



TAOGLAS®



Patriot Series

Product Features

- Up to 18-in-1 Permanent Mount Antenna
- 2* GNSS - L1 and L1/L5 Bands
- 9* 5G/4G LTE Cellular 600-6000MHz
- 5* Wi-Fi 2.4/5.8/7.1 GHz
- 1x LMR/TETRA Interchangeable Whip
- 1x AM/FM Radio/VHF/UHF/LMR Bands
- IP67 Waterproof Enclosure
- Dimensions: 205 mm * 180 mm * 60 mm
- Cables and Connectors Fully Customizable
- RoHS & Reach Compliant

Specsheet

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1. Introduction



Patriot 18-in-1 High-Performance Super Compact Combination Antenna

The **Patriot** is a cutting-edge, multi-combination antenna engineered specifically for the Ford Interceptor vehicle, the most widely used police vehicle in the U.S. Designed to eliminate the need for multiple antennas, it offers up to 18-in-1 connectivity, including 5G,/4G, GNSS (L1 & L1/L5), Wi-Fi®, SDRAS and LMR/TETRA, ensuring optimal performance for first responders and fleet vehicles. It is a compact, low-profile design that allows for seamless integration onto vehicle roofs, utilizing existing OEM mounting connections to simplify installation.

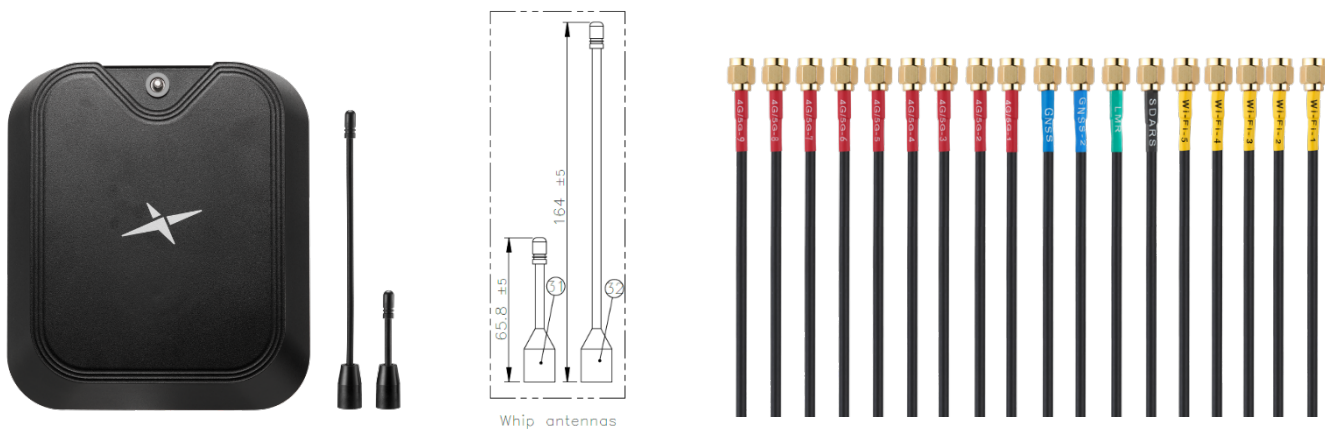
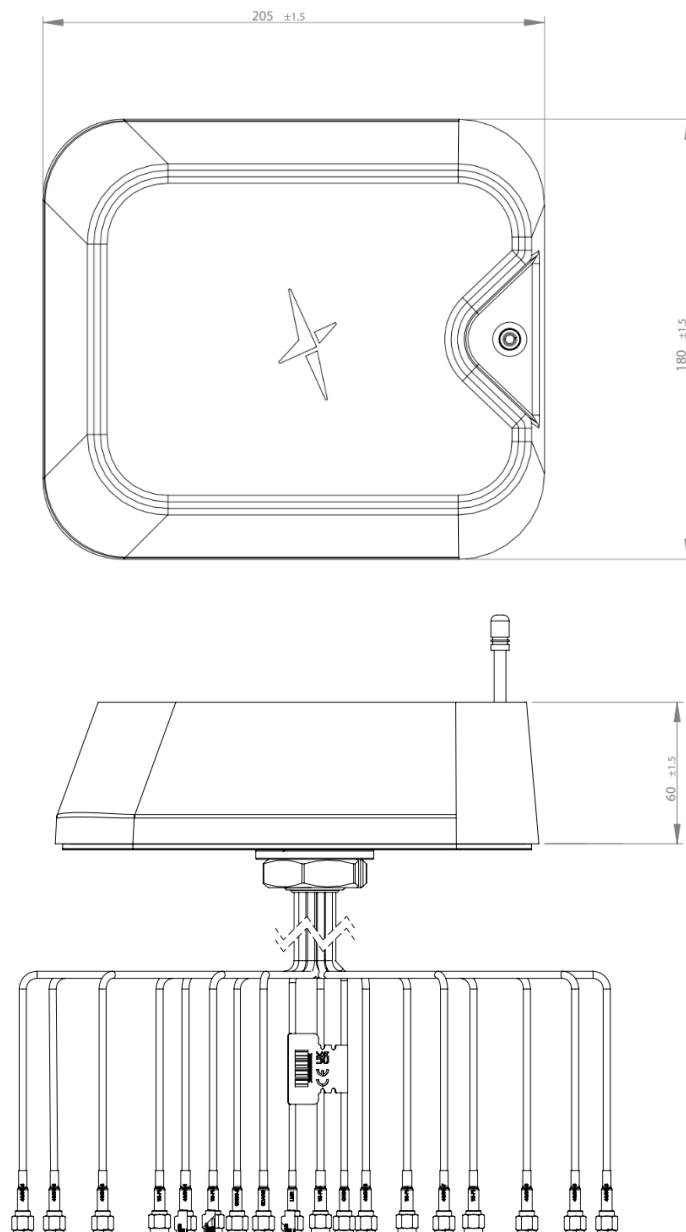
The **Patriot** guarantees enhanced signal strength and with its rugged IP67-rated enclosure and ability to mount behind the roof ribs, this next-generation antenna delivers superior durability, reliability, and efficiency, making it one of the most versatile and compact solutions available today. With a small footprint of (L)205mm x (W)180mm and a whip height of up to 164mm*, the Compact Design of the Patriot ensures a low-profile, unobtrusive installation.

Product Variations

PATR.SP.18.B.0.3M	18-in-1 Permanent Mount Antenna 2*GNSS, 9*5G/4G, 5*Wi-Fi, 1*SDARS, 1*LMR Whip With SMA/RP-SMA/Quad FAKRA Code E and Code D Connector and Staggered RG-174/TGC-1.5DS Pigtail Cables (2025 Version)
PATR.SP.17.B.0.3M	18-in-1 Permanent Mount White Antenna 2*GNSS, 9*5G/4G, 5*Wi-Fi, 1*SDARS, 1*LMR Whip With SMA/RP-SMA/Quad FAKRA Code E and Code D Connector and Staggered RG-174/TGC-1.5DS Pigtail Cables (2025 Version)
PATR.SP.18.W.0.3M	17-in-1 Permanent Mount Antenna 2*GNSS, 9*5G/4G, 5*Wi-Fi, 1*LMR Whip With SMA/RP-SMA/Dual FAKRA Code C Connector and Staggered RG-174/TGC-1.5DS Pigtail Cables (2024 Version)
PATR.SP.17.W.0.3M	17-in-1 Permanent Mount White Antenna 2*GNSS, 9*5G/4G, 5*Wi-Fi, 1*LMR Whip With SMA/RP-SMA/Dual FAKRA Code C Connector and Staggered RG-174/TGC-1.5DS Pigtail Cables (2024 Version)
PATR.SP.18.B.5M	18-in-1 Permanent Mount Antenna 2*GNSS, 9*5G/4G, 5*Wi-Fi, 1*SDARS, 1*LMR Whip With SMA/RP-SMA/Quad FAKRA Code E and Code D Connector and 5M RG-174/TGC-200 Cables (2025 Version)
PATR.SP.18.W.5M	18-in-1 Permanent Mount White Antenna 2*GNSS, 9*5G/4G, 5*Wi-Fi, 1*SDARS, 1*LMR Whip With SMA/RP-SMA/Quad FAKRA Code E and Code D Connector and 5M RG-174/TGC-200 Cables (2025 Version)
PATR.SP.17.B.5M	17-in-1 Permanent Mount Antenna 2*GNSS, 9*5G/4G, 5*Wi-Fi, 1*LMR Whip With SMA/RP-SMA/Dual FAKRA Code C Connector and 5M RG-174/TGC-200 Cables (2024 Version)
PATR.SP.17.W.5M	17-in-1 Permanent Mount White Antenna 2*GNSS, 9*5G/4G, 5*Wi-Fi, 1*LMR Whip With SMA/RP-SMA/Dual FAKRA Code C Connector and 5M RG-174/TGC-200 Cables (2024 Version)
PATR.FP.18.B.5M	18-in-1 Permanent Mount Antenna 2*GNSS, 9*5G/4G, 5*Wi-Fi, 1*SDARS, 1*LMR Whip With FAKRA Code C/D/I/Quad FAKRA Code E and Code D Connector and 5M RG-174/TGC-200 Cables (2025 Version)
PATR.FP.18.W.5M	18-in-1 Permanent Mount White Antenna 2*GNSS, 9*5G/4G, 5*Wi-Fi, 1*SDARS, 1*LMR Whip With FAKRA Code C/D/I/Quad FAKRA Code E and Code D Connector and 5M RG-174/TGC-200 Cables (2025 Version)
PATR.FP.17.B.5M	17-in-1 Permanent Mount Antenna 2*GNSS, 9*5G/4G, 5*Wi-Fi, 1*LMR Whip With FAKRA Code C/D/I/Dual FAKRA Code C Connector and 5M RG-174/TGC-200 Cables (2024 Version)
PATR.FP.17.W.5M	17-in-1 Permanent Mount White Antenna 2*GNSS, 9*5G/4G, 5*Wi-Fi, 1*LMR Whip With FAKRA Code C/D/I/Dual FAKRA Code C Connector and 5M RG-174/TGC-200 Cables (2024 Version)

Contact your local Taoglas customer service team for more information.

2. Mechanical and Environmental Information



Mechanical	
Dimensions (Not including Whip)	Length – 330mm / Width – 75.5mm / Height – 45.2mm
Whip Length	65mm
Whip Coil Diameter	Ø6mm
Whip Base Diameter	Ø14mm
Enclosure	UV Resistant PC
Cable*	GNSS, AM/FM RG-174 5G/4G MIMO, Wi-Fi MIMO, VHF/UHF(TETRA)/LMR (130-150,350-470,700-900MHz): TGC-1.5DS
Connector*	GNSS, AM/FM, 5G/4G MIMO: SMA(M) Wi-Fi MIMO: RP-SMA(M) VHF/UHF(TETRA)/LMR (130-150,350-470,700-900MHz): Mini UHF (M)
Base and Thread	Nickel plated steel
Thread Diameter	M20 1.5P
Weight (including cables & whip)	972g
Environmental	
Protection	IP67
Temperature Range	-40°C to 85°C
Humidity	Non-condensing 65°C 95% RH
RoHS Compliant	Yes
REACH Compliant	Yes

Information based on the **17-in-1 with Pigtail Cables** product.

Information is correct as of July 2025.

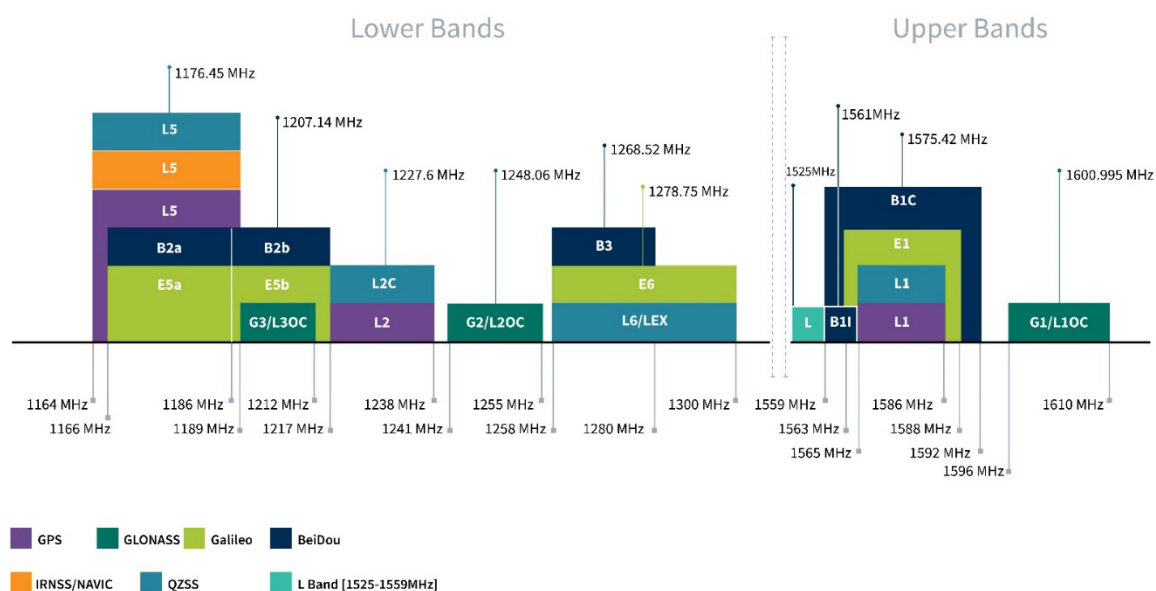
Technical specifications can change without notice.

*Cable and connector are fully customizable

3. Electrical Specification

GNSS Frequency Bands					
GPS	L1 1575.42 MHz	L2 1227.6 MHz	L5 1176.45 MHz		
	■	□	■		
GLONASS	G1 1602 MHz	G2 1248 MHz	G3 1207 MHz		
	□	□	□		
Galileo	E1 1575.24 MHz	E5a 1176.45 MHz	E5b 1201.5 MHz	E6 1278.75 MHz	
	■	■	□	□	
BeiDou	B1C 1575.42 MHz	B1I 1561 MHz	B2a 1176.45 MHz	B2b 1207.14 MHz	B3 1268.52 MHz
	■	■	■	□	□
L-Band	L-Band 1542 MHz				
	□				
QZSS (Regional)	L1 1575.42 MHz	L2C 1227.6 MHz	L5 1176.45 MHz	L6 1278.75e6	
	■	□	■	□	
IRNSS (Regional)	L5 1176.45 MHz				
	■				
SBAS	L1/E1/B1 1575.42 MHz	L5/B2a/E5a 1176.45 MHz	G1 1602 MHz	G2 1248 MHz	G3 1207 MHz
	■	■	□	□	□

Information based on the **MAX2017.A.001** product.



GPS/GLONASS/BeiDou/Galileo Electrical				
Frequency (MHz)	1176.45	1561	1575.42	1603
VSWR (max.)	3:1	3:1	3:1	8:1
Passive Antenna Efficiency (%)	37.77	33.44	40.65	17.73
Passive Antenna Gain at Zenith (dBic)	1.75	3.59	4.51	1.19
Axial Ratio (dB)	8.43	22.05	14.71	12.86
Polarization	RHCP			
Impedance	50 Ω			

LNA and Filter Electrical Properties				
Frequency (MHz)	1176.45	1561	1575.42	1603
Gain@3.0V	12.6	11.5	11.1	10.9
Noise@3.0V	2.0	2.2	2.6	2.2
DC Power Input	1.8-5.5V			
Power consumption@5.5V (mA)	10mA +/- 3			

Information based on the **17-in-1 with Pigtail Cables** product.

LTE Electrical									
Band	Frequency (MHz)	Measurement	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern	Max. input power
5G NR/4G Band 71	617-698	LTE1	27.0	-5.69	2.03	50 Ω	Linear	Omni	2W
		LTE2	20.4	-6.91	-1.50				
		LTE3	25.6	-5.92	0.17				
		LTE4	44.1	-3.56	3.54				
		LTE5	24.9	-6.04	2.68				
		LTE6	24.5	-6.11	-0.41				
		LTE7	25.1	-6.00	-1.18				
		LTE8	29.9	-5.24	0.85				
4G/3G Band 12,13,14,17,28,29	698-824	LTE1	34.1	-4.67	2.63				
		LTE2	32.0	-4.95	1.92				
		LTE3	35.7	-4.48	2.67				
		LTE4	42.9	-3.67	2.75				
		LTE5	32.0	-4.95	1.77				
		LTE6	26.4	-5.79	-0.11				
		LTE7	32.9	-4.83	1.97				
		LTE8	36.4	-4.39	2.24				
4G/3G/NB-IoT/Cat M Band 5,8,18,19,20,26,27	824-960	LTE1	38.3	-4.16	1.52				
		LTE2	36.0	-4.44	1.50				
		LTE3	28.3	-5.48	1.20				
		LTE4	35.5	-4.49	2.45				
		LTE5	29.9	-5.24	1.53				
		LTE6	28.7	-5.43	-0.35				
		LTE7	36.3	-4.40	2.66				
		LTE8	40.1	-3.97	2.58				
5G NR/4G Band 21,32,74,75,76	1427-1518	LTE1	37.4	-4.27	2.73				
		LTE2	41.9	-3.78	3.32				
		LTE3	33.1	-4.81	2.78				
		LTE4	32.9	-4.82	2.33				
		LTE5	31.2	-5.06	2.10				
		LTE6	31.5	-5.01	1.43				
		LTE7	39.7	-4.02	2.25				
		LTE8	25.7	-5.91	0.94				
4G/3G Band 1,2,3,4,9,23,25,35,39,66	1710-2200	LTE1	46.4	-3.34	4.93				
		LTE2	47.2	-3.26	4.61				
		LTE3	51.5	-2.88	5.48				
		LTE4	48.7	-3.13	5.34				
		LTE5	51.5	-2.88	6.07				
		LTE6	49.3	-3.07	6.07				
		LTE7	29.8	-5.26	4.22				
		LTE8	31.3	-5.04	2.93				
4G/3G Band 7,30,38,40,41	2300-2690	LTE1	49.9	-3.02	5.47				
		LTE2	48.3	-3.16	4.39				
		LTE3	48.2	-3.17	6.12				
		LTE4	38.8	-4.12	6.69				
		LTE5	39.2	-4.07	5.96				
		LTE6	49.2	-3.08	6.79				
		LTE7	39.7	-4.01	5.28				
		LTE8	43.1	-3.65	6.09				
5G NR/4G Band 22,42,48,77,78,79	3300-5000	LTE1	51.4	-2.89	6.13				
		LTE2	44.9	-3.48	7.46				
		LTE3	47.4	-3.24	5.75				
		LTE4	48.2	-3.17	6.88				
		LTE5	42.5	-3.72	5.24				
		LTE6	46.2	-3.35	5.90				
		LTE7	43.1	-3.65	5.37				
		LTE8	46.1	-3.36	6.02				
LTE5200/Wi-Fi5800	5150-5925	LTE1	43.2	-3.65	7.96				
		LTE2	42.7	-3.69	7.82				
		LTE3	43.4	-3.63	5.67				
		LTE4	46.5	-3.33	5.73				
		LTE5	42.7	-3.70	5.26				
		LTE6	43.6	-3.61	5.84				
		LTE7	40.1	-3.97	6.03				
		LTE8	44.6	-3.50	6.14				

*Tested with 0.3m of Cable on a 30x30cm Ground Plan
Information based on the **MAX1016.A.001** product.

Wi-Fi Electrical									
Band	Frequency (MHz)	Measurement	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern	Max. input power
Wi-Fi - 2GHz	2400-2500	Wi-Fi1	56.5	-2.48	4.36	50 Ω	Linear	Omni	2W
		Wi-Fi2	58.2	-2.35	6.55				
		Wi-Fi3	56.1	-2.51	5.68				
		Wi-Fi4	58.1	-2.36	4.19				
		Wi-Fi5	53.3	-2.73	7.60				
		Wi-Fi6	52.7	-2.78	6.98				
Wi-Fi - 5GHz	5150-5850	Wi-Fi1	49.3	-3.07	5.71				
		Wi-Fi2	49.5	-3.05	7.47				
		Wi-Fi3	47.8	-3.20	5.63				
		Wi-Fi4	45.9	-3.38	6.10				
		Wi-Fi5	50.5	-2.97	8.04				
		Wi-Fi6	44.7	-3.50	8.51				
Wi-Fi - 6GHz	5925-7125	Wi-Fi1	47.1	-3.27	6.33				
		Wi-Fi2	49.9	-3.02	7.47				
		Wi-Fi3	48.4	-3.15	6.28				
		Wi-Fi4	43.1	-3.66	5.96				
		Wi-Fi5	46.2	-3.36	7.31				
		Wi-Fi6	43.7	-3.60	7.22				

*Tested on 30x30cm ground Plane with 3m TGC-1.5DS Cable



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