

Custom Solutions

In addition to offering wide variety of standard products, NetPower is experienced in design and manufacture of custom power supplies and systems.

- ▶ Design and manufacture semi-custom or full-custom power supplies
- ▶ Integrate power systems to meet specific requirements in a fast pace
- ▶ Design and manufacture mechanical parts

Engineering & Consultation

Besides product solutions, NetPower also offers engineering and consultation services, including:

- ▶ System on-board power supply design and consultation
- ▶ Evaluation of power architectures
- ▶ Review of power conversion related circuits and layout designs
- ▶ Power conversion product evaluation and comparison study

Manufacturing Service

To bring convenience to our customers, NetPower provides manufacturing service in both China and USA:

- ▶ Prototype and volume PCB assembly/testing
- ▶ Full material sourcing capability
- ▶ ISO9001, ISO14001 and TS16949 certified manufacturing facility



LEADING THE ADVANCEMENT OF POWER CONVERSION

Selection Guide 2016

Your Reliable Partner

Having decades of experience in supporting high reliability applications, NetPower team believes that the importance of product reliability and quality can never be overstated. With an effectively implemented quality management system, NetPower has maintained superior product quality records since its inception in 2000.

NetPower is committed to meeting customer requirements and increasing customer satisfaction through the continual improvement of its products and the quality management system.

- ▶ Extensive Experience and Know-hows in High-Reliability Designs
- ▶ Patented Technologies Assuring Leading Performances
- ▶ Leading Efficiencies-up to 97% in Isolated Bricks
- ▶ High Density-up to 800W in a Quarter Brick Package
- ▶ Millions of Hours of MTBF-Forever Running
- ▶ Over a Decade of Supporting Global Leading OEMs
- ▶ In-Depth Application Support and Flexible Order Fulfillment
- ▶ ISO9001, ISO14001, TS16949 Certified Facilities
- ▶ Made-in-USA Capability

Isolated DC-DC Converters



Features

- High efficiency with synchronous rectifiers
- 8:1, 4:1 and 2:1 Input
- Output power from 15W to 800W
- Remote sense, remote control, over-voltage, over-current, short-circuit, and over temperature protection
- Adjustable output voltage
- Fixed frequency operation
- Operating ambient temperature: -40°C ~ +85°C
- Output Voltage Set Point : +/- 1%

Mechanical

- Industry standard footprint
- Open frame, baseplate, encapsulated, conformal coating
- Full Brick: 4.46" x 2.28"
- Half Brick: 2.41" x 2.29"
- Quarter Brick: 2.29" x 1.46"
- Eighth Brick: 2.30" x 0.90"
- Sixteenth Brick: 1.31" x 0.91"
- 1x1: 1.1" x 0.96"
- Thirty-second Brick: 0.93" x 0.76"

Safety

- UL 60950-1 2nd
- Basic insulation

18VDC Input (9-36V input range)

Size	Series	Power	Efficiency	Output Voltage									
				3.3V	5V	6V	8V	12V	15V	28V	48V	56V	
Half brick	HYPS1	280W	Up to 91%								10A	6A*	
Quarter brick	QYPS1	200W 150W 100W	Up to 93%		40A 30A			12A			5A*	3A	2A
Eighth brick	EYRS1	140W 100W 75W	Up to 92%		25A* 20A 12A*			10A	8A*	5A	5A 3A		
Sixteenth brick	SYRS1 SYCS1	60W 45W 30W	Up to 92%	15A 10A	12A 8A		7A 4A	5A 3A	4A 2A				
Thirty-second brick	MYRS1	25W 15W	Up to 88%		5A 3A			2A					

32VDC Input (9-75V input range)

Size	Series	Power	Efficiency	Output Voltage				
				3.3V	5V	12V	15V	28V
Quarter brick	QYPS5	150W 100W	Up to 93%			10A 7A	10A	
Sixteenth brick	SYRS5	36W	Up to 93%	8A*	6A*	3A*		

* To be released

24VDC Input (18-36V input range)

Size	Series	Power	Efficiency	Output Voltage							
				3.3V	5V	6V	8V	12V	15V	28V	48V
Half brick	HPS2	500W 450W 400W 300W	Up to 93%		80A		50A	42A 40A 38A		17A	10A 7A
Quarter brick	QBC2	250W	Up to 91.5%		50A						
Quarter brick	QPS2 QRS2	200W 150W 125W 100W	Up to 92%	70A 35A 30A 25A	40A 25A 17A	33A	25A	17A 10A 7A		7A 5A	4A
Eighth brick	ERS2	150W 100W 75W 60W	Up to 92.5%	35A	25A 10A		15A	10A	10A 8A	7A 5A 3A	2.5A*
Sixteenth brick	SRS2	100W 65W 50W 30W 20W	Up to 92%	25A 15A 10A	17A 12A 8A	12A 10A	11A 8A	7.5A 3A	6A 3A	3A	1.5A
Thirty-second brick	MRS2	45W	Up to 88%	10A	8A	5A	5A	3A	3A	1.5A	

36VDC Input (18-75V input range)

Size	Series	Power	Efficiency	Output Voltage							
				3.3V	5V	8V	12V	15V	28V	48V	
Half brick	HPS3-W	360W	Up to 91%				30A				
Quarter brick	QPS3-W	220W 150W 100W	Up to 93.5%	60A	40A 25A		19A 17A 11A	13A	6A* 5A		2A
Eighth brick	ERS3-W	140W 100W 75W 50W	Up to 92%	30A 20A	20A 14A 9A	15A	10A 9A 6A		5A 4A		
Sixteenth brick	SRS3-W SCS3-W	75W 60W 50W 40W	Up to 92%	20A	15A 12A 10A 8A	7A 5A 4A	6A 5A 3A	4A 3A			
1x1	LRS3-W	20W	Up to 87%	7A	4A		1.5A				

* To be released

48VDC Input (36-75V input range)

Size	Series	Power	Efficiency	Output Voltage														
				1.0V	1.2V	1.5V	1.8V	2.5V	3.3V	5V	8V	9.6V	12V	15V	28V	48V		
Full brick	FPS4	800W 700W	Up to 93.5%														28A 25A	
Half brick	HPS4	500W 400W 300W	Up to 94%									80A					18A 10A	
Quarter brick	QPS4	200W 100W	Up to 93.5%	100A 70A	100A	100A 65A	85A 65A	60A	55A	40A	30A		17A	13A			2.5A 2A	
Quarter brick	QBC4 QBE4-W	700W 500W 450W 400W 300W	Up to 95.5%									70A 60A		41.5A 33A			60A 42A 38A 33A 28A	
Quarter brick	QDS4 (Digital)	400W	Up to 95.5%													33A		
Eighth brick	ERS4	140W 100W 75W 50W 40W	Up to 93%	80A 50A 30A	60A	70A 40A 30A 20A	40A 30A	35A 25A		40A 30A 20A 15A	20A 15A 10A				10A 7A 5A	5A	5A 3A	
Eighth brick	EBC4 EBE4-W	360W 250W 200W	Up to 95%									60A	42A 35A		28A 26A		30A 24A 22A 17A	10A*
Sixteenth brick	SRS4	100W 75W 50W	Up to 92.5%									30A 25A 18A	17A 13A 12A 8A	11A		8A 5A 3A	6A 2.5A	
Thirty-second brick	MRS4	40W 25W	Up to 89.2%									10A	8A 5A*			3A		

48VDC Input (40-60V input range)

Size	Series	Power	Efficiency	Output Voltage
				12V
Quarter brick	QBE4	800W 720W 600W	Up to 96.8%	67A 60A 50A
Eighth brick	EBE4	500W	Up to 95.2%	40A



* To be released

Non-Isolated DC-DC Converters

Features

- High efficiency up to 96%
- Wide Input voltage ranges: 2.5-5.5V; 4.5-14V; 8.0-14V; 8.5-16V; 9-36V
- Over-voltage, over-current, short-circuit, and over temperature protection
- Output voltage tracking on selected codes
- Load sharing on selected codes
- Operating ambient temperature: -40 C ~+85 C

Mechanical

- DOSA standard footprint
- SMT and Through-hole packages
- Open frame and baseplate

Safety

- UL 60950-1 2nd

Input Voltage (V)	Series	Output Voltage (V)	Output Current (A)	Package	Size (in)
2.5-5.5	NAT0	0.75-3.63	12-20	SIP	2.00 x 0.50 x 0.25
	NAS0	0.75-3.63	12-20	SMT	1.30 x 0.53 x 0.25
	NBS0	0.75-3.63	8	SMT	1.10 x 0.45 x 0.25
4.5-14	NKS1	0.59-5.5	6-12	SMT	0.48 x 0.48 x 0.35
7.0-14	NRT1	1.2-6	10	SIP	0.42 x 0.66 x 0.38
8.0-14	NHT1	0.5-1.6	100	SMT,SIP, Horizontal TH	2.05 x 1.10 x 0.64
			120*		2.70 x 1.20 x 0.64
8.0-16	NCT1	0.8-5.5	45-60	SIP, Horizontal TH	2.00 x 0.68 x 0.39
8.5-16	NBS1	0.75-5.5	8	SMT	1.10 x 0.45 x 0.25
8.5-18	NAT1	0.75-5.5	12-20	SIP	2.00 x 0.50 x 0.25
	NAS1	0.75-5.5	12-20	SMT	1.30 x 0.53 x 0.25
	NES1	0.75-5.5	16-30	SMT	1.30 x 0.53 x 0.38
9-36	NAT2	3-6	10	SIP	2.00 x 0.50 x 0.25
	NAS2	3-6	10	SMT	1.30 x 0.53 x 0.25
	NBS2	3-6	3.5	SMT	1.10 x 0.45 x 0.25
18-36	NAT3	5-15.5	9	SIP	2.00 x 0.50 x 0.25
	NAS3	5-15.5	9	SMT	1.30 x 0.53 x 0.25
	NBS3	5-15.5	3.5	SMT	1.10 x 0.45 x 0.25

* To be released



EV on-board DC-DC Converters

With many years of experience and thorough understanding of BMP power modules, NetPower now provides customized high density and low profile EV on-board DC-DC converters for electric vehicle market to meet different requirements and standards.

Highlights

- Low voltage and up to 3KW output
- High efficiency up to 94%
- High power density: up to 100W/inch³
- Low profile, space saving
- Advanced CAN2.0B communication

Flexibility

- Customized to fit
- Matching EMI filter
- Open-frame for integration
- Cased for stand alone



Customized Products

Power Range (KW)	Input Voltage (V)	Output Voltage (V)	Output Current (A)	Communication
1-1.5	200-430; 400-700	12-16	83-100	CAN2.0
1.5-2	200-430; 400-700	12-16	125-170	CAN2.0
2-3	200-430; 400-700	12-16	166-208	CAN2.0
2-3	200-430; 400-700	24-32	72-108	CAN2.0