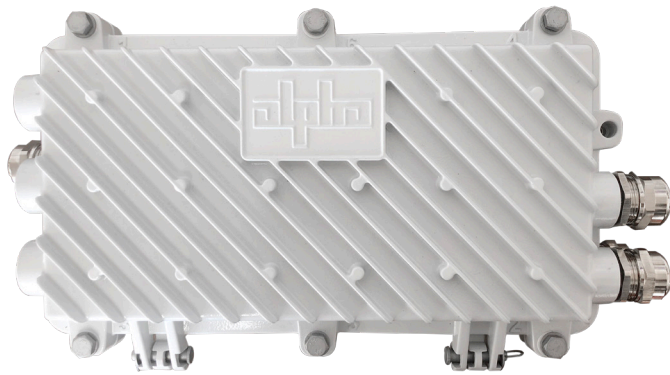




an EnerSys® company

# Alpha® BSC outdoor gateway

320W HFC Power Delivery | DOCSIS® 3.1 Backhaul



- Industrial hardened, CableLabs® certified DOCSIS® 3.1 cable modem
- Firmware-based routing
- Provides 320 watts total output power with remote power control up to 4 connections
- Remote monitoring
- UL50E, IEC 60529, IP67, UL 60950, FCC Class B (FCC CFR 47 Part 15 Class B), CISPR 32, CISPR 24, CISPR 35, RoHS Directive 2011/65/EU Compliant

**Alpha® BSC outdoor gateway is a key new member in the Alpha suite of innovative product solutions—enabling cable operators to realize new business models and associated revenue streams.**

The Alpha BSC (broadband small cell) outdoor gateway, enables cable broadband operators to leverage their existing hybrid fiber-coax (HFC) network for rapid and dense deployment of small cell radio elements.

The Alpha BSC outdoor gateway provides a cost-effective scalable solution by employing both a state-of-the-art hardened DOCSIS® 3.1 modem and enhanced power transformation technology. This two-part mix is required to meet the high-power, high-bandwidth needs of wireless small cells. As with other Alpha outdoor gateways, the Alpha BSC outdoor gateway powers directly from the HFC coax power, and then transforms and “cleans” the power to provide both robust power (320W total) and communications backhaul (1 Gbps), for up to four small cell connections.

# Alpha® BSC outdoor gateway Specifications

Model:	AG300D-AC90	AG300D-AC120	AG300P-AC90	AG300P-AC120
<b>Input Power</b>				
<b>Input Power Port:</b>	5/8 × 24in, 75 Ohm (HFC Coax)	5/8 × 24in, 75 Ohm (HFC Coax)	5/8 × 24in, 75 Ohm (HFC Coax)	5/8 × 24in, 75 Ohm (HFC Coax)
<b>Input Power Connection:</b>	Coaxial center pin	Coaxial center pin	Coaxial center pin	Coaxial center pin
<b>Input Voltage:</b>	45 to 90VAC quasi square (optional 55VAC shutdown)	45 to 90VAC quasi square (optional 55VAC shutdown)	45 to 90VAC quasi square (optional 55VAC shutdown)	45 to 90VAC quasi square (optional 55VAC shutdown)
<b>Maxium Input Current:</b>	10A RMS	10A RMS	10A RMS	10A RMS
<b>Frequency:</b>	50/60Hz ± 3%	50/60Hz ± 3%	50/60Hz ± 3%	50/60Hz ± 3%
<b>Delivered Power</b>				
<b>Number Output Power Ports:</b>	4	4	4	4
<b>Output Power Connection:</b>	Terminal block - 12 to 26AWG	Terminal block - 12 to 26AWG	Terminal block - 12 to 26AWG	Terminal block - 12 to 26AWG
<b>Output Voltage:</b>	80 to 89VAC quasi square	110 to 130VAC quasi square	80 to 89VAC quasi square	110 to 130VAC quasi square
<b>Max Output Current:</b>	5A RMS	5A RMS	5A RMS	5A RMS
<b>Max Total Power Delivery:</b>	320W (shared)	320W (shared)	320W (shared)	320W (shared)
<b>Max Power Per Port:</b>	320W	320W	320W	320W
<b>Input Loss Hold Up Time:</b>	≥16.7ms	≥16.7ms	≥16.7ms	≥16.7ms
<b>Overload Protection:</b>	Independent trip/retry (per port)	Independent trip/retry (per port)	Independent trip/retry (per port)	Independent trip/retry (per port)
<b>Network Delivery (LAN)</b>				
<b>Network Delivery:</b>	Ethernet - IEEE 802.3-2015	Ethernet - IEEE 802.3-2015	—	—
<b>Number Network Delivery Ports:</b>	1	1	—	—
<b>Distance:</b>	100m	100m	—	—
<b>LAN Services:</b>	TCP/IP, IPv4, IPv6, DHCP, L2VPN	TCP/IP, IPv4, IPv6, DHCP, L2VPN	—	—
<b>Backhaul (WAN)</b>				
<b>Compliance:</b>	DOCSIS® 1.1, 2.0, 3.0, 3.1	—	—	—
<b>CPU:</b>	Single chip Intel Puma 7 CE2753i (industrial grade)	—	—	—
<b>Memory:</b>	Flash 1 GiB NAND, DRAM 1 GiB DDR3L	—	—	—
<b>Downstream Frequency Range:</b>	<b>DOCSIS 3.0:</b> 108 to 1002MHz, <b>DOCSIS 3.1:</b> 108 to 1218MHz	—	—	—
<b>Downstream Max Throughput:</b>	1Gbps (32 bonded channels)	—	—	—
<b>Upstream Frequency Range:</b>	<b>Software selectable:</b> 5 to 42MHz / 5 to 85MHz	—	—	—
<b>Upstream Max Throughput:</b>	300Mbps (8 bonded channels)	—	—	—
<b>Digital Step Attenuation:</b>	Independent, transmit and receive digital step attenuators (DSA), 0 to 31.5dB attenuation range in 0.5dB steps, software controlled	—	—	—
<b>WAN/LAN Bridging:</b>	802.1d transparent bridging	—	—	—
<b>WAN Services (RDK-B):</b>	Roadmap Item	—	—	—
<b>Physical</b>				
<b>Mounting Options:</b>	Strand, pole, wall, vault	Strand, pole, wall, vault	Strand, pole, wall, vault	Strand, pole, wall, vault
<b>Dimensions H × W × L (in/mm):</b>	16.5 × 8.9 × 4.9 / 419.1 × 226.1 × 124.5	16.5 × 8.9 × 4.9 / 419.1 × 226.1 × 124.5	16.5 × 8.9 × 4.9 / 419.1 × 226.1 × 124.5	16.5 × 8.9 × 4.9 / 419.1 × 226.1 × 124.5
<b>Weight (lb):</b>	17.7	20.0	17.2	19.5
<b>Agency and Environment</b>				
<b>Operating Temperature:</b>	−40 to 60°C (−40 to 140°F)	—	—	—
<b>Storage Temperature:</b>	−40 to 70°C (−40 to 158°F)	—	—	—
<b>Humidity:</b>	5 to 90%, non-condensing	—	—	—
<b>Operating Altitude:</b>	−60m (−196ft) to 4,000m (13,123ft)	—	—	—
<b>Enclosure Protection:</b>	<b>UL50E / NEMA Type 6 / IEC 60529 IP67</b> <b>NEMA 250 / UL 50-5.8:</b> Salt fog (200 hours ASTM B117)	—	—	—
<b>Safety:</b>	<b>UL/CSA 60950-1:</b> NRTL/C Cert (US/CAN), general requirements <b>UL/CSA 60950-22: ED1:</b> NRTL/C Cert (US/CAN), general requirements	—	—	—
<b>EMC Emissions:</b>	<b>FCC Class B (FCC CFR 47 Part 15 Class B):</b> EMC emissions requirements (US) <b>ICES-003:</b> EMC emissions requirements (Canada) <b>CISPR 32 (IEC/EN 55032):</b> Electromagnetic compatibility of multimedia equipment - Emission requirements (EU/global)	—	—	—
<b>EMC Immunity:</b>	<b>CISPR 24 (IEC/EN 55024):</b> • Information technology equipment, immunity characteristics, limits and methods of measurement • Radiated, radio-frequency, electromagnetic field immunity test • Immunity to conducted disturbances induced by radio-frequency Fields <b>CISPR 35 (IEC/EN 55035):</b> Electromagnetic compatibility of multimedia equipment—immunity requirements (EU/global)	—	—	—
<b>Surge Immunity:</b>	<b>IEC 61000-4-5:</b> Surge immunity: 4kV/2kA on COAX input port, 4kV on Ethernet port (1.2×50/8×20) <b>UL/CSA 60950-1:</b> line cross: 277VAC on Ethernet ports	—	—	—
<b>RoHS:</b>	<b>Directive 2011/65/EU Compliant:</b> Restriction of hazardous substances directive	—	—	—

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