



Senao Networks

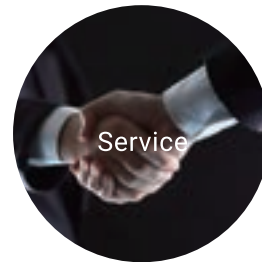
SUSTAINABLE INTELLIGENT POWER SUPPLY

Green Power Total Solution



About Us

Senao Networks, Inc. is a global leading green power manufacturer with 100% manufacturing in Taiwan. We dedicated in "Technology Innovation, Green Environment, and Service" to offer price competitive, and high quality products. Our seasoned power engineers with years of field proven experience will join your design team from start to the end to ensure your next project is a success.



Mission

We realize that power is playing an increasingly critical role in your designs. It is important to stay on the latest power trends and regulations. To keep you one step ahead, we integrate cutting-edge technologies and design techniques in our AC-DC power modules. In accordance to the demands of Green earth, Senao Networks uses Green Technology to create Green Power Supplies through practical actions. Senao Networks will continue to develop green power supplies for various application areas, including communications, networking, and server/industrial computing.

Senao Networks strives for increasing market share by offering high quality products while investing aggressively in research and development.

Quality Management

For ensuring that products meet rigorous quality standards, we invest an in-house state of the art Quality Ensurance Laboratory. All models are certified with UL, cUL, TUV and CE. In addition, most models participate in the CB-Scheme to accommodate further global certification if required.

Senao Networks' design and manufacturing processes are compliant with international quality standards, including ISO 9001, ISO 14001, ISO 45001 and TL 9000 to establish its quality system infrastructure.

In order to provide robust and reliable products, HALT and over stress test methodologies (burn to fail, over voltage, etc.) are employed in our standard procedures for design verification. Highly Accelerated Life Testing (HALT) is designed to induce product failure to determine failure site, failure mechanism and root cause. A thorough post-HALT root cause analysis improves design margins and, overall, eliminates field failure of the product.



AC Power Adapter



High Efficiency

RoHS

Warranty

Active PFC

Full Range

High Stability

Senao Networks' AC power adapter series are targeting Networking, Industrial, and Security markets. They are designed to meet or exceed the latest government energy efficiency regulations (DOE VII and EU Energy Star EPS2.0/ErP lot 7), for products that are marketed internationally. To achieve high efficient conversion ratio, we employ single stage boost converter topology to achieve Active PFC up to 0.99. To protect your expensive electronic investment, the EN55024 level 4 compliant surge protection design is exceeding typical market requirement of level 2 for devices survivability.

Features

- Meet Energy Star EPS2.0/ErP lot 7
 - Meet DOE Level VII
 - Active Power Factor PF≥0.99
 - ZVS(QR Flyback) technology to reduce power dissipation
 - Protections: OVP/OCP/SCP
- MTBF>200,000 hours at 25°C typical load
 - Surge: 4KV(L/N-PE)&3KV(L-N)
 - Can withstand 300Vac input voltage for 1 minute
 - PoE Isolation
 - Application: Networking, Industry, Communication

Complete Line of Models

Series	Model	Output Voltage	Load (max)	Output Power	Operating Temperature	Dimension (L x W x H mm)	Active Power Factor	Energy Star EPS2.0/ErP lot 7	DOE Level VII
EAA65A	EAA65A-12	12V	5.4A	65W	0~40°C	110 x 45 x 30	●	●	●
	EAA65A-54	54V	1.2A	65W	0~40°C	110 x 45 x 30	●	●	●
EA120	EA120-54	54V	2.22A	120W	0~40°C	151 x 75 x 34	●	●	●

Indoor PoE Injector



High Efficiency



RoHS



Warranty



Active PFC



Full Range

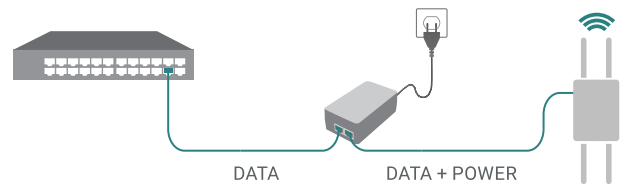


High Stability

PoE (Power over Ethernet), injecting DC power into Ethernet cabling without interrupting data transmission, simplify the deployment of powered devices. Our PoE Injector portfolio enables delivery of up to 95 watts of flexible and reliable power over Ethernet to wireless access points, VoIP phones, IP cameras, thin clients and other Ethernet devices. The PoE Injector family is an ideal solution for existing network where PoE switches are not available or not sufficient to serve newly installed devices. We offer solutions to a wide range of power requirements complying a complete set of PoE standards: 802.3af/at/bt and proprietary pass through mode. Our 802.3af/at options offer both Mode A (end-span) and Mode B (mid-span) in simple plug-and-play installation.

Features

- IEEE 802.3af/at/bt compliance
- Support 10/100/1000Mbps & 2.5G/5G/10Gbps data rates
- Meet Energy Star EPS2.0/ErP lot 7
- Meet DOE Level VI
- Active Power Factor PF $\geq$ 0.99
- Protections: OVP/OCP/SCP
- MTBF>200,000 hours at 25°C typical load
- AC to DC built-in
- Surge: 2KV(L/N-PE)&1KV(L-N), 1KV(Data in & PoE out port)
- Can withstand 300Vac input voltage for 1 minute
- PoE Isolation
- Application: Networking, Industry, Communication



Complete Line of Models

Model	Output Voltage	Load (max)	Output Power	IEEE 802.3 Compliance	Ethernet	Operating Temperature	Dimension (L x W x H mm)	Active Power Factor	Energy Star EPS2.0/ErP lot 7	DOE Level VI	Fail Reset Function
EPA2406FP	24V	0.6A	15W	Passive	10/100Mbps	0~40°C	100 x 58.4 x 33.4	●	●	●	●
EPA2406GP	24V	0.6A	15W	Passive	10/100/1000Mbps	0~40°C	100 x 58.4 x 33.4	●	●	●	●
EPA2410GP	24V	1A	24W	Passive	10/100/1000Mbps	0~40°C	100 x 58.4 x 33.4	●	●	●	●
EPA5006GP	54V	0.6A	30W	Passive	10/100/1000Mbps	0~40°C	100 x 58.4 x 33.4	●	●	●	●
EPA5012GP	54V	1.11A	60W	Passive	10/100/1000Mbps	0~40°C	100 x 58.4 x 33.4	●	●	●	●
EPA5006GAT	54V	0.6A	30W	af/at	10/100/1000Mbps	0~40°C	100 x 58.4 x 33.4	●	●	●	●
EPA5006HAT	54V	0.6A	30W	af/at	2.5Gbps	0~40°C	100 x 58.4 x 33.4	●	●	●	●
PNA60BGS-54	54V	1.11A	60W	af/at/bt	10/100/1000Mbps	0~40°C	100 x 58.4 x 33.4	●	●	●	●
PNA60BGS-54-HG	54V	1.11A	60W	af/at/bt	2.5Gbps	0~40°C	100 x 58.4 x 33.4	●	●	●	●
PNA60BGS-54-MG	54V	1.11A	60W	af/at/bt	5Gbps	0~40°C	100 x 58.4 x 33.4	●	●	●	●
PNA60BGS-54-TG	54V	1.11A	60W	af/at/bt	10Gbps	0~40°C	100 x 58.4 x 33.4	●	●	●	●
*EPA5060XBT	54V	1.11A	60W	af/at/bt	10Gbps	0~40°C	100 x 58.4 x 33.4	●	●	●	●
PNA90BGS-54	56V	1.7A	95W	af/at/bt	10/100/1000Mbps	-20~60°C	150 x 65 x 34	●	●	●	●
PNA90BGS-54-HG	56V	1.7A	95W	af/at/bt	2.5Gbps	-20~60°C	150 x 65 x 34	●	●	●	●
PNA90BGS-54-MG	56V	1.7A	95W	af/at/bt	5Gbps	-20~60°C	150 x 65 x 34	●	●	●	●
PNA90BGS-54-TG	56V	1.7A	95W	af/at/bt	10Gbps	-20~60°C	150 x 65 x 34	●	●	●	●

Remark: *: in design stage.

Outdoor PoE Injector

Featuring highly reliable IP67 rated enclosure with various secure mounting mechanism, Senao Networks' Outdoor PoE injectors equipped with 1G/2.5Gbps Ethernet data link deliver reliable power source to outdoor power devices, and offer flexibility and reliability for harsh environment installation.


High Efficiency


RoHS


Warranty


Active PFC


Full Range


High Stability

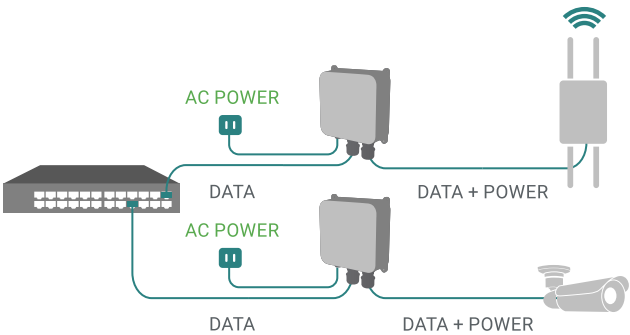

Working Temperature



POA60DGR-54

Features

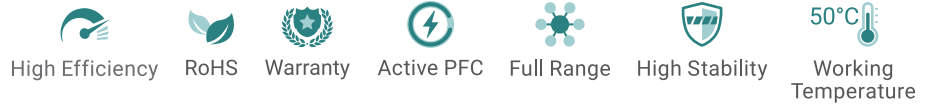
- IEEE 802.3af/at compliance
- Support 10/100/1000Mbps & 2.5Gbps data rates
- IP67 rated
- Operating temperature: -40~65°C
- Active Power Factor PF≥0.99
- Protections: OVP/OCP/SCP
- MTBF>200,000 hours at 25°C typical load
- Surge: 6KV(L/N-PE)&6KV(L-N), 6KV(Data in & PoE out port)
- AC to DC built-in
- Can withstand 300Vac input voltage for 1 minute
- PoE Isolation
- Application: Networking, Industry, Communication



Complete Line of Models

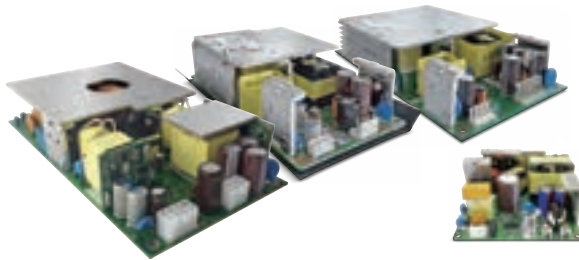
Model	Output Voltage	Load (max)		Output Power	IEEE 802.3 Compliance	Ethernet	Operating Temperature	Dimension (L x W x H mm)	Data Input Port	Active Power Factor	Fail Reset Function
POA60DGR-54	54V	0.6A	30W	30W	af/at	10/100/1000Mbps	-40~65°C	156 x 156 x 55	RJ45	●	●
		1.11A	60W	60W	Passive		-40~50°C				
POA60DXR-54	54V	0.6A	30W	30W	af/at	10/100/1000Mbps	-40~65°C	156 x 156 x 55	FIBER CAGE	●	●
		1.11A	60W	60W	Passive		-40~50°C				
POA60DGR-54-MG	54V	0.6A	30W	30W	af/at	2.5Gbps	-40~65°C	156 x 156 x 55	RJ45	●	●
		1.11A	60W	60W	Passive		-40~50°C				

Open Frame



Leveraging our in-depth networking knowledge and years of experience, Senao Networks' open frame AC to DC power supply module offering output power up to 2500W is specialized for networking systems.

With increasing popularity of AP and surveillance IP camera powered by network, Power over Ethernet (PoE) is becoming a standard feature. High efficiency universal AC input with fully regulated output power supply plays the essential role. Senao Networks' open frame AC-DC power supply series deliver high efficiency and optimized no-load performance to meet the growing demand. Featuring industry standard footprints, efficient design, compact size and rock-solid reliability make these power supplies the ideal solution for OCP compliant servers, networking systems, industrial, and various network appliances.



EMA950D-A / EPM300D / EPM480D
/ EMA135S-12

Features

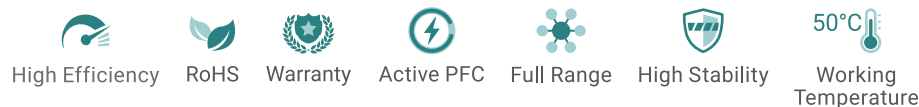
- Efficiency $\geq 88.5\%$ at 230Vac typical load
- Active Power Factor $PF \geq 0.99$
- ZVS technology to reduce power dissipation
- Protections: OVP/OCP/SCP
- MTBF > 200,000 hours at 25°C typical load
- Operating altitude: 5000 meters
- Surge protection: 4KV(L/N-PE) and 3KV(L-N)
- Can withstand 300Vac input voltage for 1 minute
- PoE Isolation

Complete Line of Models

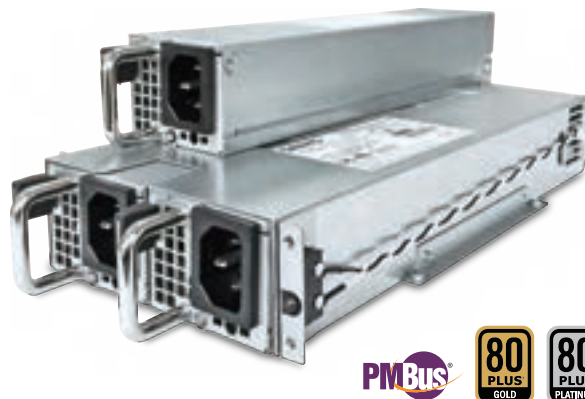
Model	Output Voltage	Load (max)	Output Power	Total Maximum Power	Output Power under Free-Air Convection	Efficiency (Typ.)	Operating Temperature (with Fan)	Dimension (L x W x H mm)	Active Power Factor	Altitude 5000m	Group Load Sharing (Option)
EMA25S-12	12V	2.09A	25W	25W	25W	91%	-10~50°C	95 x 50 x 26.6	●	●	●
EMA60S-12	12V	5.0A	60W	60W	42W	88.5%	-20~50°C	101.6 x 50.8 x 29.6	●	●	●
EMA65S-54	54V	1.11A	60W	60W	42W	88.5%	-20~50°C	101.6 x 50.8 x 29.6	●	●	●
EMA135S-12	12V	11.25A	135W	135W	95W	91%	-10~50°C	85 x 76 x 31	●	●	●
EPM180D	12V	3.0A	36W	180W	126W	90%	-10~50°C	140 x 100 x 36.6	●	●	●
	-54V	3.0A	162W								
EPM300D	12V	5.83A	70W	300W	180W	91%	-10~50°C	155 x 79.5 x 38.35	●	●	●
	-54V	4.63A	250W								
EPM480D	12V	5A	60W	480W	-	92%	-10~50°C	190.5 x 101.6 x 38.6	●	●	●
	-54V	7.8A	421W								
EMB700D-A	12V	12.5A	150W	700W	-	92%	-10~50°C	190 x 90 x 38.6	●	●	●
	-54.5V	10.1A	550W								
* EMB700D-AL	12V	12.5A	150W	700W	-	92%	-10~50°C	190 x 90 x 38.6	●	●	●
	-54.5V	10.1A	550W								
EMA900D-A	12V	8.3A	100W	900W	-	93%	-10~50°C	190.5 x 101.6 x 38.6	●	●	●
	-54V	14.8A	800W								
EMA900D-AL	12V	8.3A	100W	900W	-	93%	-10~50°C	190.5 x 101.6 x 38.6	●	●	●
	-54V	14.8A	800W								
EMA950D-A	12V	16.6A	200W	950W	-	93%	-10~50°C	190.5 x 101.6 x 38.6	●	●	●
	-54V	14.8A	800W								
EMB950D-A	12V	12.5A	150W	950W	-	93%	-10~50°C	190 x 90 x 38.6	●	●	●
	-54.5V	14.7A	800W								
* EMB950D-AL	12V	12.5A	150W	950W	-	93%	-10~50°C	190 x 90 x 38.6	●	●	●
	-54.5V	14.7A	800W								
* EMA1050S-54	54.5V	19.3A	1050W	1050W	-	91%	-10~50°C	195 x 73.5 x 39	●	●	●
EMA1800D-A	12V	22A	264W	1800W	-	91%	-10~50°C	220 x 104.5 x 41	●	●	●
	-54.5V	29.4A	1600W								
* EMA2500D-A	12V	22A	264W	2500W	-	91%	-10~50°C	220 x 104.5 x 41	●	●	●
	-54.5V	42.2A	2300W								

Remark: *: in design stage.

AC-DC 1U Slim Redundant Module / 1U 1+1 Redundant



Many data servers and high end network equipment require complex and robust power distribution system. To maximize the performance of these system under various operating conditions and reduce the overall power consumption, varying the voltages and controlling the operation mode of power converters becomes essential for any high performance system. Senao Networks develops generic, modularized hot swappable power supplies from 300W to 3200W protect your valuable equipment from power circuit and power component failures. We offer design service to satisfy your commercial, industrial and no down time power system requirements.



Features

- 80 PLUS High Efficiency
- Active Power Factor $PF \geq 0.99$
- PSU for N+1 redundant application
- PMBus™ communication
- Fan Reverse Option
- Protections: OVP/OCP/SCP/OTP/UVP
- MTBF>200,000 hours at 25°C typical load
- Operation altitude: 5000 meters
- Surge: 2KV(L/N-PE)&1KV(L-N)
- Application: Server, Storage, IPC, Surveillance, Networking

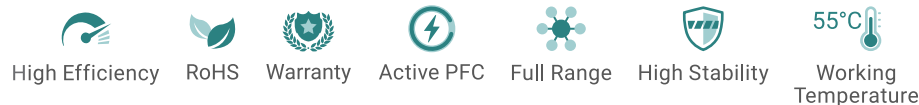
Complete Line of Models

Form Factor	Model	Output Voltage / Load (max)						Output Power	80Plus	Operating Temperature	Dimension (L x W x H mm)	Digital Power	Fan Reverse Option
		+3.3V	+5V	+12V	-12V	+5VSB	+12VSB						
1U Slim Module	ERA30-SGD-BF	-	-	25A	-	2A	-	300W	Gold	-10~60°C	220 x 50.5 x 40	●	●
	ERA50-SPD-BF	-	-	42A	-	3A	-	500W	Platinum	0~50°C	220 x 50.5 x 40	●	●
	ERA70-SPD-BF	-	-	58.3A	-	3A	-	700W	Platinum	0~50°C	220 x 50.5 x 40	●	●
	* ERAA1-SPD-BF	-	-	91.6A	-	-	3A	1100W	Platinum	0~50°C	220 x 50.5 x 40	●	●
1U 1+1 Slim RPSU	ERA30-SGD2H-BF	20A	20A	25A	0.5A	2A	-	300W	Gold	-10~60°C	260 x 106 x 41.5	●	●
	ERA50-SPD2H-BF	20A	20A	42A	0.5A	3A	-	500W	Platinum	0~50°C	260 x 106 x 41.5	●	●
	ERA70-SPD2H-BF	20A	20A	58.3A	0.5A	3A	-	700W	Platinum	0~50°C	260 x 106 x 41.5	●	●

Remark:BF: air flow cooling from Back to Front, FB: air flow cooling from Front to Back.

*: in design stage.

AC-DC 1U CRPS Redundant Module / 2U 1+1 Redundant



Features

- 80 PLUS High Efficiency
- Active Power Factor PF $\geq$ 0.99
- PSU for 1+1 redundant application
- PMBus™ communication
- Fan Reverse Option
- Protections: OVP/OC/SCP/OTP/UVP
- MTBF>200,000 hours at 25°C typical load
- Operation altitude: 5000 meters
- Surge: 2KV(L/N-PE)&1KV(L-N)
- Application: Server, Storage, IPC, Surveillance, Networking



Complete Line of Models

Form Factor	Model	Output Voltage / Load (max)							Output Power	80Plus	Operating Temperature	Dimension (L x W x H mm)	Digital Power	Fan Reverse Option	Group Load Sharing
		+3.3V	+5V	+12V	-12V	+5VSB	+12VSB	+54.5V							
Titanium CRPS Module	* ERAA6-CTA-BF	-	-	133.3A	-	-	3A	-	1600W	Titanium	0~55°C	185 x 73.5 x 40	●	●	●
	* ERAB0-CTA-BF	-	-	166A	-	-	3A	-	2000W	Titanium	0~55°C	185 x 73.5 x 40	●	●	●
	* ERAB2-CTA-BF	-	-	183A	-	-	3A	-	2200W	Titanium	0~55°C	185 x 73.5 x 40	●	●	●
	* ERAB4-CTA-BF	-	-	200A	-	-	3A	-	2400W	Titanium	0~50°C	185 x 73.5 x 40	●	●	●
	* ERAC2-CTA-BF	-	-	266A	-	-	3A	-	3200W	Titanium	0~50°C	185 x 73.5 x 40	●	●	●
CRPS Module	ERA55-CPA-BF	-	-	46A	-	-	3A	-	550W	Platinum	0~55°C	185 x 73.5 x 40	●	●	●
	ERA85-CPA-BF	-	-	70.8A	-	-	3A	-	850W	Platinum	0~55°C	185 x 73.5 x 40	●	●	●
	ERAA6-CPA-BF	-	-	133.3A	-	-	3A	-	1600W	Platinum	0~55°C	185 x 73.5 x 40	●	●	●
PoE-CRPS Module	ERA60-PPA-BF	-	-	-	-	-	2A	11A	600W	Platinum	-5~55°C	185 x 73.5 x 40	●	●	●
	ERA90-PPA-BF	-	-	-	-	-	2A	16.5A	900W	Platinum	-5~55°C	185 x 73.5 x 40	●	●	●
	ERAA2-PPA-BF	-	-	-	-	-	2A	22A	1200W	Platinum	-5~55°C	185 x 73.5 x 40	●	●	●
	* ERAB0-PPA-BF	-	-	-	-	-	-	36.7A	2000W	Platinum	0~50°C	185 x 73.5 x 40	●	●	●
2U 1+1 CRPS	ERA55-CPA2V-BF	20A	20A	46A	0.5A	3A	-	-	550W	Platinum	0~50°C	230 x 76 x 84	●	●	●
	ERA85-CPA2V-BF	20A	20A	70.8A	0.5A	3A	-	-	850W	Platinum	0~50°C	230 x 76 x 84	●	●	●

Remark: BF: air flow cooling from Back to Front, FB: air flow cooling from Front to Back.
*: in design stage.

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