

Intellex Reader Antenna

Intellex Corporation offers break-through system performance with its wide coverage single element antenna



Intellex single element antenna pair with one transmit and one receive

Intellex general purpose antennas are optimized for Intellex's RFID system and complement the outstanding performance and range offered by the I-Beam™ 500 reader and Intellex tags. The versatile, multipurpose antennas can be used for long range applications requiring large area coverage.

These rugged antennas can withstand the extreme heat, cold and moisture of outdoor environments encountered in yards and outside dock doors, as well as high humidity, dust and vibrations encountered in manufacturing, warehouse or indoor asset tracking environments. These antennas are designed to be used in pairs with complementary polarizations. A mounting kit is included for easy deployment.

ELECTRICAL

12" PATCH ANTENNA

7.5" PATCH ANTENNA

	12" PATCH ANTENNA	7.5" PATCH ANTENNA
Frequency Range	902-928 MHz (US) 865-870 MHz (Europe/India)	902-928 MHz (US/Korea)
Gain	6.85 dBil / 9 dBic (no cable loss assumed)	6 dBil (max)
VSWR	1.5:1 (max)	1.3:1
Azimuth 3 dB Beamwidth	63° (typical)	70° (typical)
Elevation 3dB Beamwidth	63° (typical)	71° (typical)
Polarization	LHCP or RHCP	LHCP or RHCP
Sidelobes Level @ 90°	-16 dB (max)	-19 dB (max)
Axial Ratio Over Beamwidth	4 dB (max)	1.3 dB (max)
F/B Ratio	-18 dB (max) -20 dB (typical)	-19 dB (max)
Input Impedance	50 Ohm	50 Ohm
Input Power Handling	6 W (max)	6 W (max)
Lightning Protection	DC grounded	DC grounded

MECHANICAL

	12" PATCH ANTENNA	7.5" PATCH ANTENNA
Dimensions (L x W x D)	12" x 12" x 1" (305 mm x 305 mm x 25 mm)	7.5" x 7.5" x 1.8" (190 mm x 190 mm x 30 mm)
Orientation	Rectangular	Rectangular
Weight	2.64 lb (1,2 kg) (max)	1.76 lb (0,8 kg) (max)
Connector	Reverse-TNC-female (US) N-female (Europe/India)	Reverse-TNC-female (US/Korea)
Casing	Plastic UV Resistant per ETSI 300	Plastic UV Resistant per ETSI 300
Base Plate	Aluminum with chemical conversion coating	Aluminum with chemical conversion coating

ENVIRONMENTAL**12" PATCH ANTENNA****7.5" PATCH ANTENNA**

Operating Temperature	-67° to +160°F (-55° to +71°C)	-67° to +160°F (-55° to +71°C)
Cold Test	IEC 68-2-1 (-55°C for 72 hours)	IEC 68-2-1 (-55°C for 72 hours)
Heat Test	IEC 68-2-2 (+71°C for 72 hours)	IEC 68-2-2 (+71°C for 72 hours)
Temperature Shock Test	IEC 68-2-14	IEC 68-2-14
Humidity Test	ETSI EN300-2-4 T4.1E (95% for 144 hours)	ETSI EN300-2-4 T4.1E (95% for 144 hours)
Water Tightness	IP67, IEC 529	IP67, IEC 529 (US/Korea)
Solar Radiation	ASTM G53	ASTM G53
Ozone Resistance	ETSI 300	ETSI 300
Flammability	UL 94, Class HB	UL 94, Class HB
Dust Resistance	IP67	IP67 (US/Korea)
Salt Spray	IEC 68-2-11 Ka (500 hours)	IEC 68-2-11 Ka (500 hours)
Ice and Snow	1" (25 mm) Radial	
Wind Speed		
Survival	1375 mph (220 Kmph)	
Operation	100 mph (160 Kmph)	
Wind Load Survival		
Front Thrust	59 lb (26,8 kg)	
Side Thrust	4.84 lb (2,2 kg)	
Quasi Random Vibration	20 g rms for 4 hours	20 g rms for 4 hours
Vehicle Vibration Operating	1 g rms, 10-500 Hz, in 3 axis	1 g rms, 10-500 Hz, in 3 axis
Mechanical Shock Operating	10 g, 11 msec, half sine pulse	10 g, 11 msec, half sine pulse
Regulatory Compliance	RoHS, CE 0682	RoHS, CE 0682

Intellex reserves the right to change product information and specifications without notice.

ORDERING INFORMATION

Part Number	Description
IA410.1	12" antenna pair, one transmit, one receive; 902-928 MHz frequency band; United States
IA414.2	12" antenna pair, one transmit, one receive; 865-868 MHz frequency band; Europe, India
IA412.1	7.5" antenna pair, one transmit, one receive; 902-928 MHz frequency band; United States
IA412.2	7.5" antenna pair, one transmit, one receive; 902-928 MHz frequency band; Korea

