

**Dualband X-pol Tri-sector Antenna  
with Integrated Combiners**

**806–960 MHz  
1710–2170 MHz**

Kathrein's dual band antennas are ready for 3G applications, covering all existing wireless bands as well as all spectrum under consideration for future systems, AMPS, PCS and 3G/UMTS.

- Wide band operation.
- Exceptional intermodulation characteristics.
- High strength fiberglass radome.
- Internal duplexers allow the +45° polarization (upper and lower bands) to be combined on one connector and the -45° polarization (upper and lower bands) to be combined on a second connector for each antenna.

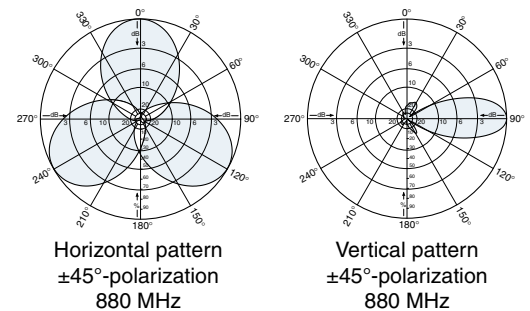
**General specifications:**

Frequency range	806–960 MHz 1710–2170 MHz
VSWR	<1.5:1
Impedance	50 ohms
Intermodulation (2x20w)	IM3: <-150 dBc
Polarization	+45° upper and lower band -45° upper and lower band
Connector	6 x 7/16 DIN female
Isolation intrasystem intersystem	>30 dB >40 dB (806–960 // 1710–2170 MHz)
Radome color	Light gray (custom colors available at additional cost)
Weight	50 lb (22.7 kg)
Height	24 inches (609 mm)
Radome diameter	16 inches (407 mm)
Equivalent flat plate area	1.6 ft <sup>2</sup> (0.148 m <sup>2</sup> )
Wind survival rating*	100 mph (160 kph)
Shipping dimensions	32 x 20 x 19 inches (813 x 508 x 483 mm)
Shipping weight	52 lb (23.6 kg)
Mounting	Designed to be mounted on top of a utility pole using a <b>custom mounting bracket supplied by the customer.</b>

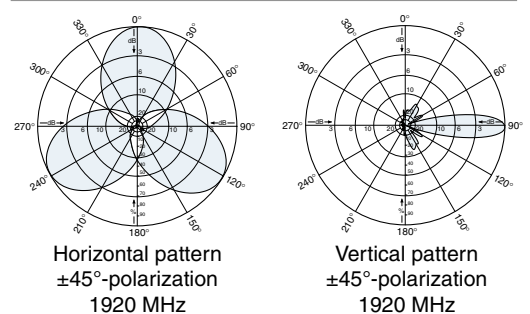
*See reverse for order information.*



**806–960 MHz**



**1710–2170 MHz**



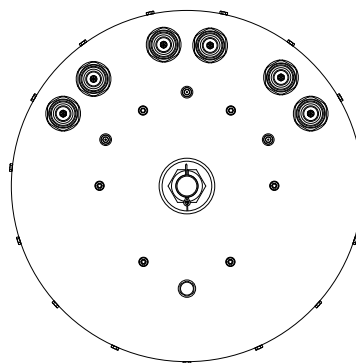
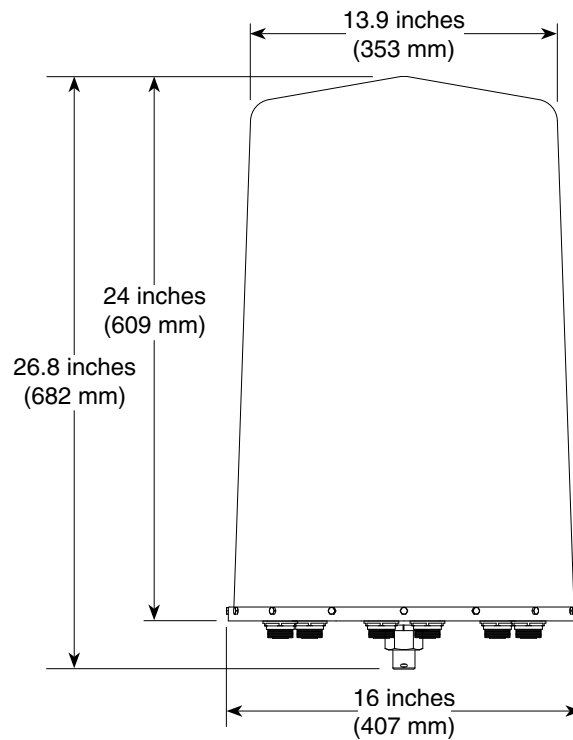
<b>Specifications:</b>	<b>806–866 MHz</b>	<b>824–894 MHz</b>	<b>880–960 MHz</b>	<b>1710–1880 MHz</b>	<b>1850–1990 MHz</b>	<b>1920–2170 MHz</b>
Gain	9.1 dBd/11.1 dBi	9.4 dBd/11.4 dBi	9.8 dBd/11.8 dBi	10.5 dBd/12.5 dBi	11.3 dBd/13.3 dBi	11.6 dBd/13.6 dBi
Front-to-back ratio (180° ± 30°)	>23 dB (co-polar) >20 dB (total power)	>23 dB (co-polar) >20 dB (total power)	>25 dB (co-polar) >22 dB (total power)	>25 dB (co-polar) >22 dB (total power)	>25 dB (co-polar) >22 dB (total power)	>25 dB (co-polar) >22 dB (total power)
Maximum input power	250 watts (at 50°C)	250 watts (at 50°C)	250 watts (at 50°C)	200 watts (at 50°C)	200 watts (at 50°C)	200 watts (at 50°C)
+45° and -45° polarization horizontal beamwidth	67° (half-power)	66° (half-power)	64° (half-power)	66° (half-power)	60° (half-power)	60° (half-power)
+45° and -45° polarization vertical beamwidth	34° (half-power)	33° (half-power)	30° (half-power)	20° (half-power)	18° (half-power)	17.5° (half-power)
Cross polar ratio						
Main direction 0°	25 dB (typical)	25 dB (typical)	25 dB (typical)	16 dB (typical)	18 dB (typical)	20 dB (typical)
Sector ±60°	>10 dB	>10 dB	>10 dB	>10 dB	>10 dB	>10 dB



\* Mechanical design is based on environmental conditions as stipulated in EIA-222-F (June 1996) and/or ETS 300 019-1-4 which include the static mechanical load imposed on an antenna by wind at maximum velocity. See the Engineering Section of the catalog for further details.

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1710–2170 MHz



**Order Information:**

Model	Description
840 10505	Dualband X-pol Omni Antenna

All specifications are subject to change without notice. The latest specifications are available at [www.kathrein-scala.com](http://www.kathrein-scala.com).

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