



# XM3-HP

ALPHA'S NEXT-GENERATION UNINTERRUPTIBLE POWER SUPPLY





# NEXT-GENERATION POWER

From ground-breaking transformer design to the most intuitive and user-friendly interface in the industry, the XM3-HP sets the new standard in **intelligent power management**.



The **Alpha XM3-HP CableUPS** incorporates significant technological advancements across the entire power technology platform. These advancements focus on delivering three primary benefits: improved efficiency, optimized performance and reduced operating costs. The XM3-HP also incorporates a wide-range features including:

- 1 AlphaGuard™**  
Embedded battery balancing to maximize battery life and optimize performance
- 2 Advanced Ferro Technology**  
Maximum power efficiency under all modes of operation
- 3 AlphaApps**  
Intelligent diagnostics for remote preventative maintenance of batteries and power train
- 4 Alpha DOC**  
Dual Output Controller (DOC) provides two programmable outputs from a single XM3-HP
- 5 Alpha Smart-Display**  
Four-line display with intelligent, virtual keypad for optimal provisioning and diagnostics
- 6 Advanced Battery Management**  
Dynamic 5-stage charger technology maximizes AlphaCell® battery life
- 7 AlphaNet™ DOCSIS®-Based Communications**  
Intelligent monitoring and power system management





# ADVANCED EFFICIENCY TECHNOLOGY

The Alpha XM3-HP **triple efficiency** ferro technology optimizes the power supply's performance, resulting in significantly reduced utility power consumption and a direct savings in network operations.



### Exclusive Patent Protected Design

Moving the inverter winding to the output side of the ferro transformer minimizes conversion losses, improving overall inverter efficiency.

### Highest Line Mode Efficiency

The XM3-HP offers the highest line mode efficiency available, requiring less AC utility power to support a load.

$$\text{Utility Power (kW)} = \frac{\text{P}_{\text{Network Load}} + \sum \left[ \left( \frac{\text{P}_{\text{Active}}}{\text{V}_{\text{Active}}} \right)^2 \times \Omega_{\text{Feet of cable}} \times \text{Feet Distance} \right]}{\text{Power Supply Efficiency}}$$

Cable Power Loss—I<sup>2</sup>R

### Tightest Output Voltage Regulation

Alpha's XM3-HP provides the tightest output voltage regulation ever offered to reduce I<sup>2</sup>R cable power losses.

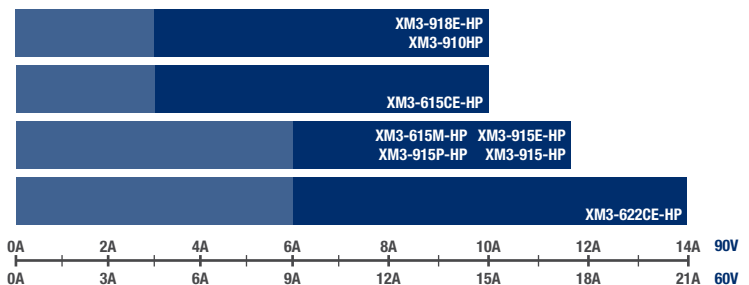
### Maximum Inverter Efficiency

Significant gains in inverter efficiency directly translates into increased battery runtimes, further improving network performance and power outage recovery capabilities.

### Load Optimization

The XM3-HP is available in several models to best match network load requirements.

Guide for Optimal Efficiency  
Maximum Efficiency



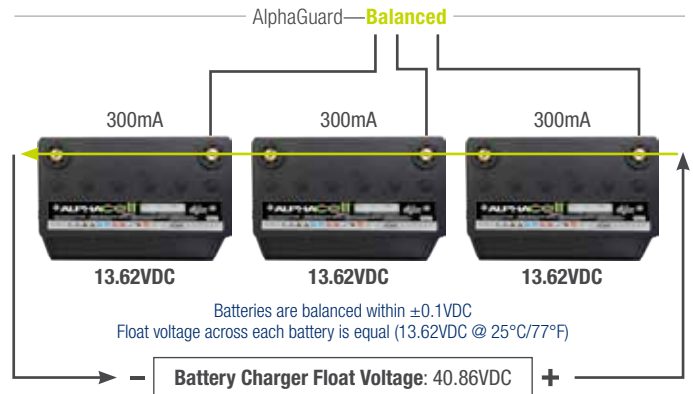
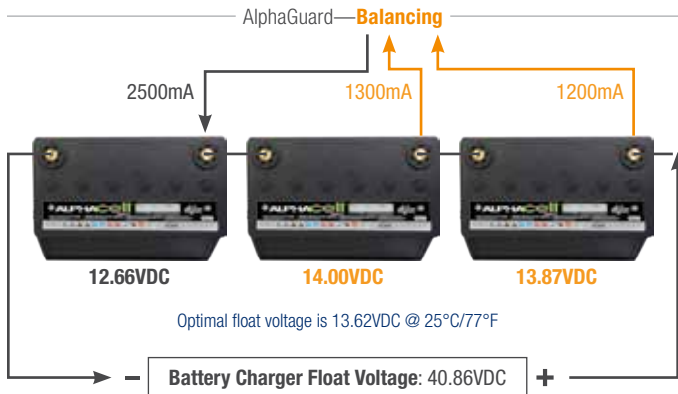


# ADVANCED BATTERY MANAGEMENT

The Alpha XM3-HP's advanced battery management optimizes battery life and contributes to **reducing both capital expenditures and on-going operating costs.**

## ➤ Embedded Battery Balancing

The Alpha XM3-HP embedded AlphaGuard uses advanced battery balancing technology to redirect current from overcharged batteries to the undercharged battery, optimizing battery service life.



## ➤ Dynamic Multi-Stage Charging

The Alpha XM3-HP's dynamic 5-stage battery charging technology provides system batteries with optimal charge management.

**BULK | ACCEPT | FLOAT | REFRESH | REST**

## ➤ Extended Runtime

The Alpha XM3-HP's advanced battery management and increased inverter efficiency maximizes battery runtime in the network.

AlphaCell HP (Estimated runtime minutes using XM3-HP @ 90VAC)								
	4A		6A		8A		10A	
Models:	3.5HP	4.0HP	3.5HP	4.0HP	3.5HP	4.0HP	3.5HP	4.0HP
3 Batteries:	540	588	358	394	263	295	204	234
6 Batteries:	1144	1264	771	841	574	624	450	491
	12A		14A		16A			
Models:	3.5HP	4.0HP	3.5HP	4.0HP	3.5HP	4.0HP		
3 Batteries:	165	193	137	164	116	142		
6 Batteries:	368	404	308	342	264	295		

AlphaCell GXL (Estimated runtime minutes using XM3-HP @ 90VAC)								
	4A		6A		8A		10A	
Models:	195GXL	220GXL	195GXL	220GXL	195GXL	220GXL	195GXL	220GXL
3 Batteries:	476	550	313	363	229	265	177	205
6 Batteries:	1026	1177	685	789	506	585	396	458
	12A		14A		16A			
Models:	195GXL	220GXL	195GXL	220GXL	195GXL	220GXL		
3 Batteries:	142	164	118	136	99	115		
6 Batteries:	322	373	269	311	229	266		





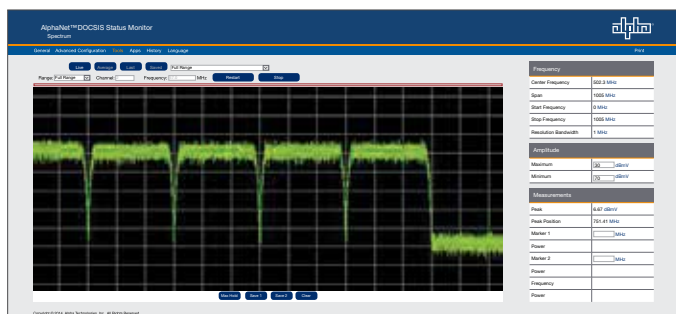
# ADVANCED INTELLIGENCE PLATFORM

The Alpha XM3-HP's internal intelligence provides Network Operation Centers (NOC) with the critical and highly relevant data necessary to **reduce operating expenses** through remote management.

## ➤ Integrated DOCSIS® Communications

The XM3-HP can be used as a network test probe when equipped with an AlphaNet DM3.0 integrated management hub, integrated DOCSIS enables access to all of the XM3-HP's advanced information and diagnostics:

- Full Spectrum Capture
- Bonded Channel Micro Reflections
- Bonded Channel Constellations



## ➤ Integrated AlphaApps

Power reliability algorithms use real-time data to predict service intervals, battery replacements and offer real-time insights into the health of your HFC network via standard EMS interface. Parameters include:

- Battery Health
- Remaining Battery Runtime
- Trending Battery MHOs
- Utility Performance Reports
- Utility Meter



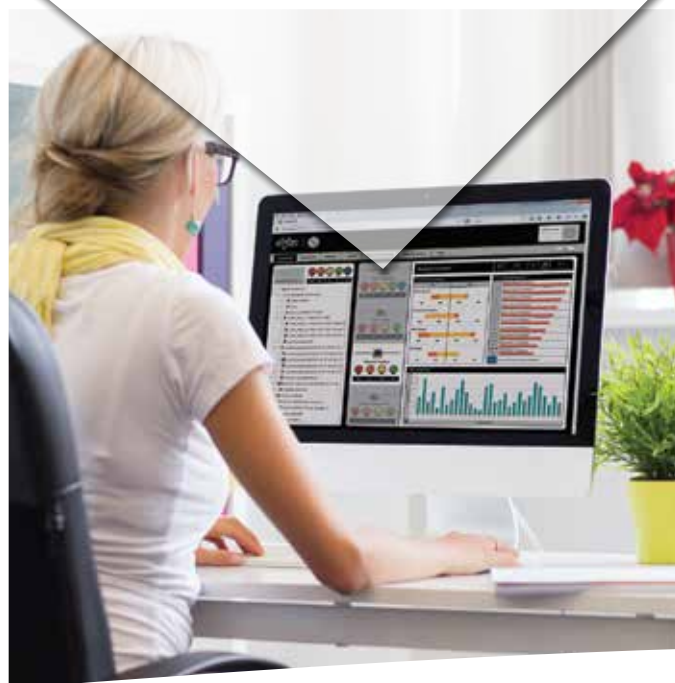
### DOCSIS Communications Menu

COMM - GENERAL  
CM MAC ADDRESS  
00:90:EA:00:36:EA  
↑ ↓ ESC

MAC Address

COMM - GENERAL  
CM IP ADDRESS  
192.168.1.120  
↑ ↓ ESC

IP Address



<b>Models:</b>	<b>915M-HP</b>	<b>915P-HP</b>	<b>910E-HP</b>	<b>915E-HP</b>	<b>615CE-HP</b>	<b>622CE-HP</b>	<b>908HP</b>	<b>910HP</b>	<b>915HP</b>	<b>918HP</b>
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Parameters										
Nominal AC Input Voltage (VAC):	127	200-240	200-240	200-240	230	230	120	120	120	120
Nominal Input Frequency:	60Hz	60Hz	50Hz	50Hz	50Hz	50Hz	60Hz	60Hz	60Hz	60Hz
Input Frequency Tolerance (%):	±3	±3	±3	±3	±3	±3	±3	±3	±3	±3
Input Voltage Operating Range Tolerance (%):	-34 / +15	-30 / +20	-30 / +20	-30 / +20	-30 / +20	-30 / +20	-30 / +15	-30 / +15	-30 / +15	-30 / +15
Output Voltage (VAC):	63 / 89	63 / 89	48 / 63 / 89	63 / 89	48 / 63	63	63 / 89	63 / 89	63 / 89	63 / 89
Output Voltage Regulation:	-5 / +1	-5 / +1	-5 / +1	-5 / +1	-6 / +1.5	-6 / +1.5	-5 / +1	-5 / +1	-5 / +1	-5 / +1
Maximum Rated Output Current:	15 Amps	15 Amps	15 / 10 Amps	22 / 15 Amps	15 Amps	22 Amps	8 Amps	10 Amps	15 Amps	18 Amps
Output Power (VA):	1350	1350	900	1350	900	1408	720	900	1350	1620
Line Mode Efficiency:	Up to 94%									
Standby Efficiency:	Up to 91%									
Bulk Charger Current (@ 80% Load & Nom Line):	10 Amps	10 Amps	10 Amps	10 Amps	10 Amps	10 Amps	10 Amps	10 Amps	10 Amps	10 Amps
Battery Voltage (VDC):	36	36	36	36	36	36*	36	36	36	36

Mechanical										
Inverter Module:	Front plug in, hot-swappable inverter module									
Dimensions H x W x D (in/mm):	7.8 x 15 x 10 / 198.1 x 381 x 254, <b>With Handle:</b> 7.8 x 16.7 x 10.7 / 198.1 x 424.18 x 271.8									
Weight (lb/kg):	60 / 27.2	60 / 27.2	53 / 24.1	67 / 30.5	53 / 24.1	67 / 30.5	48.5 / 22.0	49 / 22.3	60 / 27.2	60.5 / 27.5
Input Power Connector:	IEC 320 / C20									
Battery Connector:	Anderson style 75 Amps									
Remote Temperature Sensor:	Ring lug fastens to negative terminal on center battery									
Display:	4 line x 20 character blue LCD screen with soft-key menu controls									
LRI Connector:	Anderson PP30's									
Mounting:	Shelf mounts inside suitably rated electrical enclosure									

Environment										
Operating Temperature:	-40 to 60°C / -40 to 140°F (derate by 2°C / 3.6°F per 1,000 feet above 3,000 feet)									
Storage Temperature:	-40 to 70°C / -40 to 158°F									
Humidity:	0 to 95% non-condensing (relative)									
Conformal Coating:	All printed circuit board assemblies to prevent moisture related failure									

Voltage										
Name Plate Rating (VAC):	127	200-240	200-240	200-240	230	230	110-127	110+127	110-127	110-127
Input Window (% of Nominal Input):	-34 / +15	-30 / +20	-30 / +20	-30 / +20	-30 / +20	-30 / +20	-30 / +15	-30 / +15	-30 / +15	-30 / +15
Input Range (VAC):	84-146	161-276	161-276	161-276	161-276	161-276	84-138	84-138	84-138	84-138
Output Voltage Regulation (%):	-5 / +1	-5 / +1	-5 / +1	-5 / +1	-6 / +1.5	-6 / +1.5	-5 / +1	-5 / +1	-5 / +1	-5 / +1
Load Range:	1-15 Amps	1-15 Amps	1-10 Amps	1-15 Amps	1-15 Amps	1-22 Amps	1-8 Amps	1-10 Amps	1-15 Amps	1-8 Amps
Output Voltage Min/Max (VAC):	84.6 / 90	84.6 / 90	84.6 / 90	84.6 / 90	59.2 / 64	59.2 / 64	84.6 / 90	84.6 / 90	84.6 / 90	84.6 / 90

Safety Compliance										
UL/CSA 60950-1, UL 1778, CSA 107.3 (NRTL/C):	✓	✓					✓	✓	✓	✓
IEC 60950-1 (CB):	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IEC 62040-1:					✓	✓				
Safety Mark:	NRTL/C	NRTL/C			CE	CE	NRTL/C	NRTL/C	NRTL/C	NRTL/C

EMC Compliance										
FCC Part 15 Class A:	✓	✓					✓	✓	✓	✓
IEC/EN 50083-2 (CATV):					✓	✓				
IEC/EN 65040-2 (UPS):			✓	✓	✓	✓				
CISPR22 Class A:			✓	✓	✓	✓				



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