e**PMP**[™] Force 300-19

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 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 technology and the field proven scalable performance of ePMP, the Force 300-19 delivers up to 600 Mbps of capacity. The Force 300-19 is a powerful yet affordable subscriber module compatible with the ePMP3000 Access Point and using the forward compatibility features also interoperates with the ePMP 2000 to ease the migration into the 802.11ac Wave 2 technology. The Force 300-19 has a 19 dbi integrated antenna with a narrow beamwidth and reliable IP67 mechanics.

FEATURES:

• Cambium Networks' ePMP Force 300-19 is designed to operate in high interference environments and provides superior throughput up to 600 Mbps of real user data.

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- The ePMP Force 300-19 supports channel sizes from 20 MHz up to 80 MHz and modulations up to 256QAM.
- The ePMP Force 300-19 supports real time spectrum monitoring without 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 outstanding quality for triple play services – VoIP, video, and data – and provides three levels of traffic priority.
- The integrated 19 dBi panel antenna has a small form factor and provides excellent range. Refer to Cambium Networks LINKPlanner[™] for estimating capacity and availability.
- Installations are quick and reliable supporting both 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 |
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SPECIFICATIONS

| INTERFACE | | | | |
|-----------|------|----|----|-----|
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| | | ЕК | FA | LE |

| INTERFACE | |
|---|--|
| MAC (Media Access Control) Layer | Cambium |
| Proprietary Physical Layer | 802.11ac Wave 2 (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) = -68 dBm (per chain) |
| Nominal Receive Sensitivity (w/FEC) @40 MHz Channel | MCS0 = -87 dBm to MCS9 (256 QAM-5/6) = -66 dBm (per chain) |
| Nominal Receive Sensitivity (w/FEC) @80 MHz Channel | MCS0 = -84 dBm to MCS9 (256 QAM-5/6) = -61 dBm (per chain) |
| Modulation Levels (Adaptive) | MCS0(BPSK) to MCS9 (256 QAM-5/6) |
| Transmit Power Range | 0 to +28 dBm (combined up to the regioanl 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 | 1.45 kg (3.2 lbs.) (includes mounting bracket) |
| Wind Survival | 180 km/hour (112 mi/hour) |
| Dimensions (Dia x Depth) | 27.8 x 27.8 x 4.5 cm (10.9 x 10.9 x 1.8 in) without mounting bracket |
| 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 | Passive POE (30 VDC Nominal); 14-30 VDC range |
| SECURITY | |
| Encryption | 128-bit AES (CCMP mode) |
| CERTIFICATIONS | |
| FCCID | Z8H89FT0048 |
| Industry Canada Cert | 109W-0048 |
| CE | EN 301 893 V2.1.1 (5.4 GHz), EN 302 502 V2.1.1 (5.8 GHz)** |
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SPECIFICATIONS

| C05890C601AePMP 5GHz Fore 300-19 SM (FC) (US ord)C05090C601AePMP 5GHz Fore 300-19 SM (EU) (EU cord)C05090C602AePMP 5GHz Fore 300-19 SM (EU) (UK cord)C05090C603AePMP 5GHz Fore 300-19 SM (EU) (UK cord)C05090C603AePMP 5GHz Fore 300-19 SM (ROW) (no cord)C05090C603AePMP 5GHz Fore 300-19 SM (ROW) (US cord)C05090C603AePMP 5GHz Fore 300-19 SM (ROW) (UK cord)C05090C603AePMP 5GHz Fore 300-19 SM (ROW) (India cord)C05090C603AePMP 5GHz Fore 300-19 SM (ROW) (Argentina cord)C05090C601AePMP 5GHz Fore 300-19 SM (ROW) (Argentina cord)C05090C61AAePMP 5GHz Fore 300-19 SM (ROW) (Argentina cord) <t< th=""><th>PART NUMBER</th><th>DESCRIPTION</th></t<> | PART NUMBER | DESCRIPTION |
|---|-------------------------|---|
| C050900C802A ePMP 5GHz Force 300-19 SM (EU) (EU cord) C050900C803A ePMP 5GHz Force 300-19 SM (EU) (UK cord) C050900C804A ePMP 5GHz Force 300-19 SM (EU) (UK cord) C050900C805A ePMP 5GHz Force 300-19 SM (ROW) (no cord) C050900C805A ePMP 5GHz Force 300-19 SM (ROW) (US cord) C050900C805A ePMP 5GHz Force 300-19 SM (ROW) (UK cord) C050900C805A ePMP 5GHz Force 300-19 SM (ROW) (UK cord) C050900C807A ePMP 5GHz Force 300-19 SM (ROW) (UK cord) C050900C808A ePMP 5GHz Force 300-19 SM (ROW) (UK cord) C050900C807A ePMP 5GHz Force 300-19 SM (ROW) (UK cord) C050900C808A ePMP 5GHz Force 300-19 SM (ROW) (UK cord) C050900C808A ePMP 5GHz Force 300-19 SM (ROW) (Mai cord) C050900C801A ePMP 5GHz Force 300-19 SM (ROW) (Mai cord) C050900C801A ePMP 5GHz Force 300-19 SM (ROW) (Argentina cord) C050900C801A ePMP 5GHz Force 300-19 SM (ROW) (Argentina cord) C050900C801A ePMP 5GHz Force 300-19 SM (ROW) (Argentina cord) C050900C801A ePMP 5GHz Force 300-19 SM (ROW) (ANZ cord) C050900C801A ePMP 5GHz Force 300-19 SM (ROW) (No PSU) C050900C801AA ePMP 5GHz Force 300-19 SM (R | C058900C801A | ePMP 5GHz Force 300-19 SM (FCC) (US cord) |
| C050900C803AePMP 5GHz Force 300-19 SM (EU) (UK cord)C050900C804AePMP 5GHz Force 300-19 SM (R0W) (no cord)C050900C805AePMP 5GHz Force 300-19 SM (R0W) (US cord)C050900C806AePMP 5GHz Force 300-19 SM (R0W) (EU cord)C050900C807AePMP 5GHz Force 300-19 SM (R0W) (UK cord)C050900C808AePMP 5GHz Force 300-19 SM (R0W) (UK cord)C050900C808AePMP 5GHz Force 300-19 SM (R0W) (UK cord)C050900C808AePMP 5GHz Force 300-19 SM (R0W) (UK cord)C050900C809AePMP 5GHz Force 300-19 SM (R0W) (India cord)C050900C809AePMP 5GHz Force 300-19 SM (R0W) (China cord)C050900C81AePMP 5GHz Force 300-19 SM (R0W) (India cord)C050900C81AePMP 5GHz Force 300-19 SM (R0W) (IN FISU)C050900C81AePMP 5GHZ Force 300-19 SM (R0W) (IN FISU)C050900C81A </td <td>C050900C801A</td> <td>ePMP 5GHz Force 300-19 SM (IC) (Canada/US cord)</td> | C050900C801A | ePMP 5GHz Force 300-19 SM (IC) (Canada/US cord) |
| C050900C804AePMP 5GHz Force 300-19 SM (ROW) (no ord)C050900C805AePMP 5GHz Force 300-19 SM (ROW) (US ord)C050900C806AePMP 5GHz Force 300-19 SM (ROW) (US ord)C050900C807AePMP 5GHz Force 300-19 SM (ROW) (UK ord)C050900C808AePMP 5GHz Force 300-19 SM (ROW) (UK ord)C050900C809AePMP 5GHz Force 300-19 SM (ROW) (UK ord)C050900C809AePMP 5GHz Force 300-19 SM (ROW) (UK ord)C050900C809AePMP 5GHz Force 300-19 SM (ROW) (Uf india ord)C050900C801AePMP 5GHz Force 300-19 SM (ROW) (UK ord)C050900C810AePMP 5GHz Force 300-19 SM (ROW) (UK inai ord)C050900C812AePMP 5GHz Force 300-19 SM (ROW) (Kerzil cord)C050900C813AePMP 5GHz Force 300-19 SM (ROW) (ANz cord)C050900C815AePMP 5GHz Force 300-19 SM (ROW) (ANZ cord)C050900C815AePMP 5GHz Force 300-19 SM (ROW) (No PSU)ANTENNA SPECIFICATIONSS GHZ SPECIFICATIONFrequency Range4.9 - 5.970 MHzAntenna TypePanelPeak Gain19 dBi20819 dBi20819 dBi20820820819 dBi | C050900C802A | ePMP 5GHz Force 300-19 SM (EU) (EU cord) |
| COSO900C805AePMP 5GHz Force 300-19 SM (ROW) (US cord)COSO900C806AePMP 5GHz Force 300-19 SM (ROW) (EU cord)COSO900C807AePMP 5GHz Force 300-19 SM (ROW) (UK cord)COSO900C808AePMP 5GHz Force 300-19 SM (ROW) (Uk cord)COSO900C809AePMP 5GHz Force 300-19 SM (ROW) (India cord)COSO900C809AePMP 5GHz Force 300-19 SM (ROW) (India cord)COSO900C809AePMP 5GHz Force 300-19 SM (ROW) (India cord)COSO900C80AePMP 5GHz Force 300-19 SM (ROW) (India cord)COSO900C80AePMP 5GHz Force 300-19 SM (ROW) (India cord)COSO900C81AePMP 5GHz Force 300-19 SM (ROW) (Argentina cord)COSO900C813AePMP 5GHz Force 300-19 SM (ROW) (Argentina cord)COSO900C813AePMP 5GHz Force 300-19 SM (ROW) (South Africa cord)COSO900C815AePMP 5GHz Force 300-19 SM (ROW) (South Africa cord)COSO900C815AePMP 5GHz Force 300-19 SM (ROW) (No PSU)COSO900C815AePMP 5GHz Force 300-19 SM (ROW) (No PSU)COSO900C815AePMP 5GHz Force 300-19 SM (ROW) (No PSU)COSO900C815AePMP 5GHz Force 300-19 SM (ROW) (No PSU)Frequency Range4.9 - 5.970 MHzAntenna TypePanelPeak Gain19 dBiPeak Gain19 dBiBeamwidth-Azimuth14.5 degrees | C050900C803A | ePMP 5GHz Force 300-19 SM (EU) (UK cord) |
| C050900C806AePMP 5GHz Force 300-19 SM (ROW) (EU cord)C050900C807AePMP 5GHz Force 300-19 SM (ROW) (UK cord)C050900C808AePMP 5GHz Force 300-19 SM (ROW) (India cord)C050900C809AePMP 5GHz Force 300-19 SM (ROW) (India cord)C050900C810AePMP 5GHz Force 300-19 SM (ROW) (China cord)C050900C810AePMP 5GHz Force 300-19 SM (ROW) (Brazil cord)C050900C810AePMP 5GHz Force 300-19 SM (ROW) (Brazil cord)C050900C810AePMP 5GHz Force 300-19 SM (ROW) (Argentina cord)C050900C813AePMP 5GHz Force 300-19 SM (ROW) (Argentina cord)C050900C813AePMP 5GHz Force 300-19 SM (ROW) (ANZ cord)C050900C813AePMP 5GHz Force 300-19 SM (ROW) (NaVZ cord)C050900C813AePMP 5GHz Force 300-19 SM (ROW) (No SUH Africa cord)C050900C815AePMP 5GHz Force 300-19 SM (ROW) (No PSU)ANTENNA SPECIFICATIONSS GHZ SPECIFICATIONFrequency Range4.9 - 5.970 MHzAntenna TypePanelPeak Gain19 dBiAntenna Type19 dBiPeak Gain19 dBiCompany14.5 degrees | C050900C804A | ePMP 5GHz Force 300-19 SM (ROW) (no cord) |
| CONSIGNATIONEPMP SGHz Force 300-19 SM (ROW) (UK cord)C050900C808AePMP SGHz Force 300-19 SM (ROW) (India cord)C050900C809AePMP SGHz Force 300-19 SM (India) (India cord)C050900C810AePMP SGHz Force 300-19 SM (ROW) (Brazil cord)C050900C811AePMP SGHz Force 300-19 SM (ROW) (Brazil cord)C050900C813AePMP SGHz Force 300-19 SM (ROW) (Argentina cord)C050900C813AePMP SGHz Force 300-19 SM (ROW) (Argentina cord)C050900C815AePMP SGHz Force 300-19 SM (ROW) (South Africa cord)C050900C815AePMP SGHz Force 300-19 SM (ROW) (South Africa cord)C050900C815AePMP SGHz Force 300-19 SM (ROW) (No PSU)C050900C815AePMP SGHz Force 300-19 SM (ROW) (No PSU)Frequency Range4.9 - 5.970 MHzAntenna TypePanelPak Gain19 dBiAde Beanwidth-Azimuth14.5 degrees | C050900C805A | ePMP 5GHz Force 300-19 SM (ROW) (US cord) |
| C050900C808A ePMP 5GHz Force 300-19 SM (ROW) (India cord) C050900C809A ePMP 5GHz Force 300-19 SM (ROW) (India cord) C050900C810A ePMP 5GHz Force 300-19 SM (ROW) (China cord) C050900C810A ePMP 5GHz Force 300-19 SM (ROW) (India cord) C050900C811A ePMP 5GHz Force 300-19 SM (ROW) (Brazil cord) C050900C812A ePMP 5GHz Force 300-19 SM (ROW) (Argentina cord) C050900C813A ePMP 5GHz Force 300-19 SM (ROW) (Argentina cord) C050900C814A ePMP 5GHz Force 300-19 SM (ROW) (South Africa cord) C050900C815A ePMP 5GHz Force 300-19 SM (ROW) (No PSU) C050900C815A ePMP 5GHz Force 300-19 SM (ROW) (No PSU) Prequency Range A.9 – 5.970 MHz Antenna Type Panel Pek Gain 19 dBi Pasenwidth-Azimuth 14.5 degrees | C050900C806A | ePMP 5GHz Force 300-19 SM (ROW) (EU cord) |
| COSO900C809AePMP 5GHz Force 300-19 SM (India) (India cord)COSO900C810AePMP 5GHz Force 300-19 SM (ROW) (China cord)COSO900C811AePMP 5GHz Force 300-19 SM (ROW) (Brazil cord)COSO900C812AePMP 5GHz Force 300-19 SM (ROW) (Argentina cord)COSO900C813AePMP 5GHz Force 300-19 SM (ROW) (ANZ cord)COSO900C814AePMP 5GHz Force 300-19 SM (ROW) (South Africa cord)COSO900C815AePMP 5GHz Force 300-19 SM (ROW) (South Africa cord)COSO900C815AePMP 5GHz Force 300-19 SM (ROW) (No PSU)ANTENNA SPECIFICATIONS5 GHZ SPECIFICATIONFrequency Range4.9 - 5.970 MHzAntenna TypePanelPask Gain19 dBi3d Beamwidth-Azimuth14.5 degrees | C050900C807A | ePMP 5GHz Force 300-19 SM (ROW) (UK cord) |
| COSO900C810AePMP 5GHz Force 300-19 SM (ROW) (China cord)COSO900C811AePMP 5GHz Force 300-19 SM (ROW) (Brazil cord)COSO900C812AePMP 5GHz Force 300-19 SM (ROW) (Argentina cord)COSO900C813AePMP 5GHz Force 300-19 SM (ROW) (Argentina cord)COSO900C814AePMP 5GHz Force 300-19 SM (ROW) (South Africa cord)COSO900C815AePMP 5GHz Force 300-19 SM (ROW) (No PSU)ANTENNA SPECIFICATIONSS GHZ SPECIFICATIONFrequency Range4.9 - 5.970 MHzAntenna TypePanelPeak Gain19 dBi3d Beamwidth-Azimuth14.5 degrees | C050900C808A | ePMP 5GHz Force 300-19 SM (ROW) (India cord) |
| COSOPOOC811AePMP 5GHz Force 300-19 SM (ROW) (Brazil cord)COSOPOOC812AePMP 5GHz Force 300-19 SM (ROW) (Argentina cord)COSOPOOC813AePMP 5GHz Force 300-19 SM (ROW) (ANZ cord)COSOPOOC814AePMP 5GHz Force 300-19 SM (ROW) (South Africa cord)COSOPOOC815AePMP 5GHz Force 300-19 SM (ROW) (No PSU)COSOPOOC815AePMP 5GHz Force 300-19 SM (ROW) (No PSU)ANTENNA SPECIFICATIONS5 GHZ SPECIFICATIONFrequency Range4.9 - 5.970 MHzAntenna TypePanelPeak Gain19 dBi3dB Beamwidth-Azimuth14.5 degrees | C050900C809A | ePMP 5GHz Force 300-19 SM (India) (India cord) |
| COSOPOCRIZAePMP 5GHz Force 300-19 SM (ROW) (Argentina cord)COSOPOOCRIZAePMP 5GHz Force 300-19 SM (ROW) (ANZ cord)COSOPOOCRIAAePMP 5GHz Force 300-19 SM (ROW) (South Africa cord)COSOPOOCRISAePMP 5GHz Force 300-19 SM (ROW) (No PSU)ANTENNA SPECIFICATIONS5 GHZ SPECIFICATIONFrequency Range4.9 - 5.970 MHzAntenna TypePanelPeak Gain19 dBi3dB Beamwidth-Azimuth14.5 degrees | C050900C810A | ePMP 5GHz Force 300-19 SM (ROW) (China cord) |
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| COSOPOOC814AePMP 5GHz Force 300-19 SM (ROW) (South Africa cord)COSOPOOC815AePMP 5GHz Force 300-19 SM (ROW) (No PSU)ANTENNA SPECIFICATIONS5 GHZ SPECIFICATIONFrequency Range4.9 - 5.970 MHzAntenna TypePanelPeak Gain19 dBi3dB Beamwidth-Azimuth14.5 degrees | C050900C812A | ePMP 5GHz Force 300-19 SM (ROW) (Argentina cord) |
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| ANTENNA SPECIFICATIONS5 GHZ SPECIFICATIONFrequency Range4.9 - 5.970 MHzAntenna TypePanelPeak Gain19 dBi3dB Beamwidth-Azimuth14.5 degrees | C050900C814A | ePMP 5GHz Force 300-19 SM (ROW) (South Africa cord) |
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| Antenna Type Panel Peak Gain 19 dBi 3dB Beamwidth-Azimuth 14.5 degrees | ANTENNA SPECIFICATIONS | 5 GHZ SPECIFICATION |
| Peak Gain 19 dBi 3dB Beamwidth-Azimuth 14.5 degrees | Frequency Range | 4.9 – 5.970 MHz |
| 3dB Beamwidth-Azimuth 14.5 degrees | Antenna Type | Panel |
| | Peak Gain | 19 dBi |
| 3dB Beamwidth-Elevation 12.5 degrees | 3dB Beamwidth-Azimuth | 14.5 degrees |
| | 3dB Beamwidth-Elevation | 12.5 degrees |

Discover more information on ePMP at: http://community.cambiumnetworks.com/