DM3.0

ALPHA'S DOCSIS 3.0 INTEGRATED MANAGEMENT HUB

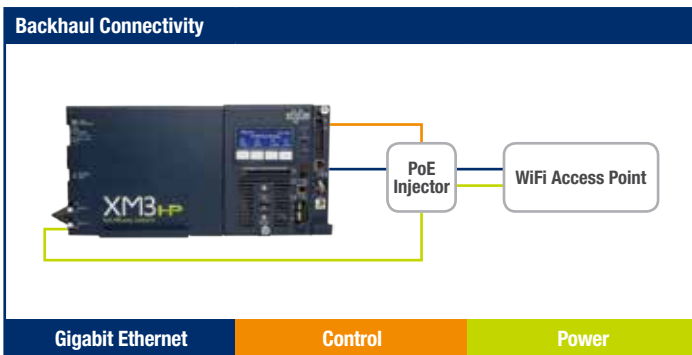### MULTIFUNCTION MANAGEMENT HUB
FOR XM3 AND XM2 POWER SUPPLIES

1 Power Supply Monitoring

2 Integrated Power Management

3 Network Test Probe

4 Network Backhaul Gateway

NETWORK BACKHAUL GATEWAY

Alpha's DM3.0 includes a **Gigabit Ethernet port for backhaul of customer critical data**. An optional PoE injector provides clean, uninterrupted power and reliable data backhaul for critical communications equipment.
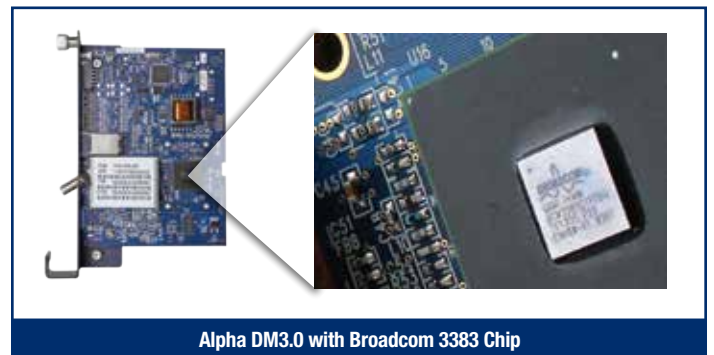
➤ **PoE Wi-Fi Ready**

➤ **PoE Security/Surveillance Ready**

➤ **8x4 DOCSIS Bonding for 300/100Mbps Backhaul**

Backhaul Connectivity

Gigabit Ethernet	Control	Power

NETWORK TEST PROBE

Alpha's DM3.0 **incorporates multiple advanced RF network test capabilities**, including the latest spectrum capture tools, enabling operators to use the power supply physical presence as a 24x7 network test probe.

➤ **Full Spectrum Capture**

➤ **Bonded Channel Micro Reflections**

➤ **Bonded Channel Constellations**

Alpha DM3.0 with Broadcom 3383 Chip

HIGHER POWER INTELLIGENCE

Building on Alpha's legacy of leadership and innovation, the DM3.0 integrated management hub raises the bar for outside plant power management. By **combining advanced power supply**, **AC utility and RF network monitoring and diagnostics with network backhaul capabilities**, the DM3.0 represents the next-generation in broadband network visibility. For more information, please visit **www.alphadm30.com**.

INTEGRATED POWER MANAGEMENT

Offering network operators a greater level of insight and convenience, Alpha's DM3.0 provides **advanced management and diagnostics** of the power supply, batteries, generator and utility power grid including:

➤ **AlphaGen Portable and Curbside Generator Monitoring**

➤ **Utility Grid and Battery Health Analysis**

➤ **XM3 Remote Firmware Updates**

Generator Monitoring and Control

AlphaGen Portable Generator
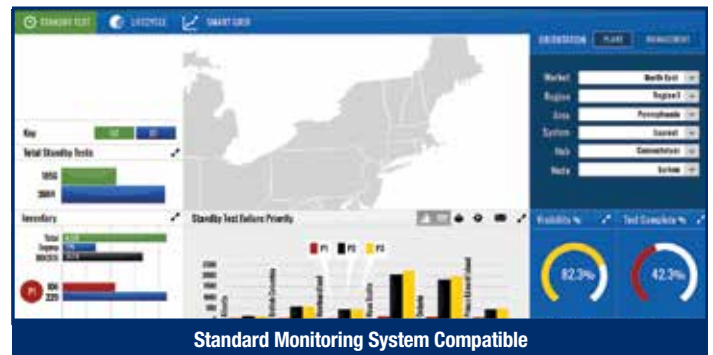
AlphaGen Curbside Generator

Generator Remote Status

POWER SUPPLY MONITORING

Representing a significant advance in technology, Alpha's DM3.0 is more than a DOCSIS 3.0 status monitoring transponder. It provides **real-time insight into the health of your HFC network**, including:

➤ **Integrated XM3 and XM2 Power Supply Management**

➤ **Standard ANSI/SCTE Alarms and Data**

➤ **CheetahXD and Continuity Advanced Monitoring**

Standard Monitoring System Compatible

NOT JUST DOCSIS... ALPHA DOCSIS

Alpha's DM3.0 has been tested to operational extremes and doesn't just endure harsh operating conditions, it works well through them. **In addition to Cable Labs Certification, the DM3.0 has successfully completed over 1,500 hours of industry-standard physical**, **environmental**, **interoperability and performance testing**. Our firmware undergoes hundreds of hours of intensive qualification testing, resulting in meeting and exceeding standards for power supply monitoring and gateway performance.

Features

Supported Power Suppy Models:	XM3-HP series, XM2-HP series and XM2 series
Models:	**DM3 (DOCSIS) & DM3E (EuroDOCSIS)**: Compatible with XM3 power supplies **DM3X (DOCSIS) & DM3EX (EuroDOCSIS)**: Compatible with XM2 and XM3 power supplies
Ethernet Port:	1 port, auto-MDX, RJ45, 10/100/1000Mbps **Data Backhaul**: Complies with DOCSIS 3.0 CPE interface operation
PoE (Optional)**:**	IEEE 802.3at compliant, type 2, Power over Ethernet mid-span power source PSE
Battery Monitoring:	**DM3**: Individual battery voltages monitored via XM3 embedded AlphaGuard **DM3X**: Individual battery voltages monitored via direct sense harness. Up to 16 individual batteries configured in 1, 2, 3 or 4 strings of 36 or 48V batteries
Power Systems:	**DM3X**: Up to 5 XM2 or XM3 power supplies and/or an AlphaGen curbside generator. System management includes coordinated battery charging, system test and aggregated alarm

Physical and Environmental

Installation:	Alpha XM2 and XM3 broadband UPS specific. Inverter module co-installed via internal interface connectors
Power:	**XM3**: 12W max, internal power connection **XM2**: 12W max, combined internal power connection and battery string connection (24, 36 or 48V battery strings), internal low voltage disconnect protects batteries from over discharge
Dimensions **H x W x D** (in/mm)**:**	5.6 x 1.1 x 7.4 / 143 x 28 x 188
Weight (oz/g)**:**	10.7 / 304
Operating Temperature:	-40 to 149°F / -40 to 65°C
Storage Temperature:	-40 to 185°F / -40 to 85°C
Humidity:	10 to 90% non-condensing
Regulatory Compliance:	• FCC Part 15 Class A • EN 50083-2 EMC requirements for CATV equipment, • EN 62040-2 EMC requirements for uninterruptible power supplies • **Surge**: IEEE C62.41, 6kV combined wave with external surge protector • **RoHS**: Directive 2002/95/EC

Cable Modem

Standard:	• DOCSIS 3.0 with 8x4 bonded channels • EuroDOCSIS 3.0 with 8x4 bonded channels
Data Rates:	**Downstream**: 300Mbps, 8 bonded channels (DOCSIS), 400Mbps, 8 bonded channels (EuroDOCSIS) **Upstream**: 100Mbps, 4 bonded channels (DOCSIS and EuroDOCSIS) Data rates consistent across entire operating temperature range and through all power supply operating modes and transitions
Frequency:	**DOCSIS**: 5 to 42MHz upstream, 88 to 1002MHz downstream **EuroDOCSIS**: 5-65MHz upstream, 108-1002MHz downstream
Channel Bandwidth:	**DOCSIS**: 6MHz **EuroDOCSIS**: 8MHz

Advanced Diagnostics

RF Network:	• Full Band Capture data available through Broadcom MIB and DM3.0 internal web server • Constellation diagram available via DM3.0 internal web server • Micro-reflection diagram available via DM3.0 internal web server
Power Supply Display:	With DM3.0 installed, power supply display will show advanced network diagnostics including: upstream and downstream frequencies and RF levels, IPv4 or IPv6 address assigned by network DHCP server, MAC address, DOCSIS timeout error codes and firmware versions
Utility Power Diagnostics:	With XM3 app card, utility performance status including outages, sags, surges, and out of frequency events
Battery Diagnostics:	With XM3 app card, power supply diagnostics report when batteries should be serviced including battery string runtime remaining and battery life remaining
Event Logging:	With XM3 app card, logs include power supply events, power supply configurations and battery events

Status Monitoring

Standards:	**ANSI/SCTE 38-4**: Hybrid fiber/coax outside plant status monitoring SCTE-HMS-PS-MIB management information base **ANSI/SCTE 38-6**: Hybrid fiber/coax outside plant status monitoring SCTE-HMS-GEN-MIB management information base • Alpha proprietary, portable generator management information base • Cheetah proprietary KPI management information base
Power Supply Monitored Parameters (ANSI-HMS):	Major alarm, minor alarm, input voltage, output voltage, output current, output power, input current, input power, UPS status, charger current, battery discharge current, battery voltage, battery temperature, remote test control, enclosure door
Portable Generators:	**Models**: AlphaGen DCX2000, DCX3000 **Monitored Parameters**: Generator connected, generator running, generator runtime
Curbside Generators:	**Models**: AlphaGen 3.5, 5.0 and 7.5kW vis AlphaBus interface **Monitored Parameters**: Status, alarms, gas hazard, water intrusion, pad shear, enclosure door, ignition battery voltage, enclosure temperature, low fuel, remote test control

Ordering Information (For XM3 Power Supplies)

X3-DM3:	Alpha embedded DOCSIS 3.0 transponder with backhaul and Full Band Capture, XM3 installed with embedded AlphaGuard
X3-DM3E:	Alpha embedded EuroDOCSIS 3.0 transponder with backhaul and Full Band Capture, XM3 installed with embedded AlphaGuard
X3-DM3X:	Alpha embedded DOCSIS 3.0 transponder with backhaul and Full Band Capture, XM3 installed (NO embedded AlphaGuard), up to 4 battery strings, curbside generator and 5 power supplies
X3-DM3EX:	Alpha embedded EuroDOCSIS 3.0 transponder with backhaul and Full Band Capture, XM3 installed (NO embedded Alpha Guard), up to 4 battery strings, curbside generator & 5 power supplies

Ordering Information (For XM2 Power Supplies)

X2-DM3X:	Alpha embedded DOCSIS 3.0 transponder with backhaul and Full Band Capture, XM2 installed, up to 4 battery strings, curbside generator & 5 power supplies
X2-DM3EX:	Alpha embedded EuroDOCSIS 3.0 transponder with backhaul and Full Band Capture, XM2 installed, up to 4 battery strings, curbside generator & 5 power supplies