

# ePMP™ 6 GHz Force 4600 Series Subscriber Module

## QUICK LOOK:

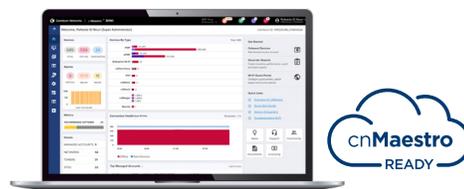
- **Broad selection of high-performance subscriber modules (SM) for point-to-point (PTP) and point-to-multipoint (PMP) fixed wireless broadband applications**
- **Gbps capacity leveraging 160 MHz channels and 802.11ax technology**
- **SM in PMP applications interoperates with ePMP 4600 Access Points**
- **3-year hardware warranty**



Service providers face ever-increasing demand for capacity in a limited amount of spectrum. The Force 4600 series of subscriber modules (SM) meets this demand offering high performance and low latency across both PMP and PTP deployments.

The Force 4600 Series of SM's is available in two form factors: connectorized with 2 x RP-SMA connectors and integrated with a 25 dBi dish antenna. Both models include the following:

- High capacity and latencies less than 5 ms when using ePTP technology.
- Proven air interface on top of 802.11ax technology
- Interoperability with the ePMP 4600 Series SM which uses MU-MIMO to achieve more than 4 Gbps per sector by transmitting to two ePMP 4600 Series SM's simultaneously.
- Security features meeting the requirements of enterprise, industrial, government and service provider users.
- Management by Cambium Networks cnMaestro™ element management system for easy provisioning, monitoring and upgrades.
- Network planning with LINKPlanner and cnHeat.
- 3-year hardware warranty and support from Cambium Networks.
- Each SM comes with a Power over Ethernet injector and pole mount hardware included.



## ePMP™ Force 4600 Series Subscriber Module

Spectrum	
<b>Specs in this table apply to all models, except where noted.</b>	
<b>Available Models</b>	Force 4600C and Force 4625
<b>Channel Width MHz</b>	20   40   80   160 MHz
<b>Proprietary Physical Layer</b>	ePMP air interface with 2x2 MIMO/OFDMA based on 802.11ax underlying technology
<b>Channel Spacing</b>	Configurable in 5 MHz increments
<b>Frequency Range</b>	Wide Band Operation 5925–7125 MHz (Note: Allowable frequencies and bands are dictated by individual country regulations.) Operation under AFC (Automatic frequency coordination) control in FCC jurisdictions.
<b>MAC Layer (Media Access Control)</b>	Cambium Proprietary
<b>Ethernet Interface</b>	100/1000 BaseT, rate auto negotiated, 802.3at compliant; 4600C has SFP+ port
<b>Protocols Used</b>	IPv4/IPv6, UDP, TCP, IP, ICMP, SNMPv2c, HTTPs, STP, SSH, IGMP Snooping
<b>Network Management</b>	HTTP/HTTPS, SNMPv1/2, SNMPv3, SSH
<b>VLAN</b>	802.1Q with 802.1p priority

Performance		
	<b>Force 4600C</b>	<b>Force 4625</b>
<b>ARQ</b>	Yes	Yes
<b>Nominal Receive Sensitivity (w/FEC) @20 MHz Channel</b>	MCS 0 = -92 dBm to MCS 13 (4096 QAM-5/6) = -53 dBm (per chain)	MCS 0 = -92 dBm to MCS 11 (1024 QAM-5/6) = -61 dBm (per chain)
<b>Nominal Receive Sensitivity (w/FEC) @40 MHz Channel</b>	MCS 0 = -89 dBm to MCS 13 (4096 QAM-5/6) = -50 dBm (per chain)	MCS 0 = -89 dBm to MCS 11 (1024 QAM-5/6) = -58 dBm (per chain)
<b>Nominal Receive Sensitivity (w/FEC) @80 MHz Channel</b>	MCS 0 = -86 dBm to MCS 13 (4096 QAM-5/6) = -47 dBm (per chain)	MCS 0 = -86 dBm to MCS 11 (1024 QAM-5/6) = -55 dBm (per chain)
<b>Nominal Receive Sensitivity (w/FEC) @160 MHz Channel</b>	MCS 0 = -83 dBm to MCS 13 (4096 QAM-5/6) = -44 dBm (per chain)	MCS 0 = -86 dBm to MCS 11 (1024 QAM-5/6) = -51 dBm (per chain)
<b>Modulation Levels (Adaptive)</b>	MCS 0 (BPSK) to MCS 13 (4096 QAM-5/6)	MCS 0 (BPSK) to MCS 11 (1024 QAM-5/6)
<b>Geolocation</b>	Integrated GPS with antenna puck	External USB GPS receiver
<b>Transmit Power Range</b>	+3 to +30 dBm (combined, to regional EIRP limit) (1 dB interval)	+3 to +30 dBm (combined, to regional EIRP limit) (1 dB interval)
<b>Quality of Service (QoS)</b>	Three level priority (Voice, High, Low) with packet classification by DSCP, COS, VLAN ID, IP & MAC Address, Broadcast, Multicast and Station Priority, MIR/CIR* support	Three level priority (Voice, High, Low) with packet classification by DSCP, COS, VLAN ID, IP & MAC Address, Broadcast, Multicast and Station Priority, MIR/CIR* support

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Physical		
	Force 4600C	Force 4625
<b>Surge Supression*</b>	1 Joule Integrated	1 Joule Integrated
<b>Environmental</b>	IP67	IP55
<b>Temperature</b>	-30°C to 65°C (-22°F to 149°F)	-30°C to 65°C (-22°F to 149°F)
<b>Weight</b>	0.73 kg (1.61 lbs) without bracket	2.76 Kg (6.1 lbs)
<b>Dimensions (Dia x Depth)</b>	256 x 125 x 47 mm (10.1 x 4.9 x 1.9 in)	472 x 472 x 296 mm (18.5 x 18.5 x 11.7 in)
<b>Pole Diameter Range</b>	Center: 3.1 to 7.6 cm (1.25 to 3.0 inches)	Center: 3.1 to 7.6 cm (1.25 to 3.0 inches)
<b>Power Consumption</b>	28W	28W
<b>Input Voltage</b>	44V–59V	44V–59V
<b>Antenna</b>	External Dish, PN# 2 x 50 ohm, RP SMA (Reverse Polarity)	25 dBi Integrated Dish
<b>GPS Antenna Connection</b>	1 x 50 ohm, RP (Reverse Polarity) SMA; GPS Puck Antenna: Part # N000900L030A	Optional external USB GPS antenna - GPS Puck Antenna: Part # N000940L001A

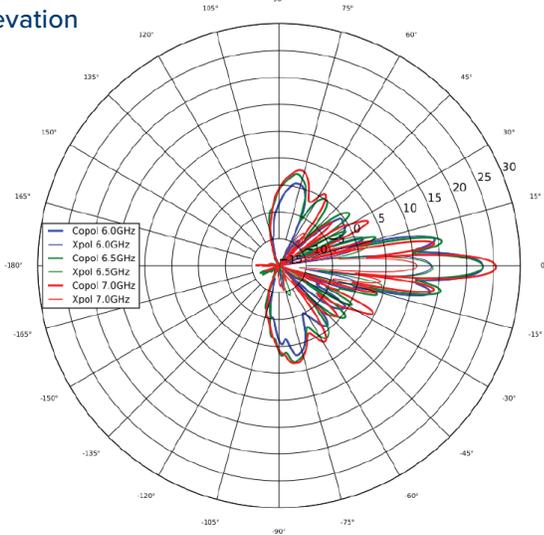
Security	
<b>Encryption</b>	<b>All models:</b> 128-bit AES (CCMP mode), 256-bit AES optional where allowed

Certifications		
	Force 4600C	Force 4625
<b>FCCID</b>	Z8H89FT0069	Z8H89FT0075
<b>FCC Regulatory Part #</b>	C068940C122A	C068940M142A
<b>ETSI Regulatory Part #</b>	C060940C021A	C060940M041A
<b>Industry Canada Cert</b>	109W-0069	109W-0075
<b>CE</b>	Visit <a href="http://cambiumnetworks.com">cambiumnetworks.com</a> for declaration of conformity	Visit <a href="http://cambiumnetworks.com">cambiumnetworks.com</a> for declaration of conformity

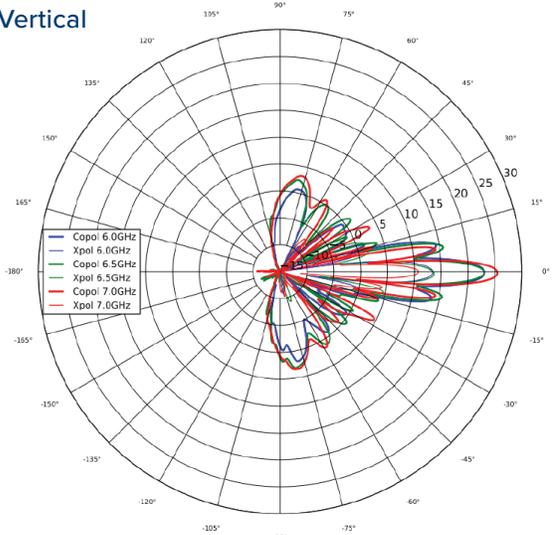
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## Force 4625 Antenna Patterns

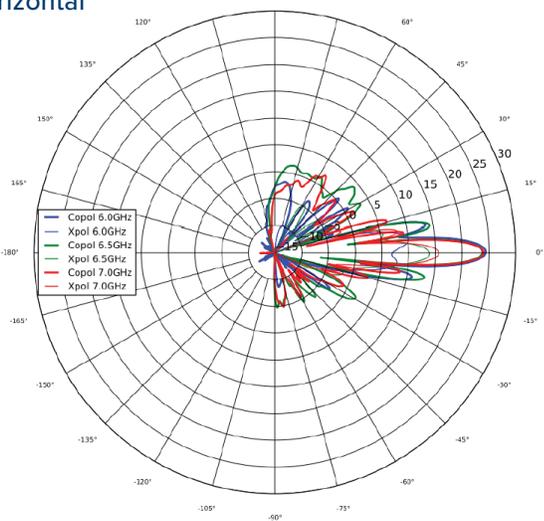
**Azimuth  
Elevation**



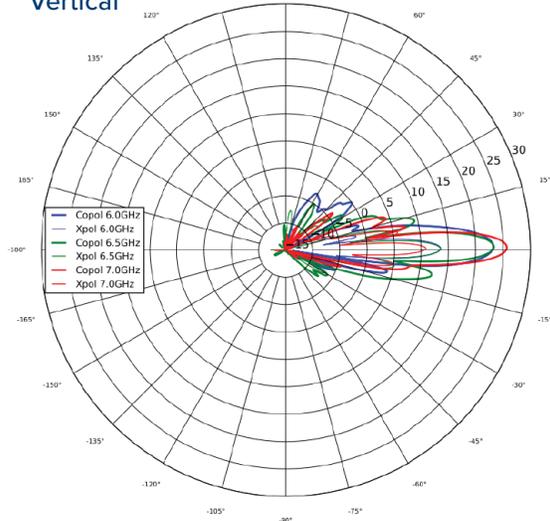
**Azimuth  
Vertical**



**Elevation  
Horizontal**



**Elevation  
Vertical**



## ePMP™ Force 4600 Series Subscriber Module

### Force 4600C Ordering Information

<b>C060940C021A</b>	ePMP 6 GHz Force 4600C SM Radio (ROW) (no cord)
<b>C060940C121A</b>	ePMP 6 GHz Force 4600C SM Radio (ROW) (US cord)
<b>C068940C124A</b>	ePMP 6 GHz Force 4600C SM Radio (IC) (Canada/US cord)
<b>C060940C221A</b>	ePMP 6 GHz Force 4600C SM Radio (ROW) (EU cord)
<b>C060940C223A</b>	ePMP 6 GHz Force 4600C SM Radio (EU) (EU cord)
<b>C060940C321A</b>	ePMP 6 GHz Force 4600C SM Radio (ROW) (UK cord)
<b>C060940C323A</b>	ePMP 6 GHz Force 4600C SM Radio (EU) (UK cord)
<b>C060940C421A</b>	ePMP 6 GHz Force 4600C SM Radio (ROW) (India cord)
<b>C060940C425A</b>	ePMP 6 GHz Force 4600C SM Radio (India) (India Cord)
<b>C060940C521A</b>	ePMP 6 GHz Force 4600C SM Radio (ROW) (China cord)
<b>C060940C621A</b>	ePMP 6 GHz Force 4600C SM Radio (ROW) (Brazil cord)
<b>C060940C721A</b>	ePMP 6 GHz Force 4600C SM Radio (ROW) (Argentina cord)
<b>C060940C821A</b>	ePMP 6 GHz Force 4600C SM Radio (ROW) (ANZ cord)
<b>C060940C921A</b>	ePMP 6 GHz Force 4600C SM Radio (ROW) (South Africa cord)
<b>C060940CZ21A</b>	ePMP 6 GHz Force 4600C SM Radio (ROW) (No PSU)
<b>C068940C122B</b>	ePMP 6 GHz Force 4600C SM Radio (FCC) (US Cord)
<b>C060940C226A</b>	ePMP 6 GHz Force 4600C SM Radio (Indonesia) (EU Cord)

### Force 4625 Ordering Information

<b>C060940M041A</b>	ePMP 6 GHz Force 4625 SM Bulk packaging (ROW) (no cord)
<b>C060940M141A</b>	ePMP 6 GHz Force 4625 SM Bulk packaging (ROW) (US cord)
<b>C068940M144A</b>	ePMP 6 GHz Force 4625 SM Bulk packaging (IC) (Canada/US cord)
<b>C060940M241A</b>	ePMP 6 GHz Force 4625 SM Bulk packaging (ROW) (EU cord)
<b>C060940M243A</b>	ePMP 6 GHz Force 4625 SM Bulk packaging (EU) (EU cord)
<b>C060940M341A</b>	ePMP 6 GHz Force 4625 SM Bulk packaging (ROW) (UK cord)
<b>C060940M343A</b>	ePMP 6 GHz Force 4625 SM Bulk packaging (EU) (UK cord)
<b>C060940M441A</b>	ePMP 6 GHz Force 4625 SM Bulk packaging (ROW) (India cord)
<b>C060940M445A</b>	ePMP 6 GHz Force 4625 SM Bulk packaging (India) (India Cord)
<b>C060940M541A</b>	ePMP 6 GHz Force 4625 SM Bulk packaging (ROW) (China cord)
<b>C060940M641A</b>	ePMP 6 GHz Force 4625 SM Bulk packaging (ROW) (Brazil cord)
<b>C060940M741A</b>	ePMP 6 GHz Force 4625 SM Bulk packaging (ROW) (Argentina cord)
<b>C060940M841A</b>	ePMP 6 GHz Force 4625 SM Bulk packaging (ROW) (ANZ cord)
<b>C060940M941A</b>	ePMP 6 GHz Force 4625 SM Bulk packaging (ROW) (South Africa cord)
<b>C060940MZ41A</b>	ePMP 6 GHz Force 4625 SM Bulk packaging (ROW) (No PSU)
<b>C068940M142A</b>	ePMP 6 GHz Force 4625 SM Bulk packaging (FCC) (US Cord)
<b>C060940M246A</b>	ePMP 6 GHz Force 4625 SM Bulk packaging (Indonesia) (EU Cord)

### ABOUT CAMBIUM NETWORKS

Cambium Networks empowers millions of people with wireless connectivity worldwide. Its wireless portfolio is used by commercial and government network operators as well as broadband service providers to connect people, places and things. With a single network architecture spanning fixed wireless and Wi-Fi, Cambium Networks enables operators to achieve maximum performance with minimal spectrum. End-to-end cloud management transforms networks into dynamic environments that evolve to meet changing needs with minimal physical human intervention. Cambium Networks empowers a growing ecosystem of partners who design and deliver gigabit wireless solutions that just work.