

# ePMP™ Force 300-16



Wireless service providers and enterprises around the globe are challenged to deliver reliable connectivity in overcrowded RF environment. As spectrum increasingly becomes a scarce commodity, finding the right broadband connectivity solution is vital for all low and high density types of deployments.

Cambium Networks resolves this challenge with a breakthrough technology solution that delivers superior performance, resiliency and reach in the most congested environments. Combining the latest 802.11AC Wave 2 chipset and the field proven TDD MAC of ePMP, the Force 300-16 offers a compelling yet affordable point to point product and a future mid gain subscriber module for the ePMP3000 Access Point.

Force 300-16 continues the tradition of previous products with a 16dbi integrated antenna with a narrow beamwidth and reliable mechanics. Supporting peak throughput greater than 500Mbps, the Force300-16 will also supports an always on spectrum analyzer and local WiFi management to take advantage of mobile installation applications.

## FEATURES:

- Cambium Networks' ePMP Force 300-16 is designed to operate in high interference environments and provides superior throughput of over 500 Mbps of real user data.
- The ePMP Force 300-16 supports channel size configuration from 20MHz up to 80MHz and modulates up to 256 QAM.
- The Force 300-16 supports a local Wi-Fi connection to allow easy installation, configuration, and monitoring from any Wi-Fi enabled device.
- The ePMP Force 300-16 supports real time spectrum monitoring with out degradation in throughput
- Configurable modes of operation ensure robust adaptivity to both symmetrical and asymmetrical traffic while providing high performance and round-trip latency as low as 3-5 ms.
- QoS management offers an outstanding quality for triple play services - VoIP, video, and data - and provides three levels of traffic priority.
- With a horizontal orientation mount providing a 15 degree beamwidth and 16dBi gain, the F300-16 offers a compelling, compact subscriber or point to point solution resilient to interference.
- This platform is for the user base that wants a smaller on premises footprint while enabling high gain.
- Install is a breeze with the easy to install mount, capable of pole and wall mounting.

## SPECIFICATIONS

### SPECTRUM

Channel Spacing	Configurable in 5 MHz increments
Frequency Range	Wide Band Operation 4910 - 5970 MHz (Note: Allowable frequencies and bands are dictated by individual country regulations.)
Channel Width	20   40   80 MHz

## SPECIFICATIONS

### INTERFACE

MAC (Media Access Control) Layer	Cambium
Proprietary Physical Layer	2x2 MIMO/OFDM
Ethernet Interfaced	10/100/1000 BaseT, Compatible with Cambium PoE & Standard PoE pinouts
Protocols Used	IPv4/IPv6 (Dual Stack), UDP, TCP, ICMP, SNMPv2c, NTP, STP, IGMP, SSH
Network Management	IPv4/IPv6, HTTPs, SNMPv2c, SSH, Cambium Networks CnMaestro™
VLAN	802.1Q with 802.1p priority

### PERFORMANCE

ARQ	Yes
Nominal Receive Sensitivity (w/FEC) @20 MHz Channel	MCS0 = -89 dBm to MCS8 (256 QAM-3/4) = -66 dBm (per chain)
Nominal Receive Sensitivity (w/FEC) @40 MHz Channel	MCS0 = -87 dBm to MCS9 (256 QAM-5/6) = -64 dBm (per chain)
Nominal Receive Sensitivity (w/FEC) @80 MHz Channel	MCS0 = -84 dBm to MCS9 (256 QAM-5/6) = -59 dBm (per chain)
Modulation Levels (Adaptive)	MCS0(BPSK) to MCS9 (256 QAM-5/6)
Transmit Power Range	0 to +29 dBm (combined, to regional EIRP limit) (1 dB interval)

### PHYSICAL

Surge Suppression	1 Joule Integrated (C000000L065A - 30V Gigabit surge suppressor is recommended for optimum protection)
Environmental	IP55
Temperature	-30°C to +60°C (-22°F to +140°F)
Weight	0.50 kg (1.1 lb) (includes mounting bracket)
Wind Survival	180 km/hour (112 mi/hour)
Dimensions (Dia x Depth)	12.4 x 25.1 x 11.9 cm (4.9 x 9.9 x 4.7 in) – with mounting bracket attached
Pole Diameter Range	1 – 1.6 in (2.5 – 4.1 cm) with included clamp; up to 2.25 in (5.7 cm) with larger clamp
Power Consumption	12 Watts
Input Voltage	30 Volts

### SECURITY

Encryption	128-bit AES (CCMP mode)
------------	-------------------------

### CERTIFICATIONS

FCCID	Z8H-89FT0016**
Industry Canada Cert	109W-0016**
CE	EN 301 893 V2.1.1 (5.4 GHz), EN 302 502 V2.1.1 (5.8 GHz)**

### PART NUMBER

### DESCRIPTION

C058910C112A	ePMP 5 GHz Force 300-16 Radio (FCC) (US cord)
C050910C114A	ePMP 5 GHz Force 300-16 Radio (IC) (Canada/US cord)
C050910C213A	ePMP 5 GHz Force 300-16 Radio (EU) (EU cord)
C050910C313A	ePMP 5 GHz Force 300-16 Radio (EU) (UK cord)
C050910C011A	ePMP 5 GHz Force 300-16 Radio (ROW) (no cord)
C050910C111A	ePMP 5 GHz Force 300-16 Radio (ROW) (US cord)
C050910C211A	ePMP 5 GHz Force 300-16 Radio (ROW) (EU cord)
C050910C311A	ePMP 5 GHz Force 300-16 Radio (ROW) (UK cord)
C050910C411A	ePMP 5 GHz Force 300-16 Radio (ROW) (India cord)
C050910C412A	ePMP 5 GHz Force 300-16 Radio (India) (India cord)
C050910C511A	ePMP 5 GHz Force 300-16 Radio (ROW) (China cord)

# SPECIFICATIONS

PART NUMBER	DESCRIPTION
C050910C611A	ePMP 5 GHz Force 300-16 Radio (ROW) (Brazil cord)
C050910C711A	ePMP 5 GHz Force 300-16 Radio (ROW) (Argentina cord)
C050910C811A	ePMP 5 GHz Force 300-16 Radio (ROW) (ANZ cord)
C050910C911A	ePMP 5 GHz Force 300-16 Radio (ROW) (South Africa cord)
C050910CZ11A	ePMP 5 GHz Force 300-16 Radio (ROW) (No PSU)

ANTENNA SPECIFICATIONS	5 GHZ SPECIFICATION
Frequency Range	4.9 – 5.970 MHz
Antenna Type	Panel
Peak Gain	16 dBi
3dB Beamwidth-Azimuth	15 degrees
3dB Beamwidth-Elevation	30 degrees

\*\*Certifications are a place holder until official grant is given

## ANTENNA PATTERNS

