

A man and a woman in business attire are looking at a laptop in a server room. The man is on the left, pointing at the screen, and the woman is on the right, holding the laptop. They are both wearing blue lanyards. The background shows server racks and a blue-tinted environment with digital graphics.

flex®

# Power Modules

Selection Guide

3<sup>rd</sup>/ 4<sup>th</sup> Quarter, 2020



# Powering your innovation

## About Flex

Flex is the Sketch-to-Scale® solutions provider that designs and builds Intelligent Products for a Connected World™. With more than 200,000 professionals across 30 countries, in over 100 locations around the globe, Flex provides innovative design, engineering, manufacturing, real-time supply chain insight and logistics services.

## Flex Power Modules

Power Modules (formerly Ericsson Power Modules) is a subsidiary of Flex that predominantly designs and manufactures board-mounted DC/DC conversion products. While many of our products are designed for use in Information and Communication Technology (ICT) applications, during the last few years we have also extended our product portfolio to serve other demanding applications within the Industrial and Transportation markets.

We are headquartered in Stockholm, Sweden, and have design centers in Kalmar, Sweden, and Shanghai, China. Manufacturing is also carried out in our factory in Shanghai. The emphasis is on quality and highly automated production, making the company one of the largest volume manufacturers in the power modules industry, having delivered more than 100 million modules to the world-wide market.

In order to support our customers globally we have a network of technical sales people and field application engineers covering the Americas, Asia Pacific, Europe, Middle East and Africa. We also work with an extensive network of channel partners and representatives offering local support for all our customers.

## About our products

With more than 40 years of experience and with over 145 registered patents in the area of power solutions, we have achieved many industry innovations in the areas of Distributed Power Architectures, Intermediate Bus Architectures and most recently, Direct Conversion technology, converting directly from 48V to silicon core voltages as low as 0.5V. Our products can be summarized as follows, which is also the way this Selection Guide is structured:

- » Isolated DC/DC converters from 1W to 1300W (both digital and analog)
- » Non-Isolated Point-of-Load regulators from 2A to 120A (both digital and analog)
- » 48V to Load Direct conversion products
- » Power Interface Modules (PIM), ATCA compliant
- » Application Specific Products (Industrial, RFPA)
- » Software: Flex Power Designer Software and SMBus Tool
- » Evaluation boards and accessories

Every product design is the result of extensive research and development in power technology, with a broad application and system knowledge and a focus on design for environment and design for manufacturing.

The result is:

- » High efficiency over a wide load range
- » High power density
- » Efficient thermal management
- » Low total cost of ownership over product lifetime
- » Excellent dynamic load performance
- » High MTBF and long lifetime

Let us help you to be successful in your business by choosing an innovative power solution.

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# Isolated DC/DC Converters

Our offering of isolated DC/DC converters are designed to support various markets including ICT, Industrial and Transportation/Railway. We also offer a class-leading range of digital DC/DC converters that incorporate a PMBus compliant interface to complement the digital PoL (Point of Loads) on offer.

## ISOLATED DC/DC CONVERTERS – DIGITAL Eighth Brick

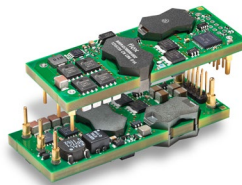


Product examples:

BMR 457 with baseplate



BMR 457



BMR 454



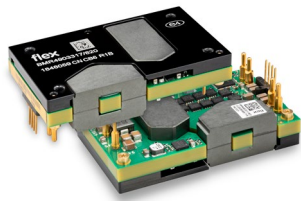
### Isolated DC/DC Converters: Eighth Brick Digital

$V_{out}$ (V)	$V_{in}$ (V)	$V_{out\ adjust}$ (V)	$I_{out}$ (A)	$P_{out}$ (W)	$\eta$ (%)	Dimensions (L x W x H)	Product Reference
3.3	36-75	3.0-6.7	40	132	93.2	58.4 x 22.7 x 10.2 mm; 2.3 x 0.89 x 0.4 in.	BMR4540002/003
5	36-75	3.0-6.7	38	190	94.5	58.4 x 22.7 x 10.2 mm; 2.3 x 0.89 x 0.4 in.	BMR4540002/004
12	36-75	6.9-13.2	22	251	95.2	58.4 x 22.7 x 10.2 mm; 2.3 x 0.89 x 0.4 in.	BMR4570007/013
	36-75	6.9-13.2	22	264	95.2	58.4 x 22.7 x 10.2 mm; 2.3 x 0.89 x 0.4 in.	BMR4570004/001
	40-60	6.9-13.2	25	285	95.1	58.4 x 22.7 x 10.2 mm; 2.3 x 0.89 x 0.4 in.	BMR4570011/016
	40-60	6.9-13.2	25	300	95.1	58.4 x 22.7 x 10.2 mm; 2.3 x 0.89 x 0.4 in.	BMR4570000/002
12.45	36-75	6.9-13.2	22	261	95.2	58.4 x 22.7 x 10.2 mm; 2.3 x 0.89 x 0.4 in.	BMR4570007/014
	40-60	6.9-13.2	25	296	95.1	58.4 x 22.7 x 10.2 mm; 2.3 x 0.89 x 0.4 in.	BMR4570011/017

Optional baseplated versions are available for all devices.

Product examples:

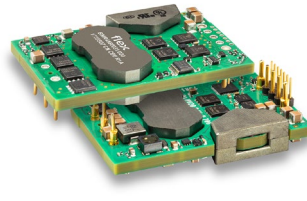
BMR 490



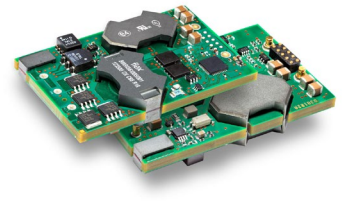
BMR 480



BMR 458



BMR 456



Isolated DC/DC Converters: Quarter Brick Digital

V <sub>out</sub> (V)	V <sub>in</sub> (V)	V <sub>out adjust</sub> (V)	I <sub>out</sub> (A)	P <sub>out</sub> (W)	η (%)	Dimensions (L x W x H)	Product Reference
3.3	36-75	3.0-6.7	60.0	198	94.9	57.9 x 36.8 x 11.6 mm; 2.28 x 1.45 x 0.46 in.	BMR4530002/003
5	36-75	3.0-6.7	60.0	300	96.1	57.9 x 36.8 x 11.6 mm; 2.28 x 1.45 x 0.46 in.	BMR4530002/004
9	36-75	4.0-13.2	35.0	315	95.3	57.9 x 36.8 x 11.3 mm; 2.28 x 1.45 x 0.45 in.	BMR4560004/004
	36-60	4.0-13.2	39.0	351	95.9	57.9 x 36.8 x 11.3 mm; 2.28 x 1.45 x 0.45 in.	BMR4560000/003
10.4	40-60	N/A	96.2	1000	97.3	58.4 x 36.8 x 14.5 mm; 2.3 x 1.45 x 0.57 in.	BMR4801104/003
	45-56	N/A	96.2	1000	97.3	58.4 x 36.8 x 14.5 mm; 2.3 x 1.45 x 0.57 in.	BMR480 0100/001
12	36-75	4.0-13.2	35.0	400	96.4	57.9 x 36.8 x 11.3 mm; 2.28 x 1.45 x 0.45 in.	BMR4560007/013
	36-75	4.0-13.2	35.0	420	96.4	57.9 x 36.8 x 11.3 mm; 2.28 x 1.45 x 0.45 in.	BMR4560004/001
	36-75	4.0-13.2	35.0	420	96.4	57.9 x 36.8 x 11.3 mm; 2.28 x 1.45 x 0.45 in.	BMR4560004/018
	40-60	4.0-13.2	39.0	445	96.8	57.9 x 36.8 x 11.3 mm; 2.28 x 1.45 x 0.45 in.	BMR4560011/016
	40-60	4.0-13.2	39.0	468	96.8	57.9 x 36.8 x 11.3 mm; 2.28 x 1.45 x 0.45 in.	BMR4560000/002
	36-75	8.0-13.2	50.0	600	96.4	57.9 x 36.8 x 11.2 mm; 2.28 x 1.45 x 0.44 in.	BMR4580002/003
	36-75	8.0-13.2	50.0	600	96.4	58.4 x 36.8 x 11.2 mm; 2.3 x 1.45 x 0.45 in.	BMR4580032/003*
	40-60	8.0-13.2	54.2	650	96.6	57.9 x 36.8 x 11.2 mm; 2.28 x 1.45 x 0.44 in.	BMR4580011/002
	40-60	8.0-13.2	54.2	650	96.6	58.4 x 36.8 x 11.2 mm; 2.3 x 1.45 x 0.45 in.	BMR4580030/004*
	36-60	N/A	69.0	800	96.4	58.4 x 36.8 x 14.5 mm; 2.3 x 1.45 x 0.57 in.	BMR4800113/034
	40-60	N/A	75.0	900	97.3	58.4 x 36.8 x 14.5 mm; 2.3 x 1.45 x 0.57 in.	BMR4800102/002
	45-60	N/A	108.3	1300	97.3	58.4 x 36.8 x 14.5 mm; 2.3 x 1.45 x 0.57 in.	BMR4801106/xxx
12.45	36-75	4.0-13.2	35.0	415	96.4	57.9 x 36.8 x 11.3 mm; 2.28 x 1.45 x 0.45 in.	BMR4560007/014
	40-60	4.0-13.2	39.0	462	96.8	57.9 x 36.8 x 11.3 mm; 2.28 x 1.45 x 0.45 in.	BMR4560011/017
	36-75	8.0-13.2	50.0	600	96.4	57.9 x 36.8 x 11.2 mm; 2.28 x 1.45 x 0.45 in.	BMR4580002/014
	36-75	8.0-13.2	50.0	600	96.4	58.4 x 36.8 x 11.2 mm; 2.3 x 1.45 x 0.45 in.	BMR4580032/014*
	36-75	8.0-13.2	50.0	615	96.4	57.9 x 36.8 x 11.2 mm; 2.28 x 1.45 x 0.45 in.	BMR4580002/031*
	40-60	8.0-13.2	54.2	650	96.6	57.9 x 36.8 x 11.2 mm; 2.28 x 1.45 x 0.45 in.	BMR4580011/017
	40-60	8.0-13.2	54.2	665	96.6	57.9 x 36.8 x 11.2 mm; 2.28 x 1.45 x 0.45 in.	BMR4580011/032
	40-60	8.0-13.2	54.2	650	96.6	57.9 x 36.8 x 11.2 mm; 2.28 x 1.45 x 0.45 in.	BMR4580020/018
40-60	8.0-13.2	54.2	650	96.6	58.4 x 36.8 x 11.2 mm; 2.3 x 1.45 x 0.45 in.	BMR4580030/020*	

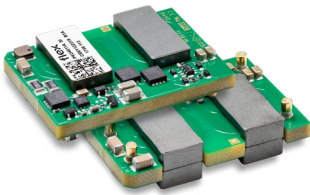
\* Alternative digital pinout  
Optional baseplated versions are available for all devices.

# ISOLATED DC/DC CONVERTERS – ANALOG

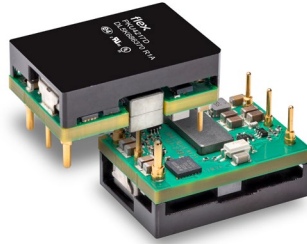
## Sixteenth Brick

Product examples:

PKU-A



PKU-D



PKU-E



### Isolated DC/DC Converters: Sixteenth Brick Analog

$V_{out}$ (V)	$V_{in}$ (V)	$V_{out,adjust}$ (V)	$I_{out}$ (A)	$P_{out}$ (W)	$\eta$ (%)	Dimensions (L x W x H)	Product Reference
3.3	18-75	3.0-3.7	15.0	50	92	33 x 22.9 x 9.4 mm; 1.3 x 0.9 x 0.37 in.	PKU5510E
	36-75	2.6-3.6	20.0	66	92	33 x 22.9 x 9.4 mm; 1.3 x 0.9 x 0.37 in.	PKU4610E
	36-75	2.6-3.7	30.3	110	93.7	33 x 22.9 x 11.3 mm; 1.3 x 0.9 x 0.44 in.	PKU4110D
5	18-75	4.5-5.5	10.0	50	92	33 x 22.9 x 9.4 mm; 1.3 x 0.9 x 0.37 in.	PKU5511E
	36-60	5.0-6.0	12.0	60	94	33 x 22.9 x 8.4 mm; 1.3 x 0.9 x 0.33 in.	PKU4611A
	36-60	4.5-5.5	15.8	71.5	93	33 x 22.9 x 8.2 mm// 1.3 x 0.9 x 0.32 in	PKU4717YA
	36-75	4.0-5.5	27.0	150	93.6	33 x 22.9 x 11.30 mm; 1.3 x 0.9 x 0.44 in.	PKU4111D
5.5	18-60	5.0-6.0	9.0	50	92	33 x 22.9 x 9.4 mm; 1.3 x 0.9 x 0.37 in.	PKU4517VE
	36-60	5.5-6.5	12.7	70	94.3	33x 22.9 x 8.2 mm// 1.3 x 0.9 x 0.32 in	PKU4716VA
6	28-60	5.5-6.5	8.5	50	90.7	33 x 22.9 x 9.4 mm; 1.3 x 0.9 x 0.37 in.	PKU5517VE
	36-60	6.0-7.0	10.0	60	94	33 x 22.9 x 8.4 mm; 1.3 x 0.9 x 0.33 in.	PKU4617VA
6.5	36-75	5.2-7.2	10.0	65	89.8	33 x 22.9 x 9.4 mm; 1.3 x 0.9 x 0.37 in.	PKU4717E
10.4	36-60	9.36-10.92	25.0	260	96.1	33x 22.9 x 11.3 mm // 1.3 x 0.9 x 0.44 in	PKU4217D
12	36-65	N/A	5.8	70	94	33x 22.9 x 8.2 mm// 1.3 x 0.9 x 0.32 in	PKU4713A
	36-75	9.6-13.2	7.0	84	90.6	33 x 22.9 x 9.6 mm; 1.3 x 0.9 x 0.38 in.	PKU4813C
	36-75	9.6-13.2	10.0	120	95.5	33 x 22.9 x 11.30 mm; 1.3 x 0.9 x 0.44 in.	PKU4113D
	36-75	9.6-13.2	17.0	204	95	33x 22.9 x 11.30 mm; 1.3 x 0.9 x 0.44 in.	PKU4213D
15	36-75	12.0-16.5	5.7	86	91.6	33x 22.9 x 9.6 mm; 1.3 x 0.9 x 0.38 in.	PKU4815C
24	28-60	19.2-26.4	1.8	43	91.7	33x 22.9 x 9.6 mm; 1.3 x 0.9 x 0.38 in.	PKU4416Z
24/28/30	36-75	10-33	3.3	79.2	92.9	33x 22.9 x 9.6 mm // 1.3 x 0.9 x 0.38 in	PKU4116C*

\* Default voltage = 30V

# ISOLATED DC/DC CONVERTERS – ANALOG

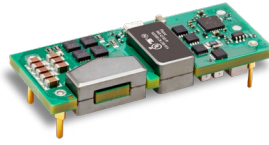
## Eighth Brick

Product examples:

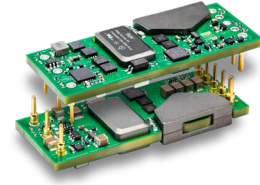
PKB-D with baseplate



PKB-D



PKB-C



### Isolated DC/DC Converters: Eighth Brick Analog

$V_{out}$ (V)	$V_{in}$ (V)	$V_{out\_adjust}$ (V)	$I_{out}$ (A)	$P_{out}$ (W)	$\eta$ (%)	Dimensions (L x W x H)	Product Reference
1	36-75	0.8-1.1	50.0	50	87.2	58.4 x 22.7 x 8.5 mm; 2.3 x 0.9 x 0.34 in.	PKB4518NC
1.2	36-75	1.0-1.3	60.0	72	87.5	58.4 x 22.7 x 8.5 mm; 2.3 x 0.9 x 0.34 in.	PKB4718LC
1.5	36-75	1.2-1.7	60.0	90	88	58.4 x 22.7 x 8.5 mm; 2.3 x 0.90 x 0.34 in.	PKB4918HC
1.8	36-75	1.4-2.0	60.0	108	89	58.4 x 22.7 x 8.5 mm; 2.3 x 0.90 x 0.34 in.	PKB4118GC
3.3	36-75	2.6-3.6	40.0	132	91	58.4 x 22.7 x 8.5 mm; 2.3 x 0.9 x 0.34 in.	PKB4110C
	36-75	2.6-3.6	40.0	132	94.7	58.4 x 22.7 x 9.6 mm; 2.3 x 0.89 x 0.38 in.	PKB4110D
	36-75	2.6-3.6	62.0	205	95.4	58.4 x 22.7 x 13.2 mm; 2.3 x 0.9 x 0.52 in.	PKB4210DA
5	36-75	4.0-5.5	28.0	140	92	58.4 x 22.7 x 8.5 mm; 2.3 x 0.90 x 0.34 in.	PKB4111C
	36-75	4.0-5.5	30.0	150	94.5	58.4 x 22.7 x 9.6 mm; 2.3 x 0.89 x 0.38 in.	PKB4111D
	36-75	4.0-5.5	40.0	200	95.3	58.4 x 22.7 x 9.6 mm; 2.3 x 0.89 x 0.38 in.	PKB4211D
	36-75	4.0-5.5	52.0	260	95.5	58.4 x 22.7 x 13.2 mm; 2.3 x 0.9 x 0.52 in.	PKB4211DA
10	36-75	N/A	25.0	250	95.7	58.4 x 22.7 x 9.6 mm; 2.3 x 0.89 x 0.38 in.	PKB4217ND
12	36-75	9.6-13.2	12.0	144	92.5	58.4 x 22.7 x 8.5 mm; 2.3 x 0.89 x 0.34 in.	PKB4113C
	18-36	11.6-12.4	20.0	240	95.5	58.4 x 22.7 x 9.6 mm; 2.3 x 0.89 x 0.38 in.	PKB2213D
	40-75	N/A	20.0	240	95.5	58.42 x 22.76 x 8.10 mm; 2.3 x 0.90 x 0.32 in.	PKB4204
	36-75	N/A	22.0	264	95.4	58.4 x 22.7 x 9.6 mm; 2.3 x 0.89 x 0.38 in.	PKB4213D
	36-75	N/A	25.0	300	96.2	58.4 x 22.7 x 9.6 mm; 2.3 x 0.89 x 0.38 in.	PKB4313D
	36-75	N/A	32.5	390	95.6	58.4 x 22.7 x 9.6 mm; 2.3 x 0.89 x 0.38 in.	PKB4313DA
	36-75	N/A	34.0	408	96.2	58.4 x 22.7 x 9.6 mm; 2.3 x 0.89 x 0.38 in.	PKB4413DA
	36-60	N/A	37.5	450	96.2	58.4 x 22.7 x 9.6 mm; 2.3 x 0.89 x 0.38 in.	PKB4413D
24/28/30	36-75	15.0-33.0	6.7	200	95	58.4 x 22.7 x 8.5 mm; 2.3 x 0.90 x 0.34 in.	PKB4216C*
48/50	36-60	40.0-55.0	5.0	250	94.5	58.4 x 22.7 x 13.2 mm; 2.3 x 0.89 x 0.52 in.	PKB4216HDPIHS

\* Default voltage = 30V

## ISOLATED DC/DC CONVERTERS – ANALOG

### Quarter Brick

Product examples:

PKM-NH



PKM-NH with baseplate



PKM-AD



### Isolated DC/DC Converters: Quarter Brick Analog

$V_{out}$ (V)	$V_{in}$ (V)	$V_{out}$ adjust (V)	$I_{out}$ (A)	$P_{out}$ (W)	$\eta$ (%)	Dimensions (L x W x H)	Product Reference
10.8	40-60	N/A	70.0	750	97	57.9 x 36.8 x 11.4 mm; 2.28 x 1.45 x 0.45 in.	PKM4717BNH
	40-60	N/A	70.0	756	97	57.9 x 36.8 x 11.4 mm; 2.28 x 1.45 x 0.45 in.	PKM4717NH
	40-60	N/A	80.0	864	97	57.9 x 36.8 x 11.4 mm; 2.28 x 1.45 x 0.45 in.	PKM4817NHPIHS
11	45-60	N/A	80.0	800	97	57.9 x 36.8 x 11.4 mm; 2.28 x 1.45 x 0.45 in.	PKM4817LNH
11.6	36-75	N/A	50.0	580	96	57.9 x 36.8 x 11.4 mm; 2.28 x 1.45 x 0.45 in.	PKM4613ANH
12	40-75	N/A	33.0	396	96.6	57.9 x 36.8 x 11.6 mm; 2.28 x 1.45 x 0.46 in.	PKM4304
	36-75	N/A	50.0	600	96.2	57.9 x 36.8 x 11.4 mm; 2.28 x 1.45 x 0.45 in.	PKM4613NH
	40-60	N/A	58.3	700	96.5	57.9 x 36.8 x 11.4 mm; 2.28 x 1.45 x 0.45 in.	PKM4713NH
28/30	36-75	14.0-35.0	18.0	500	95.5	58.4 x 36.8 x 12.7 mm; 2.3 x 1.45 x 0.50 in.	PKM4516AD
48/50	36-75	25.0-55.0	10.0	500	95.1	58.4 x 36.8 x 12.7 mm; 2.3 x 1.45 x 0.50 in.	PKM4516HD

### Half Brick

Product example:

PKJ



### Isolated DC/DC Converters: Half Brick Analog

$V_{out}$ (V)	$V_{in}$ (V)	$V_{out}$ adjust (V)	$I_{out}$ (A)	$P_{out}$ (W)	$\eta$ (%)	Dimensions (L x W x H)	Product Reference
28/30	36-75	14-35	25.0	700	96.2	61.0 x 57.9 x 12.7 mm; 2.4 x 2.23 x 0.5 in.	PKJ4716A
48/50	36-75	25-55	14.0	700	95.8	61.0 x 57.9 x 12.7 mm; 2.4 x 2.23 x 0.5 in.	PKJ4716H

# Non-isolated DC/DC Converters

Our non-isolated digital converters aimed at ICT applications.

## NON-ISOLATED DC/DC CONVERTERS – DIGITAL Quarter Brick

BMR490



### Non-isolated DC/DC Converters – Digital

$V_{out}$ (V)	$V_{in}$ (V)	$V_{out\ adjust}$ (V)	$I_{out}$ (A)	$P_{out}$ (W)	$\eta$ (%)	Dimensions (L x W x H)	Product Reference
12	40-60	N/A	139	1300	97.7	58.4 x 36.8 x 14.5 mm; 2.3 x 1.45 x 0.57 in.	BMR4903317/820
	40-60	N/A	139	1300	97.7	58.4 x 36.8 x 14.5 mm; 2.3 x 1.45 x 0.57 in.	BMR4904318/033*

\* Active current sharing

# 48V to Load Direct Conversion

Solutions for converting directly from 48V to the core voltages required by the most demanding FPGAs, ASICs, DSPs, CPUs, GPUs and Memories.

Product examples:

BMR481: Main unit

BMR481: Satellite unit



### Direct Conversion

$V_{out}$ (V)	$V_{in}$ (V)	$V_{out\ min}$ (V)	$V_{out\ max}$ (V)	$I_{out\ max}$ (A)	$P_{out}$ (W)	$\eta$ %	Dimensions (L x W x H)	Product Reference
1	40-60	0.5	1.4	70	70	91.6	27.7 x 12.0 x 14.0 mm; 1.1 x 0.47 x 0.55 in.	BMR4810021/002*
1	40-60	0.5	1.4	70	70	92	27.7 x 12.0 x 12.6 mm; 1.1 x 0.47 x 0.5 in.	BMR4810022**

\* Main unit \*\* Satellite unit

Note: One Main unit controls up to 5 Satellite units or up to 6 multi-phase

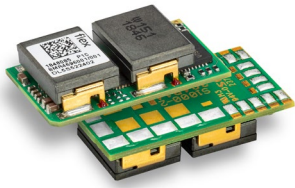
# Point of Load (PoL)

Our Point of Load (PoL) devices are non-isolated DC/DC converters and are available in multiple industry standard footprints including DOSA & POLA for analog solutions, and AMP for digital solutions offering a PMBus interface for easy monitoring, configuration and control, including support from the “Flex Power Designer” engineering design tool.

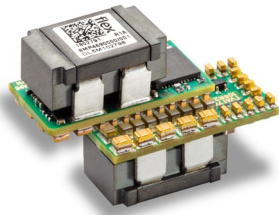
## Point of Load - Digital

Product examples:

BMR 4696001



BMR 4690001



BMR 466



BMR 461



### Point of Load (PoL): Digital

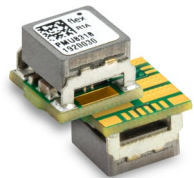
$I_{out}$ (A)	$V_{in}$ (V)	$V_{out}$ adjust (V)	$P_{out}$ (W)	$\eta$ (%)	Dimensions (L x W x H)	Product Reference
6	4.5-14	0.6-5.0	30	95.8	12.2 x 12.2 x 8.0 mm; 0.48 x 0.48 x 0.32 in.	BMR4612x01
12	4.5-14	0.6-5.0	60	96	12.2 x 12.2 x 8.0 mm; 0.48 x 0.48 x 0.32 in.	BMR4613x01
	4.5-14	0.6-5.0	60	97.1	Laydown: 21 x 12.7 x 8.2 mm; 0.83 x 0.5 x 0.32 in. SIP: 20.8 x 7.6 x 15.6 mm; 0.82 x 0.3 x 0.612 in.	BMR462
15	4.5-14	0.6-3.3	50	94.6	12.2 x 12.2 x 8.0 mm; 0.48 x 0.48 x 0.32 in.	BMR4615x01
18	4.5-14	0.6-1.8	36	91.6	12.2 x 12.2 x 8.0 mm; 0.48 x 0.48 x 0.32 in.	BMR4614x01
20	4.5-14	0.6-3.3	66	97.1	Laydown: 26.65 x 13.8 x 8.2 mm; 1.01 x 0.54 x 0.32 in. SIP: 26.3 x 7.6 x 15.6 mm; 1.035 x 0.30 x 0.61 in.	BMR463x002, BMR463x006
25	4.5-14	0.6-3.3	83	97.1	Laydown: 26.65 x 13.8 x 8.2 mm; 1.01 x 0.543 x 0.32 in. SIP: 26.3 x 7.6 x 15.6 mm; 1.035 x 0.30 x 0.614 in.	BMR463x008
	7.5-14	0.6-5.0 (dual)	100	94.3	25.4 x 14.5 x 5.8 mm; 1.00 x 0.57 x 0.23 in.	BMR4696001*
40	4.5-14	0.6-3.3	132	97.2	Laydown: 30.85 x 20.0 x 8.2 mm; 1.215 x 0.787 x 0.32 in. SIP: 33.0 x 7.6 x 18.1 mm; 1.30 x 0.30 x 0.713 in.	BMR464x002
	7.5-14	0.6-5.0 (dual)	200	92.6	25.4 x 12.7 x 11.6 mm; 1.00 x 0.50 x 0.46 in.	BMR4690000**
50	4.5-14	0.6-3.3	165	97.2	Laydown: 30.85 x 20.0 x 8.2 mm; 1.215 x 0.79 x 0.32 in. SIP: 33.0 x 7.6 x 18.1 mm; 1.30 x 0.30 x 0.71 in.	BMR464x008, BMR464x012
	7.5-14	0.6-5.0	100	94.3	25.4 x 14.5 x 5.8 mm; 1.00 x 0.57 x 0.23 in.	BMR4696001***
60	4.5-14	0.6-1.8	108	93.6	25 x 14 x 7.0 mm; 0.98 x 0.55 x 0.28 in.	BMR4668x04 (DLC)
	4.5-14	0.6-1.8	108	93.6	25 x 14 x 7.0 mm; 0.98 x 0.55 x 0.28 in.	BMR4668x12
80	7.5-14	0.6-5.0	200	92.6	25.4 x 12.7 x 11.6 mm; 1.00 x 0.50 x 0.46 in.	BMR4690000****
90	7.5-14	0.6-1.8	162	94.3	Laydown: 50.8 x 19.05 x 10.0 mm; 2.0 x 0.75 x 0.39 in. SIP: 50.8 x 9.51 x 19.05 mm; 2.0 x 0.37 x 0.75 in.	BMR465x010
120	7.5-14	0.6-1.8	216	93.2	Laydown: 50.8 x 19.05 x 10.4 mm; 2.0 x 0.75 x 0.41 in. SIP: 50.8 x 8.2 x 19.05 mm; 2.0 x 0.32 x 0.75 in.	BMR467x010

\*Configured as dual output 2x 25A \*\*Configured as dual output 2x 40A \*\*\*Configured as single output 50A \*\*\*\*Configured as single output 80A  
DLC= Dynamic Loop Compensation

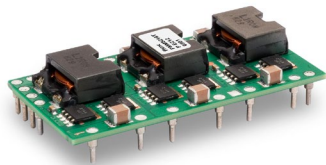
## Point of Load - Analog

Product examples:

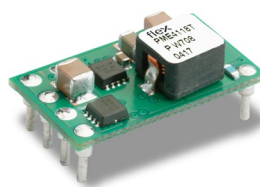
PMU



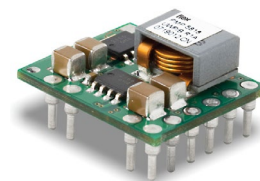
PMM



PME



PMP



### Point of Load (PoL): Analog

$I_{out}$ (A)	$V_{in}$ (V)	$V_{out}$ adjust (V)	$P_{out}$ (W)	$\eta$ (%)	Dimensions (L x W x H)	Product Reference
4	4.5-17	0.6-5.5	22	93.1	7.5 x 7.5 x 5.4 mm; 0.29 x 0.29 x 0.21 in.	PMU8218
6	3.05-3.7	0.8-2.5	15	94.7	22.1 x 12.6 x 8.5 mm; 0.87 x 0.5 x 0.36 in.	PME4118T
	4.5-5.5	0.8-3.6	22	94.8	22.1 x 12.6 x 8.5 mm; 0.87 x 0.5 x 0.36 in.	PME5218T
	10.8-13.2	0.6-1.8	11	84	22.1 x 12.6 x 8.5 mm; 0.87 x 0.5 x 0.36 in.	PME8118V
	10.8-13.2	0.8-1.8	11	87.3	22.1 x 12.6 x 8.5 mm; 0.87 x 0.5 x 0.36 in.	PME8118T
	10.8-13.2	1.2-5.5	33	89.2	22.1 x 12.6 x 8.5 mm; 0.87 x 0.5 x 0.36 in.	PME8318L
	4.5-14	0.8-5.5	30	95.1	12.2 x 12.2 x 7.2 mm; 0.48 x 0.48 x 0.28 in.	PMT8318VS
	4.5-17	0.6-5.5	33	92.7	7.5 x 7.5 x 5.4 mm; 0.29 x 0.29 x 0.21 in.	PMU8318
8	4.5-17	0.6-5.5	44	91.9	7.5 x 7.5 x 5.4 mm; 0.29 x 0.29 x 0.21 in.	PMU8418
10	3.0-3.7	0.8-2.5	25	94.1	25.3 x 15.6 x 9.0 mm; 1.0 x 0.62 x 0.35 in.	PMF4218T
	10.8-13.2	0.8-1.8	18	89.5	25.3 x 15.8 x 9.0 mm; 1.0 x 0.62 x 0.35 in.	PMF8118T
	10.8-13.2	1.2-5.5	55	93.1	25.3 x 15.8 x 9.0 mm; 1.0 x 0.62 x 0.35 in.	PMF8518L
15	3.05-3.7	0.8-2.5	38	94.5	34.8 x 15.8 x 9.0 mm; 1.37 x 0.62 x 0.35 in.	PMG4318T
	4.5-5.5	0.8-3.6	54	95.4	34.8 x 15.8 x 9.0 mm; 1.37 x 0.62 x 0.35 in.	PMG5518T
16	4.5-14.0	0.7-5.5	88	96	22.1 x 19.0 x 8.5 mm; 0.87 x 0.75 x 0.34 in.	PMP5818UW
22	3.0-3.7	0.8-2.5	55	93.8	38.0 x 22.1 x 9.0 mm; 1.50 x 0.87 x 0.35 in.	PMH4518T
	4.5-5.5	0.8-3.6	79	95.6	38.0 x 22.1 x 9.0 mm; 1.50 x 0.87 x 0.35 in.	PMH5718T
26	10.8-13.2	1.2-5.5	143	92.2	34.8 x 28.5 x 9.0 mm; 1.37 x 1.12 x 0.35 in.	PMJ8118L
30	3.0-3.7	0.8-2.5	75	94.5	34.8 x 28.5 x 9.0 mm; 1.37 x 1.12 x 0.35 in.	PMJ4718T
	4.5-5.5	0.8-3.6	108	95.5	34.8 x 28.5 x 9.0 mm; 1.37 x 1.12 x 0.35 in.	PMJ5918T
	4.5-5.5	0.7-3.6	108	96	34.8 x 15.8 x 8.5 mm; 1.37 x 0.62 x 0.34 in.	PMN5118U
	5.5-14.0	0.7-3.6	108	96	34.8 x 15.8 x 8.5 mm; 1.37 x 0.62 x 0.34 in.	PMN8118UW
50	8-14.0	0.8-5.5	275	94.3	52.0 x 26.6 x 9.6 mm; 2.05 x 1.05 x 0.38 in.	PMM8218T
	4.5-14.0	0.7-3.6	180	96	38.6 x 25.9 x 10.2 mm; 1.52 x 1.02 x 0.40 in.	PMR5118UW
60	3.0-5.5	0.8-2.5	150.0	94	51.9 x 26.5 x 9.8 mm; 2.05 x 1.05 x 0.39 in.	PMM4218T

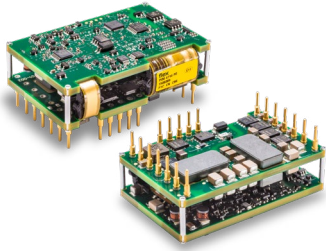
# Power Interface Modules (PIM)

Our range of Power Interface Modules (PIM) simplify the design in blade servers based on AdvancedTCA standards and other applications. Offering features such as EMI filtering, hot-swap, dual feed OR-ing, hold-up management, reverse polarity protection and auxiliary power management rails, the PIM can be used for any industrial or ICT application employing a Distributed Power Architecture.

## PIM

Product examples:

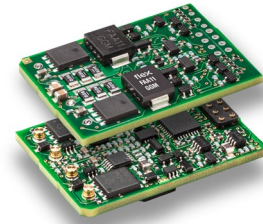
PIM 4710



PIM 4328



PIM 4106



## Power Interface Modules

$I_{out}$ (A)	$V_{in}$ (V)	$V_{out 1}$ (V)	$V_{out 2}$ (V)	$I_{out 2}$ (A)	$V_{out 3}$ (V)	$I_{out 3}$ (A)	$I_{out 4}$ (A)	$P_{out}$ (W)	$\eta$ %	Dimensions (L x W x H)	Product Reference
2.6	36-60	Vin	-	-	-	-	-	100	99.5	33.0 x 22.9 x 8.0 mm; 1.3 x 0.9 x 0.32 in.	PIM4106
5.1	36-60	Vin	-	-	-	-	-	200	99.5	33.0 x 22.9 x 8.0 mm; 1.3 x 0.9 x 0.32 in.	PIM4206
7.7	36-60	Vin	-	-	-	-	-	300	99.5	33.0 x 22.9 x 8.0 mm; 1.3 x 0.9 x 0.32 in.	PIM4306
10.3	36-60	Vin	-	-	-	-	-	400	99.5	33.0 x 22.9 x 8.0 mm; 1.3 x 0.9 x 0.32 in.	PIM4406
10-12	36-75	Vin	3.6	3.3	0.15	5	0.2	390-540	99	57.9 x 36.8 x 13.7 mm; 2.28 x 1.45 x 0.59 in.	PIM4328PD/PDA*
16.5-20	36-75	Vin	5	0.9-7	-	-	-	960-1080	99.2	57.9 x 36.8 x 13.7 mm; 2.28 x 1.45 x 0.59 in.	PIM4820B
16	36-75	Vin	3.6-7	3.3	-	-	-	780-1080	98.9	57.9 x 36.8 x 13.7 mm; 2.28 x 1.45 x 0.59 in.	PIM4610*
20	36-75	Vin	3.6-7	3.3	-	-	-	780-1080	98.8	57.9 x 36.8 x 13.7 mm; 2.28 x 1.45 x 0.59 in.	PIM4710*

\*ATCA compliant

# Application Specific Products

We have a long history of serving the ICT industry with our traditional telecom products, but we also offer specific devices that ideally suit the Data Center and RFPAs sections of that industry. We are extending our product portfolio to cover other alternate markets, including devices specifically focused on Industrial and Railway/Transportation applications. All our railway products comply with the EN50155 standard.

## Radio Frequency Power Amplifier

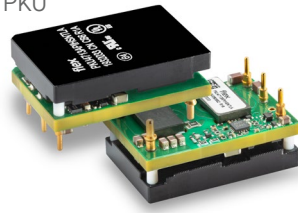
We have a wide offering of DC-DC converters aimed at Radio Frequency Power Amplifier (RFPAs and microwave) applications in the telecom market segment. They are particularly designed for the 5G rollout which is accelerating in the world.

Product examples:

PKM-D



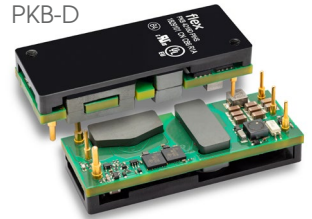
PKU



PKJ



PKB-D



Application specific products: RFPAs

$V_{out}$ (V)	$V_{in}$ (V)	$V_{out,adjust}$ (V)	$I_{out}$ (A)	$P_{out}$ (W)	$\eta$ %	Dimensions (L x W x H)	Product Reference
12	36-65	NA	5.83	70	94.0	33.0 x 22.86 x 8.2 mm; 1.3 x 0.9 x 0.32 in.	PKU4713A
24	28-60	19.2-26.4	1.8	43	91.7	33.0 x 22.9 x 9.6 mm; 1.3 x 0.9 x 0.38 in.	PKU4416Z
24/28/30	36-75	10.0-33.0	3.3	100	92.9	33.0 x 22.9 x 9.6 mm; 1.3 x 0.9 x 0.38 in.	PKU4116C*
		15.0-33.0	6.7	200	95	58.4 x 22.7 x 8.5 mm; 2.3 x 0.9 x 0.34 in.	PKB4216C*
		14.0-35.0	18.0	504	95.5	58.4 x 36.8 x 12.7 mm; 2.3 x 1.45 x 0.5 in.	PKM4516AD
		14.0-35.0	25.0	700	96.2	61.0 x 57.9 x 12.7 mm; 2.4 x 2.23 x 0.5 in.	PKJ4716A
48/50	36-60	40.0-55.0	5.0	250	94.5	58.4 x 22.7 x 13.2 mm; 2.3 x 0.89 x 0.52 in.	PKB4216HDPIHS
		25.0-55.0	10.0	500	95.1	58.4 x 36.8 x 12.7 mm; 2.3 x 1.45 x 0.5 in.	PKM4516HD
		25.0-55.0	14.0	700	95.8	61.0 x 57.9 x 12.7 mm; 2.4 x 2.23 x 0.5 in.	PKJ4716H

\*Default output voltage = 30V

BMR683 | **NEW**



Application specific products: RFPAs digital

$V_{out}$ (V)	$V_{in}$ (V)	$V_{out,adjust}$ (V)	$I_{out}$ (A)	$P_{out}$ (W)	$\eta$ %	Dimensions (L x W x H)	Product Reference
28 <b>NEW</b>	36-60	18-32	17.9	500	95.2	58.4 x 36.8 x 12.7 mm; 2.3 x 1.45 x 0.5 in.	BMR683

# Industrial and Railway

Product examples:

PKM-W | **NEW**

PKE

PKE-A



## Application Specific Products: Industrial and Railway

$V_{out1}$ (V)	$V_{in}$ (V)	$I_{out1}$ (A)	$V_{out2}$ (V)	$I_{out2}$ (A)	$P_{out}$ (W)	$\eta$ %	Dimensions (L x W x H)	Product Reference
<b>NEW</b> 3.3	18-36	2.0	-	-	7	82	47.8 x 28.1 x 8.0 mm; 1.88 x 1.11 x 0.32 in.	PKR2610A
	36-75	3.0	-	-	10	80	47.8 x 28.1 x 8.0 mm; 1.88 x 1.11 x 0.32 in.	PKR4910A
	9-36	4.5	-	-	15	88.2	25.4 x 25.4 x 10.8 mm; 1.0 x 1.0 x 0.43 in.	PKE3210
	18-75	4.5	-	-	15	87.8	25.4 x 25.4 x 10.8 mm; 1.0 x 1.0 x 0.43 in.	PKE5210
	9-36	7.0	-	-	23	88	25.4 x 25.4 x 10.8 mm; 1.0 x 1.0 x 0.43 in.	PKE3310
	18-75	7.0	-	-	23	89	25.4 x 25.4 x 10.8 mm; 1.0 x 1.0 x 0.43 in.	PKE5310
	9-75	10			33	91	50.8 x 25.4 x 11.9mm // 2.0 x 1.0 x 0.47 in.	PKE 8410A
	9-36	15			50	88	35.3 x 25 x 10.4 mm // 1.39 x 0.984 x 0.41 in.	PKU 3510S
	18-75	15.0	-	-	50	92	33.02 x 22.86 x 9.4 mm; 1.3 x 0.9 x 0.37 in.	PKU5510E
	18-75	15.0	-	-	50	88	35.3 x 25 x 10.4 mm; 1.39 x 0.984 x 0.41 in.	PKU5510S
12-160	15.0	-	-	50	86	57.91 x 36.8 x 12.7 mm // 2.28 x 1.45 x 0.5 in.	PKM7510WPI	
5	9-36	0.5	-	-	3	82	31.8 x 20.3 x 10.7 mm; 1.25 x 0.80 x 0.42 in.	PKV3211
	18-72	0.5	-	-	3	82	31.8 x 20.3 x 10.7 mm; 1.25 x 0.80 x 0.42 in.	PKV5211
	18-36	2.0	-	-	10	85	47.8 x 28.1 x 8.0 mm; 1.88 x 1.11 x 0.32 in.	PKR2111A
	9-36	3.0	-	-	15	88	25.4 x 25.4 x 10.8 mm; 1.0 x 1.0 x 0.43 in.	PKE3211
	18-75	3.0	-	-	15	84.3	25.4 x 25.4 x 10.8 mm; 1.0 x 1.0 x 0.43 in.	PKE5211
	36-75	3.0	-	-	15	83.5	47.8 x 28.1 x 8.0 mm; 1.88 x 1.11 x 0.32 in.	PKR4211A
	9-36	6.0	-	-	30	90	25.4 x 25.4 x 10.8 mm; 1.0 x 1.0 x 0.43 in.	PKE3311
	18-75	6.0	-	-	30	91	25.4 x 25.4 x 10.8 mm; 1.0 x 1.0 x 0.43 in.	PKE5311
	43-160	6.0	-	-	30	91	50.8 x 25.4 x 11.9 mm; 2.0 x 1.0 x 0.47 in.	PKE7311A
	9-75	8.0	-	-	40	89	50.8 x 25.4 x 11.9 mm; 2.0 x 1.0 x 0.47 in.	PKE8411A
	9-36	10.0	-	-	50	90	35.3 x 25 x 10.4 mm; 1.39 x 0.984 x 0.41 in.	PKU3511S





# Miniature Industrial Power Supplies

We are introducing miniature power modules in SIP4, SIP7 and SMD industry standard form factors. These are encapsulated devices, offering high isolation levels up to 6kV, high MTBF (mean time before failures) figures up to 17Mhrs and features such as short circuit protection as standard.

## Fixed Ratio SMD

Product examples:

PUB2405S2M | **NEW**

PUB2405S1M



Miniature industrial power supplies: fixed ratio SMD/ 1 W power and 3 kV isolation

$V_{in}$ (V)	$V_{out1}$ (V)	$I_{out1}$ (A)	$V_{out2}$ (V)	$I_{out2}$ (A)	$P_{out}$ (W)	$\eta$ %	Dimensions (L x W x H)	Product Reference
5	5	0.2	-	-	1.0	76	12.7 x 11.2 x 6.6 mm; 0.5 x 0.44 x 0.26 in.	PUB0505S1M
12	5	0.2	-	-	1.0	81	12.7 x 11.2 x 6.6 mm; 0.5 x 0.44 x 0.26 in.	PUB1205S1M
24	5	0.2	-	-	1.0	75	12.7 x 11.2 x 6.6 mm; 0.5 x 0.44 x 0.26 in.	PUB2405S1M

Miniature industrial power supplies: fixed ratio SMD / 2 W power and 3 kV isolation

$V_{in}$ (V)	$V_{out1}$ (V)	$I_{out1}$ (A)	$V_{out2}$ (V)	$I_{out2}$ (A)	$P_{out}$ (W)	$\eta$ %	Dimensions (L x W x H)	Product Reference
5 <b>NEW</b>	5	0.4	-	-	2	78.8	12.7 x 11.2 x 8.0 mm // 0.5 x 0.44 x 0.32 in.	PUB0505S2M
12 <b>NEW</b>	5	0.4	-	-	2	80	12.7 x 11.2 x 8.0 mm // 0.5 x 0.44 x 0.32 in.	PUB1205S2M
24 <b>NEW</b>	5	0.4	-	-	2	82.6	12.7 x 11.2 x 8.0 mm // 0.5 x 0.44 x 0.32 in.	PUB2405S2M
24 <b>NEW</b>	12	0.4	-	-	2	86.5	12.7 x 11.2 x 8.0 mm // 0.5 x 0.44 x 0.32 in.	PUB2412S2M
24 <b>NEW</b>	5	0.2	-5	0.2	2	83	15.2 x 11.2 x 8.0 mm // 0.6 x 0.44 x 0.32 in.	PUB2405D2M*

\*dual output

## Fixed Ratio SIP4

Product example:

PUA1205S1A



Miniature industrial power supplies: fixed ratio SIP4 / 1V power and 2 kV isolation

$V_{in}$ (V)	$V_{out1}$ (V)	$I_{out1}$ (A)	$V_{out2}$ (V)	$I_{out2}$ (A)	$P_{out}$ (W)	$\eta$ %	Dimensions (L x W x H)	Product Reference
3.3	3.3	0.3	-	-	1	75	11.6 x 6.0 x 10.2 mm; 0.46 x 0.24 x 0.40 in.	PUA0303S1A
3.3 <b>NEW</b>	5	0.2	-	-	1	76	11.6 x 6.0 x 10.2 mm; 0.46 x 0.24 x 0.40 in.	PUA0305S1A
3.3 <b>NEW</b>	12	0.08	-	-	1	77	11.6 x 6.0 x 10.2 mm; 0.46 x 0.24 x 0.40 in.	PUA0312S1A
5 <b>NEW</b>	3.3	0.3	-	-	1	74	11.6 x 6.0 x 10.2 mm; 0.46 x 0.24 x 0.40 in.	PUA0503S1A

$V_{in}$ (V)	$V_{out1}$ (V)	$I_{out1}$ (A)	$V_{out2}$ (V)	$I_{out2}$ (A)	$P_{out}$ (W)	$\eta$ %	Dimensions (L x W x H)	Product Reference
5 <b>NEW</b>	5	0.2	-	-	1	78	11.6 x 6.0 x 10.2 mm; 0.46 x 0.24 x 0.40 in.	PUA0505S1A
5 <b>NEW</b>	12	0.08	-	-	1	78	11.6 x 6.0 x 10.2 mm; 0.46 x 0.24 x 0.40 in.	PUA0512S1A
12 <b>NEW</b>	3.3	0.3	-	-	1	79	11.6 x 6.0 x 10.2 mm; 0.46 x 0.24 x 0.40 in.	PUA1203S1A
12 <b>NEW</b>	5	0.2	-	-	1	82	11.6 x 6.0 x 10.2 mm; 0.46 x 0.24 x 0.40 in.	PUA1205S1A
12 <b>NEW</b>	12	0.08	-	-	1	80	11.6 x 6.0 x 10.2 mm; 0.46 x 0.24 x 0.40 in.	PUA1212S1A
24 <b>NEW</b>	3.3	0.3	-	-	1	78	11.6 x 6.0 x 10.2 mm; 0.46 x 0.24 x 0.40 in.	PUA2403S1A
24 <b>NEW</b>	5	0.2	-	-	1	79	11.6 x 6.0 x 10.2 mm; 0.46 x 0.24 x 0.40 in.	PUA2405S1A
24 <b>NEW</b>	12	0.08	-	-	1	80	11.6 x 6.0 x 10.2 mm; 0.46 x 0.24 x 0.40 in.	PUA2412S1A
24 <b>NEW</b>	15	0.07	-	-	1	84	11.6 x 6.0 x 10.2 mm; 0.46 x 0.24 x 0.40 in.	PUA2415S1A

## Fixed Ratio SIP7

Product examples:

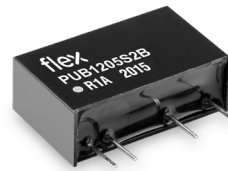
PUC1205S2B



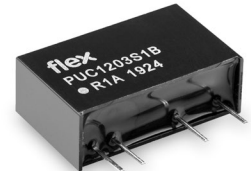
PUB1205S1B | **NEW**



PUB1205S2B | **NEW**



PUC1203S1B | **NEW**



Miniature industrial power supplies: fixed ratio SIP 7 / 1 W power and 4 kV isolation

$V_{in}$ (V)	$V_{out1}$ (V)	$I_{out1}$ (A)	$V_{out2}$ (V)	$I_{out2}$ (A)	$P_{out}$ (W)	$\eta$ %	Dimensions (L x W x H)	Product Reference
3.3 <b>NEW</b>	3.3	0.3			1	75	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB0303S1B
3.3 <b>NEW</b>	5	0.2			1	78	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB0305S1B
3.3 <b>NEW</b>	12	0.08			1	77	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB0312S1B
3.3 <b>NEW</b>	12	0.04	-12	0.04	1	80	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB0312D1B*
5 <b>NEW</b>	3.3	0.3			1	74	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB0503S1B
5 <b>NEW</b>	5	0.2			1	79	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB0505S1B
5 <b>NEW</b>	12	0.08			1	78	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB0512S1B
5 <b>NEW</b>	12	0.04	-12	0.04	1	80	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB0512D1B*
12 <b>NEW</b>	3.3	0.3			1	79	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB1203S1B
12 <b>NEW</b>	5	0.2			1	82	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB1205S1B
12 <b>NEW</b>	12	0.08			1	80	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB1212S1B
12 <b>NEW</b>	12	0.04	-12	0.04	1	80	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB1212D1B*
12 <b>NEW</b>	15	0.03	-9	0.06	1	81	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB121509D1B*
15 <b>NEW</b>	5	0.2			1	80	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB1505S1B
24 <b>NEW</b>	3.3	0.3			1	78	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB2403S1B
24 <b>NEW</b>	5	0.2			1	79	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB2405S1B
24 <b>NEW</b>	12	0.08			1	79	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB2412S1B
24 <b>NEW</b>	12	0.08	-12	0.04	1	83	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB2412D1B*
24 <b>NEW</b>	15	0.03	-15	0.03	1	81	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB2415D1B*
24 <b>NEW</b>	15	0.03	-9	0.06	1	79	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB241509D1B*

\*Dual output

Miniature industrial power supplies: fixed ratio SIP 7 / 2 W power and 4 kV isolation

V <sub>in</sub> (V)	V <sub>out1</sub> (V)	I <sub>out1</sub> (A)	V <sub>out2</sub> (V)	I <sub>out2</sub> (A)	P <sub>out</sub> (W)	η %	Dimensions (L x W x H)	Product Reference
3.3 <b>NEW</b>	3.3	0.6			2	77	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB0303S2B
3.3 <b>NEW</b>	5	0.4			2	78	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB0305S2B
3.3 <b>NEW</b>	12	0.17			2	84	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB0312S2B
3.3 <b>NEW</b>	12	0.08	-12	0.08	2	84	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB0312D2B*
5 <b>NEW</b>	5	0.4			2	79	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB0505S2B
5 <b>NEW</b>	12	0.17			2	83	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB0512S2B
5 <b>NEW</b>	12	0.08	-12	0.08	2	84	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB0512D2B*
5 <b>NEW</b>	15	0.07	-9	0.11	2	82	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB051509D2B*
12 <b>NEW</b>	3.3	0.6			2	78	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB1203S2B
12 <b>NEW</b>	5	0.4			2	79	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB1205S2B
12 <b>NEW</b>	12	0.17			2	85	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB1212S2B
12 <b>NEW</b>	12	0.08	-12	0.08	2	80	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB1212D2B*
12 <b>NEW</b>	15	0.07	-9	0.11	2	78	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB121509D2B*
24 <b>NEW</b>	3.3	0.6			2	79	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB2403S2B
24 <b>NEW</b>	5	0.4			2	84	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB2405S2B
24 <b>NEW</b>	12	0.17			2	86	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB2412S2B
24 <b>NEW</b>	12	0.08	-12	0.08	2	83	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB2412D2B*
24 <b>NEW</b>	15	0.07	-15	0.07	2	84	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB2415D2B*
24 <b>NEW</b>	15	0.07	-9	0.11	2	81	19.7 x 7.1 x 10.2 mm // 0.77 x 0.28 x 0.4 in.	PUB241509D2B*

\*Dual output

Miniature industrial power supplies: fixed ratio SIP 7/ 1 W power and 6 kV isolation

V <sub>in</sub> (V)	V <sub>out1</sub> (V)	I <sub>out1</sub> (A)	V <sub>out2</sub> (V)	I <sub>out2</sub> (A)	P <sub>out</sub> (W)	η %	Dimensions (L x W x H)	Product Reference
5 <b>NEW</b>	3.3	0.3			1	77	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC0503S1B
5	5	0.2			1	77	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC0505S1B
5	12	0.08			1	78	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC0512S1B
5	5	0.1	-5	0.1	1	77	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC0505D1B*
5	12	0.04	-12	0.04	1	78	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC0512D1B*
12 <b>NEW</b>	3.3	0.3			1	77	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC1203S1B
12	5	0.2			1	80	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC1205S1B
12	12	0.08			1	80	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC1212S1B
12	12	0.04	-12	0.04	1	80	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC1212D1B*
24 <b>NEW</b>	3.3	0.3			1	75	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC2403S1B

\*Dual output

Miniature industrial power supplies: fixed ratio SIP 7 / 1 W and 6 kV isolation | continued

V <sub>in</sub> (V)	V <sub>out1</sub> (V)	I <sub>out1</sub> (A)	V <sub>out2</sub> (V)	I <sub>out2</sub> (A)	P <sub>out</sub> (W)	η %	Dimensions (L x W x H)	Product Reference
24	5	0.2			1	78	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in	PUC2405S1B
24	12	0.08			1	80	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in	PUC2412S1B
24	15	0.625			1	80	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in	PUC2415S1B
24	5	0.1	-5	0.1	1	77	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in	PUC2405D1B*
24	12	0.04	-12	0.04	1	80	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in	PUC2412D1B*
24	15	0.03	-15	0.03	1	80	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in	PUC2415D1B*

\*Dual output

Miniature industrial power supplies: fixed ratio SIP 7/ 2 W power and 6 kV isolation

V <sub>in</sub> (V)	V <sub>out1</sub> (V)	I <sub>out1</sub> (A)	V <sub>out2</sub> (V)	I <sub>out2</sub> (A)	P <sub>out</sub> (W)	η %	Dimensions (L x W x H)	Product Reference
5 <b>NEW</b>	3.3	0.6			2	77	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC0503S2B
5 <b>NEW</b>	5	0.4			2	79	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC0505S2B
5 <b>NEW</b>	12	0.17			2	83	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC0512S2B
5 <b>NEW</b>	12	0.08	-12	0.08	2	82	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC0512D2B*
12 <b>NEW</b>	3.3	0.6			2	77	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC1203S2B
12 <b>NEW</b>	5	0.4			2	80	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC1205S2B
12 <b>NEW</b>	12	0.17			2	84	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC1212S2B
12 <b>NEW</b>	5	0.2	-5	0.2	2	82	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC1205D2B*
12 <b>NEW</b>	12	0.08	-12	0.08	2	83	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC1212D2B*
24 <b>NEW</b>	3.3	0.6			2	79	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC2403S2B
24 <b>NEW</b>	5	0.4			2	81	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC2405S2B
24 <b>NEW</b>	12	0.17			2	85	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC2412S2B
24 <b>NEW</b>	5	0.2	-5	0.2	2	82	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC2405D2B*
24 <b>NEW</b>	12	0.08	-12	0.08	2	85	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC2412D2B*
24 <b>NEW</b>	15	0.07	-15	0.07	2	84	19.7 x 7.1 x 11.5 mm // 0.77 x 0.28 x 0.45 in.	PUC2415D2B*

\*Dual output

# Software

Flex Power Modules offers internally developed software tools, which help our customers optimize, sketch and simulate their power systems.

## Flex Power Designer

Software used to sketch and simulate future power systems as well as to configure and monitor your existing digital power system. The software is available as a free download from [Flex Power Modules'](#) homepage.

## SMBus/PMBus Tool

A production tool used to perform module configuration in a production environment.



# Evaluation Boards + Accessories

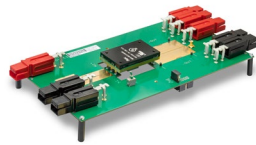
Evaluation boards and accessories include test boards and other useful tools for customer evaluation of our power modules.

## Evaluation Boards

PoL Evaluation Board



IBC BMR480/490



PoL BMR461 Evaluation Board



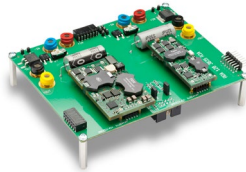
PoL BMR465 paralleling Evaluation Board



PoL BMR466 paralleling Evaluation Board



IBC Evaluation Board



PIM Evaluation Board



PoL BMR469 Evaluation Board



## Evaluation Boards

Name	Product Reference	Product	General Info
PoL Evaluation Board	ROA1283836	PoL Design Board	This board can host: 2xBMR464 or 2xBMR451, 2xBMR463 or 2xBMR450, 2xBMR462
PoL SIP Evaluation Board	ROA1285068	PoL Design Board for SIP version	This board can host: 3xBMR464, 3xBMR463, 2xBMR462
PoL BMR461 Evaluation Board	ROA17026	PoL BMR461 3001 Simple Evaluation Board (small sized board)	This board can host: BMR4613001 BMR4612001 BMR4614001
	ROA17026/2	PoL BMR461 2001 Simple Evaluation Board (small sized board)	
	ROA17026/3	PoL BMR461 4001 Simple Evaluation Board (small sized board)	
PoL BMR465 Paralleling Evaluation Board	ROA17064	PoL Design Board for paralleling configuration, BMR465	This board can host: 2xBMR465 or 2xBMR467 in parallel
PoL BMR466 Paralleling Evaluation Board	ROA17044/2B	PoL Design Board for paralleling configuration, BMR466	This board can host: 2 x BMR4668004 in parallel 4 x BMR4668012 in parallel
	ROA17044/4B		
IBC Evaluation Board	ROA1283835	IBC Design Board	This board can host: 2xBMR453, 2xBMR454, 2xBMR456, 2xBMR457 or 2xBMR458
PIM Evaluation Board	ROA1285151	PIM Design Board	This board can host: PIM 4820B, PIM 4328PD or PIM 4328PDA
PoL BMR469 Evaluation Board	ROA170111	PoL BMR4690000 Design Board	This board can host: 1xBMR4690000 module with dual-output configuration (2x40 A) and 1x BMR4690000 module with single-output configuration (80 A)
	ROA170111/1	PoL BMR4696001 Design Board	1xBMR4696001 module with dual-output configuration (2x25 A) and 1x BMR4696001 module with single-output configuration (50 A)
IBC BMR480/490 Evaluation Board	ROA170019	BMR480/490 Design Board	This board can host: 1 x BMR480 or 1x BMR490
PoL PMU8318 Evaluation Board	ROA170163	PMU8318 Design Board	This board can host 1 PMU8318

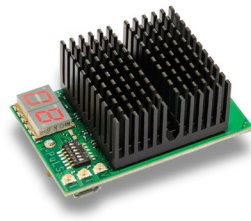
## Evaluation Boards | Continued

Name	Product Reference	Product	General Info
IBC BMR480/490 Evaluation Board	ROA170019	BMR480/490 Design Board	This board can host: 1 x BMR480 or 1x BMR490
	ROA170032	BMR 480/490 Design Board	3x BMR480 or 3 x BMR490 in parallel
PoL PMU8000 Evaluation Board	ROA170163 ROA170163/2 ROA170163/4	PMU8318 Design Board PMU8218 Design Board PMU8418 Design Board	This board can host: 1x PMU8318 1x PMU8218 1x PMU8418
Direct conversion BMR 481 Evaluation Board	ROA170014/3	BMR 481 Design Board	This board can host: 1 x BMR481 main module + 5 x BMR481 satellite modules

## Accessories

USB-PMBus adapter and cable

Electronic Load



### Accessories

Accessory	Product Reference	Product
USB-PMBus Adapter and Cable	FAB8020785	USB-PMBus Adapter and cable
Electronic Load	ROA1285552	Electronic Loads with PMBus interface

For more information, please visit [flexpowermodules.com](http://flexpowermodules.com).

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For more information, please visit [www.flex.com](http://www.flex.com) or follow us on Twitter @flexintl

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