

# S24512BPX

2.4 and 5.5 GHz High Performance Antenna



## SPECIFICATIONS

Model	S24512BPX
Frequency, MHz	2400-2500 /5150-5850
Gain, dBi	3 dBi Typical for 2.4 GHz6 6 dBi Typical for 5.5 GHz
Elevation Plane Beamwidth	50° @ 2400-2500 MHz 20° @ 5150-5850 MHz
Azimuth Plane Beamwidth	360°
Wind Surface Area ft. <sup>2</sup> (m <sup>2</sup> )	0.07 (0.006)
Wind Survivability, mph (kph)	125 (200)
Weight, lb. (kg)	0.30 (0.14)
Height, in. (cm)	9.6 (24.5)
Nominal Impedance, Ohms	50
VSWR	2.0:1 nominal
Power Handling, Watts	10
Radiating Element	PC board
Enclosure	Polycarbonate
Feed	Reverse polarity SMA (male) 36" (91.4 cm) Plenum

### LIMITED WARRANTY

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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

### Warranty and Liability

LAIRD TECHNOLOGIES shall not be liable for any incidental or consequential damages which may result from a defective, or use, or improper or otherwise or installation, improper or otherwise. Please contact your vendor for technical support and warranty service

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**Important Notice:** Please read all instructions carefully before attempting to install and use this product.

## SAFETY

The S24512BPX and all associated equipment should be installed in accordance with applicable local and national electrical code guidelines to ensure safe operation.

## LOCATION

For best results, mount the S24512BPX at ceiling or roof level near the center of the coverage area. A line-of-sight path between the antenna and active floor location generally works best. Although 2.4 GHz signals penetrate cubical dividers and interior partitions with little attenuation, reinforced block walls, banks of metal cabinets, or steel shelving may attenuate signals or cause multipath, a condition where reflected signals interfere with the primary signal. Avoid mounting next to a column or vertical support that could create a shadow zone of reduced coverage to one portion of the room. Each antenna comes with a ceiling-tile support-runner mount and a U-bolt style pole mount.

## APPLICATIONS

Laird Technologies' S24512BPX is a ruggedized high-performance omnidirectional collinear antenna used for 2.4 and 5.5 GHz RF-distribution systems. Its flattened radiation pattern focuses energy along the horizontal plane to provide extended coverage in large rooms or vaulted areas (see Figure-1). The S24512BPX may also be pole-mounted for use in exterior locations.

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## MOUNTING

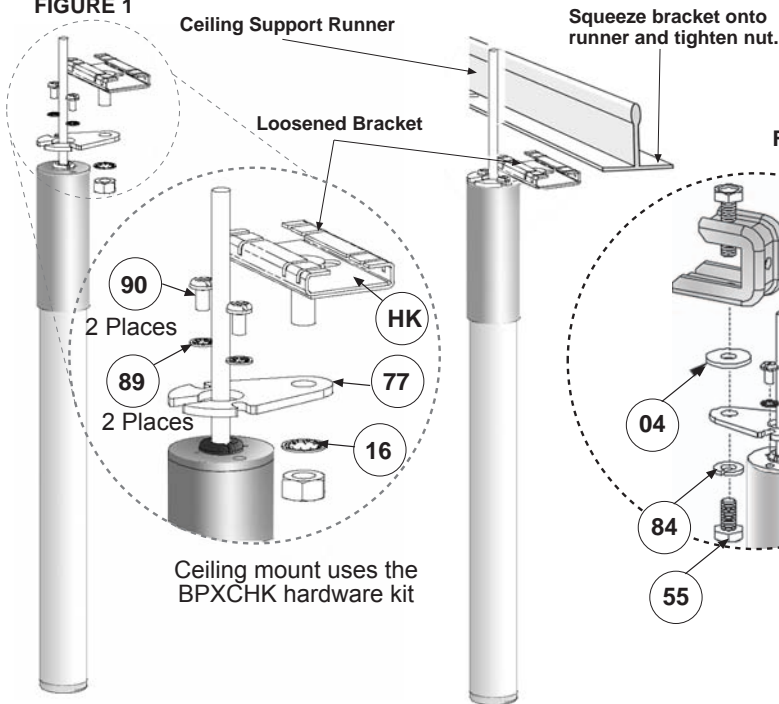
### To install the antenna using the ceiling bracket:

1. Find the antenna bracket (77). Also, find two #6 phillips head screws (90) and two #6 lock washers (89). Use the #6 hardware to secure the antenna bracket to the antenna base (see Figure-1).
2. Find the tile runner bracket (HK). Remove the 1/4" - 20 hex nut and flat washer from the bracket's carriage bolt in preparation for mounting. Discard the flat washer-this will not be used.
3. Find the 1/4" lock washer (16). Insert the antenna bracket onto the threaded end of the tile-bracket bolt (Figure-1). Install the 1/4" lock washer and nut loosely-the halves of the tile bracket must slide freely for final installation.
4. Clamp the ceiling bracket onto the support runner and tighten the 1/4" mounting nut using a 7/16" wrench or adjustable wrench. Secure the coaxial cable along the support runner using tape or cable ties.
5. If installing one antenna, attach the connector to the AP unit's Primary antenna connection. If installing a diversity system, attach the leads from the two antennas to the AP unit's *Primary* and *Secondary* jacks.

### To install the antenna using the I-beam bracket:

1. For I-beam installations, first install bracket plate (77) as described in Step-1. Next, referring to Figure-1A, install I-beam clamp (80) to the bracket plate using flat washer (04), lock washer (84), and short 1/4"-20 bolt (55). Tighten the clamp bolt to secure antenna in place on beam.

FIGURE 1



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### BPXCHK (hardware kit for suspended ceiling mounting).

KEY	P/N	DISPLAY	DESC	SIZE	QTY
HK	S 2403BHHK		GRID BRACKET	-	1
16	010216		INT. TOOTH LOCKWASHER	1/4" (00.0)	1
77	195577		BRACKET PLATE	-	1
89	015589		INT. TOOTH LOCK WASHER	#6	2
90	015590		SS MACHINE PHILLIPS SCREW	#6-32 x 1/4"	2
80	194980		I-BEAM CLAMP	----	1
04	010104		FLAT WASHER	1/4"	1
84	010084		SPLIT LOCK WASHER	1/4	1
55	015655		HEX HEAD BOLT	1/4 X 20 X 1/2	1

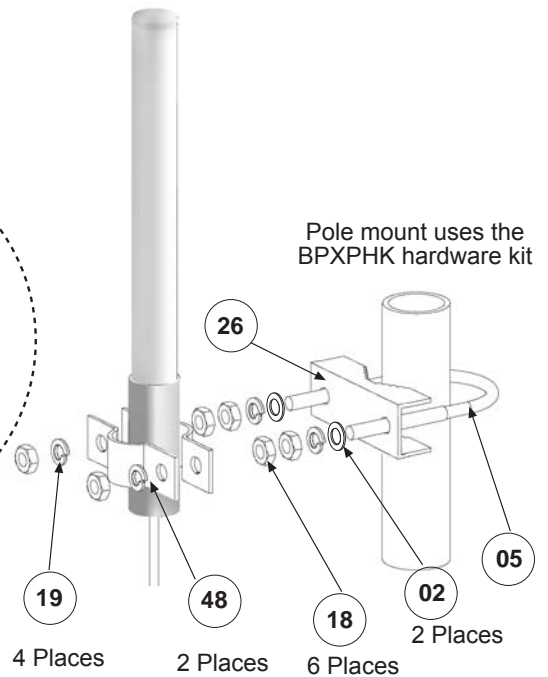
## MOUNTING (cont.)

### To install the antenna using the pole mount bracket:

1. Find the U-bolt (05), mast clamp (26), plus two 5/16" nuts (18) lock washers (19) and (02) flat washers.
2. At the top of the pipe, using a 1/2" wrench or adjustable wrench, secure the U-bolt to the clamp using the hardware provided (see Figure-2).
3. Find two more 5/16" nuts (18). Install these nuts by turning them down against the nuts securing the U-bolt to the mast.
4. Find two antenna clamps (48), plus two 5/16" lock washers (19) and the two remaining 5/16" nuts (18).
5. Sandwich the antenna between the two clamps at its base and slide this assembly onto the U-bolt (Figure-2). Secure in place using hardware provided.
6. Secure the coaxial cable along the mast or pole using tape or cable ties.
7. If installing one antenna, attach the connector to the AP unit's Primary antenna connection. If installing a diversity system, attach the leads from the two antennas to the AP unit's *Primary* and *Secondary* jacks.

**Note:** for outside mounting or in wet environments, make sure antenna is vertically mounted with weep holes facing down.

FIGURE 2



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### BPXPHK (hardware kit for pole/mast mounting).

KEY	P/N	DISPLAY	DESC	SIZE	QTY
18	010118		SS HEX NUT	5/16" x 18 (00.0)	6
19	010119		SS LOCK WASHER	5/16" x (00.0)	4
05	010405		U-BOLT	-	1
26	195726		V-BRACKET	-	1
48	195548		BASE BRACKET	-	2
02	013402		FLAT WASHER	5/16	2