Cambium Networks™

cnMedusa™ 3 GHz & 5 GHz plus Ordering Guide

2018

5 GHz PMP 450m

- **Leading-Edge Technical Innovation**
  - **More than 3x Capacity vs. 450/450i**
    - *cn*Medusa™ Massive MU-MIMO technology allows simultaneous communication with up to seven SMs
  - **Supreme Spectral Efficiency**
    - Achieve over 400 Mbps in a 20 MHz channel
  - **Protect Your Investment**
    - Continue using existing SMs
  - **Enhanced Link Stability**
    - Uplink Interference mitigation due to beamforming
    - Uplink Rx Sensitivity improvements (5-6 dB better)
  - **Advanced Processing Capability**
    - >100k PPS

- **One Simple device to install**
  - Simple Installation and Increased Reliability
  - Integrated 90° sector beam-forming array, **ZERO** RF cables to connect or weatherproof
  - A single Ethernet cable to connect
  - 20” x 25” x 4” (52x65x11 cm)
  - 40 lbs. (18.3 kg)

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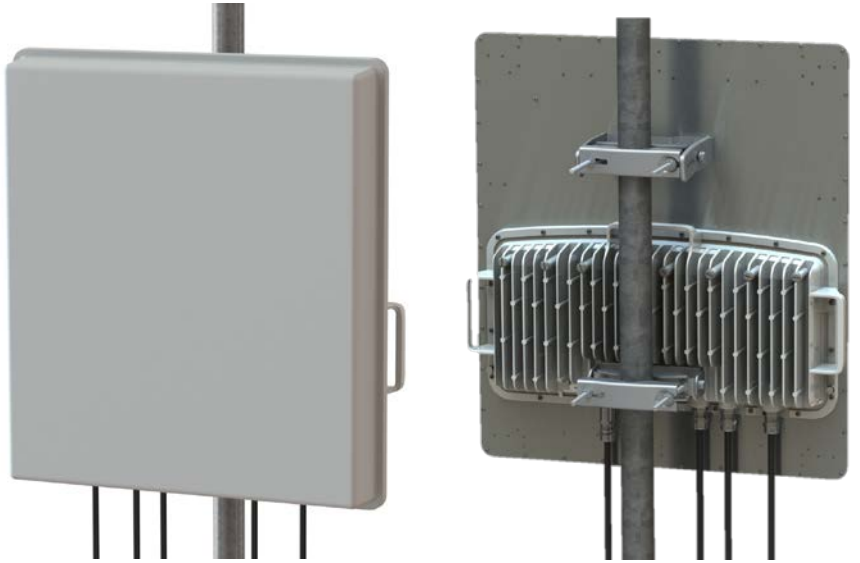
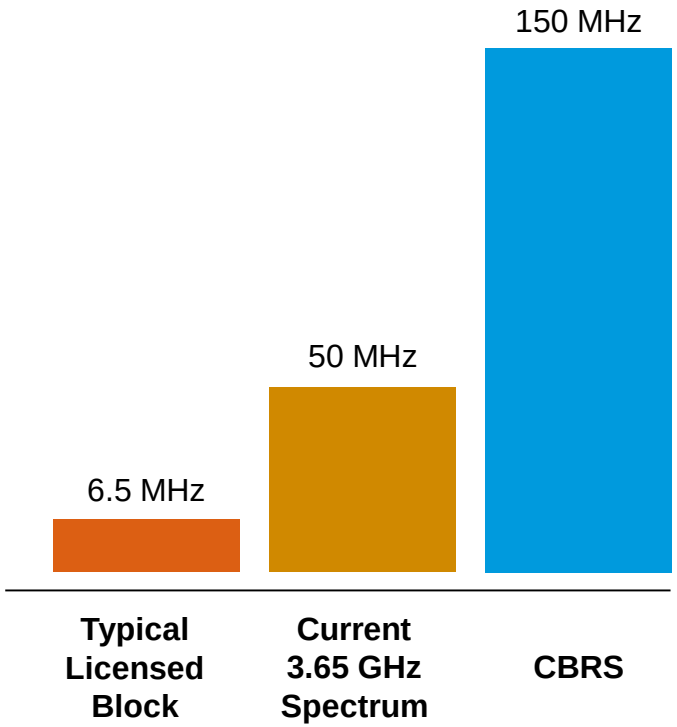
3 GHz 450m



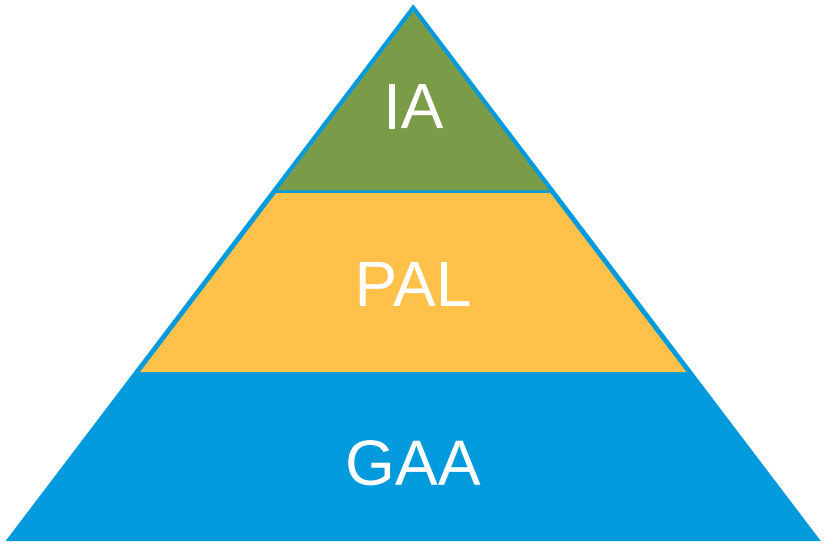
Matt Mangriotis
Director of Product Management

CBRS and New 3 GHz Spectrum

Opportunity



Tiered Flexible Use



Incumbents

- DoD Radars (coastal areas)
- Satellite Earth Stations

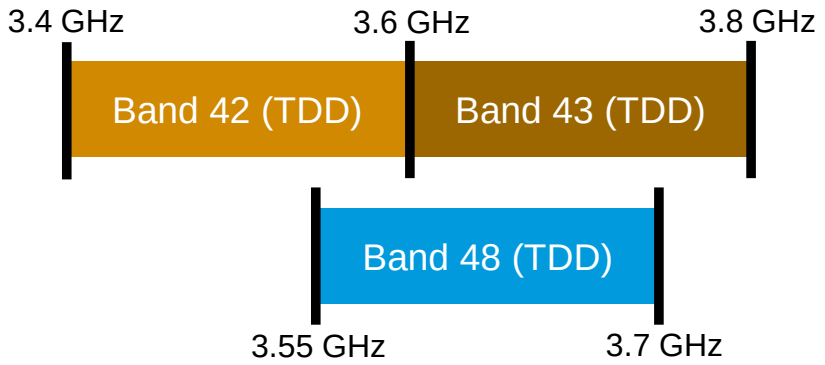
Priority Access Licenses (PAL)

- Up to 70 MHz of spectrum licensed by auction

General Authorized Access (GAA)

- At least 80 MHz nationwide

Establishing a New Common Band



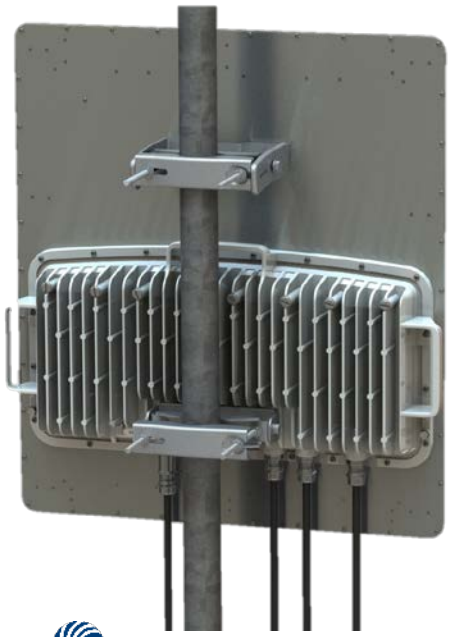
CBRS and New 3 GHz Spectrum - Strategy

- Ensure 450 platform readiness by working with several SAS providers

federated wireless COMMSCOPE® Google

- cnMaestro will bridge the communication from Radio to SAS
- Several questions exist on competitive equipment being able to meet more stringent CBRS emissions masks (and at what Tx powers)
- Release of 3 GHz 450m is at end of Q3, 2018
  - Supporting 8x8 MU-MIMO (up to 500 Mbps)
- Release of 3 GHz 450b SM at end of Q1, 2019
- Complete 3 GHz portfolio capable of graceful migration
  - Continue to operate under Part 90 subpart Z until license expires
  - Easily transition to Part 96 (CBRS) without changing equipment

cnMedusa

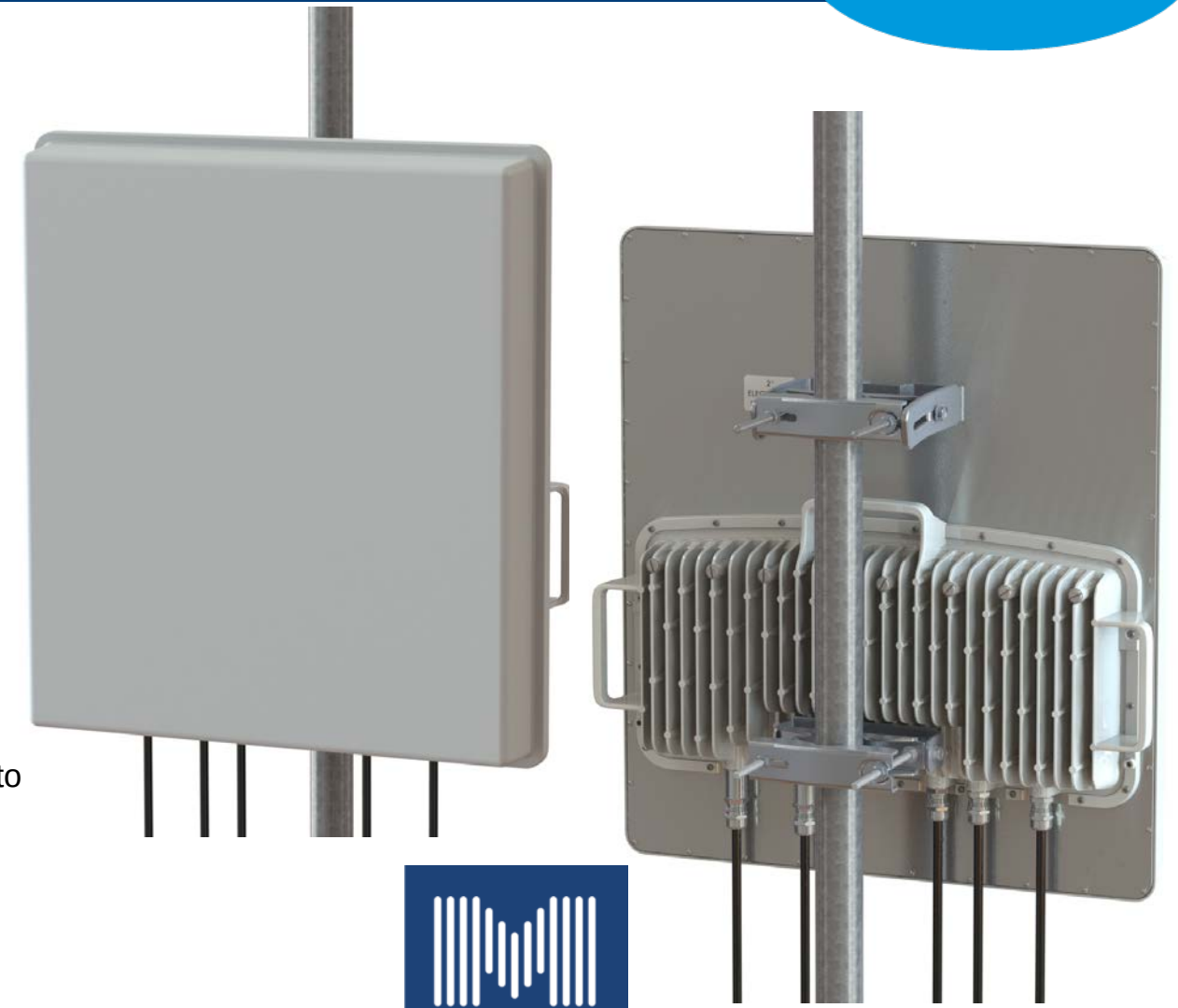


3 GHz - PMP 450m

Q3 2018

- **Leading-Edge Technical Innovation**
  - **More than 3x Capacity vs. 450/450i**
    - *cn*Medusa™ 8x8 MU-MIMO technology allows simultaneous communication with up to four SMs
  - **Supreme Spectral Efficiency**
    - DL and UL MU-MIMO supported
    - Achieve up to 750 Mbps in a 40 MHz channel
  - **Protect Your Investment**
    - 3.3GHz to 3.9GHz range
    - >47dBm EIRP
    - Continue using existing SMs
  - **Enhanced Link Stability**
    - Uplink Interference mitigation due to beamforming
    - Uplink Rx Sensitivity improvements (4-5 dB better)
  - **Advanced Processing Capability**
    - >200k PPS

- **One Simple device to install**
  - Simple Installation and Increased Reliability
  - Integrated 90° sector beam-forming array, **ZERO** RF cables to connect or weatherproof
  - Direct DC powering
  - SFP and Gigabit Ethernet Support
  - 27” x 24” x 7” (70x61x17 cm)
  - 44 lbs. (20 kg)



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Under test in the Lab – May 2018

Current Results Status

Test Duration: 8 Pkt Length: 1500 Test Direction Downlink

Link Test with Multiple LUIDs

Subscriber Module	LUID	Priority Channels	Throughput	Efficiency	Fragments		Downlink Rate
					Transmit	Received	SU-MIMO
			123.95 Mbps	**99%**	**1939784**	**1936758**	
SM 106 - [0a-00-3e-42-9a-11]	004	Low Priority	10.71 Mbps	99%	167806	167472	8X/8X MIMO-B
SM 107 - [0a-00-3e-42-98-d1]	005	Low Priority	8.96 Mbps	99%	140667	140139	8X/8X MIMO-B
SM 108 - [0a-00-3e-42-9c-7c]	006	Low Priority	9.86 Mbps	99%	154186	154074	8X/8X MIMO-B
SM 109 - [0a-00-3e-42-99-70]	007	Low Priority	10.83 Mbps	99%	169400	169335	8X/6X MIMO-B
SM 110 - [0a-00-3e-42-9b-99]	008	Low Priority	10.64 Mbps	99%	166550	166313	8X/8X MIMO-B
SM 111 - [0a-00-3e-42-99-d0]	009	Low Priority	8.49 Mbps	99%	133577	132793	8X/8X MIMO-B
SM 100 - [0a-00-3e-42-9c-a7]	010	Low Priority	10.24 Mbps	99%	160589	160114	8X/8X MIMO-B
SM 101 - [0a-00-3e-42-9b-c3]	011	Low Priority	10.97 Mbps	99%	171554	171489	8X/8X MIMO-B
SM 102 - [0a-00-3e-42-9c-1a]	012	Low Priority	11.02 Mbps	99%	172313	172252	8X/8X MIMO-B
SM 103 - [0a-00-3e-42-9b-c4]	013	Low Priority	10.82 Mbps	99%	169176	169124	8X/8X MIMO-B
SM 104 - [0a-00-3e-42-9c-9c]	014	Low Priority	10.49 Mbps	99%	164130	163991	8X/8X MIMO-B
SM 105 - [0a-00-3e-42-9c-95]	015	Low Priority	10.85 Mbps	99%	169836	169662	8X/8X MIMO-B

Slot Grouping

Group Size	% Distribution	Average Slot Count
1 (ungrouped)	100.0	75
2	0.0	0
3	0.0	0
4	0.0	0
5	0.0	0
6	0.0	0
7	0.0	0

Link Test ran on 04:34:18 01/01/2016 UTC

Current Results Status

Test Duration: 10 Pkt Length: 1500 Test Direction Downlink

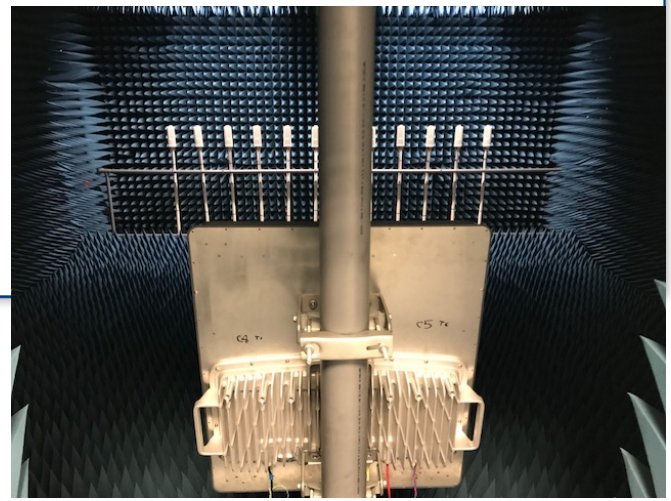
Link Test with Multiple LUIDs

Subscriber Module	LUID	Priority Channels	Throughput	Efficiency	Fragments		Downlink Rate		Grouping Ratio
					Transmit	Received	SU-MIMO	MU-MIMO	
			489.44 Mbps	**99%**	**9592489**	**9559481**			
SM 106 - [0a-00-3e-42-9a-11]	004	Low Priority	39.59 Mbps	98%	785146	773259	8X/8X MIMO-B	8X/8X MIMO-B	100%
SM 107 - [0a-00-3e-42-98-d1]	005	Low Priority	40.34 Mbps	99%	791558	788002	8X/8X MIMO-B	8X/8X MIMO-B	100%
SM 108 - [0a-00-3e-42-9c-7c]	006	Low Priority	41.17 Mbps	99%	805024	804217	8X/8X MIMO-B	8X/8X MIMO-B	100%
SM 109 - [0a-00-3e-42-99-70]	007	Low Priority	41.34 Mbps	99%	808172	807613	8X/8X MIMO-B	8X/8X MIMO-B	100%
SM 110 - [0a-00-3e-42-9b-99]	008	Low Priority	41.40 Mbps	99%	809112	808611	8X/8X MIMO-B	8X/8X MIMO-B	100%
SM 111 - [0a-00-3e-42-99-d0]	009	Low Priority	41.02 Mbps	99%	803493	801330	8X/8X MIMO-B	8X/8X MIMO-B	100%
SM 100 - [0a-00-3e-42-9c-a7]	010	Low Priority	40.09 Mbps	99%	786514	783012	8X/8X MIMO-B	8X/8X MIMO-B	100%
SM 101 - [0a-00-3e-42-9b-c3]	011	Low Priority	41.22 Mbps	99%	807076	805157	8X/8X MIMO-B	8X/8X MIMO-B	100%
SM 102 - [0a-00-3e-42-9c-1a]	012	Low Priority	41.10 Mbps	99%	803660	802755	8X/8X MIMO-B	8X/8X MIMO-B	100%
SM 103 - [0a-00-3e-42-9b-c4]	013	Low Priority	41.02 Mbps	99%	803118	801251	8X/6X MIMO-B	8X/8X MIMO-B	100%
SM 104 - [0a-00-3e-42-9c-9c]	014	Low Priority	40.39 Mbps	99%	792695	789022	8X/8X MIMO-B	8X/8X MIMO-B	100%
SM 105 - [0a-00-3e-42-9c-95]	015	Low Priority	40.71 Mbps	99%	796921	795252	8X/8X MIMO-B	8X/8X MIMO-B	100%

Slot Grouping

Group Size	% Distribution	Average Slot Count
1 (ungrouped)	0.0	0
2	0.0	0
3	0.0	0
4	100.0	75
5	0.0	0
6	0.0	0
7	0.0	0

Link Test ran on 01:13:52 01/01/2016 UTC



3 GHz PMP 450 vs. LTE Whitepaper


Cambium Networks

A COMPARISON

PMP 450 and LTE in 3 GHz

INTRODUCTION

The LTE (Long Term Evolution) standard provides for great performance and has (at some point on the roadmap) many features that make it well-suited for any use case. The 3rd Generation Partnership Project (3GPP) originally came together as an industry group to create mobile standards that would move mobile (cellular) infrastructure forward. This group has continued to evolve the standard, and is backed by the largest telecommunications groups in the world. The LTE standard has been developed by this group and has had billions of hours and dollars poured into it to create the standard protocol for mobile telecommunications. As it stands, the release definitions are frozen through Release 13, with Release 14 soon to come. Chipset manufacturers are doing their best to keep up with the release schedule, and incorporating features defined in these releases in their latest offerings.

However, just because a product utilizes the LTE standard does not inherently mean it has any of these features, or the optimal level of performance. The system implementation; that is, the application of chipset to functional system, makes all the difference. As is nearly always the case, there are tradeoffs to be made between system cost and performance. Striking the proper balance for the targeted market segment is key to creating a product that will be successfully implemented.

CUSTOMER EXPERIENCE

Globally, the 3 GHz band has been a licensed frequency band that was defined for the WiMAX standard. It is not typically available to Service Providers without having purchased or leased this frequency. However, some efforts have been made to make it more readily available in certain parts of the world. Specifically, in the United States and Canada, 50 MHz of this spectrum (3650-3700 MHz) had been available under a "lightly licensed" condition. An operator needed to obtain a nationwide, non-exclusive license at very low cost from the regulatory body, then register any equipment that would be operating in that band. This propelled the use of this band forward tremendously over the last several years.

Cambium Networks introduced the 450 platform operating in the 3 GHz band in 2014. Since then, it has been deployed in hundreds of networks globally. This represents a substantial number of operators that are helping to bridge the digital divide, and connect rural customers. Upcoming changes to this band in the United States (via the Citizens Band Radio Service (CBRS) initiative) will allow additional frequency

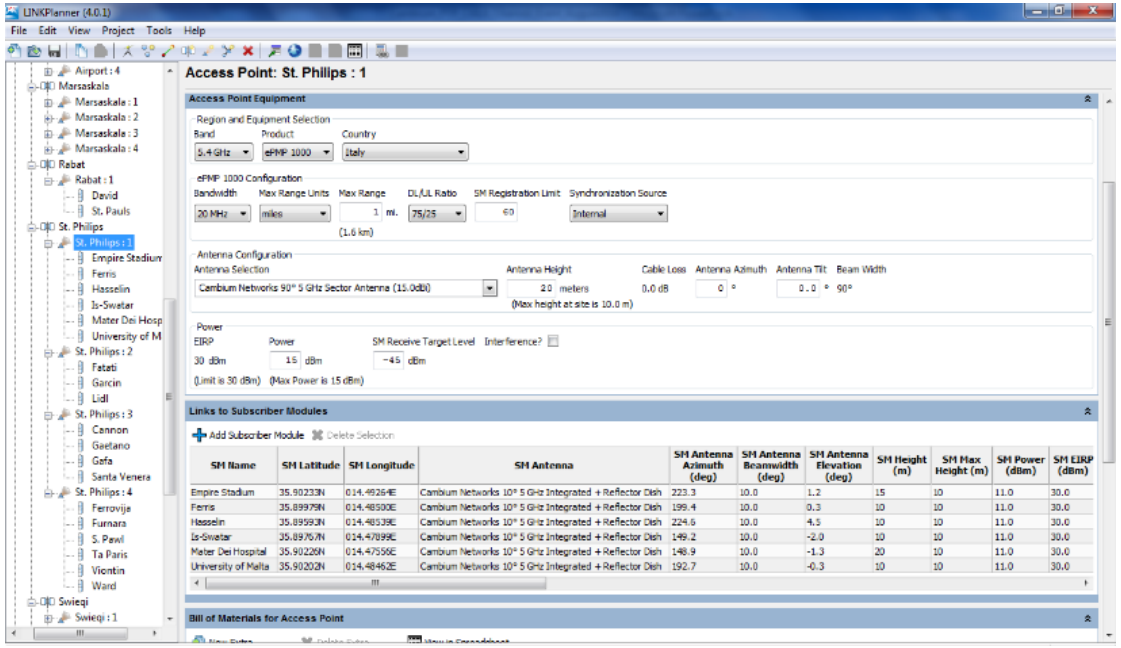
Paper available at:
https://www.cambiumnetworks.com/resource/comparison-pmp-450-lte-3-ghz/

In many ways, 450 outperforms any existing LTE solution

BEST ● ◓ ○ ◒ ● WORST	EXISTING LTE SOLUTIONS	CAMBIUM PMP
Customer Experience	◒	●
Range and Coverage	●	○
Interference Mitigation	○	●
Total Sector Capacity	○	●
Subscriber Bandwidth	◒	●
Infrastructure Costs	●	●
Mobility Support	●	●
Total Cost of Ownership	●	●

LINKPlanner

- To determine the expected benefit of 450m, **use LINKPlanner**!
- Input existing sector to LINKPlanner
- “Swap” existing 450 or 450i AP with new 450m
- Compare the expected throughput gain before even purchasing equipment



450m SYNC Options

Device	Capabilities	Requirements
CMM5 – C000000L556A	Supports GigE Mix 670, 450i, 450m	56VDC Power Supply
UGPS Module – 1096K	SYNC	RJ-45 cable to AUX Port

CMM5

UGPS

5 GHz 450m Power Supply Options

	Enhanced Power Injector	DC Power Injector
Model #	C000065L002C	N000000L101A
Key Attributes	Extended Temperature Range Required for AUX port powering 48 VDC input 48 VDC output to resilient-mode Supports longer cable runs	600 W PSU capable of supporting four 450m units
Inputs	120-240VAC 48VDC	90-305 VAC
Temperature Range	-40° C to +60° C -40° F to 140° F	-40° C to +70° C

3 GHz 450m Power Supply Options

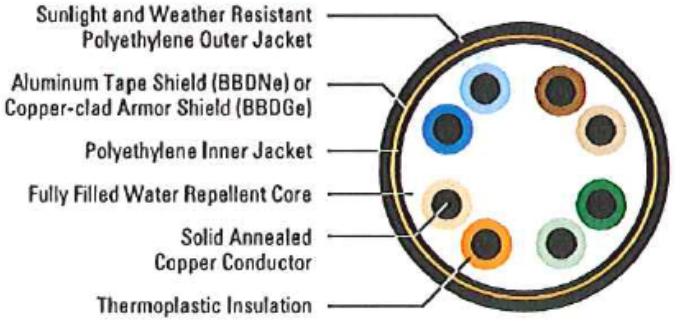
	DC Power Supply	Crimp Tool	Crimp Extractor Tool	Connector & Crimps	Cable
Model #	N000000L054B	N000000T001A	N000000T002A	N000000L123A N000000L124A	N000000L115A N000000L116A N000000L117A N000000L118A

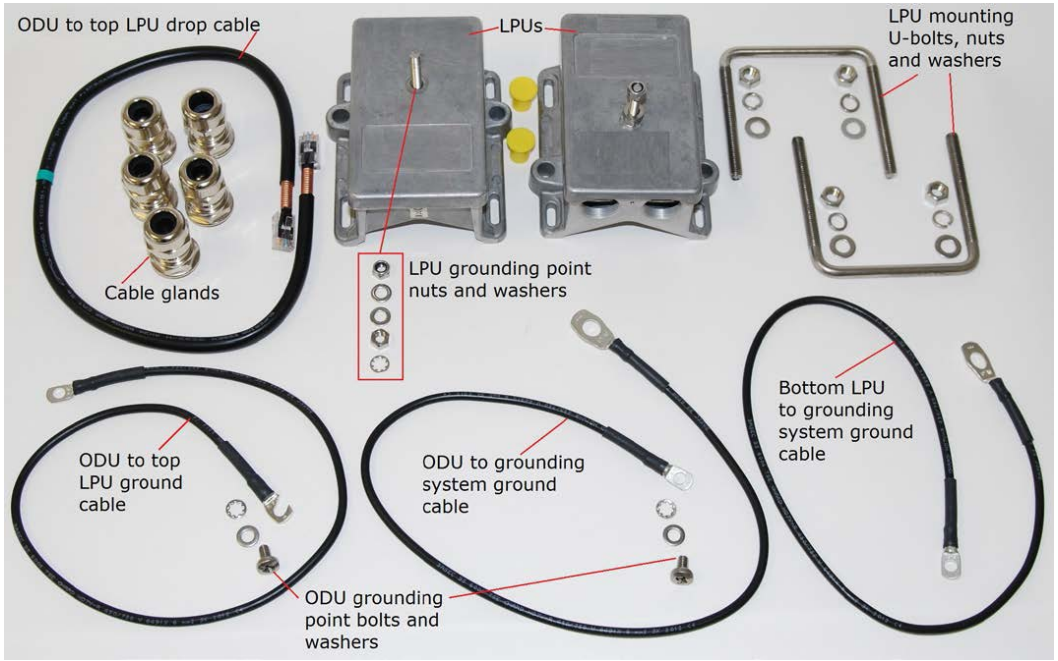
Key Attributes	Main Power Supply
	240 W PSU
	IP65
		Tool to apply crimps for DC Power Connectors	Manual Tool to extract crimps from connector	• DC Power Connector Kit
				• Package contains:
				  • 10 connectors
				  • 50 crimps
				• 18 AWG or 16 AWG respectively
				• Sold as spares kit
					• 0.75mm^2 or 1mm^2 Four Conductor cable
					• Sold in 100m or 300m reels

Inputs	90-305 VAC				
Temperature Range	-40° C to +70° C -40° F to 158° F				

Best Practices for Long-term Deployments – RJ-45 MAIN Port

- Lightning Protection (LPU) – C000065L007B
  - Protects radio and building ingress
- Ruggedized CAT 5 cable
  - Copper-clad armored drop cable
  - Gel-filled, UV resistant



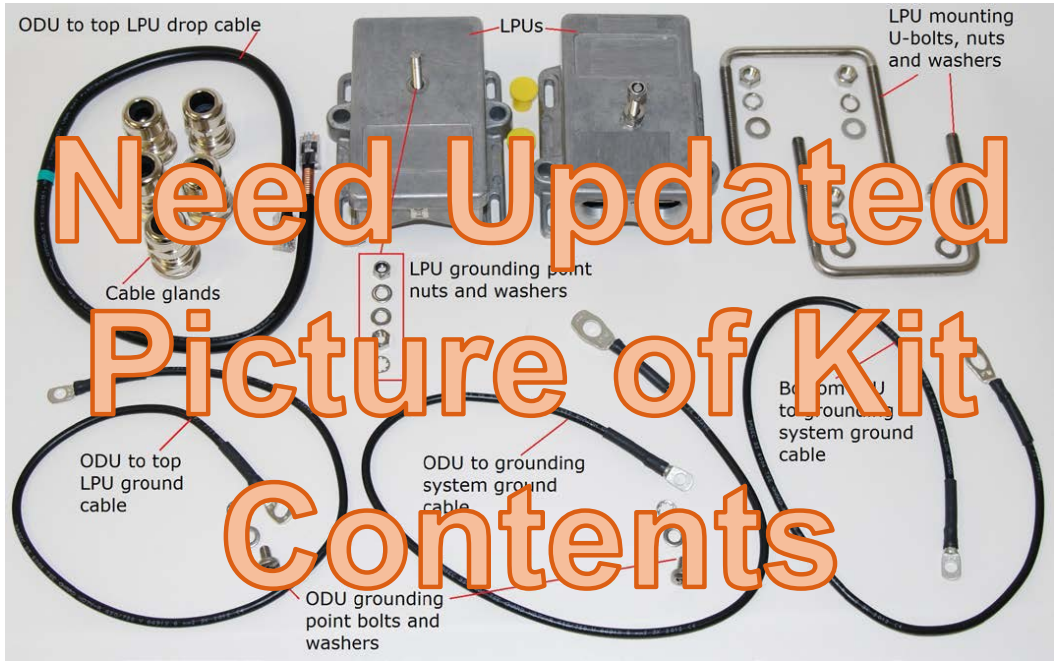


Best Practices for Long-term Deployments – PSU Port

- DC Lightning Protection (LPU) – C000000L114A
  - Protects radio PSU Input and building ingress

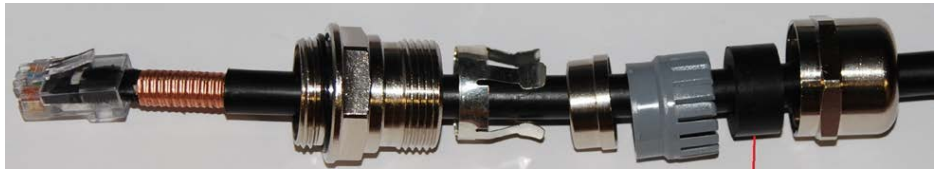
- Contains
  - 2 DC Lightning Protection Units (LPU)
  - DC LPU Mounting Kits
  - Ground Cables for DC LPU
  - Copper tape
  - 4-pin connectors (Qty. 4)
  - 18 AWG Crimps (Qty. 20)
  - PG-16 Style Glands w/EMC (Qty. 4)

- MSRP: $380



5 GHz Flexible I/O Options

Port name	Connector	Interface	Description
Main/PSU	RJ45	Proprietary PoE input	Proprietary power over Ethernet (PoE) twisted pair.
		100/1000BT	Management and/or data, SyncE sink or source
SFP	SFP	Optical or Copper Gigabit Ethernet, proprietary 3 GB link	OOB management, user data, user data with IB management. SyncE sink or source.
AUX	RJ45	Ethernet with 802.3at compliant PoE out capability, or 1PPS GPS input	Auxiliary Ethernet port which can be used for example to connect and power a video camera or wireless access point. Can also be used for GPS input via UGPS.



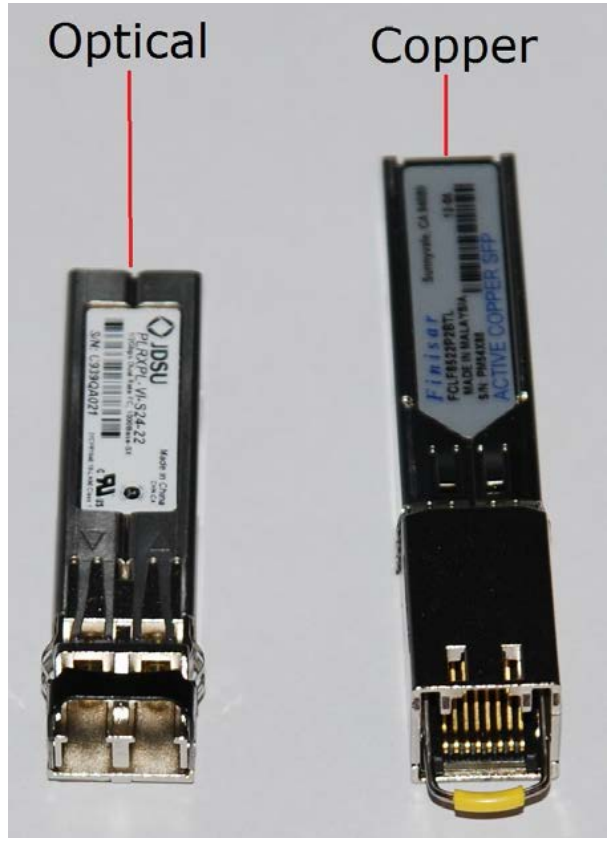
3 GHz Flexible I/O Options

Port name	Connector	Interface	Description
PSU	4-pin Power	DC Power	0.75mm^2 to 1.3mm^2 4 conductor power cable to provide DC power to radio
Main	RJ45	100/1000BaseT	Management and/or data
AUX	RJ45	Ethernet with 802.3at compliant PoE out capability, and 1PPS GPS input	Auxiliary Ethernet port which can be used for example to connect and power a video camera or wireless access point. Can also be used for GPS input via UGPS.
SFP1	SFP	Optical or Copper Gigabit Ethernet	OOB management, user data, user data with IB management
SFP2	SFP	Optical or Copper Gigabit Ethernet	OOB management, user data, user data with IB management

SFP Modules

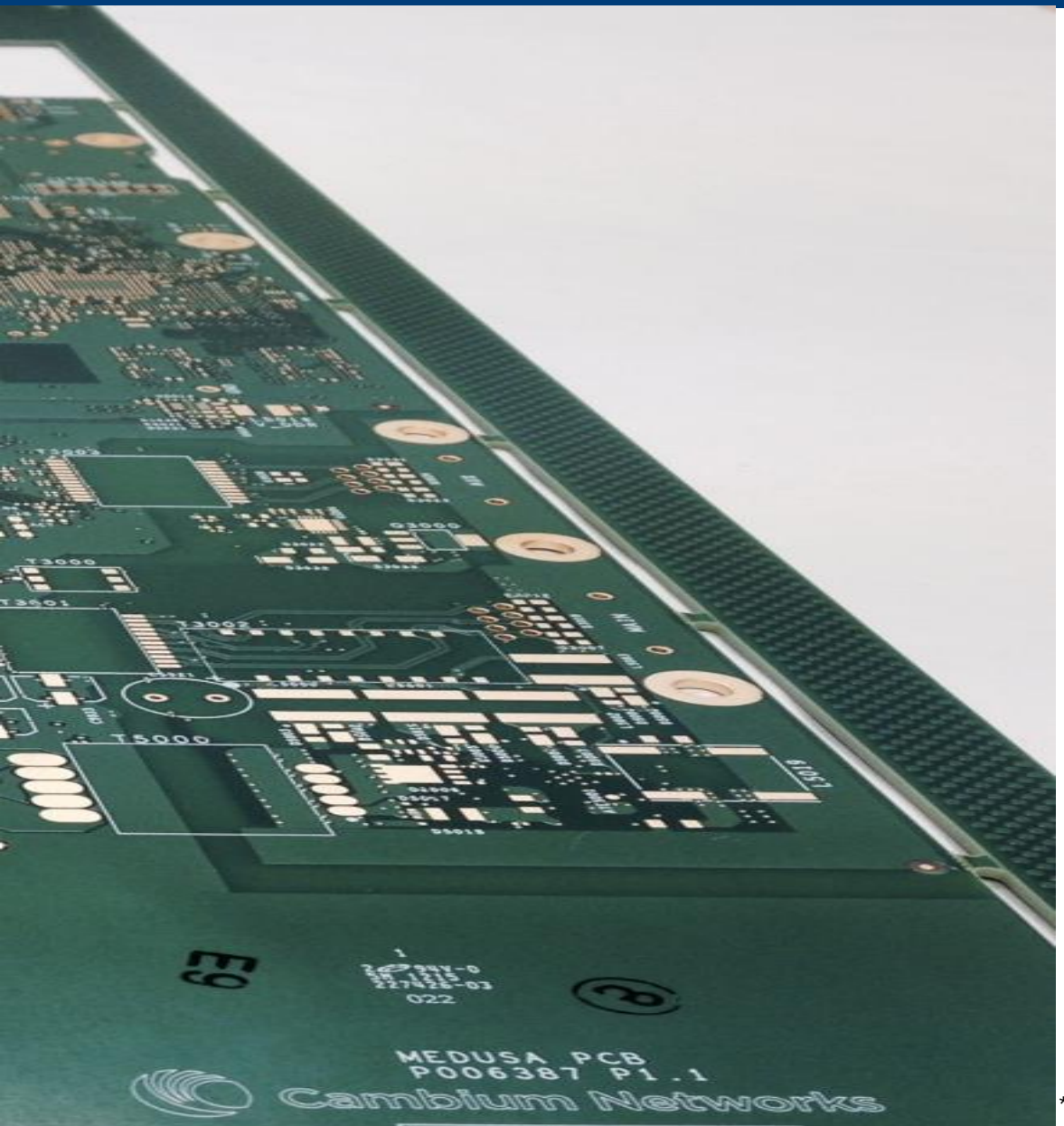
- SFP Modules
  - Kits contain SFP module, gland, software key and documentation

C000065L008A	Single Mode Optical SFP Interface per ODU	1310nm / 1000BaseLX
C000065L009A	Multi-mode Optical SFP Interface per ODU	850nm / 1000BaseSX
C000065L010A	Gig-Ethernet SFP Interface per ODU	1000BaseT
C000065L011A	2.5 Gig-Ethernet SFP Interface per ODU	2.5GBaseT



  - 3rd party SFP modules may work but are NOT supported.

Designed for the Future



- Optimized to reduce Total Cost of Ownership (TCO)
- Scales to 40 MHz operation
  - Maximum realistic channel size for outdoor unlicensed PMP
- Future Proof Platform: FPGA/Quad-Core Processor
- *cn*Medusa MU-MIMO on the PMP 450m
  - Extending life of existing deployed PMP 450 SMs
  - Supports NEW generation of 450 platform devices (450b)
  - 3 GHz 450m coming in 2018!
- Rich roadmap options
  - Wide Channel Support (30 and 40 MHz)
  - Downlink Beamforming Mode
  - Uplink MU-MIMO
  - Active Interference Cancellation
  - Re-use of Architecture, Iterative Hardware
    - Support for additional frequencies
    - Possible additional antenna options (decreased TCO)
    - Continued PPS improvements (beyond 600K)
    - Increased throughput (>1 Gbps Real World Capacity)

*Roadmap features mentioned subject to change at any time

450m Ordering Guide

Cambium Networks™

Cambium 450m Product Choices

Two Choices:

450m – Standard Model

450m Limited –

Get all the benefits of the 450m hardware, but only allows “demo” mode of Multi-User MIMO operation (for a 30 day period)

A software key can be purchased to permanently enable MU-MIMO operation

Feature / Benefit	450m Limited	450m
Integrated, Optimized 90° Sector Antenna Array	✓	✓
Compatible with all 450 platform devices	✓	✓
Uplink Sensitivity Improvements	✓	✓
Uplink Beamforming	✓	✓
Downlink Beamforming	✓	✓
“Demo Mode” for MU-MIMO (30 days)	✓	
MU-MIMO Operation		✓

Ordering a PMP 450m Step by Step

First, visit LINKPlanner!

1. Select 450m Access Point (for your region)
2. Select optional accessories
   - 2a. Add Lightning Protection
   - 2b. Do you require UGPS or CMM5 for sync?
   - 2c. Add Power Supplies and line cords
3. Select optional installation Tools
   - Cable and connectors
4. Select a warranty period
5. Do you need spares?

5 GHz 450m - MSRP Part Number List

Part Number	Description	MSRP
C050045A101A	5 GHz PMP 450m Integrated Access Point, 90 Degree (ROW)	$6,995
C050045A102A	5 GHz PMP 450m Integrated Access Point, 90 Degree (FCC)	$6,995
C050045A103A	5 GHz PMP 450m Integrated Access Point, 90 Degree (EU)	$6,995
C050045A104A	5 GHz PMP 450m Integrated Access Point, 90 Degree (DES Only)	$6,995
C050045A105A	5 GHz PMP 450m Integrated Access Point, 90 Degree (IC)	$6,995
C050045A111A	5 GHz PMP 450m Integrated Access Point, 90 Degree (ROW), Limited	$4,995
C050045A112A	5 GHz PMP 450m Integrated Access Point, 90 Degree (FCC), Limited	$4,995
C050045A113A	5 GHz PMP 450m Integrated Access Point, 90 Degree (EU), Limited	$4,995
C050045A114A	5 GHz PMP 450m Integrated Access Point, 90 Degree (DES Only), Limited	$4,995
C050045A115A	5 GHz PMP 450m Integrated Access Point, 90 Degree (IC), Limited	$4,995
C000045K100A	MU-MIMO Enable Key	$2,500

3 GHz 450m - MSRP Part Number List

Part Number	Description	MSRP
C030045A101A	3 GHz PMP 450m Integrated Access Point, 90 Degree	$8,995
C030045A104A	3 GHz PMP 450m Integrated Access Point, 90 Degree (No Encryption)	$8,995
C030045A111A	3 GHz PMP 450m Integrated Access Point, 90 Degree, Limited	$6,995
C030045A114A	3 GHz PMP 450m Integrated Access Point, 90 Degree (No Encryption), Limited	$6,995
C000045K100A	MU-MIMO Enable Key	$2,500
N000000L054B	Power Supply, AC, 54V 240W	$ 200
N000000T001A	Crimp tool for Molex MiniFitJr	$ 850
N000000T002A	Crimp removal tool for Molex MiniFitJr	$ 60
N000000L123A	DC Power Connector Kit 18 AWG, pkt of 10	$ 51
N000000L124A	DC Power Connector Kit 16 AWG, pkt of 10	$ 51
C000000L114A	DC Surge Suppressor Kit (DC LPU Kit) with 2x 4-pin power connectors	$ 380
N000000L115A	4-Conductor 0.75mm^2 DC cable – 100m	TBD
N000000L116A	4-Conductor 1mm^2 DC cable – 100m	TBD
N000000L117A	4-Conductor 0.75mm^2 DC cable – 300m	TBD
N000000L118A	4-Conductor 1mm^2 DC cable – 300m	TBD

3 GHz Only

450m Accessories - MSRP Part Number List

	Part Number	Description	MSRP
5 GHz Only	C000065L002C	AC+DC Enhanced Power Injector	$380
	N000065L003A	US Line Cord Fig 8 (IEC 60320 Type C7)	$20
	N000065L004A	UK Line Cord Fig 8 (IEC 60320 Type C7)	$20
	N000065L005A	EU Line Cord Fig 8 (IEC 60320 Type C7)	$20
	C000000L556A	CMM5 – 56 VDC Injector (4-port)	$1,295
	N000000L101A	Power Supply for CMM5 to support 450m, 48 V, 600 W	$449
	1096K	UGPS	$349
	C000065L007B	LPU and Grounding Kit	$400
	C000065L008A	Single Mode Optical SFP Interface per ODU	$295
	C000065L009A	Multi-mode Optical SFP Interface per ODU	$295
	C000065L010A	Gig-Ethernet SFP Interface per ODU	$395
	C000065L011A	2.5 Gig-Ethernet SFP Interface per ODU	$395
	WB3175A	1000 ft Reel Outdoor Copper Clad CAT5E (Recommended for PTP)	$995
	WB3176A	328 ft (100 m) Reel Outdoor Copper Clad CAT5E (Recommended for PTP)	$350
	N000065L033A	RJ-45 Gland Spare – PG16 style (QTY 10)	$400
	N000065L036A	PTP650 Series Blanking Plug Pack (QTY 10)	$50

450m Extended Warranties - MSRP Part Number List

Part Number	Description	MSRP
EW-E1PM4MAP-WW	PMP450m Access Point Extended Warranty, 1 Additional Year	$210
EW-E2PM4MAP-WW	PMP450m Access Point Extended Warranty, 2 Additional Years	$378
EW-E3PM4MAP-WW	PMP450m Access Point Extended Warranty, 3 Additional Years	$472
EW-E4PM4MAP-WW	PMP450m Access Point Extended Warranty, 4 Additional Years	$560
EW-E5PM4MAP-WW	PMP450m Access Point Extended Warranty, 5 Additional Years	$585
EW-E6PM4MAP-WW	PMP450m Access Point Extended Warranty, 6 Additional Years	$630
EW-E7PM4MAP-WW	PMP450m Access Point Extended Warranty, 7 Additional Years	$660

5 GHz PMP 450m Example BOM

LINKPlanner will generate the BOM for you

Example: Deployment of a 4-sector site in the US, using a 450m, with UGPS and standalone Power Supplies.

Part Number	Description	Qty.
C050045A102A	5 GHz PMP 450m Integrated Access Point, 90 Degree (FCC)	4
N000065L002C	AC+DC Enhanced Power Injector	4
N000065L003A	US Line Cord Fig 8 (IEC-60320 Type C7)	4
1096K	UGPS	2
C000065L007B	LPU and Grounding Kit	4

3 GHz PMP 450m Example BOM – Using Fiber for Data

LINKPlanner will generate the BOM

Example: Deployment of a single 3 GHz 450m sector with UGPS using Fiber for Data

Note: the 3 GHz 450m **requires** DC power input

Part Number	Description	Qty.
C030045A101A	3 GHz PMP 450m Integrated Access Point, 90 Degree	1
DC Power:		
N000000L054B	Power Supply, AC, 54V 240W	1
C000000L114A	DC Surge Suppressor Kit (DC LPU Kit) with 2x 4-pin power connectors	1
N000000L11XX	DC Cables as needed (see slide 23)	As needed
Data Input:		
C000065L0XXX	SFP Module Kit – Single or Multi-mode (see slide 17)	
Fiber		
Optional Accessories:		
N000000T001A	Crimp tool for Molex MiniFitJr	1, If needed
N000000T002A	Crimp removal tool for Molex MiniFitJr	1, If needed
1096K	UGPS	1, if needed

3 GHz PMP 450m Example BOM – Using Ethernet for Data

LINKPlanner will generate the BOM

Example: Deployment of a single 3 GHz 450m sector with UGPS using Ethernet for Data

Note: the 3 GHz 450m **requires** DC power input, and Ethernet LPU to protect Data line (including PSU to bias the LPU)

Part Number	Description	Qty.
C030045A101A	3 GHz PMP 450m Integrated Access Point, 90 Degree	1
DC Power:		
N000000L054B	Power Supply, AC, 54V 240W	1
C000000L114A	DC Surge Suppressor Kit (DC LPU Kit) with 2x 4-pin power connectors	1
N000000L11XX	DC Cables as needed (see slide 23)	As needed
Data Input:		
C000065L007A	LPU and Grounding Kit (1 kit per ODU)	1
01010419001	Coaxial Cable Grounding Kits for ¼" and 3/8" Cable	2
N000000L017A	Power Supply, 15W 56V (to provide power to LPU)	1
N000000L00XA	CABLE, UL POWER SUPPLY CORD SET	1
Ethernet Cable		
Optional Accessories:		
N000000T001A	Crimp tool for Molex MiniFitJr	1, If needed
N000000T002A	Crimp removal tool for Molex MiniFitJr	1, If needed
1096K	UGPS	1, if needed

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