

WIRELESS FRAMES

GENERAL DESCRIPTION

Wireless Frames include 2³/₈" OD antenna-mounting pipes, available in several lengths to match the length of the antenna. These pipes mount to the Frame with U-bolts and can be positioned on the Frame as required for antenna separation.

Wireless Frames normally mount directly to a vertical pipe-leg or angle-leg tower. When the leg is sloped, a 4¹/₂" OD Pipe Mount (section 10), or Universal Adjustable Slope Pipe Mount (page 8.11) compensates for the slope, providing a vertical pipe for mounting. Additionally, a Standoff Pipe Mount (page 8.10) can be utilized if the tower interferes with adjusting the Frame to the required azimuth. A stabilizing rod, furnished standard with some of the Frames, secures the Frame at the desired azimuth.

Wireless Frames can also be mounted on other structures that have a 4¹/₂" OD pipe mast, such as Wall Mounts (section 9), Monopoles (section 15), and Rooftop Tripods (section 13).

Design loading, per EIA-RS-222-C, is for 100 mph and 1/2" of radial ice. The Wireless Frames support panel antennas with up to 8-ft² of flat-plate equivalent area each, a maximum wind load of 320 lbs per antenna.

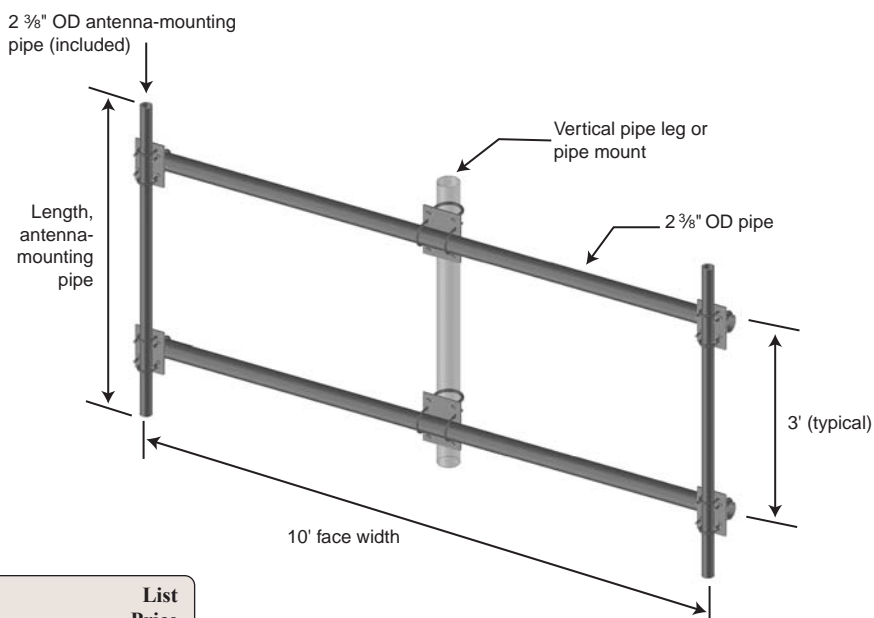
WIRELESS FRAME

FOR TWO ANTENNAS ON VERTICAL PIPE

Wireless Frames mount to pipe with diameters from 1³/₄" to 4¹/₂" OD. A B1706 Stabilizing Rod is required when mounting Frames to a Standoff Pipe Mount (page 8.10). Frames install to 1³/₄" to 4¹/₂" OD vertical pipe.

Two 2³/₈" OD Antenna Mounting Pipes are included.

Galvanized.



Product Number	Description	List Price
99287	10' Frame w/ two 5'-6" long mounting pipes	\$290.00
B2145	10' Frame w/ two 7' long mounting pipes	\$305.00
99288	10' Frame w/ two 8'-6" long mounting pipes	\$315.00

ANTENNA SUPPORT STRUCTURES

ANTENNA FRAMES

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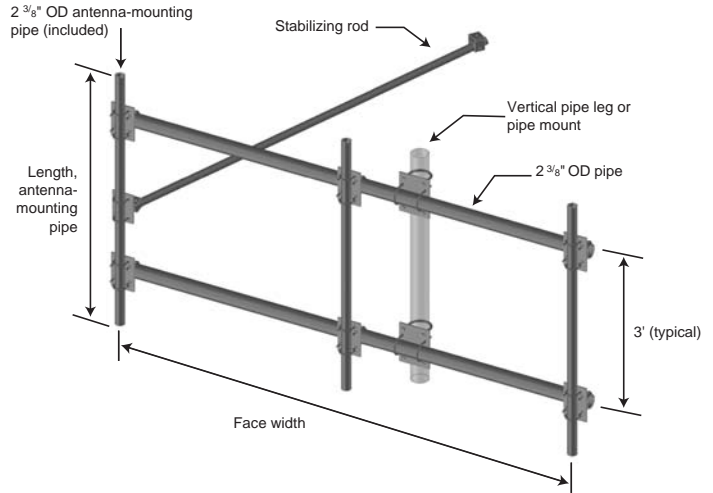
WIRELESS FRAME

FOR THREE ANTENNAS ON VERTICAL PIPE

Wireless Frames mount directly to 1³/₄" to 4¹/₂" OD pipe.

Three 2³/₈" OD Antenna Mounting Pipes and a 1.90" OD x 13' long Stabilizing Rod are included.

Galvanized.



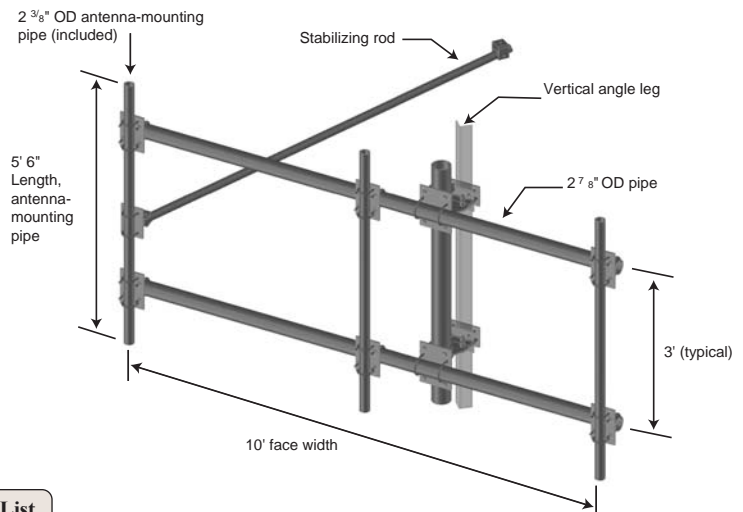
Product Number	Description	List Price
99292	10' Frame w/ three 5'-6" long mounting pipes	\$435.00
99293	10' Frame w/ three 8'-6" long mounting pipes	\$472.00
99327	10' Frame w/ three 7' long mounting pipes	\$544.00

WIRELESS FRAME

FOR THREE ANTENNAS ON VERTICAL ANGLE LEG

Wireless Frame mounts to a range of angle sizes on 3-leg or 4-leg towers and includes a stabilizing rod, 1.90" diameter x 13' long. Three 2³/₈" OD, 5' 6" long Antenna Mounting Pipes are also included. Galvanized.

Frame installs to a 2¹/₂" x 2¹/₂" to 6" x 6" vertical angle.



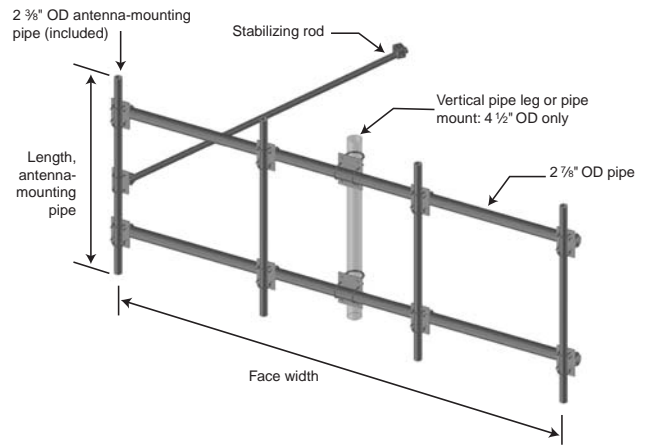
Product Number	Description	List Price
99290	10' Frame w/ three 5'-6" long mounting pipes	\$830.00

WIRELESS FRAME

FOR FOUR ANTENNAS ON VERTICAL PIPE

Wireless Frame mounts to pipe with diameters from 1 3/4" to 4 1/2" OD and includes a stabilizing rod, 1.90" diameter x 13' long. Four 2 3/8" OD Antenna Mounting Pipes are also included.

Galvanized.

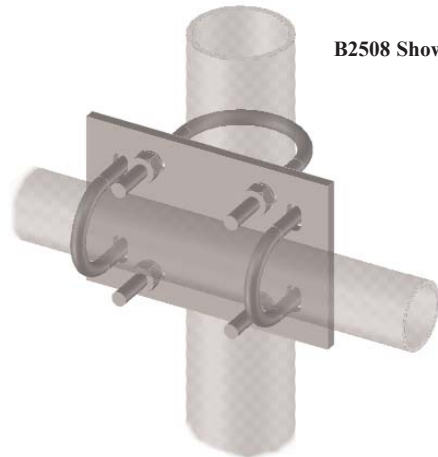


Product Number	Description	List Price
99285	13' Frame w/ four 5'-6" long mounting pipes	\$590.00
99294	13' Frame w/ four 7' long mounting pipes	\$615.00
99286	13' Frame w/ four 8'-6" long mounting pipes	\$640.00
99320	15' Frame w/ four 5'-6" long mounting pipes	\$615.00

PIPE TRANSFER KIT

Pipe Transfer Kit enables a single pipe of one diameter to be connected to a pipe of another diameter. Each Kit consists of one 3/8" thick plate and two U-bolt assemblies to fit both pipe sizes. Universal clamp style fits pipe from 1 1/2" to 4 1/2" OD on both sides of transfer plate.

Galvanized.



Pipe Transfer Kit includes one transfer plate and two U-bolt assemblies for both pipe diameters.

Product Number	First Pipe Diameter	U-Bolt Size	Second Pipe Diameter(s)	U-Bolt Size	List Price
B2508	2 3/8"	1/2"	2 3/8"	1/2"	\$30.00
B2509	2 3/8"	1/2"	2 7/8"	1/2"	\$35.00
B2510	2 3/8"	1/2"	3 1/2"	1/2"	\$35.00
B2511	2 3/8"	1/2"	2 3/8" & 4 1/2"	5/8"	\$60.00
B2512	2 7/8"	1/2"	4 1/2"	1/2"	\$45.00
B2513	2 7/8"	1/2"	2 7/8"	1/2"	\$35.00
B2514	2 7/8"	1/2"	3 1/2"	1/2"	\$37.00
B2515	3 1/2"	1/2"	3 1/2"	1/2"	\$40.00
B2516	3 1/2"	1/2"	4 1/2"	1/2"	\$50.00
B2517	4 1/2"	5/8"	4 1/2"	5/8"	\$60.00
B2731	2 3/8"	1/2"	5 9/16"	5/8"	\$47.00
B3101	2 3/8"	1/2"	6 5/8"	5/8"	\$50.00
B3157	1 1/2" - 4 1/2"	5/8"	1 1/2" - 4 1/2"	5/8"	\$60.00



ANTENNA SUPPORT STRUCTURES

ANTENNA FRAMES

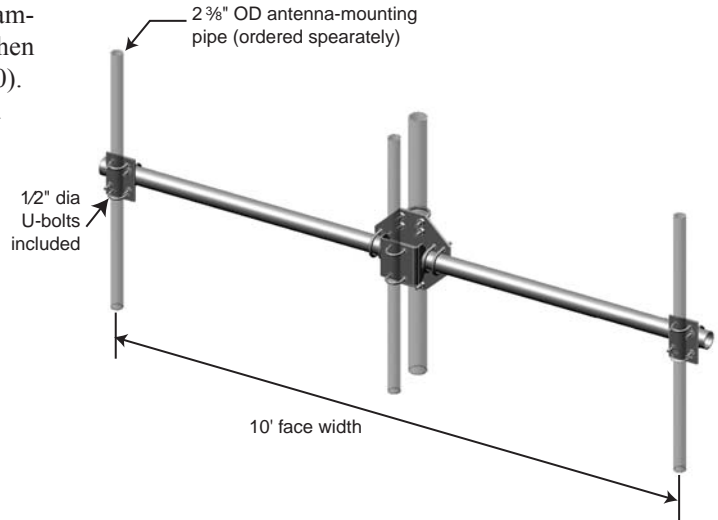
11.4

WIRELESS CROSS-ARM

FOR THREE ANTENNAS ON VERTICAL PIPE

Wireless Cross-Arm supports three panel antennas with a maximum center-to-center antenna spacing of 10'. Cross-Arms mount directly to 4½" OD pipe with included ½" diameter U-bolts. A B1706 Stabilizing Rod is required when mounting Frames to a Standoff Pipe Mount (page 8.10). The wireless panel antennas mount on separately ordered 2¾" OD Antenna-Mounting Pipes (page 8.1).

Galvanized.



Product Number	Description	List Price
B2398	10' Cross-Arm	\$200.00

WIRELESS CROSS-ARM

FOR FOUR ANTENNAS ON VERTICAL PIPE

Wireless Cross-Arm supports four panel antennas with a maximum center-to-center antenna spacing of 13'. Cross-Arm mounts directly to 4½" OD pipe with included ½" diameter U-bolt. A B1706 Stabilizing Rod is required when mounting Cross-Arm to a Standoff Pipe Mount (page 8.10). The wireless panel antennas mount on separately ordered 2¾" OD Antenna-Mounting Pipes (page 8.1).

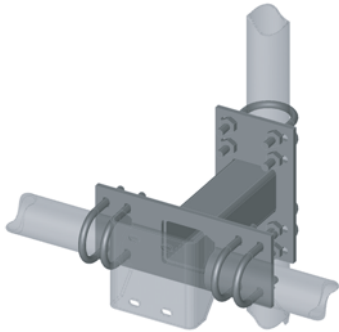
Galvanized.



Product Number	Description	List Price
B2399	13' Cross-Arm	\$250.00

STRAIGHT STANDOFF ASSEMBLY

The Straight Standoff is designed to support a Single Cross - Arm and is provided with the installation hardware. The standoff fits 2⁷/₈" to 4¹/₂" OD tower legs, or pipe mounts.



Product Number	Description	List Price
B2968	12" long	\$120.00
B2969	24" long	\$130.00

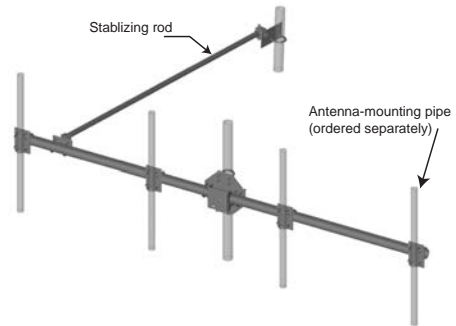
CROSS-ARM

Supporting up to four wireless antennas, the single Cross-Arm can be mounted to Straight Standoff Assembly or directly to the tower leg.

Comes with a stabilizing rod and installation hardware.

Minimizes surface wind area.

Can be used for down-tilt antenna adjustments.



Product Number	Description	List Price
B2953	13' Cross-Arm for 4 Antennas	\$395.00
B2955	10' Cross-Arm for 3 Antennas	\$345.00

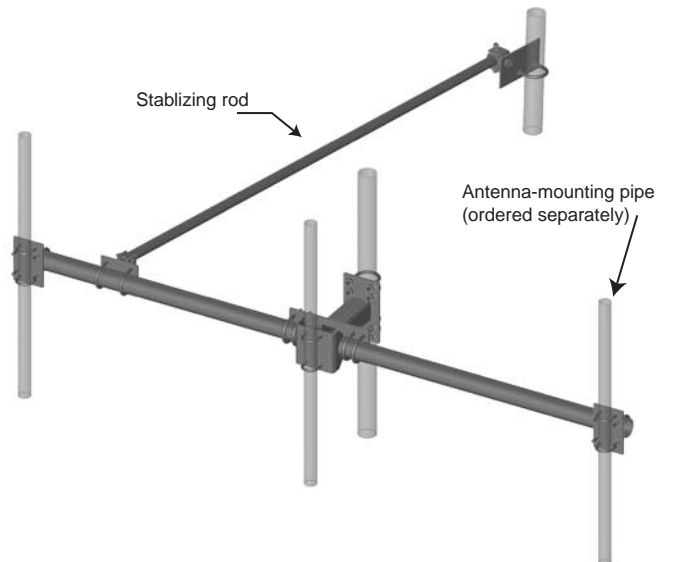
CROSS ARM WITH STANDOFF

The Single Cross-Arm supports up to four wireless antennas on a sector, and is mounted either on a Straight Standoff assembly. Fits 2⁷/₈" to 4¹/₂" OD tower leg or pipe mount.

Comes with a stabilizing rod and installation hardware.

Minimizes surface wind area.

Can be used for down-tilt antenna adjustments.



Product Number	Description	List Price
B2964	10' Cross-Arm for 3 antennas w/ 12" standoff	\$420.00
B2965	10' Cross-Arm for 3 antennas w/ 24" standoff	\$430.00
B2966	13' Cross-Arm for 4 antennas w/ 12" standoff	\$470.00
B2967	13' Cross-Arm for 4 antennas w/ 24" standoff	\$480.00

ANTENNA SUPPORT STRUCTURES

ANTENNA FRAMES

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STANDOFF WIRELESS FRAMES FOR VERTICAL TOWER LEG OR PIPE MOUNT

GENERAL DESCRIPTION

Standoff Wireless Frame supports panel antennas and mount to the vertical leg of a tower or to a pipe mount when the leg is sloped.

2³/₈" OD pipes (page 8.1), in various lengths, are included for supporting the antennas. These pipes mount to the Frame with U-bolts at specific positions on the Frame.

The Standoff Wireless Frames normally mount directly to a vertical pipe-leg or angle-leg tower. When the leg is sloped, a 4¹/₂" OD Pipe Mount (section 8) compensates for the slope, providing a vertical pipe for mounting. A stabilizing rod secures the Frame at the desired azimuth.

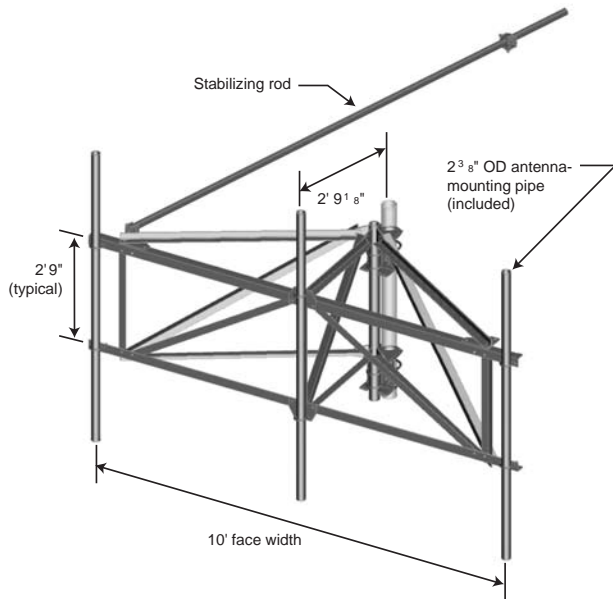
Unless noted otherwise, the Standoff Wireless Frames support panel antennas with up to 8 ft² of flat plate equivalent area each, a maximum wind load of 320 lbs per antenna.

STANDOFF WIRELESS FRAME

FOR THREE ANTENNAS ON VERTICAL PIPE

Standoff Wireless Frame mounts to pipe with diameter from 1³/₄" to 4¹/₂" OD and includes a 2³/₈" OD x 13'-4" long stabilizing rod. Three 2³/₈" OD Antenna Mounting Pipes are included.

Galvanized.



Product Number	Description	List Price
B3131	10' Frame w/ three 5'-6" long mounting pipes	\$820.00
B3158	10' Frame w/ three 7' long mounting pipes	\$835.00

Design loading, per EIA-RS-222-C, is for 100 mph and 1/2" of radial ice. The Wireless Frames support three panel antennas with up to 8-ft² of flat-plate equivalent area each, a maximum wind load of 320 lbs per antenna.

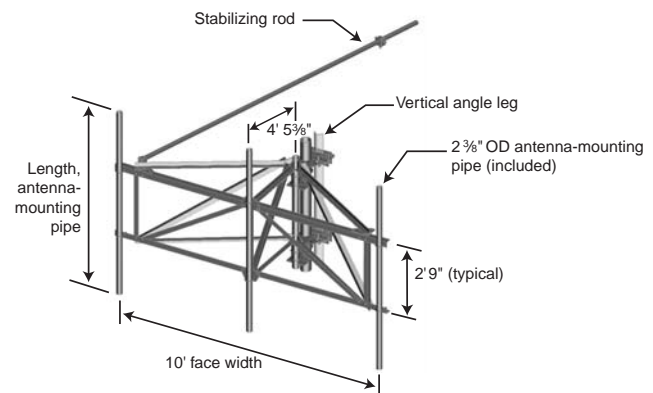
STANDOFF WIRELESS FRAME

FOR THREE ANTENNAS ON VERTICAL ANGLE LEG

Standoff Wireless Frame mounts to a range of angle sizes on 3-leg or 4-leg towers and includes a 2³/₈" OD x 13' 4" long stabilizing rod. Three 2³/₈" OD antenna-mounting pipes are included.

Frame installs to a 2¹/₂" x 2¹/₂" to 6" x 6" vertical angle.

Galvanized.



Product Number	Description	List Price
99291	10' Frame w/ three 5'-6" long mounting pipes	\$995.00
99297	10' Frame w/ three 7' long mounting pipes	\$1,020.00

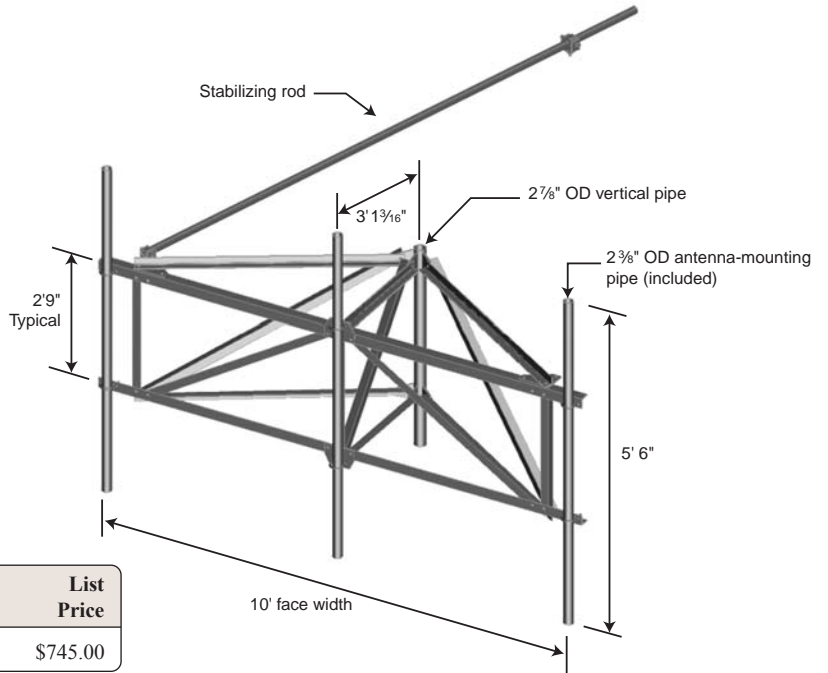
Design loading, per EIA-RS-222-C, is for 100 mph and 1/2" of radial ice. The Wireless Frames support three panel antennas with up to 8-ft² of flat-plate equivalent area each, a maximum wind load of 320 lbs per antenna.

STANDOFF WIRELESS FRAME

WITHOUT TOWER MOUNTING HARDWARE

Standoff Wireless Frame mounts to pipe-leg or angle-leg towers with a Pipe Adapter Kit (page 8.7-8.7). A Pipe Adapter Kit is chosen to fit the Frames 2 7/8" OD vertical pipe. A stabilizing rod, 2 3/8" diameter x 13'-4" long is included. Three 2 3/8" OD 5'-6" long antenna-mounting pipes are included.

Galvanized.



Product Number	Description	List Price
B2072	10' Frame w/ three 5'-6" long mounting pipes	\$745.00

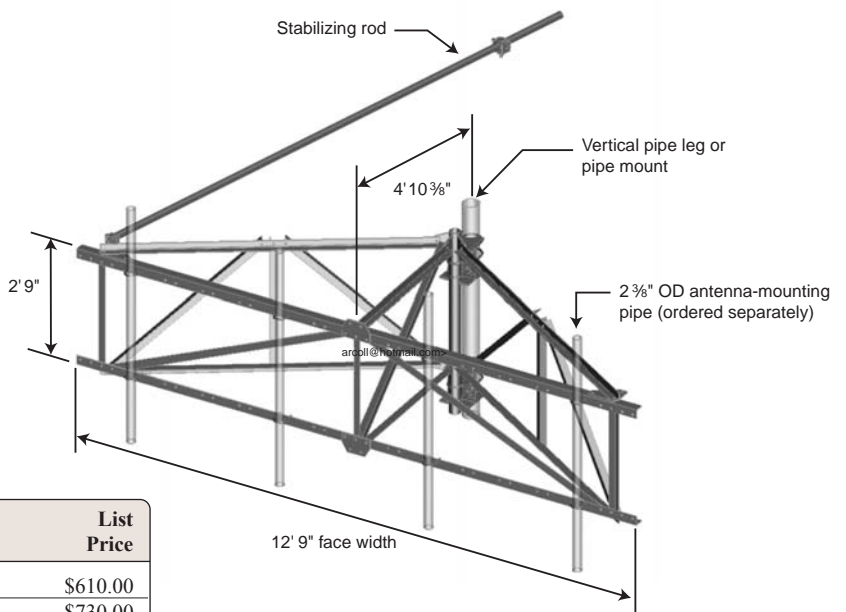
Design loading, per EIA-RS-222-C, is for 100 mph and 1/2" of radial ice. The Wireless Frames support three panel antennas with up to 8-ft² of flat-plate equivalent area each, a maximum wind load of 320 lbs per antenna.

STANDOFF WIRELESS FRAME

FOR FOUR ANTENNAS ON VERTICAL PIPE

Standoff Wireless Frame supports four panel antennas with a maximum center-to-center antenna spacing of 12'-9" or 16'. Frame installs to vertical pipe from 1 3/4" to 4 1/2" OD. The antennas mount on separately ordered 2 3/8" OD Antenna-Mounting Pipes (page 8.1), that U-bolt to the Frame in 15 possible positions with included hardware. Frames include a 2 3/8" OD x 13'-4" long stabilizing rod.

Galvanized.



Product Number	Description	List Price
B2840	without pipe to pipe adapter	\$610.00
B3132	12'-9" wide	\$730.00
B3134	16' wide	\$750.00

Design loading, per EIA-RS-222-C, is for 100 mph and 1/2" of radial ice. The Wireless Frames support four panel antennas with up to 8-ft² of flat-plate equivalent area each, a maximum wind load of 320 lbs per antenna.

ANTENNA SUPPORT STRUCTURES

ANTENNA FRAMES

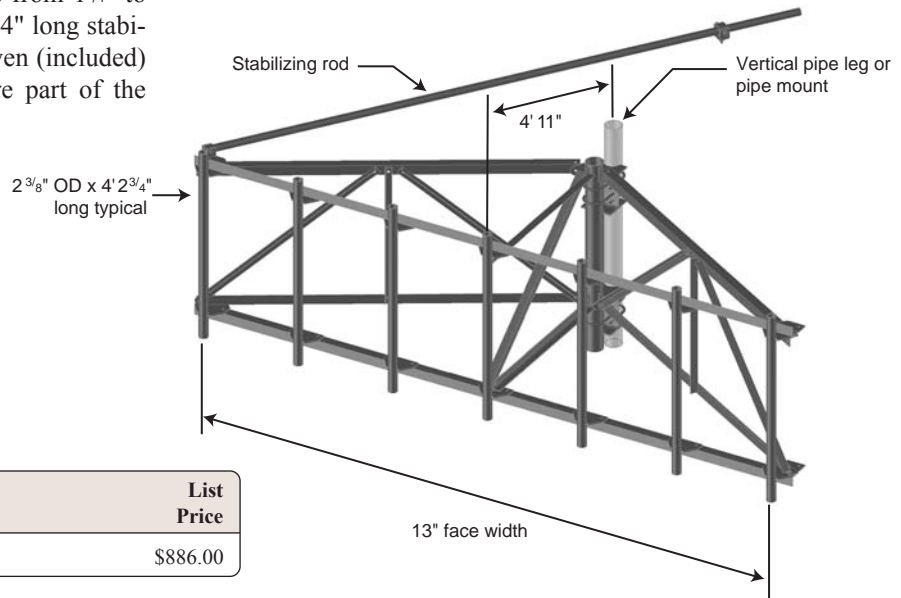
11.8

STANDOFF WIRELESS FRAME

FOR SEVEN ANTENNAS ON VERTICAL PIPE

Frame mounts to pipe with diameters from 1 $\frac{3}{4}$ " to 4 $\frac{1}{2}$ " OD and includes a 2 $\frac{3}{8}$ " OD x 13'-4" long stabilizing rod. The antennas mount on seven (included) 2 $\frac{3}{8}$ " OD x 4'-2 $\frac{3}{4}$ " long pipes that are part of the Frames structure.

Galvanized.



Product Number	Description	List Price
B3133	13' Frame	\$886.00

Design loading, per EIA-RS-222-C, is for 112 mph and no radial ice. The Wireless Frames support seven panel antennas with up to 5-ft² of flat-plate equivalent area each, a maximum wind load of 250 lbs per antenna.

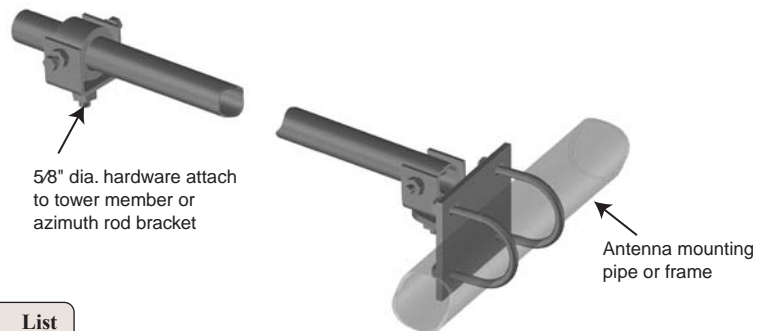
STABILIZING ROD

FOR WIRELESS FRAMES

A Stabilizing Rod, included with the Standoff Wireless Frames and most of the Wireless Frames, is also available as a second Rod when the application necessitates additional Frame stabilization.

The Stabilizing Rod is installed on either end of the Frame and is secured on the tower either to a braced angle girt or to a pipe leg, using a Side-Strut Bracket (page 8.12).

Galvanized.



Product Number	Description	Stabilizing Rod Diameter	Length	List Price
B1706	For Wireless Frame	1.90"	13'	\$100.00
B1706X	Hardware Kit (without pipe)	1.90"		\$75.00
B1825	For Standoff Wireless Frame	2 $\frac{3}{8}$ "	13'-4"	\$115.00