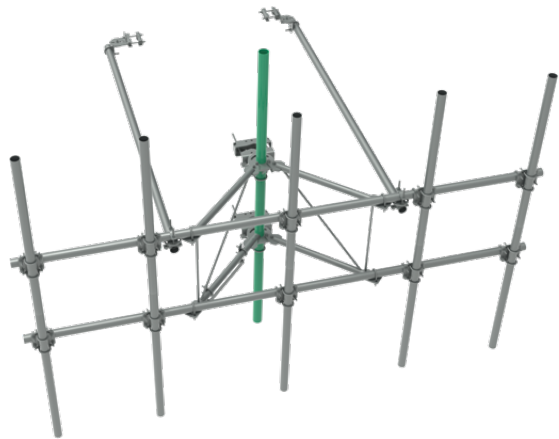
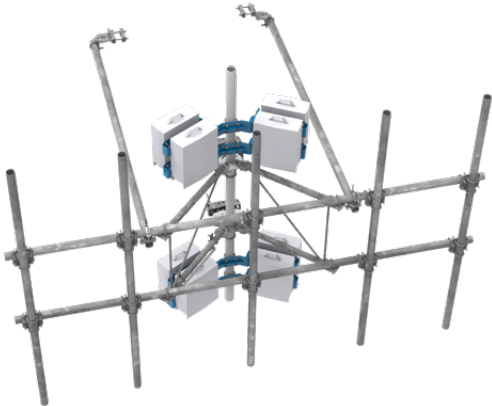

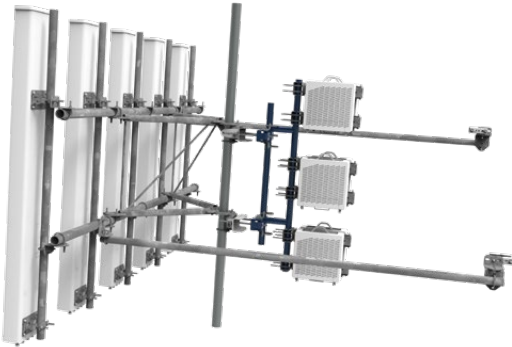
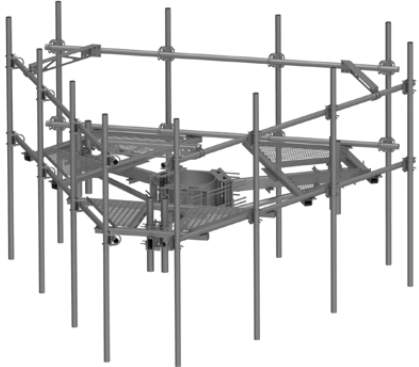


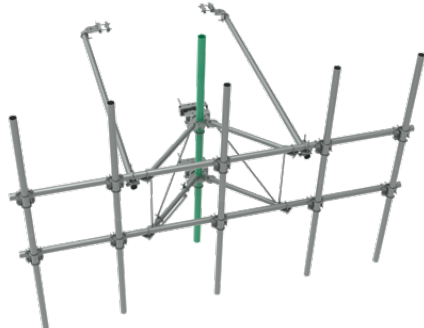
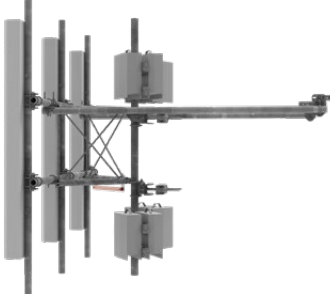


## Smarter engineering for PIM-free tower tops


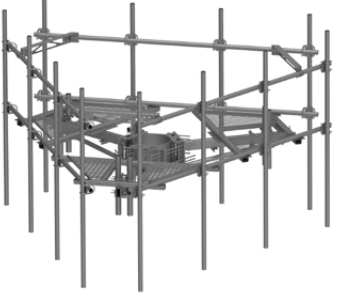
Passive intermodulation (PIM) presents a constant challenge to cellular network performance. CommScope created new antenna mounting solutions that greatly reduce PIM arising between remote radio units (RRUs) and base station antennas (BSAs) on the tower—and the resulting PIM savings are a real game-changer, especially for higher-power radios.

RHDX SPINE Extension	APEX RRU Mount	RHDXL PIM Optimized Sector Frame
	 <ul style="list-style-type: none"> <li>• APEX mounts up to 8 Radios on RHDX &amp; RHDXL Spines to move radios away from antennas</li> </ul>	 <ul style="list-style-type: none"> <li>• All the Features and Benefits of the RHDX Extended Spine PLUS PIM Optimized Frame to increase antenna-to-antenna spacing</li> </ul>
Features	CORE RRU Saddle Mount	MP-PP PIM Optimized Platform
<ul style="list-style-type: none"> <li>• Extended spine for SFG23 RHDX mounts that increase RRU mounting capabilities</li> <li>• Decreased PIM from radio relocation</li> <li>• Increased versatility and stability</li> <li>• Updated frame provides higher loading</li> <li>• More RRU mounting available, reducing need for additional mounts</li> <li>• Better load management</li> <li>• Less structure stress</li> <li>• Available as tower &amp; monopole sector frames</li> <li>• Can be used in combination with APEX and CORE RRU mounts</li> </ul>	 <ul style="list-style-type: none"> <li>• CORE internal Tower mount attaches to rear of RHDX and RHDXL Saddle mounts</li> </ul>	 <ul style="list-style-type: none"> <li>• PIM Optimized Monopole Platform that provides increased antenna spacing &amp; enables RRU Mounting on Custom Triangle</li> </ul>

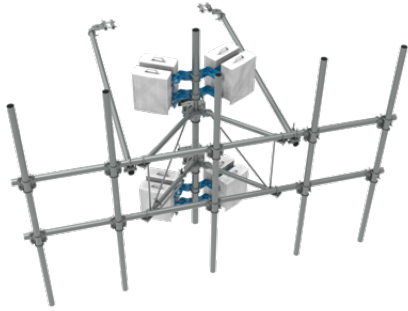
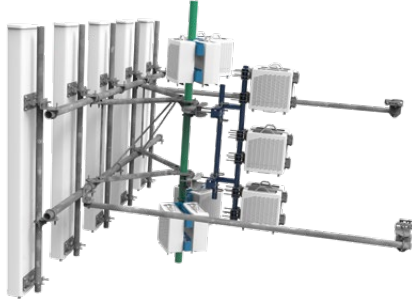
# RHDX Extended Spine Sector Frames

RHDX SPINE Extension	Description	Antenna Pipes Included	Attachment Hardware	CommScope Material ID	AT&T Item Number
    <ul style="list-style-type: none"> <li>• Extended spine for SFG23 RHDX mounts that increase RRU mounting capabilities</li> <li>• Decreased PIM from radio relocation</li> <li>• Increased versatility and stability</li> <li>• Updated frame provides higher loading</li> <li>• More RRU mounting available, reducing need for additional mounts</li> <li>• Better load management</li> <li>• Less structure stress</li> <li>• Available as tower &amp; monopole sector frames</li> <li>• Can be used in combination with APEX and CORE RRU mounts</li> </ul>	RHDX Extended Spine Tower Sector Frame	None	Tapered Clamps Up to 8" Tower Leg	SFG23RHDX-12-B	ANT.55911
	Single Sector	(4) 2-7/8" x 96"		SFG23RHDX-12-4-96	Pending
	12' 6" Face	(4) 2-7/8" x 120"		SFG23RHDX-12-4-H10	Pending
		(5) 2-7/8" x 120"		SFG23RHDX12-5-WLL	Pending
		(4) 2-7/8" x 126"		SFG23RHDX-12-4-126	Pending
	RHDX Extended Spine Tower Sector Frame	None	Tapered Clamps Up to 8" Tower Leg	SFG23RHDX-14-B	ANT.55904
	Single Sector	(4) 2-7/8" x 96"		SFG23RHDX-14-4-96	Pending
	14' 6" Face	(4) 2-7/8" x 120"		SFG23RHDX-14-4-120	ANT.53542
		(5) 2-7/8" x 120"		SFG23RHDX-14-5-120	ANT.53542
		(4) 2-7/8" x 120"		SFG23RHDX14-4-H10	Pending
		(5) 2-7/8" x 120"		SFG23RHDX14-5-WLL	Pending
		(4) 2-7/8" x 126"		SFG23RHDX-14-4-126	Pending
	RHDX Extended Spine Monopole Sector Frame	None	Double Ring Mount Kit 15" to 50" Monopoles	MCG23RHDX-12MB	Pending
	Three Sectors	(12) 2-7/8" x 96"		MCG23RHDX-12M1296	Pending
	12' 6" Face	(15) 2-7/8" x 120"		MCG23RHDX-12M15120	Pending
		(12) 2-7/8" x 126"		MCG23RHDX-12M12126	Pending
RHDX Extended Spine Monopole Sector Frame	None	Double Ring Mount Kit 15" to 50" Monopoles	MCG23RHDX-14MB	Pending	
Three Sectors	(12) 2-7/8" x 96"		MCG23RHDX-14M1296	Pending	
14' 6" Face	(12) 2-7/8" x 120"		MCG23RHDX-14M12120	ANT.53542	
	(15) 2-7/8" x 120"		MCG23RHDX-14M15120	ANT.53542	
	(12) 2-7/8" x 126"	MCG23RHDX-14M12126	Pending		

# RHDX Extended Spine Sector Frames

RHDXL PIM Optimized Sector Frame		Description	Antenna Pipes Included	Attachment Hardware	CommScope Material ID	AT&T Item Number	
 <ul style="list-style-type: none"> <li>All the Features and Benefits of the RHDX Extended Spine PLUS PIM Optimized Frame</li> <li>New RHDXL Extended Frame enables increased Antenna-to-Antenna Spacing</li> <li>Extended Spine relocates radios &amp; Extended Frame increases distance between antennas to combine forces &amp; mitigate PIM in the Hi-risk zone around antennas</li> </ul>	RHDXL PIM Optimized Tower Sector Frame Single Sector 11' Face	None	(3) 2-7/8" x 126"	Tapered Clamps Up to 8" Tower Leg	SFG23RHDXL-11-B	Pending	
					SFG23RHDXL-11-3-126	Pending	
	RHDXL PIM Optimized Tower Sector Frame Single Sector 13' Face	None	(4) 2-7/8" x 126"	Tapered Clamps Up to 8" Tower Leg	SFG23RHDXL-13-B	Pending	
					SFG23RHDXL-13-4-126	Pending	
	RHDXL PIM Optimized Tower Sector Frame Single Sector 14' 6" Face	None		Tapered Clamps Up to 8" Tower Leg	SFG23RHDXL-14-B	ANT.55909	
RHDXL PIM Optimized Tower Sector Frame Single Sector 15' Face	None	(4) 2-7/8" x 126" (5) 2-7/8" x 126"	Tapered Clamps Up to 8" Tower Leg	SFG23RHDXL-15-B	Pending		
				SFG23RHDXL-15-4-126	Pending		
				SFG23RHDXL-15-5-126	Pending		
MP-PP PIM Optimized Platform		Description	Antenna Pipes Included	Attachment Hardware	CommScope Material ID	AT&T Item Number	
 <ul style="list-style-type: none"> <li>PIM Optimized Monopole Platform enables increased antenna-to-antenna spacing</li> <li>Innovative new Triangle design enables RRU Mounting to relocate radios away from antennas</li> <li>Unique features both contribute to significant tower top PIM reduction</li> </ul>	MP-PP PIM Optimized Monopole Platform Three Sectors 13' Face	None	(12) 2-7/8" x 96" (12) 2-7/8" x 126"	Ring Mount Kit 15" to 50" Monopoles	MP-PP13M-12C-B	Pending	
						MP-PP13M-12C-96	Pending
						MP-PP13M-12C-126	Pending
	MP-PP PIM Optimized Monopole Platform Three Sectors 15' Face	None	(12) 2-7/8" x 96" (12) 2-7/8" x 126" (15) 2-7/8" x 126"	Ring Mount Kit 15" to 50" Monopoles	MP-PP15M-12C-B	Pending	
						MP-PP15M-12C-96	Pending
						MP-PP15M-12C-126	Pending
						MP-PP15M-15C-126	Pending

# RRU Mounting Solutions

APEX RRU Mount			CORE RRU Saddle Mount		
 <ul style="list-style-type: none"> <li>• APEX mounts up to 8 Radios on RHDX &amp; RHDXL Spines to move radios away from antennas</li> <li>• Angled RRU brackets for stronger, more versatile mounting</li> <li>• Decreased PIM from radio relocation (pulls radio from near field)</li> <li>• Increased equipment and mount stability (reduces potential for vibration induced PIM)</li> <li>• Decreased antenna pipe loading</li> <li>• Compatible with towers and monopoles</li> <li>• Single radio location for faster assembly</li> <li>• Increased radio capacity</li> </ul>			 <ul style="list-style-type: none"> <li>• CORE internal Tower mount attaches to rear of RHDX and RHDXL Saddle mounts</li> <li>• Internal tower RRU mount</li> <li>• Decreased PIM from radio relocation</li> <li>• Increased mount stability</li> <li>• Decreased face loading</li> <li>• Increased mount versatility without the need for a new RRU mount</li> <li>• Requires use of RR-FA2 RRU brackets</li> </ul>		
Part Number	CEQ Number	Description	Part Number	CEQ Number	Description
RR-APEX4	ANT.54860	Radio Mount, Apex, 2 mntg brackets, 4 Radios/Mount	MTC4112	CEQ.46872	Radio Mount Spine and Clamp, 12 in stand off, 2-3/8" OD x 70" in Mounting Pipe
			MTC4113	CEQ.46874	Radio Mount Spine and Clamp, 24 in stand off, 2-3/8" OD x 70" in Mounting Pipe
			RR-FA2	ANT.16533	Radio Mount, Back to Back, Low Profile, Quick Connect, 2 Radios/Mount



For additional information, please contact us at [steelproducts@commscope.com](mailto:steelproducts@commscope.com)

[commscope.com](http://commscope.com)

Visit our website or contact your local CommScope representative for more information.

© 2023 CommScope, Inc. All rights reserved. CommScope, Inc. All rights reserved. All trademarks identified by ™ or ® are trademarks or registered trademarks in the US and may be registered in other countries. All product names, trademarks and registered trademarks are property of their respective owners. This document is for planning purposes only and is not intended to modify or supplement any specifications or warranties relating to CommScope products or services.