

# ePMP™ Force 300-13L 5 GHz Subscriber Module



Wireless service providers and enterprises around the globe are challenged to deliver reliable connectivity in overcrowded RF environments. As spectrum increasingly becomes a scarce commodity, finding the right broadband connectivity solution is vital for all low and high density types of deployments. Combining the latest 802.11ac Wave 2 technology and the field proven, scalable performance of ePMP, the Force 300-13L delivers up to 400 Mbps of capacity. The Force 300-13L is a powerful, yet affordable subscriber module compatible with the ePMP3000 Access Point, while also interoperating with the ePMP2000 to enable seamless migration to 802.11ac Wave 2 technology.

## FEATURES:

- Cambium Networks' ePMP™ Force 300-13L is an affordable subscriber module well-suited for markets where price is key and networks where ranges are shorter.
- The ePMP 300-13L is designed to operate in high interference environments and provides throughput of up to 400 Mbps with bi-directional traffic of real user data.
- Configurable Modes of operation ensure high performance and low round-trip latency in both symmetrical and asymmetrical traffic.
- QoS management offers outstanding quality for triple play services - VoIP, video and data and provides three levels of traffic priority.
- The ePMP Force 300-13L is available in 5 GHz only, supports a peak throughput of 400Mbps and does not support a dedicated spectrum analyzer.
- Installation is a breeze for pole and wall mounting.
- The ePMP Force 300-13L is compatible with ePMP 1000, ePMP 2000 and ePMP 3000 Access Points.
- The ePMP Force 300-13L is available in EMEA, CALA and APAC regions where type approved. NOT available in FCC regions.

## SPECTRUM

Channel Spacing	Configurable on 5 MHz increments
Frequency Range	4920- 5970 MHz
Channel Width	10   20   40   80   MHz

## INTERFACE

MAC (Media Access Control) Layer	Cambium Proprietary
Physical Layer	2x2 MIMO/OFDM
Ethernet Interface	10/100/1000 BaseT
Protocols Used	IPv4, IPv6, UDP, TCP, IP, ICMP, SNMPv2c, HTTPS, STP, SSH, 24V POE, IGMP Snooping
Network Management	HTTPS, SNMPv2c, SSH
Spectrum Analyzer	Radio Tx must be off and used in conjunction with offline app from Cambium support site.
VLAN	802.1Q with 802.1p priority

## SPECIFICATIONS

### PERFORMANCE

ARQ	Yes
Nominal Receive Sensitivity (w/FEC) @20 MHz Channel	MCS9 -62dBm, MCS7 -67 dBm, MCS0 -89 dBm
Nominal Receive Sensitivity (w/FEC) @40 MHz Channel	MCS9 -61dBm, MCS7 -66 dBm, MCS0 -87 dBm
Nominal Receive Sensitivity (w/FEC) @80 MHz Channel	MCS9 -59dBm, MCS7 -64 dBm, MCS0 -85 dBm
Modulation Levels(Adaptive)	MCS0 (BPSK) to MCS9 (256 QAM 5/6)
Quality of Service	Three level priority (Voice, High, Low) with packet classification by DSCP, COS, VLAN ID, IP & MAC Address, Broadcast, Multicast and Station Priority
Transmit Power Range	+3 to 27 dBm (combined, to regional EIRP limit) (1 dB interval)
Antenna Gain	13 dBi

### PHYSICAL

Surge Suppression	1 Joule Integrated
Environmental	IP55
Temperature	-30°C to +55°C (-22°F to +122°F)
Weight	0.35 kg (0.88 lbs)
Wind Survival	200 km/hour (124 mi/hour)
Dimensions (H x W x D)	235 x 77 x 58 mm
Pole Diameter Range	3.8 cm – 6.4 cm (1.5 in – 2.5 in)
Power Consumption	12 W Maximum, 9 W Typical
Input Voltage	30 V Passive PoE (14-30V DC input)

### SECURITY CERTIFICATIONS

Encryption	128-bit AES (CCMP mode)
CE	DoC pending

### PART NUMBER

### DESCRIPTION

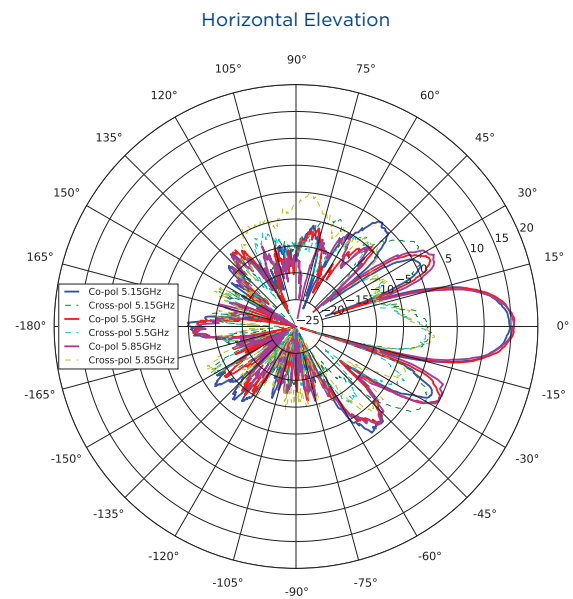
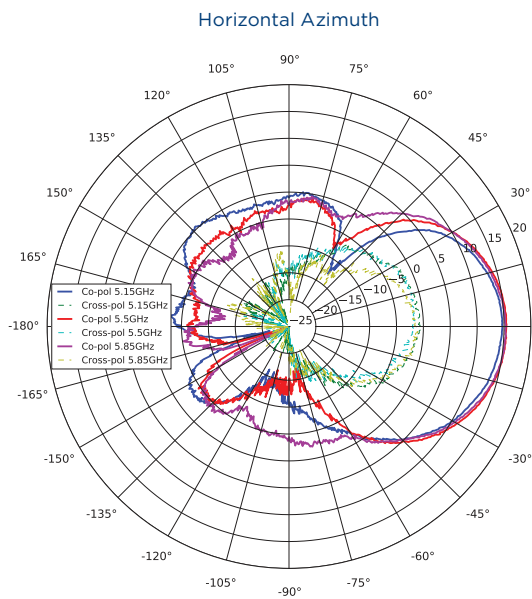
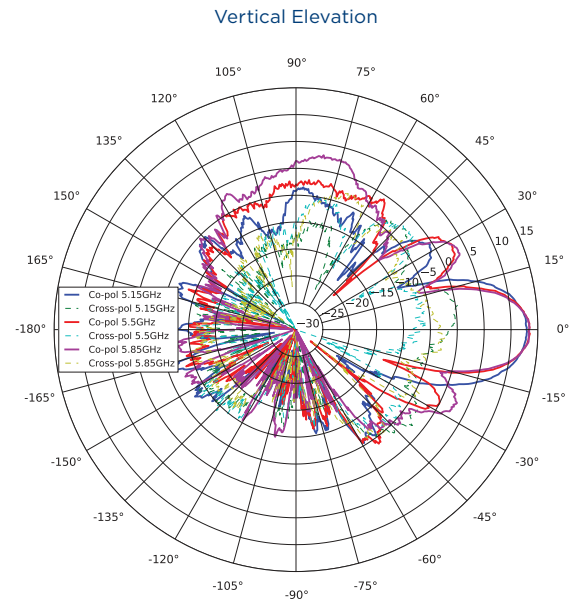
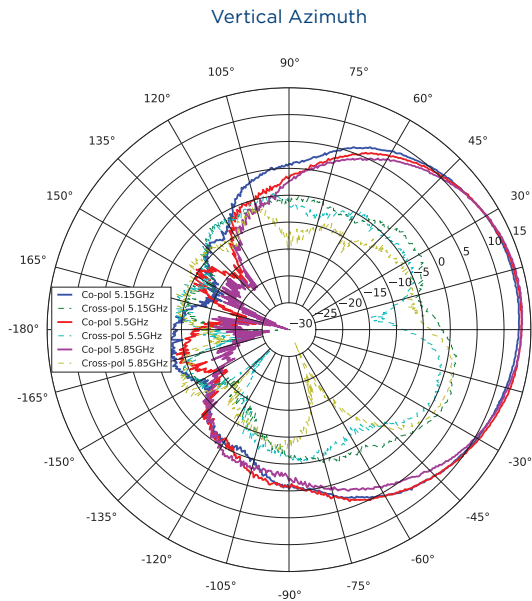
C050910C233A	ePMP 5 GHz Force 300-13L SM (EU) (EU cord)
C050910C331A	ePMP 5 GHz Force 300-13L SM (ROW) (UK cord)
C050910C333A	ePMP 5 GHz Force 300-13L SM (EU) (UK cord)
C050910C431A	ePMP 5 GHz Force 300-13L SM (ROW) (India cord)
C050910C432A	ePMP 5 GHz Force 300-13L SM (India) (India Cord)
C050910C531A	ePMP 5 GHz Force 300-13L SM (ROW) (China cord)
C050910C631A	ePMP 5 GHz Force 300-13L SM (ROW) (Brazil cord)
C050910C731A	ePMP 5 GHz Force 300-13L SM (ROW) (Argentina cord)
C050910C831A	ePMP 5 GHz Force 300-13L SM (ROW) (ANZ cord)
C050910C931A	ePMP 5 GHz Force 300-13L SM (ROW) (South Africa cord)
C050910CZ31A	ePMP 5 GHz Force 300-13L SM (ROW) (No PSU)

# SPECIFICATIONS

## ANTENNA SPECIFICATIONS 5 GHZ SPECIFICATION

Frequency Range	4920 to 5950 MHz
Antenna Type	Flat panel
Peak Gain	13 dBi
3dB Beamwidth-Azimuth	45 degrees
3dB Beamwidth-Elevation	15 degrees

## FORCE 300-13L ANTENNA PATTERNS



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