 MHz	SMD	Internal Surface Mount	<2.0:1	2.4	• Datasheet / Manual		
















# WI-FI

						NINA-W13
						
Product Image	Part Number	Connection Type	Antenna Type	VSWR	Peak Gain (dBi)	Compliance
	<b>001-0012</b> 2400-2500/ 4910-5850 MHz	RP-SMA	External Dipole	<2.5:1	2.0 @ 2.4 GHz 2.0 @ 5 GHz	<ul style="list-style-type: none"> <li>FCC Test Report</li> <li>Datasheet / Manual</li> </ul>
	<b>0600-00040</b> 2400 - 2500 MHz	I-PEX/MHF1	External Dipole	<2.0:1	2.0	<ul style="list-style-type: none"> <li>FCC Test Report</li> <li>Datasheet / Manual</li> </ul>
	<b>ANT-2.4-LCW Series</b> 2400 - 2485 MHz	SMA RP-SMA	External Dipole	<2.0:1	2.8	<ul style="list-style-type: none"> <li>FCC Test Report</li> <li>Datasheet / Manual</li> </ul>
	<b>ANT-2.4-CW-RH Series</b> 2400 - 2485 MHz	SMA RP-SMA	External Monopole	<2.0:1	-0.9	<ul style="list-style-type: none"> <li>Certified with module</li> </ul>
	<b>1-2195935 Series</b> 2400 - 7125 MHz	U,FL MHF4	External Universal Antenna Module	<2.0:1	3.4	<ul style="list-style-type: none"> <li>FCC Test Report</li> <li>Datasheet / Manual</li> </ul>
	<b>ANT-2.4-FPC-SF Series</b> 2400 - 2500 MHz	U,FL MHF4	Internal FPC	<1.9:1	3.9	<ul style="list-style-type: none"> <li>FCC Test Report</li> <li>Datasheet / Manual</li> </ul>
	<b>ANT-2.4-FPC-SH Series</b> 2400 - 2500 MHz	U,FL MHF4	Internal FPC	<1.4:1	4.0	<ul style="list-style-type: none"> <li>FCC Test Report</li> <li>Datasheet / Manual</li> </ul>
	<b>2118060-1</b> 2300 -3800/ 5150 -5875 MHz	U,FL	Internal FPC	<1.5:1 @3 GHz <1.5:1 @5 GHz	2.0	<ul style="list-style-type: none"> <li>FCC Test Report</li> <li>Datasheet / Manual</li> </ul>
	<b>1513353-1</b> 2400 -2483.5 MHz	Solder	Internal Surface Mount	<2.0:1	2.0	<ul style="list-style-type: none"> <li>FCC Test Report</li> </ul>
	<b>2108832-1</b> 2400 - 2500 MHz	Solder	Internal Surface Mount	<2.8:1	1.8	<ul style="list-style-type: none"> <li>Datasheet / Manual</li> </ul>
	<b>2108838-1</b> 2400 - 2500 MHz	SMD	Internal Surface Mount	<2.0:1	2.4	<ul style="list-style-type: none"> <li>Datasheet / Manual</li> </ul>
	<b>ANT-2.45-CHP-T</b> 2400 - 2500 MHz	Solder	Internal Surface Mount	<2.0:1	0.5	















# WI-FI & BLUETOOTH

						JODY-W3	MAYA-W1	MAYA-W2	NINA-W15	NORA-W10
										
Product Image	Part Number	Connection Type	Antenna Type	VSWR	Peak Gain (dBi)	Compliance				
	<b>001-0001-L</b> 2400 - 2500 MHz	RP-SMA	External Dipole	<2.5:1	2.0		• FCC Report	• FCC Report		
	<b>001-0009</b> 2400 - 2500/ 5150 - 5850 MHz	RP-SMA	External Dipole	<2.0:1	2.0 @ 2.4 GHz 2.0 @ 5 GHz	• FCC Report • Certified with module				
	<b>001-0012</b> 2400-2500/ 4910-5850 MHz	RP-SMA	External Dipole	<2.5:1	2.0 @ 2.4 GHz 2.0 @ 5 GHz	• FCC Report • Certified with module				• FCC Report • Datasheet / Manual
	<b>0600-00039</b> 2400 - 2500 MHz	MMCX	External Dipole	<2.0:1	5.0				• FCC Report • Datasheet / Manual	
	<b>0600-00040</b> 2400 - 2500 MHz	MHF1	External Dipole	<2.0:1	2.0				• Datasheet / Manual	• FCC Report • Datasheet / Manual
	<b>2108923 Series</b> 2400 -2500/ 5150 -5875/ 5925 -7125 MHz	SMA RP-SMA	External Dipole	<1.6:1 @ 2.4 GHz <1.8:1 @ 5 GHz <1.9:1 @ 6 GHz	2.5 @ 2.4 GHz 3.2 @ 5 GHz 3.5 @ 6 GHz					
	<b>2108936 Series</b> 2400 -2500/ 5150 -5875 MHz	SMA RP-SMA	External Dipole	<1.6:1 @ 2.4 GHz <1.7:1 @ 5 GHz	2.2 @ 2.4 GHz 3.7 @ 5 GHz		• FCC Report	• FCC Report		
	<b>2195630-1</b> 2400-2500/ 5150-5875 MHz	RP-SMA	External Dipole	<2.0:1	2.0 dBi @ 2.4 GHz 2.0 dBi @ 5 GHz	• FCC Report • Certified with module				
	<b>ANT-2.4-CW-RCT-RP</b> 2400 - 2500 MHz	RP-SMA	External Dipole	<1.9:1	2.2	• FCC Report • Certified with module	• FCC Report	• FCC Report		
	<b>ANT-2.4-LCW Series</b> 2400 - 2485 MHz	SMA RP-SMA	External Dipole	<2.0:1	2.8				• FCC Report	• FCC Report • Datasheet / Manual

# WI-FI & BLUETOOTH















						JODY-W3	MAYA-W1	MAYA-W2	NINA-W15	NORA-W10
										
Product Image	Part Number	Connection Type	Antenna Type	VSWR	Peak Gain (dBi)	Compliance				
	<b>ANT-DBI-LCD Series</b> 2400 - 2500/ 5125 - 5875 MHz	SMA RP-SMA	External Dipole	<2.0:1	2.8 @ 2.4 GHz 4.5 @ 5 GHz		• FCC Report	• FCC Report		
	<b>ANT-DBI-RAF-RPS</b> 2400 - 2485/ 5150 - 5850/ 5925 - 7125 MHz	SMA RP-SMA	External Dipole	<1.8:1 @ 2.4 GHz <1.7:1 @ 5 GHz <6.1:1 @ 6 GHz	4.1 @ 2.4 GHz 5.1 @ 5 GHz 4.8 @ 6 GHz		• FCC Report • Certified with module	• FCC Report • Certified with module		
	<b>RD2458-5 Series</b> 2400 - 2500/ 4900 - 5850 MHz	SMA RP-SMA N-Type	External Dipole	<1.5:1 @ 2.4 GHz <1.5:1 @ 5 GHz	3.0 @ 2.4 GHz 5.0 @ 5 GHz				• FCC Report • Datasheet / Manual	
	<b>ANT-2.4-CW-RH-RPS</b> 2400 - 2485 MHz	RP-SMA	External Monopole	<2.0:1	-0.9				• FCC Report • Certified with module	
	<b>ANT-2.4-RAH Series</b> 2400 - 2485 MHz	SMA RP-SMA	External Monopole	<2.0:1	1.6		• FCC Report	• FCC Report		
	<b>ANT-W63-MON Series</b> 2400 - 2485/ 5150 - 5850/ 5925 - 7125 MHz	SMA RP-SMA	External Monopole	<2.4:1 @ 2.4 GHz <2.3:1 @ 5 GHz <2.0:1 @ 6 GHz	3.2 @ 2.4 GHz 4.2 @ 5 GHz 3.4 @ 6 GHz					
	<b>1-2195935 Series</b> 2400 - 7125 MHz	U.FL MHF4	External Universal Antenna Module	<2.0:1	3.4					
	<b>2344657 Series</b> 2400 - 2485/ 5150 - 5850/ 5925 - 7125 MHz	MHF MHF4	Internal FPC	<2.7:1 @ 2.4 GHz <2.1:1 @ 5 GHz <2.1:1 @ 6 GHz	1.1 @ 2.4 GHz 4.9 @ 5 GHz 5.3 @ 6 GHz					
	<b>ANT-2.4-FPC-SF Series</b> 2400 - 2500 MHz	U.FL MHF4	Internal FPC	<1.9:1	3.9				• FCC Report • Datasheet / Manual	• FCC Report • Datasheet / Manual
	<b>ANT-2.4-FPC-SH Series</b> 2400 - 2500 MHz	U.FL MHF4	Internal FPC	<1.4:1	4.0				• FCC Report • Datasheet / Manual	• FCC Report • Datasheet / Manual

# WI-FI & BLUETOOTH

















						JODY-W3	MAYA-W1	MAYA-W2	NINA-W15	NORA-W10
										
Product Image	Part Number	Connection Type	Antenna Type	VSWR	Peak Gain (dBi)	Compliance				
	<b>2118060-1</b> 2300 -3800/ 5150 -5875 MHz	U.FL	Internal FPC	<1.5:1 @3 GHz <1.5:1 @5 GHz	2.0	• FCC Report	• FCC Report	• FCC Report		• FCC Report • Datasheet / Manual
	<b>2118309 Series</b> 2400 - 2483.5/ 4900 - 5875 MHz	MHF MHF4	Internal PCB	<2.0:1	3.7				• FCC Report • Datasheet / Manual	
	<b>2344654 Series</b> 2400 - 2500/ 5150 - 5875 MHz	MHF MHF4	Internal PCB	<3.0:1 @ 2.4 GHz <3.0:1 @ 5 GHz	1.5 @ 2.4 GHz 5.7 @ 5 GHz					
	<b>1513164-1</b> 2400 - 2483.5/ 4900 - 5875 MHz	Solder	Internal Stamped	<2.5:1	4.0					
	<b>1513504-1</b> 2400 -2483.5 MHz	Solder	Internal Stamped	<2.0:1 @ 2.4 GHz	2.0 @ 2.4 GHz					• FCC Report • Datasheet / Manual
	<b>2108517-2</b> 2400 - 2500/ 5150 - 5875 MHz	Solder	Internal Stamped	<2.5:1	3.0					
	<b>2108964-1</b> 2400 - 2500/ 4900 - 5875 MHz	Solder	Internal Stamped	<2.0:1 @ 2.4 GHz <2.0:1 @ 5 GHz	2.7 @ 2.4 GHz 4.3 @ 5 GHz					
	<b>2118788-1</b> 2400 - 2500/ 4900 - 5875 MHz	Solder	Internal Stamped	<2.5:1 @ 2.4 GHz <2.5:1 @ 5 GHz	1.9 @ 2.4 GHz 2.9 @ 5 GHz					
	<b>ANT-2.4-MSA- TH1</b> 2400 - 2500 MHz	Solder	Internal Stamped	<1.3:1 @ 2.4 GHz	3.7 @ 2.4 GHz				• FCC Report	


















# WI-FI & BLUETOOTH

						JODY-W3	MAYA-W1	MAYA-W2	NINA-W15	NORA-W10
										
Product Image	Part Number	Connection Type	Antenna Type	VSWR	Peak Gain (dBi)	Compliance				
	<b>1513353-1</b> 2400 - 2483.5 MHz	Solder	Internal Surface Mount	<2.0:1	2.0		• FCC Report	• FCC Report		• FCC Report • Datasheet / Manual
	<b>2108789-1</b> 2400 -2483.5 MHz	Solder	Internal Surface Mount	<1.8:1	1.0 @		• FCC Report	• FCC Report		
	<b>2108790-1</b> 2400 -2483.5 MHz	Solder	Internal Surface Mount	<2.0	0.4		• FCC Report	• FCC Report		
	<b>2118016-1</b> 2400 - 2483.5/ 5150 - 5875 MHz	SMD	Internal Surface Mount	<3.0:1	2.0					
	<b>ANT-2.4-USP-T</b> 2400 - 2485 MHz	Solder	Internal Surface Mount	<2.0	3.8				• Datasheet / Manual	
	<b>ANT-DB1-NSP250-T</b> 2400 - 2485 MHz	Solder	Internal Surface Mount	<2.0:1 @ 2.4 GHz <2.2:1 @ 5 GHz	2.7 @ 2.4 GHz 4.3 @ 5 GHz					
	<b>2108832-1</b> 2400 - 2500 MHz	Solder	Internal Surface Mount	<2.8:1	1.8		• FCC Report	• FCC Report		• FCC Report • Datasheet / Manual
	<b>2108838-1</b> 2400 - 2500 MHz	SMD	Internal Surface Mount	<2.0:1	2.4					• FCC Report • Datasheet / Manual
	<b>ANT-2.45-CHP-T</b> 2400 - 2500 MHz	Solder	Internal Surface Mount	<2.0:1 @ 2.4 GHz	0.5 @ 2.4 GHz					• FCC Report • Datasheet / Manual










# CELLULAR - CAT-M/CAT-1

						SARA-R5	SARA-R422	LARA-R6	LENA-R8
									
Product Image	Part Number	Connection Type	Antenna Type	VSWR	Peak Gain (dBi)	Compliance			
	<a href="#">2108940-1</a> 698 - 2700 MHz	SMA RP-SMA	External Dipole	<2.5:1	4.2	• Max Gain • Datasheet / Manual	• Max Gain	• Max Gain	• Max Gain
	<a href="#">ANT-5GWW51-SMA</a> 617 - 4990 MHz	SMA	External Dipole	<3.1:1	4.1	• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual	• Max Gain	• Max Gain • Datasheet / Manual
	<a href="#">ANT-5GWW53-SMA</a> 617 - 5925 MHz	SMA	External Dipole	<4.5:1	9.9	• Max Gain			
	<a href="#">ANT-5GWW55-SMA</a> 617 - 5925 MHz	SMA	External Dipole	<2.9:1	7.9	• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual
	<a href="#">ANT-5GWW56-SMA</a> 617 - 5925 MHz	SMA	External Dipole	<3.9:1	8.9	• Max Gain • Datasheet / Manual			
	<a href="#">DBA6171C1 Series</a> 617 - 7125 MHz	SMA	External Dipole	<5.0:1	4.4	• Datasheet / Manual	• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual
	<a href="#">DBA6927C1 Series</a> 698 - 2690 MHz	SMA TNC	External Dipole	<2.5:1	2.2		• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual
	<a href="#">ANT-5GW-IPW1-NP</a> 617 - 5000 MHz	N-Type	External Monopole	<4.8	7.6	• Max Gain • Datasheet / Manual			• Max Gain
	<a href="#">ANT-5GW-IPW3-NP</a> 617 - 5925 MHz	N-Type	External Monopole	<4.8:1	7.2				• Max Gain • Datasheet / Manual
	<a href="#">ANT-LTE-MON-SMA</a> 698-3800 MHz	SMA	External Monopole	<4.6:1	6.1	• Max Gain	• Max Gain		• Max Gain
	<a href="#">ANT-LTE-MON-SMA-E</a> 617 - 2485 MHz	SMA	External Monopole	< 6.8:1	4.5	• Max Gain	• Max Gain		• Max Gain
	<a href="#">ANT-LTE-MON-SMA-L</a> 617 - 2485 MHz	SMA	External Monopole	<3.3:1	5.0	• Max Gain	• Max Gain		• Max Gain

# CELLULAR - CAT-M/CAT-1

						SARA-R5	SARA-R422	LARA-R6	LENA-R8
									
Product Image	Part Number	Connection Type	Antenna Type	VSWR	Peak Gain (dBi)	Compliance			
	<a href="#">2108921 Series</a> 617 - 7125 MHz	MHF MHF4L	Internal FPC	<2.7:1	6.1	• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual	• Datasheet / Manual	• Max Gain • Datasheet / Manual
	<a href="#">2195846 Series</a> 698 - 7125 MHz	MHF MHF4L	Internal FPC	<2.6:1	6.7		• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual	• Max Gain
	<a href="#">2361492 Series</a> 698-2700 MHz	MHF	Internal FPC	<3.6:1	4.0		• Max Gain		• Max Gain
	<a href="#">2367286 Series</a> 698-2700 MHz	MHF MHF4L	Internal FPC	<3.6:1	3.0		• Max Gain		• Max Gain
	<a href="#">ANT-5GW-FPC-LH Series</a> 617 - 5000 MHz	MHF4 U.FL	Internal FPC	<4.7:1	7.0	• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual		
	<a href="#">ANT-5GW-FPC-V Series</a> 617 - 5000 MHz	MHF4 U.FL	Internal FPC	<2.7:1	7.9			• Datasheet / Manual	• Datasheet / Manual
	<a href="#">ANT-LTE-RPC Series</a> 617 - 2585 MHz	U.FL None	Internal FPC	<4.1:1	6.3	• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual		
	<a href="#">2108783-1</a> 617 - 3800 MHz	Solder	Internal Surface Mount	<2.7:1	4.9	• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual	• Datasheet / Manual	• Max Gain • Datasheet / Manual
	<a href="#">2108994-1</a> 698 - 2700 MHz	Solder	Internal Surface Mount	<3.0:1	2.3		• Max Gain • Datasheet / Manual	• Datasheet / Manual	• Max Gain • Datasheet / Manual
	<a href="#">2118310-1</a> 698 - 2700 MHz	Solder	Internal Surface Mount	<3.0:1	3.5			• Certified with Module	• Certified with Module
	<a href="#">2118903-1</a> 698 - 2700 MHz	Solder	Internal Surface Mount	<3.0:1	3.7		• Max Gain • Datasheet / Manual	• Datasheet / Manual	• Max Gain • Datasheet / Manual

# CELLULAR - CAT-M/CAT-1
















						SARA-R5	SARA-R422	LARA-R6	LENA-R8
									
Product Image	Part Number	Connection Type	Antenna Type	VSWR	Peak Gain (dBi)	Compliance			
	<a href="#">2195728-1</a> 698 - 2700 MHz	Solder	Internal Surface Mount	<2.0:1	2.3		• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual
	<a href="#">2195852-1</a> 698 - 5875 MHz	Solder	Internal Surface Mount	<2.7:1	4.5		• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual
	<a href="#">2195851-1</a> 698 - 7125 MHz	Solder	Internal Surface Mount	<2.7:1	4.6		• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual
	<a href="#">2108823-1</a> 617 - 7125 MHz	Solder	Internal Stamped	<2.8:1	4.8	• Max Gain • Datasheet / Manual	• Max Gain • Datasheet / Manual	• Datasheet / Manual	• Max Gain • Datasheet / Manual
	<a href="#">ANT-LTE-CER-T</a> 698 - 2700 MHz	Solder	Internal - Passive Ceramic Patch	<4.0:1	4.0		• Max Gain		

# CELLULAR - CAT-M/CAT-1












## External Antennas Certified with U-Blox Cat-M Modules

						SARA-R5
						
Product Image	Part Number	Connection Type	Antenna Type	VSWR	Peak Gain (dBi)	Compliance
	<a href="#">OC69271-FNM</a> 698 - 2700 MHz	N-Type	External Indoor/ Outdoor Baton	<2.5:1	3.5	• FCC Report • Certified with Module
	<a href="#">TRA6927M3PW-001</a> 698 - 2700 MHz					• FCC Report • Certified with Module
















# GNSS - L1

						MAX-M10	MIA-M10Q	NEO-M9V
								
Product Image	Part Number	Connection Type	Antenna Type	VSWR	Peak Gain (dBic)	Compliance		
	<b>1513634-1</b> B1 + E1 + L1	Solder	Internal - Passive Surface Mount	<3.0:1	0		• GNSS Spec	• GNSS Spec
	<b>2108824-1</b> L1+G1	SMD	Internal - Passive Surface Mount	<1.7:1	2.9		• GNSS Spec	
	<b>ANT-GNLI-nSP</b> L1	Solder	Internal - Passive Surface Mount	<1.4:1	4.4	• GNSS Req.	• GNSS Spec	• GNSS Spec
	<b>2108852-1</b> L1+G1	Solder	Internal - Active Ceramic Patch	<3.3:1	25.9	• GNSS Req.	• GNSS Spec	• GNSS Spec
	<b>ANT-GNCP-C257L160</b> L1+E1+B1C+B1L	MHF	Internal - Active Ceramic Patch	<1.7:1	34.5	• GNSS Req.	• GNSS Spec	• GNSS Spec
	<b>ANT-GNCP-C357L160</b> L1+E1+B1C+B1L	MHF	Internal - Active Ceramic Patch	<1.7:1	34.7	• GNSS Req.	• GNSS Spec	• GNSS Spec
	<b>ANT-GNCP-CA158L160</b> L1+E1+B1-BOC	MHF	Internal - Active Ceramic Patch	<1.7:1	31.6	• GNSS Req.	• GNSS Spec	• GNSS Spec
	<b>ANT-GNCP-CA188L165</b> L1+E1+B1-BOC	MHF	Internal - Active Ceramic Patch	<1.1:1	13.7	• GNSS Req.	• GNSS Spec	• GNSS Spec
	<b>ANT-GNCP-C106L160</b> L1+E1+B1-C+B1-L	MHF	Internal - Active Ceramic Patch	<2.1:1	24.4	• GNSS Req.	• GNSS Spec	• GNSS Spec
	<b>ANT-GNCP-C185L160</b> L1+E1+B1-C+B1-L	MHF	Internal - Active Ceramic Patch	<1.6:1	13.4	• GNSS Req.	• GNSS Spec	• GNSS Spec
	<b>2195891-1</b> L1+G1	SMA	External - Active Magnetic Mount	<1.9:1	29.4	• GNSS Req.	• GNSS Spec	• GNSS Spec
	<b>ANT-GNRM-L1A Series</b> L1+E1+B1C+B1L	SMA	External - Active Magnetic Mount	<1.5:1	33.5	• GNSS Req.	• GNSS Spec	• GNSS Spec





# GNSS - L1

						SARA-R5	SARA-R422	LARA-R6	LENA-R8
									
Product Image	Part Number	Connection Type	Antenna Type	VSWR	Peak Gain (dBic)	Compliance			
	<a href="#">2108852-1</a> L1+G1	U.FL	Internal - Active Ceramic Patch	<3.3:1	34.0				• Meets Pre-Certified Antenna Spec
	<a href="#">2108912-1</a> L1	U.FL	Internal - Active Ceramic Patch	<2.0:1	11.1				
	<a href="#">2195768-1</a> L1	U.FL	Internal - Active Ceramic Patch	<2.0:1	19				• FCC Report  • Certified with Module
	ANT-GNCP-C257L160 L1	U.FL	Internal - Active Ceramic Patch	<1.7:1	34.5				
	<a href="#">2195891-1</a> L1+G1	SMA	External - Active Magnetic Mount	<1.9:1	29.4 dBic	• Datasheet / Manual  • Meets Pre-Certified Antenna Spec	• Datasheet / Manual	• No GNSS Spec Available. Complies with SARA-R422	• Meets Pre-Certified Antenna Spec
	<a href="#">GNS1559MPF-100SMAM</a> B1+L1+G1	SMA	External - Active Permanent Mount	<2.4:1	31.9 dBic	• Datasheet / Manual  • Meets Pre-Certified Antenna Spec			• Meets Pre-Certified Antenna Spec
	<a href="#">GPS15MG SMA</a> L1	SMA	External - Active Permanent Mount	<2.0:1	29 dBic				• Meets Pre-Certified Antenna Spec

# GNSS - L1 & L2

						SARA-R5	SARA-R422	LARA-R6	LENA-R8	ZED-F9P	ZED-F9R
											
Product Image	Part Number	Connection Type	Antenna Type	VSWR	Peak Gain (dBic)					Compliance	
	<b>2108840-1</b> L1+G1 & L2+E5b+G2	Solder	Internal - Passive Ceramic Patch	<1.4:1	5.6	• Datasheet / Manual • Meets Pre-Certified Antenna Spec	• Datasheet / Manual			• GNSS Spec	• GNSS Spec
	<b>2108844-1</b> L1+G1 & L2+L5+E5b+G2	Solder	Internal - Passive Ceramic Patch	<1.4:1	6.0	• Datasheet / Manual • Meets Pre-Certified Antenna Spec	• Datasheet / Manual			• GNSS Spec	• GNSS Req.
	<b>2108847-1</b> L1+G1 & L2	Solder	Internal - Passive Ceramic Patch	<1.4:1	3.9					• GNSS Req.	• GNSS Req.
	<b>2108848-1</b> L1+G1 & L2+G2	Solder	Internal - Passive Ceramic Patch	<1.3:1	6.0		• Datasheet / Manual			• GNSS Req.	• GNSS Req.
	<b>2108853-1</b> L1+G1 & L2+E5b+G2	MHF	Internal - Active Ceramic Patch	<1.3:1	33.5					• GNSS Req.	• GNSS Req.
	<b>2108854-1</b> L1+G1 & L2+E5b+G2	MHF	Internal - Active Ceramic Patch	<1.4:1	24.6					• GNSS Req.	• GNSS Req.
	<b>2108855-1</b> L1+G1 & L2+L5+E5b+G2	SMA	External - Active Magnetic Mount	<1.4:1	31.3 dBic	• Datasheet / Manual • Meets Pre-Certified Antenna Spec	• Datasheet / Manual	• Complies with SARA-R422 - No GNSS Spec Available	• Meets Pre-Certified Antenna Spec	• GNSS Req.	• GNSS Req.
	<b>ANT-GNCP-C25L12100</b> L1 & L2+B1+E5b	MHF	Internal - Active Ceramic Patch	<2.3:1	33.0					• GNSS Req.	• GNSS Req.
	<b>ANT-GNRM-L12A Series</b> L1 & L2	SMA	External - Active Magnetic Mount	<1.5:1	32.4					• GNSS Req.	• GNSS Req.

# GNSS L1 & L2 & L5

						LEA-F9T
						
Product Image	Part Number	Connection Type	Antenna Type	VSWR	Peak Gain (dBic)	Compliance
	<a href="#">ANT-GNCP-C25L125100</a> L1 & L2 & L5	MHF	Internal - Active Ceramic Patch	<2.2:1	31.6	· GNSS Spec
	<a href="#">2108855-1</a> L1+G1 & L2+L5+E5b+G2	SMA	External - Active Magnetic Mount	<1.4:1	31.3	· GNSS Req.
	<a href="#">ANT-GNRM-L125A Series</a> L1 & L2 & L5	SMA	External - Active Magnetic Mount	<1.4:1	29.8	· GNSS Req.

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