

5G Low Profile On-Ground Plane Antennas 617-7125 MHz/698-7125 MHz



The 5G Phantom on-ground plane antenna series cover either 617-7125 or 698-7125 MHz and are both available in black or white.

5G Phantom antennas deliver global cellular coverage, even for regions where the lower 600 MHz band is required. They offer high levels of average efficiency, over 80% up to 4200 MHz, and gain up to 6.0 dBi in an IP67-rated, compact form factor.

A direct-mount, threaded stud, with superior quality and integrated N-female connector provides tamper-resistant installation. The direct coaxial connection ensures performance remains consistent, even at the higher frequencies, avoiding the performance losses of other mounting methods.



FEATURES AND BENEFITS

- Based on our popular Phantom series Our highly-popular Phantom antennas are widely used in applications such as utilities, vehicular, public safety, and other IoT installations.
- Global cellular coverage Available in 617-7125 MHz and 698-7125 MHz variants
- Optimized Optimal gain directed at just above the horizon for superior connectivity with exceptional efficiency levels
- Minimum Gain Ripple Around the horizon (Azimuth Plane) there is excellent consistency with minimal shifting gain; unlike competitors.
- Connectivity where you need it Uniform azimuth patterns reduce the chance of signal drop outs
- Rugged, robust construction Tamperresistant and highly durable with IP67-rated enclosure and UL 94 flammability rating
- Guaranteed Backed by our industry-leading 5year warranty

ELECTRICAL SPECIFICATIONS								
Model Name	FTRA6171M5PB-001 / FTRA6171M5PW-001							
Operating Frequency (MHz)	617-698	698-960	1427-1695	1695-2700	3300-4200	4400-6000	6000- 6500	
VSWR (Max)	<2.5:1	<2.0:1	<4.0:1	<2.0:1	<2.0:1	<2.5:1	<3	.0:1
Peak Gain (Average), dBi	4.5	4.5	5.0	5.5	6.0	6.0	6.5	7.5
Ave. Gain at Theta 80 deg. (10 deg above Horiz.); dBi	0.3	0.5		1.5	1.0	.7		
Efficiency (%), Avg	>70	>80	> 50	>80	>80	>80	-	
	FTRA6971M5PB-001 / FTRA6971M5PB-001							
Operating Frequency (MHz)	N/A	698-960	1427-1695	1695-2700	3300-4200	4400-6000	6000- 6875	6875- 7125
VSWR (Max)	N/A	<2.3:1	<3.0:1	<2.0:1	<2.0:1	<2.5:1	<3.0:1	
Peak Gain (Average), dBi	N/A	4.3	5.4	5.7	6.2	5.6	5.7	7.2
Typ. Ave. Gain at Theta 80 deg. (10 deg above Horiz.); dBi	N/A	0.3	1.5	1.6	1.9	2.0		
Efficiency (%), Avg	N/A	>80	>80 >80 >80 >80 >75 -					
Polarization	Vertical							
Azimuth (Horizontal) Beamwidth	360°							
Nominal Impedance (Ohms)	50							
Max Power @ Ambient 25°C (W)	100		20					

MECHANICAL SPECIFICATIONS			
Dimensions – H x D Bottom-D Top – mm (inches)	FTRA6171M5Pxx: 92 x 45 (3.62 x 1.77)	FTRA6971M5Pxx: 84 x 45-32 (3.78 x 1.81-1.2	
Weight – kg (lbs.)	FTRA6171M5Pxx: 0.145 (0.32)	FTRA6971M5Pxx: 0.138 (0.30)	
Radome Material	Polycarbonate		
Connector Type	Type N (female)		



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ENVIRONMENTAL SPECIFICATIONS		
Operating Environment (Indoor or Outdoor)	Outdoor	
Operating Temperature – °C (°F)	-40 to +85°C (-40 to +185°F)	
Storage Temperature – °C (°F)	-40 to +85°C (-40 to +185°F)	
Ingress Protection Rating	IP67	
Flammability Rating	UL94 V0	
Material Substance Compliance	RoHS	

CONFIGURATION

PART NUMBER	Operating Frequency	Color
FTRA6171M5PB-001	617 – 7125 MHz	Black
FTRA6171M5PW-001	617 – 7125 MHz	White
FTRA6971M5PB-001	698 – 7125 MHz	Black
FTRA6971M5PW-001	698 – 7125 MHz	White

MECHANICAL DRAWING

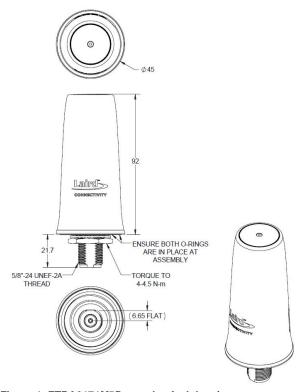


Figure 1: FTRA6171M5Px mechanical drawing

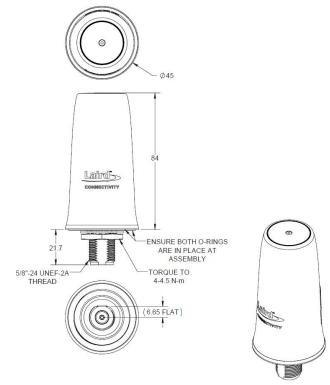
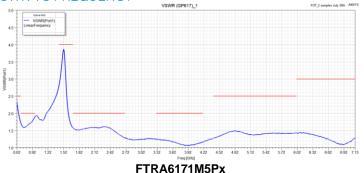


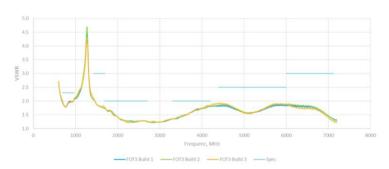
Figure 2: FTRA6971M5Px mechanical drawing



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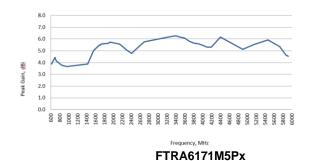






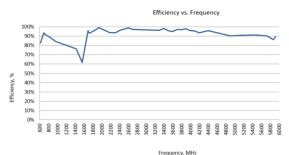
FTRA6971M5Px

PEAK GAIN VS FREQUENCY





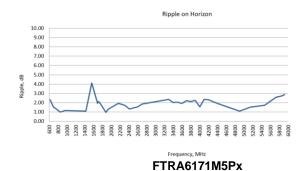
RADIATED EFFICIENCY VS FREQUENCY

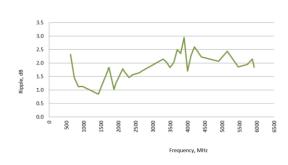


FTRA6171M5Px

FTRA6971M5Px

GAIN RIPPLE VS FREQUENCY



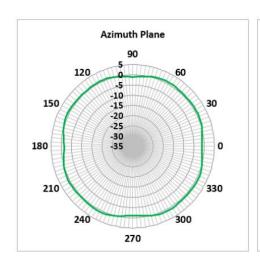


FTRA6971M5Px

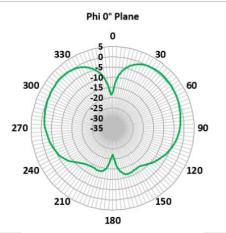


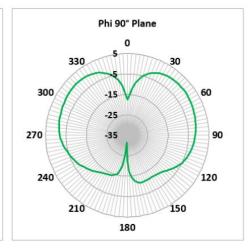
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RADIATION PATTERNS

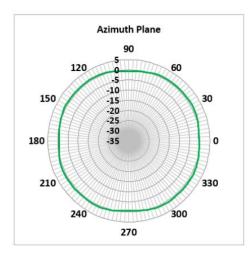


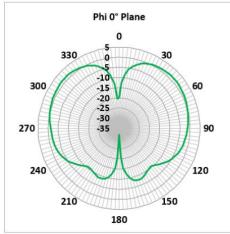
617 MHz (FTRA6171M5Px)

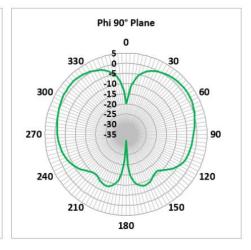


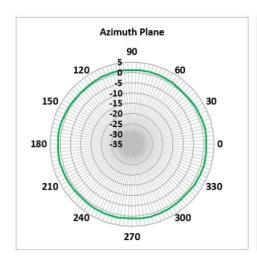


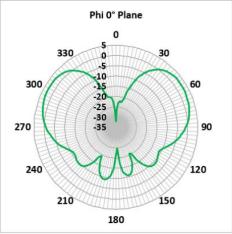
698 MHz (FTRA6171M5Px)

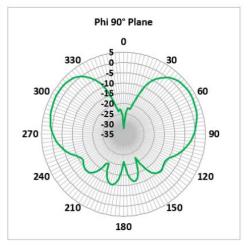








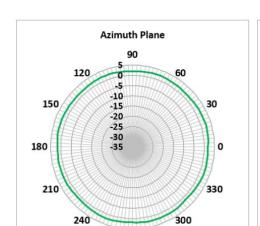






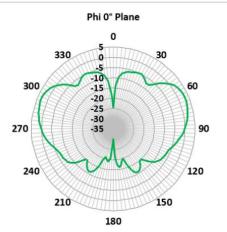


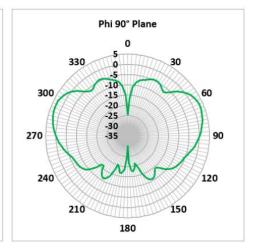
RADIATION PATTERNS (CONTINUED)

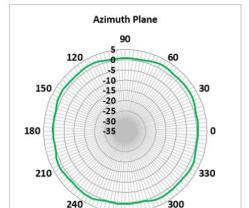


270

1427 MHz (FTRA6171M5Px)



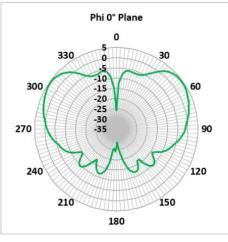


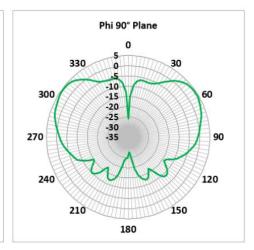


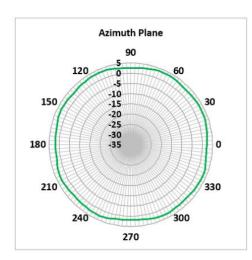
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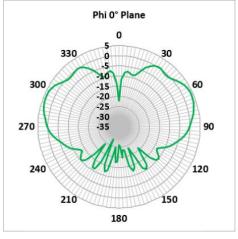
240

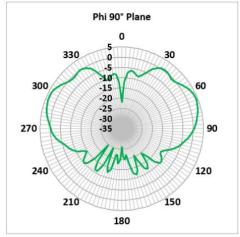
1695 MHz (FTRA6171M5Px)







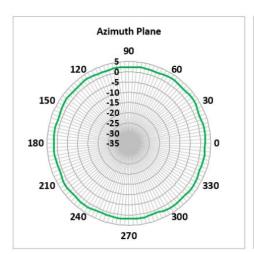




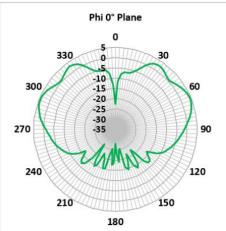


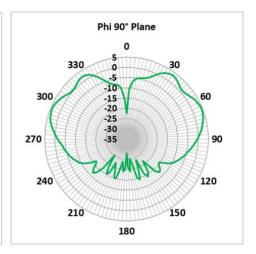


RADIATION PATTERNS (CONTINUED)

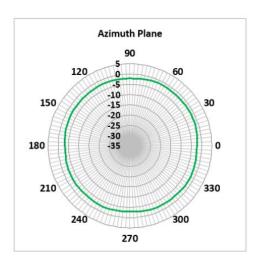


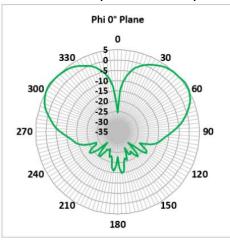
2310 MHz (FTRA6171M5Px)

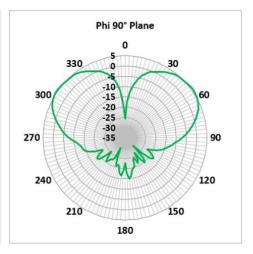


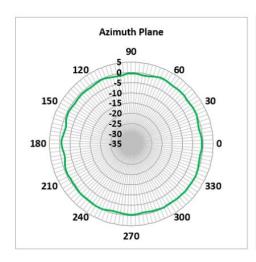


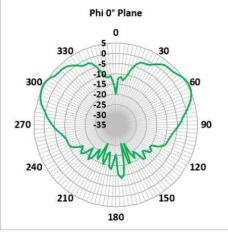
2700 MHz (FTRA6171M5Px)

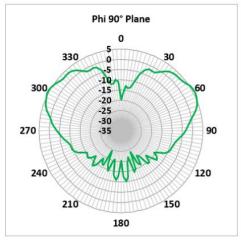








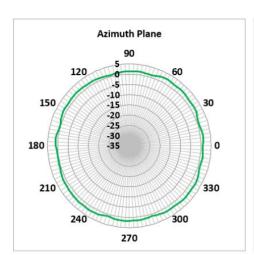




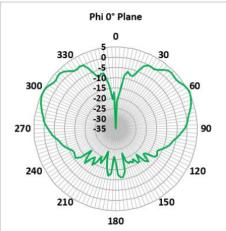


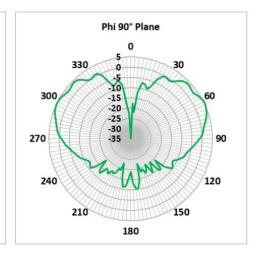


RADIATION PATTERNS (CONTINUED)

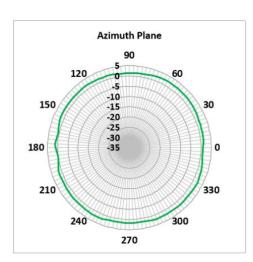


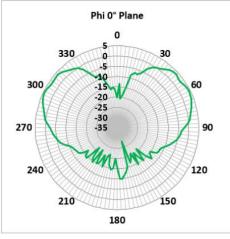
3800 MHz (FTRA6171M5Px)

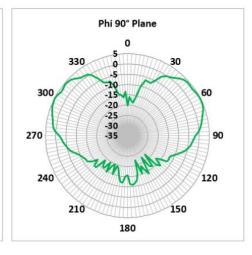


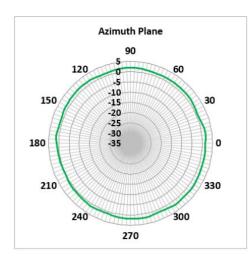


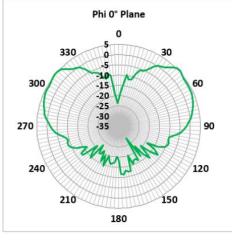
4200 MHz (FTRA6171M5Px)

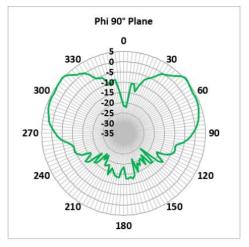








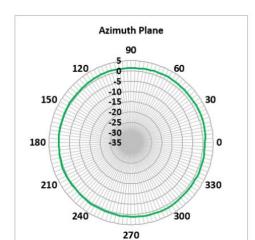




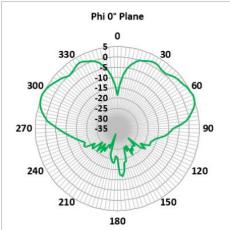


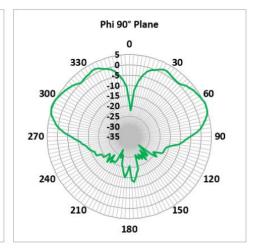


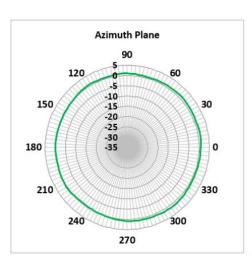
RADIATION PATTERNS (CONTINUED)



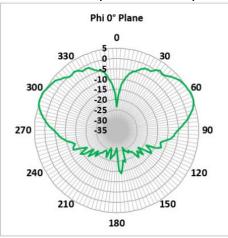
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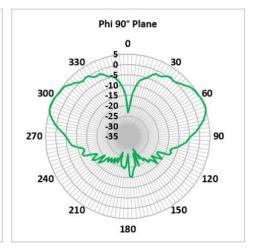


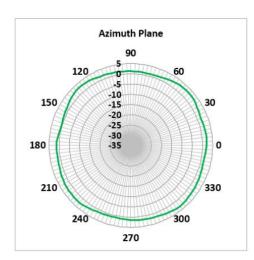


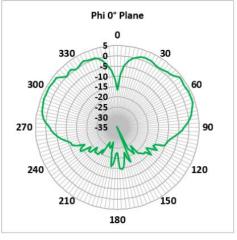


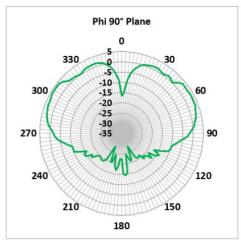
5470 MHz (FTRA6171M5Px)







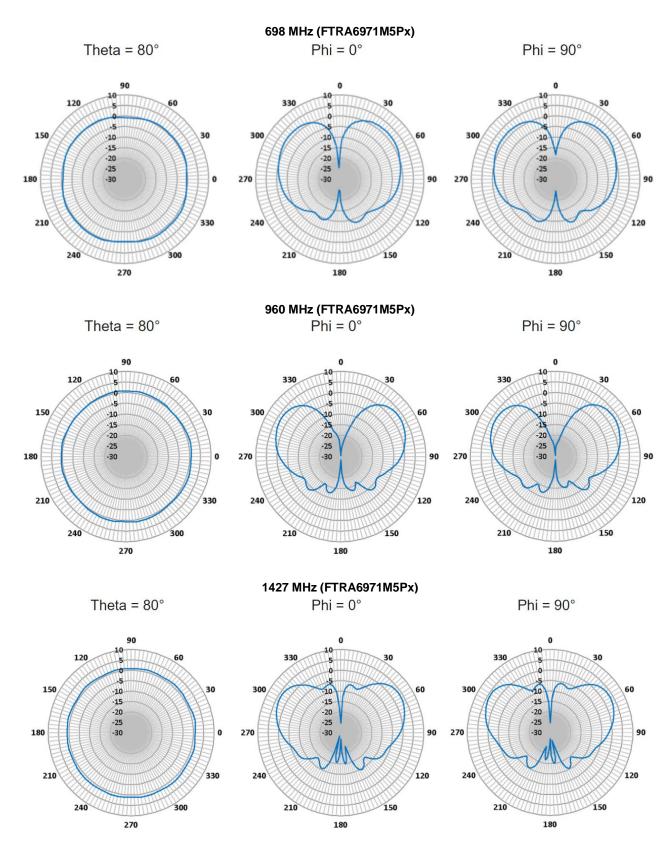






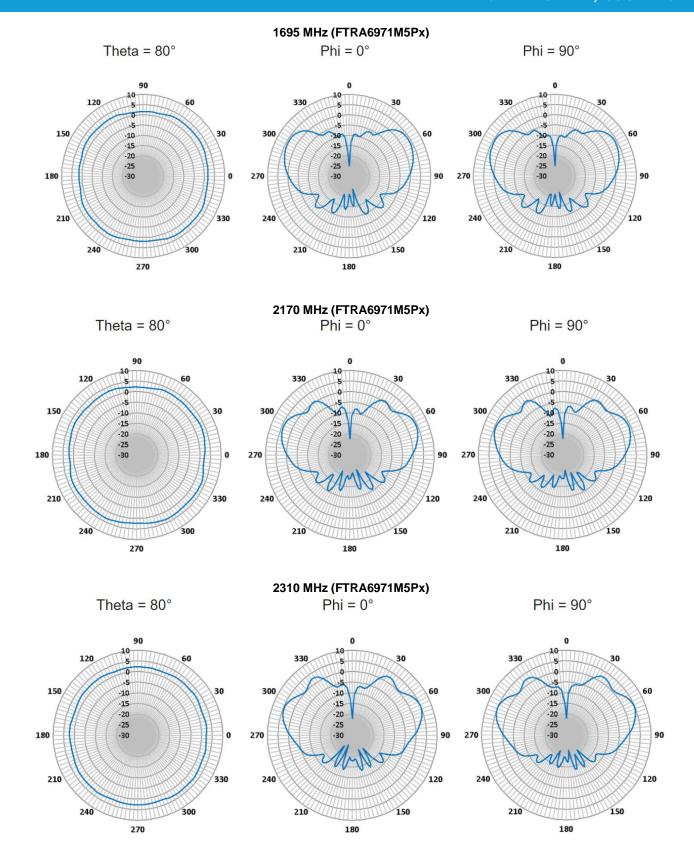
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RADIATION PATTERNS (CONTINUED)



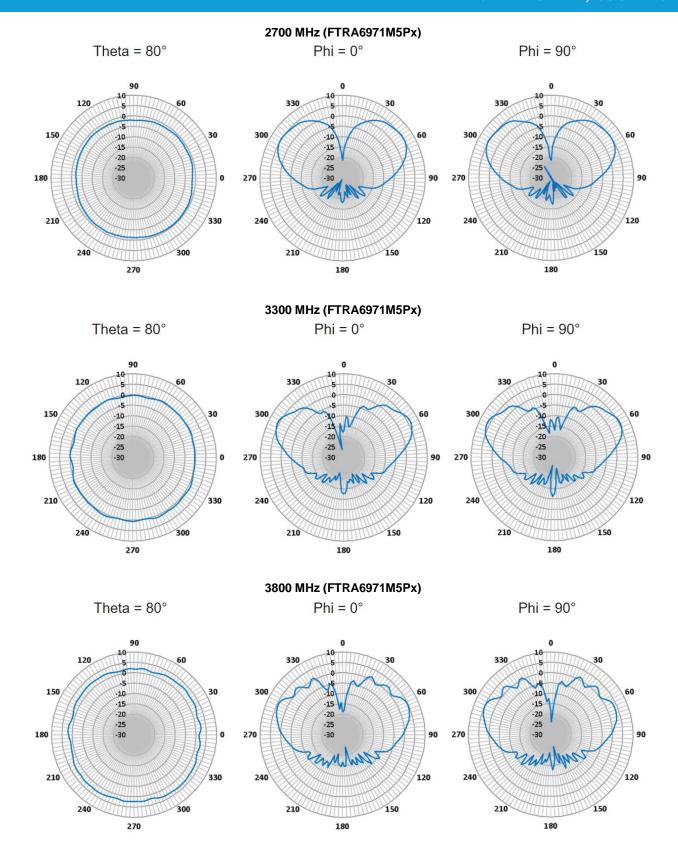


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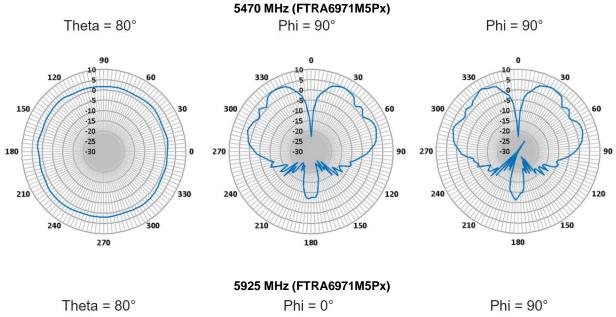


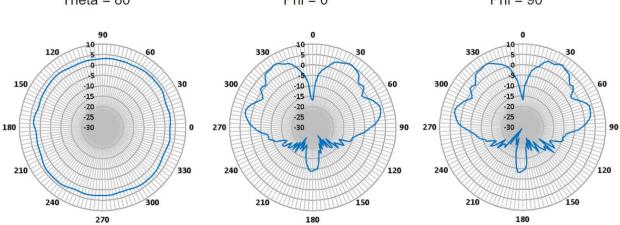
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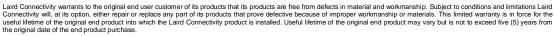


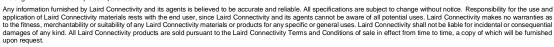
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