



# Backhaul Power Systems

Supporting High-Speed Wireless/Cellular Data Backhaul For Business Services

# Wireless/Cellular Backhaul Power Systems

**T**O SUPPORT THE GROWING DEMAND FOR WIRELESS CARRIER BACKHAUL AND MSO BUSINESS SERVICES, ALPHA OFFERS A COMPREHENSIVE RANGE OF FULLY INTEGRATED BACKUP POWERING SOLUTIONS, INCLUDING TIME-TESTED ENCLOSURES AND POWER SUPPLIES.

- *Multiple Enclosure Types*
- *Fan cooled, air-conditioned or heat exchanger options*
- *Separate Demarcation Access Door*
- *Add-on Battery Cabinets*
- *Alpha/Argus AC/DC Power Plants*
- *Factory Installed Power Distribution Options*
- *Field Installation Services*

Designed to UL, NEMA or GR487 requirements, Alpha systems are an all-in-one solution to your backhaul and powering needs. The modular design allows you to claim valuable real estate now and expand with powering options in the future. With 30 years of experience in providing field proven enclosures, batteries and DC or AC power supplies, Alpha's technical staff also performs site survey and installation services.

## Fully Integrated Power Systems

Alpha's Wireless Backhaul and Business Services Enclosures ship from our East and West Coast factories completely wired to your configuration. Installation errors are reduced since every enclosure is consistent in appearance, wiring and function. By ensuring reliable operation from day one, we help you minimize long term maintenance, while reducing installation time and cost.



Fiber Backhaul Enclosure



Radium MiniBay Enclosure

Any of these items can be installed and wired at the factory prior to shipment:

- *Cooling fans or AC units*
- *Alarm modules*
- *Door switch alarms*
- *Adjustable racks set to your specification*
- *Battery heaters*
- *Rectifier shelves*
- *AC Input – no need for contract electricians*
- *DC or AC distribution panel*
- *Rectifier output pre-wired to distribution panel*
- *Fiber splice trays*
- *Any customer specified or supplied equipment*

# Wireless/Cellular Backhaul Equipment Enclosures

<p>➤ <b>11RU BACKHAUL ENCLOSURE</b></p> <ul style="list-style-type: none"> <li>• 19" rack</li> <li>• Cooling Option: Redundant DC fan</li> <li>• Dimensions L x W x H (in): 21.5 x 23 x 24.5</li> <li>• Wall, ground or H-frame mounting options</li> </ul>	<p>Fiber Backhaul Enclosure (FBE)</p>	<p>➤ <b>11RU BACKHAUL ENCLOSURE</b></p> <ul style="list-style-type: none"> <li>• 19" rack</li> <li>• Cooling Option: Thermoelectric cooler</li> <li>• Dimensions L x W x D (in): 21.5 x 23 x 24.5</li> <li>• Wall, ground or H-frame mounting options</li> </ul>	<p>FBE with thermoelectric cooler</p>
<p>➤ <b>18RU BACKHAUL ENCLOSURE</b></p> <ul style="list-style-type: none"> <li>• Adjustable 19" EIA equipment rack</li> <li>• Cooling Option: AC and DC fan options</li> <li>• Dimensions L x W x H (in): PMR-S1: 19.25 x 26 x 32.2 GMR-S1: 20 x 27.5 x 31</li> <li>• Pole and ground mounting options</li> </ul>	<p>PMR-S1/GMR-S1</p>	<p>➤ <b>20RU BACKHAUL ENCLOSURE</b></p> <ul style="list-style-type: none"> <li>• Adjustable 19" EIA equipment rack</li> <li>• Cooling Option: AC and DC fan options</li> <li>• Dimensions L x W x H (in): PMR-S2: 19.25 x 30 x 37 GMR-S2: 20 x 31 x 38</li> <li>• Pole and ground mounting options</li> </ul>	<p>PMR-S2/GMR-S2</p>
<p>➤ <b>26RU BACKHAUL ENCLOSURE</b></p> <ul style="list-style-type: none"> <li>• 19" rack</li> <li>• Cooling Options: DC fan cooling, vented with filters or air conditioner on door</li> <li>• Dimensions L x W x H (in): 20.4 x 21.4 x 36</li> <li>• Pedestal, rack, wall and pole mounting options</li> </ul>	<p>Te25xh</p>	<p>➤ <b>46RU BACKHAUL ENCLOSURE</b></p> <ul style="list-style-type: none"> <li>• 23" rack</li> <li>• Cooling Options: DC fan cooling (and/or backup), vented or air conditioner on front door</li> <li>• Dimensions L x W x H (in): 30 x 30 x 58</li> <li>• Pad or platform mounting options</li> </ul>	<p>Te30</p>
<p>➤ <b>31RU BACKHAUL ENCLOSURE</b></p> <ul style="list-style-type: none"> <li>• 19" rack</li> <li>• Cooling Options: Heat exchanger for equipment component or Thermoelectric cooler for battery compartment</li> <li>• Dimensions L x W x H (in): 24 x 24 x 70</li> <li>• Ground mounting options</li> </ul>	<p>WTE</p>	<p>➤ <b>46RU BACKHAUL ENCLOSURE</b></p> <ul style="list-style-type: none"> <li>• 19 or 23" rack</li> <li>• Cooling Options: High capacity 3000BTU (879W) DC powered air conditioner or DC fan and filter</li> <li>• Dimensions L x W x H (in): 52 x 30 x 44</li> <li>• Ground mounting options</li> </ul>	<p>Radium MiniBay Series</p>

# AC/DC Powering Options

<p>➤ <b>DC RECTIFIERS</b></p> <ul style="list-style-type: none"> <li>• HP "High Performance" series</li> <li>• 24Vdc or 48Vdc output</li> <li>• 93% efficiency and power factor correction</li> <li>• 1RU x 2RU footprint and high power density (21.8 W/in<sup>3</sup>)</li> <li>• Wide AC input operating range</li> </ul>	<p>Cordex HP™</p>
<p>➤ <b>DC TO AC INVERTER</b></p> <ul style="list-style-type: none"> <li>• 1000VA to 12kVA models</li> <li>• True online, double conversion operation (zero transfer time)</li> <li>• Internal Static Bypass</li> <li>• Automatic Frequency Synchronization</li> <li>• Power factor correction</li> <li>• Hot swappable batteries</li> </ul>	<p>Twin Sine Inverter Shelf</p>
<p>➤ <b>RACKMOUNT AC UPS</b></p> <ul style="list-style-type: none"> <li>• Clean, uninterruptible backup power</li> <li>• Wide range Automatic Voltage Regulation during periods of surge or sag</li> <li>• Local or remote monitoring and control via RS-232 port or (optional) Ethernet SNMP interface</li> <li>• Event and alarm logging with time and date stamping</li> <li>• Temperature compensated battery charging extends the life of the battery</li> </ul>	<p>Novus FXM</p>

# Application-Specific Batteries

- *Front access terminal design*
- *Specifically designed for mission-critical applications*
- *High cyclic life capability*
- *10-year float life @ 25°C*
- *Strong corrosive-resistant grid design*
- *3-step terminal seal design ensures leak-free operation*
- *Approved as non-hazardous cargo for ground/sea/air transportation*



## Installation and Maintenance

Alpha's complete power system integration and turn-key installation services include right-of-way and easement procurement, site preparation, equipment installation, utility hookup coordination, system turn-up and system testing.

- *Alpha performs all site negotiations*
- *Alpha coordinates utilities and construction permitting process*
- *Correct installation and maintenance of Headend, DC Plant and Outside Plant power solutions*
- *Customers benefit from Alpha's professional project management and quality control*

Turn-up and test services for Headend, DC Plant and Outside Plant installations performed by Alpha specialists represent a significant first step in ensuring long-term system reliability. Services include verification of proper installation, completion of Alpha start-up procedures and system testing.

- *Turn-up and test completed by Alpha technicians*
- *Certified installation inspections*
- *Coordinated product and service ordering, tracking and billing*
- *Extended warranty availability*
- *Allows customers to focus on fiber and transmission equipment*



Visit [www.alpha.com](http://www.alpha.com) for more information on Alpha Technologies' fiber, wireless and cellular backhaul powering solutions.

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