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C&D **C**P**S**

www.cdtechno-cps.com

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C&D **T**E**C**H**N**O**L**O**G**I**E**S

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C&D-CPS^{*} Product Portfolio

DC/DC Converters

Single Output Isolated

Bus Converters

Point of Load Non-Isolated
Memory Support

64- & 32-Bit
Processor Support

*Formerly Celestica Power Systems

C&D **T**E**C**H**N**O**L**O**G**I**E**S
Power Solutions

Celestica Power Systems

C&D Technologies is proud to introduce a range of innovative DC/DC conversion products from our latest acquisition, Celestica Power Systems (C&D-CPS).

In addition to the standard products shown in this brochure, C&D-CPS can also supply non-stock and custom solutions for DC/DC and AC/DC conversion. For more information go to www.cdtechno-cps.com



Innovative Solutions

C&D-CPS has always been the Power company that customers go to when they need system solutions unavailable elsewhere. High di/dt capability, high efficiency, high current density, small form-factor – these are parameters by which C&D-CPS products drive the market and create innovative solutions for customers.

As the industry moves towards the convergence of the computing and communications segments, the challenges faced by system designers are demanding the need for leading edge power conversion products. The performance demands of today's processor and communication ASIC's require lower voltages (1V), higher currents (120A), higher di/dt's, and smaller footprints.

C&D-CPS supports power requirements for the complete system. Utilizing industry leading component technologies, innovative packaging, and high efficiency designs, our broad range of isolated and non-isolated products can power industry leading applications such as 32/64 bit processors and ASIC's, system memory, and I/O chip sets.

Power Architecture Solutions

The industry has recently begun using an intermediate bus in an attempt to reduce system power cost as well as to bring the power conversion closer to the load.

In order to obtain an optimum solution, an analysis has to be performed that takes into account efficiency, PCB area, and cost from the perspective of the system solution, rather than a component comparison. Additionally, when considering discrete, on-board solutions, the system architect also has to consider hidden costs such as those of manufacturing, reliability and repair costs, design costs, host PCB cost, etc.

Our engineering team can work with you to examine the design options and provide guidance in optimizing your system requirements.

Operational Excellence

An industry-leader in providing innovative solutions you can count on, C&D-CPS' products are manufactured in our world-class operations in China and Thailand, focused on providing an excellence in service, product quality and competitive costs.

Quality & Reliability

- Strategy – Six Sigma quality programs are key to our operating philosophies and quality excellence.
- Capabilities – real-time shop floor data collection systems, SPC at key process steps, on-line quality documentation system, certified quality engineers and technicians are all part of the quality processes.
- Reliability – each site is fully equipped with the latest test, inspection and failure analysis equipment to supplement the manufacturing processes.
- Continuous Improvement – programs are in place to promote continuous improvement and facilitate a learning organization.
- Certifications - each site has been certified to ISO 9001-2000, TL 9000 R3.0 and ISO14001.

Manufacturing Processes


- Systems – high-quality training and certification programs have been developed for all manufacturing operators.
- Equipment – leading-edge technical capabilities for high-end automated placement machines and testers.
- Flexibility – both factories have extensive equipment and personnel to respond rapidly to unexpected customer demand.

Costs

- Components – manufacturing locations are serviced by local suppliers from all commodity groups reducing leadtime and costs, as well as streamlining the logistics for just-in-time manufacturing.
- Design – our design team utilizes a preferred supplier base for lowest cost/highest quality components.



Selectable, Non-Isolated POL's




- V_{out} programmable by external resistor
- Available in SIP and SMT packages
- Positive and negative enable logic
- Wide input voltage ranges
- Excellent thermal derating

NCA, NEA, NFA Series

Datasheet: NCA, NEA, NFA Series

V _{out}	V _{dc}	0.75-5	0.75-5	0.75-5		
I _{out}	A	5	10	16		

Fixed, Non-Isolated POL's



- Industry-standard packages/pinouts
- Fixed-output 10A models
- Available in SIP and SMT packages
- Positive and negative enable logic
- Wide input voltage ranges

NCF, NEF Series

Datasheet: NCF, NEF Series

V _{out}	V _{dc}	1	1.2	1.5	1.8	2	2.5	3.3	5	
I _{out}	A	10	10	10	10	10	10	10	10	10


Output Voltage	Rated Output Current	Total Output Power	Input Voltage		Efficiency	Package Details										Model Number	Datasheet Name	Go To:	
			Nom.	Range		Surface Mount	Through Hole	Open Frame	1/8 Brick	1/4 Brick	1/2 Brick	DIP	SIP	Dimensions (W x L x H)					
														Inches	mm				
0.75-3.3V	5	16.5	5	3-5.5	94	•	•	•							•	0.9 x 0.22 x 0.4	22.9 x 5.6 x 10.2	NCA005133xB0	NCA005
			5	3-5.5	94	•	•	•							•	0.8 x 0.45 x 0.24	20.3 x 11.4 x 6.1	NCA005133xS0	NCA005
	15	50	5	3-5.5	94	•	•	•							•	2.0 x 0.33 x 0.5	50.8 x 8.30 x 12.7	NCA015133xB0	NCA015
			5	3-5.5	94	•	•	•							•	1.3 x 0.53 x 0.37	33 x 13.46 x 9.4	NCA015133xS0	NCA015
0.75-5V	5	25	12	8.3-14	92	•	•	•							•	0.9 x 0.22 x 0.4	22.9 x 5.6 x 10.2	NEA005150xB0	NEA005
			12	8.3-14	92	•	•	•							•	0.8 x 0.45 x 0.24	20.3 x 11.4 x 6.1	NEA005150xS0	NEA005
	10	50	12	6-14	94	•	•	•							•	2.0 x 0.33 x 0.5	50.8 x 8.3 x 13	NFA010150xB0	NFA010
			12	6-14	94	•	•	•							•	1.3 x 0.53 x 0.33	33 x 13.5 x 9.3	NFA010150xS0	NFA010
			12	8.3-14	95	•	•	•							•	2 x 0.33 x 0.5	50.8 x 8.3 x 12.7	NEA010150xB0	NEA010
			12	8.3-14	95	•	•	•							•	1.3 x 0.53 x 0.37	33 x 13.5 x 9.4	NEA010150xS0	NEA010
	16	80	12	6-14	94	•	•	•							•	2.0 x 0.33 x 0.5	50.8 x 8.3 x 13	NFA016150xB0	NFA016
			12	6-14	94	•	•	•							•	1.3 x 0.53 x 0.33	33 x 13.46 x 9.3	NFA016150xS0	NFA016
			12	8.3-14	94	•	•	•							•	2 x 0.33 x 0.5	50.8 x 8.3 x 12.7	NEA016150xB0	NEA016
			12	8.3-14	94	•	•	•							•	1.3 x 0.53 x 0.37	33 x 13.5 x 9.4	NEA016150xS0	NEA016
	20	100	12	6-14	94	•	•	•							•	2.4 x 0.33 x 0.5	61 x 8.3 x 13	NFA020150xB0	NFA020
			12	6-14	94	•	•	•							•	1.7 x 0.53 x 0.37	43.2 x 13.5 x 9.3	NFA020150xS0	NFA020
1.2-5.0V	8	40	5 (4.75-5.25) or 12 (10.8-13.2)		90	•	•	•							•	1.2 x 1.1 x 0.45	30.5 x 28 x 11.4	SO07-UV20100-3B	SO07
			12	10.8-12.6	90	•	•	•							•	1.2 x 0.45 x 1.1	30.5 x 11.4 x 27.9	SV15-UV2010T-A1	SV15
	15	40	12	10.8-12.6	90	•	•	•							•	1.2 x 1.1 x 0.45	30.5 x 28 x 11.4	SV15-UV3010T-A1	SV15
			12	10.8-12.6	90	•	•	•							•	1.2 x 0.45 x 1.1	30 x 11.4 x 27.9	SO16-1220120-FB	SO16
	16	45	12	10.8-12.6	90	•	•	•							•	1.2 x 1.1 x 0.45	30.5 x 28 x 11.4	SO16-1240120-FB	SO16
			12	10.8-12.6	90	•	•	•							•	1.7 x 0.45 x 0.79	43.2 x 11.4 x 20.1	SO20-1220120-FB	SO20
12	10.8-12.6	93	•	•	•								•	1.7 x 0.79 x 0.475	43.2 x 20.1 x 12.1	SO20-1240120-FB	SO20		
1V	10	10	5	3-5.5	86	•	•	•							•	2 x 0.33 x 0.5	50.8 x 8.3 x 12.7	NCF010010xB0	NCF010
			12	8-14	84	•	•	•							•	2 x 0.33 x 0.5	50.8 x 8.3 x 12.7	NEF0100100B0	NEF010
			12	8-14	84	•	•	•							•	1.3 x 0.53 x 0.33	33 x 13.5 x 9.3	NEF0100100S0	NEF010
1.2V	10	12	5	3-5.5	88	•	•	•						•	2 x 0.33 x 0.5	50.8 x 8.3 x 12.7	NCF010012xB0	NCF010	
			12	8-14	86	•	•	•							•	2 x 0.33 x 0.5	50.8 x 8.3 x 12.7	NEF0100120B0	NEF010
1.5V	10	15	5	3-5.5	89	•	•	•						•	1.3 x 0.53 x 0.5	50.8 x 8.3 x 12.7	NEF010015xB0	NCF010	
			12	8-14	89	•	•	•							•	2 x 0.33 x 0.5	50.8 x 8.3 x 12.7	NEF0100150B0	NEF010
1.8V	10	18	5	3-5.5	89	•	•	•						•	1.3 x 0.53 x 0.33	33 x 13.5 x 9.3	NEF0100150S0	NEF010	
			12	8-14	91	•	•	•							•	2 x 0.33 x 0.5	50.8 x 8.3 x 12.7	NCF010018xB0	NCF010
2V	10	20	12	8-14	90	•	•	•						•	2 x 0.33 x 0.5	50.8 x 8.3 x 12.7	NEF0100180B0	NEF010	
			12	8-14	90	•	•	•							•	1.3 x 0.53 x 0.33	33 x 13.5 x 9.3	NEF0100180S0	NEF010
2.5V	10	25	5	3-5.5	92	•	•	•							•	2 x 0.33 x 0.5	50.8 x 8.3 x 12.7	NCF010020xB0	NCF010
			12	8-14	91	•	•	•							•	2 x 0.33 x 0.5	50.8 x 8.3 x 12.7	NEF0100200B0	NEF010
			12	8-14	91	•	•	•							•	1.3 x 0.53 x 0.33	33 x 13.5 x 9.3	NEF0100200S0	NEF010
3.3V	10	33	5	3-5.5	93	•	•	•						•	2 x 0.33 x 0.5	50.8 x 8.3 x 12.7	NEF010025xB0	NCF010	
			12	8-14	92	•	•	•							•	2 x 0.33 x 0.5	50.8 x 8.3 x 12.7	NEF0100250B0	NEF010
			12	8-14	92	•	•	•							•	1.3 x 0.53 x 0.33	33 x 13.5 x 9.3	NEF0100250S0	NEF010
5V	10	50	5	3-5.5	95	•	•	•						•	2 x 0.33 x 0.5	50.8 x 8.3 x 12.7	NCF010033xB0	NCF010	
			12	8-14	93	•	•	•							•	2 x 0.33 x 0.5	50.8 x 8.3 x 12.7	NEF0100330B0	NEF010
			12	8-14	93	•	•	•							•	1.3 x 0.53 x 0.33	33 x 13.5 x 9.3	NEF0100330S0	NEF010
5	25	50	12	8-14	95	•	•	•						•	2 x 0.33 x 0.5	50.8 x 8.3 x 12.7	NEF0100500B0	NEF010	
			12	8-14	95	•	•	•							•	1.3 x 0.53 x 0.33	33 x 13.5 x 9.3	NEF0100500S0	NEF010
3.3	3-3.6	80	•	•	•								•	2.52 x 0.36 x 0.57	64 x 9 x 14.5	SBST-0320500-7C	SBST		

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150 Amp VRM's

		<ul style="list-style-type: none"> • Meets VRM 10.1 and 10.2 requirements • 150A peak (VRM 10.2); 120A peak (VRM 10.1) • 1U form factor (1.25" total mating height) • Compact, enhanced thermal design • DAC programmable output voltage 	
		Datasheet: VR102B150CU	
V_{OUT}	V_{dc}	0.8375	1.6
I_{OUT}	A	150A (peak)	150A (peak)

DDR DRAM Power

		<ul style="list-style-type: none"> • Wide-range programmable output • Supports DDR1 and DDR2 memory • 1U form factor • High efficiency • 1.7-2.4V_{out} and 2.5-5V_{out} models 				
		Datasheet: VCN75				
V_{OUT}	V_{dc}	1.8	2	2.5	3.3	5
I_{OUT}	A	75	75	55	55	55

POL Non-Isolated, Memory Support

Output Voltage	Rated Output Current	Total Output Power	Input Voltage		Memory Spec.	Efficiency %	Package Details								Model Number	Datasheet Name	Go To:		
			Nom.	Range			Surface Mount	Through Hole	Open Frame	1/8 Brick	1/4 Brick	1/2 Brick	DIP	SIP				Dimensions (W x L x H)	
																		Inches	mm
1.2-1.8V	40	100	12	10.8-12.6	DDR2	90									3.8 x 1.25 x 0.8	96.5 x 31.8 x 20.3	VCN40-POV-6	VCN40	www.cdtechno-cps.com
			12	10.8-12.6	DDR2	90	•	•								3.8 x 1.25 x 0.8	96.5 x 31.8 x 20.3	VCN40-POVH-6	
1.7-2.4V	75	250	12	10.8-13.2	DDR1/DDR2	85									3 x 1.05 x 1.1	76.2 x 26.7 x 27.9	VCN75-018V	VCN75	www.cdtechno-cps.com
2.5-5V	25	100	12	10.8-12.6	DDR1	88						•		2.4 x 1.25 x 0.55	61 x 31.8 x 14	VCN25-025V	VCN25		
			12	10.8-12.6	DDR1	88							•		2.4 x 1.25 x 0.55	61 x 31.8 x 14	VCN25-025H	VCN25	
2.5V	55	250	12	10.8-13.2	DDR1/DDR2	85									3 x 1.05 x 1.1	76.2 x 26.7 x 27.9	VCN55-025V	VCN55	www.cdtechno-cps.com
			12	11-12.6	DDR1	90										3.8 x 1.25 x 0.83	96.5 x 31.8 x 21.1	VCN60-025	
2.5/1.8V and 1.25/0.9V	35/08	100	12	10.8-12.6	DDR1/DDR2	83/85									3.8 x 1.18 x 0.64	96.5 x 30 x 16.2	DDR3508DVB	DDR3508	www.cdtechno-cps.com

64- and 32-Bit Processor Support

Output Voltage	Rated Output Current	Total Output Power	Input Voltage		Efficiency %	Package Details								Model Number	Datasheet Name	Go To:			
			Nom.	Range		Surface Mount	Through Hole	Open Frame	1/8 Brick	1/4 Brick	1/2 Brick	DIP	SIP				Dimensions (W x L x H)		
																	Inches	mm	
0.95-1.7V	100	130	12	11-12.6	82				•						4.92 x 2.79 x 0.87	125 x 70.9 x 22.1	IPF100-013-12	IPF100-013-12	www.cdtechno-cps.com
	100	130	12	11-12.6	82				•						3.9 x 2.75 x 0.78	99.1 x 69.9 x 19.8	IPS100-013-12-P	IPS100-013-12	
	100	130	12	11-12.6	82				•						3.9 x 2.75 x 0.78	99.1 x 69.9 x 19.8	IPS100-013-12-R	IPS100-013-12	

Output Voltage	Rated Output Current	Total Output Power	Input Voltage		VRM Spec.	Efficiency %	Package Details								Model Number	Datasheet Name	Go To:			
			Nom.	Range			Surface Mount	Through Hole	Open Frame	1/8 Brick	1/4 Brick	1/2 Brick	DIP	SIP				Dimensions (W x L x H)		
																		Inches	mm	
0.8375-1.6V	150	240	12	11.04-12.6	10.1/10.2	86				•						3.8 x 1 x 1.18	96.5 x 25.4 x 29.9	VR102B150CU	VRM10.0	www.cdtechno-cps.com
	100	160	12	11.04-12.6	10.0	83				•						3.8 x 0.96 x 2.3	96.5 x 24.4 x 58.4	VR100B100CS	VRM10.0	
1.1-1.85V	80	148	12	11.04-12.6	9.1	84				•						3.8 x 0.58 x 1.8	96.5 x 14.7 x 45.7	VR091B08OCL	VR091B08OCL	www.cdtechno-cps.com
			12	11-12.6	9.1	84					•						3.8 x 0.8 x 1.25	96.5 x 20.3 x 31.8	VR091B08OTU	
1.075-1.85V	80	148	12	11.04-12.6	9.1	84				•						3.8 x 0.57 x 2.3	96.5 x 14.5 x 58.4	VR091B08OCS	VR091B08OCS	www.cdtechno-cps.com
	68	126	12	11.04-12.6	9.0	84				•						3.8 x 0.57 x 2.3	96.5 x 14.5 x 58.4	VR090B068CS	VR090B068CS	
1.05-1.825V	28	51	5 or 12	4.5-5.5 or 10.8-13.2	8.5	80				•						2.75 x 0.85 x 1.5	69.9 x 21.6 x 38.1	VR085U028CS	VR085U028CS	www.cdtechno-cps.com
	28	51	5 or 12	4.75-5.25 or 11.4-12.6	8.5	80				•						2.4 x 0.60 x 1.25	61 x 15.2 x 31.8	VR085U025TU	VR085U025TU	

C&D: www.cdpoweronline.com C&D-CPS: www.cdtechno-cps.com

North America

3400 E Britannia Drive, Tucson,
Arizona 85706 USA

Tel: +1 800 547 2537

Fax: +1 520 741 4598

email: sales@cdtechno.com

Europe & Asia Pacific

Tanners Drive, Blakelands North,
Milton Keynes, MK14 5BU
United Kingdom

Tel: +44 (0)1908 615232

Fax: +44 (0)1908 617545

email: info@cdtechno-ncl.com

Mexico

Building 271-2
Carretera Internacional Km. 6.5
Nogales, Sonora,
Mexico

Tel: +52 (631) 31 40049

Fax: +1 520 295 4943

email: cdmexico@cdtechno.com

People's Republic of China

5th Floor, Building A1, Bei Wei No.1 District,
Guangzhou Economic & Technical Development Zone
Guangzhou, Guangdong 510730
People's Republic of China

Tel: +86 208 221 8066

Fax: +86 208 221 5902

email: info@cn.cdtechno-ncl.com

C&D CPS

1150 Eglinton Avenue East, Toronto,
Ontario, M3C 1H7 Canada

Tel: +1 866 740 1232

Fax: +1 416 448 3203

email: sales.cps@cdtechno.com

Celab

Woolmer Way, Bordon, Hampshire GU35 9QE
United Kingdom

Tel: +44 (0)1420 477011

Fax: +44 (0)1420 472034

email: salesdesk@celab.co.uk

North America

11 Cabot Boulevard
Mansfield, MA 02048-1151 USA

Tel: +1 800 233 2765

Fax: +1 508 339 6356

email: sales@datel.com

Germany

PF 15 08 26, D-80045 München
Bavariaring 8, D-80336 München
Germany

Tel: +49 (0) 89 544334 0

Fax: +49 (0) 89 536337

email: datel.gmbh@datel.com

United Kingdom

Unit 15, Campbell Court Business Park,
Campbell Road, Bramley, Tadley,
Hampshire RG26 5EG
United Kingdom

Tel: +44 (0)1256 880444

Fax: +44 (0)1256 880706

email: datel.ltd@datel.com

France

Zone d'Activités du Pas du Lac Nord
9, rue Michaël Faraday
78180 Montigny Le Bretonneux,
France

Tel: +33 (0)1 34 60 01 01

Fax: +33 (0)1 30 58 21 30

email: datel.sarl@datel.com

Japan

Meiji Seimei Gotanda Building
2-27-4 Nishigotanda
Shinagawa-Ku, Tokyo 141, Japan

Tel: +81 3 3779 1031

Fax: +81 3 3779 1030

email: salestko@datel.co.jp

Yachiyo Building, Higashikan
2-Kita 1-21, Tenjinbashi
Kita-Ku, Osaka 530, Japan

Tel: +81 6 6354 2025

Fax: +81 6 6354 2064

email: salesosa@datel.co.jp