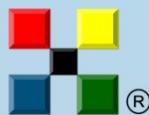


# BACKUP POWER WITHOUT BATTERIES

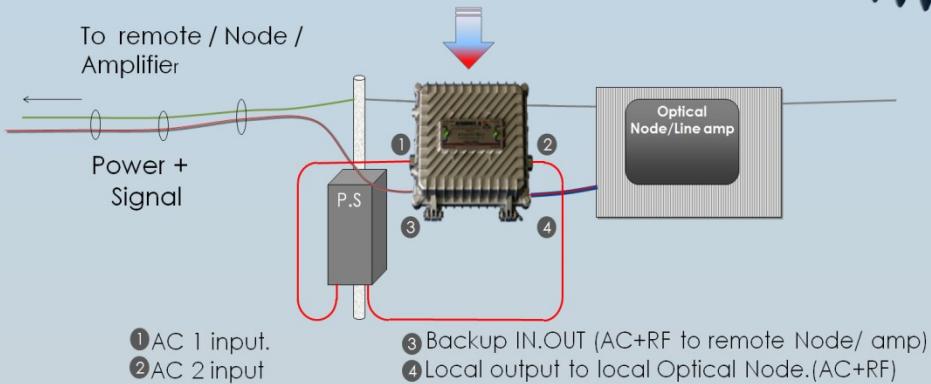
## SYNERGY 2

All in One

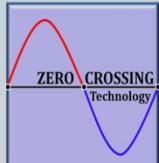
Unlimited Backup Power  
US PATENT 5,747,888 8,415,822



Based on the strategic placing of intelligent power management devices throughout the network, in the event of a power outage the SYNERGY-2 draws power from distance available source over existing coax or power cables. Utilizing patented breakthrough direct AC/AC stabilize Zero Crossing technology Safecom ensures an optimal voltage level at the insertion point – even the source of power from over long distances.



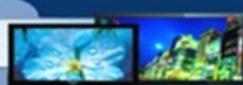
- Unlimited Remote Synergy backup power solution.
- Embedded Dual Power inserter 2 x 15A. (RF Pass 5-1000MHz)
- Monitoring online current & voltage.
- Embedded Power Booster + Voltage stabilizing.



### Standard Features

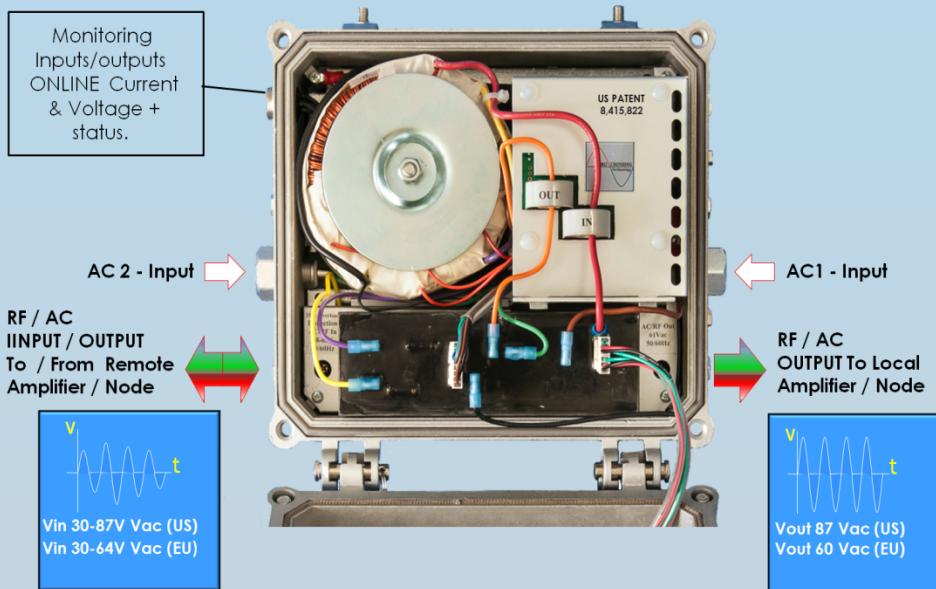
- Europe 60V & US 90V Standard.
- Support full 15A rms input/output.
- Voltage stabilization at the insertion point in the network.
- Zero Crossing Technology - Smooth transfer between gears .
- Top-efficiency – compact Genius Toroidal Transformer (up to 1350 Watt).
- Electronic Overload Protection.
- Water-proof Enclosure. (IPX8)
- Wall or pole Mounted.
- Automatic Standby mode.
- Opposite connection protected.
- Input & Output Surge Protection.
- Optional DOCSIS® & EuroDOCSIS Status Monitoring.
- Online RF transmission during operation.





# SYNERGY2 -60/87-2x15A –inside view

## Inputs/ Outputs configuration



### SYNERGY-2 - Technical Specification

Electrical		Environmental	
Max Current(Each port)	15A	Operating Humidity	0-100%
Input AC1,AC2 min threshold level	EU- 45 Vac US 58 Vac	Operating Temperature	-40°C ÷ +60°C
Min Voltage level-from remote area	30Vac	IP Standard – 100 % waterproof	IPX8
Transition between gears	0 mSec	Operating Temperature	-40°C ÷ +60°C
Operational Voltage Range – Local Power.	EU: 48-75VAC US: 60-90VAC	<b>RF</b>	
Power Consumption Backup unit	48Vac@50 Hz-1.8W 90Vac@50Hz-3.5W	Band width	5-1000Mhz
Power Consumption. Power Booster module	7 Watt Max (EU) 18 Watt Max (US)	Through loss 1000 MHz	< 1.7 dB (+/- 0.3dB)
Min Voltage level-from remote area	30Vac	Return Loss	> 18 dB
Backup threshold Turn to backup-mode	18Vac	RFI	>110 dB
Max Voltage all port	75 Vac (EU) , 90 Vac (US)	Hum Modulation	> 65
Current 50Hz/60Hz	39mA / 31mA	<b>General</b>	
Transition to Backup	15msec (max) –ONLINE	Backup operation Life Expectancy	500,000
LED's indicators		Broadcast Continuity	Online
Two green	Local ON , Remote ON.	<b>Monitoring interface for IP transponder</b>	
Two red	Backup from Remote area.	Current from local P.S	0-15A -1%
Left LED-RED Right LED -Green	Local ON , Remote Standby	Current from remote P.S	0-15A -1%
Voltage gain ratio (Max)	1 : 1.56	Voltage-all ports	0-90V-0.5%
		Status of SYNERGY2	Local /Remote
		Dimensions ( L , W , H ) mm	250 X 200 X 152
		Dimensions ( L , W , H ) inch	9.8 X 7.8 X 6
		Weight	14.33 lbs / 6.5Kg

# POWER BOOSTER

US PATENT 8,415,822

Utilizing patented breakthrough direct AC/AC stabilize Zero Crossing technology Safecom ensures an optimal voltage level at the insertion point – even the source of power from over long distances.

Passive , Stand alone element power booster solves the power distribution problem in a CATV network caused by high-resistance and low energy efficient coax & electricity cables.



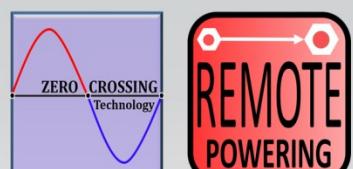
- 87V(US) / 60V(EU) -15A AC/AC stabilizer -Zero Crossing Technology & RF-Pass 5-1000MHz**

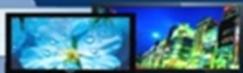


- MINIMIZE THE NUMBER OF POWER SUPPLIES IN THE NETWORK.**
- INCREASING THE POWERING AREA COVERED BY POWER SUPPLY**

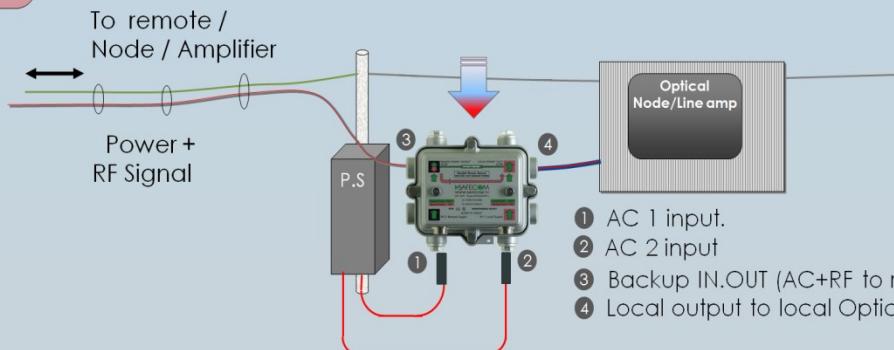
Mechanical	
Dimensions ( L , W , H ) mm	250 X 200 X 152
Weight (Kg/lbs)	6/13.2
Finish	Passivation
Environment	
Operating Temperature	-40°C ÷ +60°C
Storage Temperature	-40°C ÷ +70°C
Humidity (water proof)	0 ÷ 100%
Standard Features	
Quick Connection In / Out Coax socket	✓
Electronic Overload protection	
Power Booster Adaptor Indication Green /Red LED	✓
RF	
Band width	5-1000Mhz
Through loss 1000 MHz	< 1.7 dB (+/- 0.3dB)
Return Loss	> 18 dB
RFI	>110 dB
Hum Modulation	> 65

Electronic	
Input Voltage range (Vac)	42-90 V(US) 32-72V (EU)
Input Frequency (Hz)	50/60 Hz
Max Output Current (A)	15A
Max Input Current	15A
Output Voltage range (Vac)	82 ÷ 90 V(US) 57÷63 V(EU)
Voltage gain ratio (min)	1 : 1.03
Voltage gain ratio (Max)	1 : 1.56
Load Regulation (%)	<2%
Efficiency (%)	>95%
Transfer time	ONLINE





# BACKUP POWER WITHOUT BATTERIES



- ① AC 1 input.
- ② AC 2 input
- ③ Backup IN.OUT (AC+RF to remote Node/amp)
- ④ Local output to local Optical Node.(AC+RF)

- Unlimited Remote Synergy backup power solution.
- Embedded Dual Power inserter 2 x 15A. (RF Pass 5-1000MHz)
- Monitoring online current & voltage.
- Optional external Power Booster + Voltage stabilizing.

## Standard Features

- Europe 60V & US 90V Standard.
- Support full 15A rms input/output.
- Voltage stabilization at the insertion point in the network.
- Water-proof Enclosure.(IPX8)
- Opposite connection protected.
- Input & Output Surge Protection.
- Optional DOCSIS® & EuroDOCSIS Status Monitoring.
- Online RF transmission during operation.

