Digital Power

Flexible Power Solutions

Digital Power Corporation designs, manufactures, and markets highly efficient, flexible, and custom power supply solutions . . .



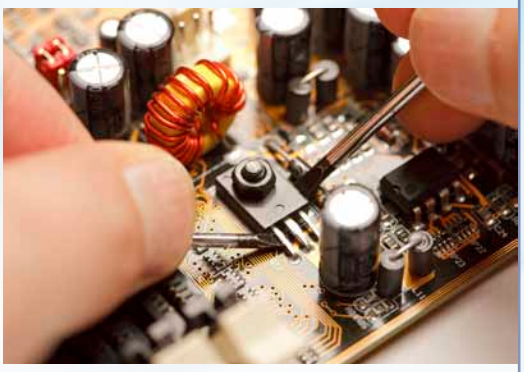

MEDICAL MIL/COTS TELECOM INDUSTRIAL

. . . for the medical, military, telecom, and industrial markets.

Advanced Custom Power Solutions for Your Specific Application

Digital Power can provide advanced custom solutions that meet almost any AC or DC power requirements

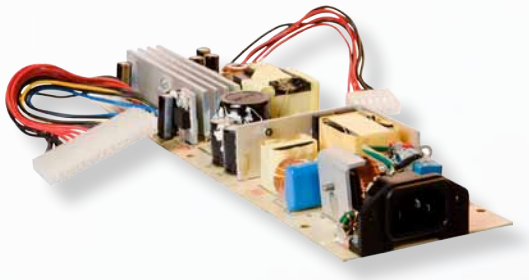
• Minimum NRE charges • Advanced design topologies • Fast turnaround time • Superior reliability and performance



Digital Power designs solutions that include the following key features:

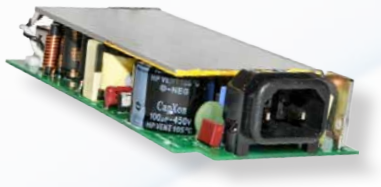
- High power density, up to 36 W/ in.^{3}
- EMI/RFI per EN55022 or customer-specific requirements
- Power output up to 25 kW
- Switching frequency synchronized to an external clock
- Wide AC or DC input voltage range
- Single or multiple AC or DC output voltages
- Wide operating temperature range, from –40 to 212 °F (–40 to 100 °C)
- Switching frequencies up to 500 kHz
- Power factor correction, single or 3 phase input
- Redundancy and hot swap N+1
- International regulatory standards approvals (IT or medical)
- I^{2}C, IPMI, or other required communications protocols for digital interfaces
- High efficiency, up to 98%
- Free convection, forced air, or base plate cooling

Digital Power provides custom solutions for medical, industrial, telecom, instrumentation, and military/defense applications



Industry: Telecom

Application: Video decoding system
Solution: Digital Power developed a highly efficient, custom switching power supply for a next-generation video decoding system. The power supply features high power density, active input power factor correction, and multiple output voltages. This solution includes a customized interface for obtaining a variety of status and monitoring signals.



Industry: Medical

Application: Portable oxygen concentrator
Solution: Digital Power developed a dual-input power source with AC and DC input to deliver clean, regulated DC power for charging batteries and operating electronics. This solution features high efficiency, high power density, and advanced topology for both AC and DC input.

Industry: Telecom

Application: Broadband TV
Solution: Digital Power developed an automatic power transfer switch for selecting and transferring from dual-input, AC, or DC power sources. The device provides a scalable content ingest platform for video storage, streaming, and on-demand applications in a high-speed data network. Advanced features of this state-of-the-art solution include a universal, dual source, redundant input that enables automatic selection of a primary or secondary main AC source. This device exceeds 98% efficiency over most of its operating range.

ATCA / CPCI Platform Based Power Solutions

Strong Box Series: 600–1500 W High Density Front Ends and Shelves

AC Input Models

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The Digital Power front end power supplies provide high power density, hot swap capabilities, and N+M redundancy in cost-effective products that are ideally suited for mission critical applications.

- 600–1500 W power modules
- Universal AC input with PFC
- 48 and 56 VDC output models
- Active load current share
- Hot swappable
- ATCA compatible
- RoHS compliant
- International regulatory approvals
- ORing diode for N+1 parallel operation
- PS2150 shelf accepts up to three power modules

Power Modules						
Model	Input	Module Power	Output Voltage	Output Current	Shelf Power	Shelf
PS2100	90–264 VAC	600 W	48 V	12.5 A	1800 W	PS2150
PS2156	90–264 VAC	600 W	56 V	10.1 A	1800 W	
PS2180	90–264 VAC	800 W	48 V	16.7 A	2400 W	
PS1548	90–264 VAC	1500 W	48 V	31.2 A	4500 W	PS1200
PS1200	90–264 VAC	SHELF	48 V	93.7 A	4500 W	

For other output voltages or higher power requirements, please contact Digital Power.

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Compact PCI Series: 200–600 W High Density Power Supply

AC Input Models

DC Input Models

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Digital Power offers a full range of compact PCI AC or DC power supplies that deliver up to 600 W, incorporate the standard Positronic 47-pin connector, and are fully compliant with the PICMG 2.11 specification. They provide very high efficiency and power density.

- 200–600 W in 3U and 6U form factor
- Universal AC input with PFC
- 24 and 48 VDC input models available
- ORing FETs for N+1 parallel operation
- Ruggedized models available for industrial or military/COTS applications
- Active load current share
- International regulatory approvals
- PICMG 2.11 compliant
- RoHS compliant

3U and 6U Height						
Model	Input	Power	V1	V2	V3	V4
CPCI-AC-3U-200	90–264 VAC	200 W	+5 V/20 A	+3.3 V/30 A	+12 V/3 A	–12 V/0.5 A
CPCI-AC-3U-300	90–264 VAC	300 W	+5 V/30 A	+3.3 V/40 A	+12 V/5 A	–12 V/0.5 A
CPCI-DC-3U-200/24	24 VDC	200 W	+5 V/20 A	+3.3 V/30 A	+12 V/3 A	–12 V/0.5 A
CPCI-DC-3U-300/24	24 VDC	300 W	+5 V/30 A	+3.3 V/40 A	+12 V/5 A	–12 V/0.5 A
CPCI-DC-3U-200/48	48 VDC	200 W	+5 V/20 A	+3.3 V/30 A	+12 V/3 A	–12 V/0.5 A
CPCI-DC-3U-300/48	48 VDC	300 W	+5 V/30 A	+3.3 V/40 A	+12 V/5 A	–12 V/0.5 A
CPCI-AC-6U-400	90–264 VAC	400 W	+5 V/50 A	+3.3 V/80 A	+12 V/7 A	–12 V/1.5 A
CPCI-AC-6U-500	90–264 VAC	500 W	+5 V/65 A	+3.3 V/80 A	+12 V/12 A	–12 V/1.5 A
CPCI-AC-6U-600	90–264 VAC	600 W	+5 V/65 A	+3.3 V/80 A	+12 V/12 A	–12 V/1.5 A
CPCI-DC-6U-350/24	24 VDC	350 W	+5 V/50 A	+3.3 V/60 A	+12 V/7 A	–12 V/1.5 A
CPCI-DC-6U-400/48	48 VDC	400 W	+5 V/50 A	+3.3 V/80 A	+12 V/7 A	–12 V/1.5 A
CPCI-DC-6U-500/48	48 VDC	500 W	+5 V/65 A	+3.3 V/80 A	+12 V/12 A	–12 V/1.5 A
CPCI-DC-6U-600/48	48 VDC	600 W	+5 V/65 A	+3.3 V/80 A	+12 V/12 A	–12 V/1.5 A

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For information about custom silkscreen or faceplate modifications, please contact Digital Power.

N + 1 Parallel Redundant Operation with Active Load Current Sharing

EF Series: 150–200 W High Density Power Supply

AC Input Models
DC Input Models

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The EF Series products provide the industry's smallest open frame AC/DC switchers, delivering up to 500 W of continuous power from one to four outputs. These devices provide the flexibility to meet virtually any design requirement.

- 150–200 W compact high-density models
- Universal AC input with PFC
- 48 VDC input models available
- ORing diode for N+1 parallel operation
- Active load current share
- Ruggedized U-channel construction
- RoHS compliant
- International regulatory approvals

Single Output Models

Model	Output Power	Output Voltage	Output Current	W x L x H in. (cm)
EFS175-105	150 W	5 V	30 A	3.30 x 5.00 x 1.50 (8.38 x 12.70 x 3.81)
EFS175-112	200 W	12 V	16.6 A	
EFS175-124	200 W	24 V	8.3 A	
EFS175-128	200 W	28 V	7.15 A	
EFS175-148	200 W	48 V	4.16 A	

Quad Output Models

Model	Output Power	V1 Output	V2 Output	V3 Output	V4 Output
EF200-433	200 W	+5 V/15 A	+3.3 V/15 A	+12 V/3.5 A	–12 V/1.5 A

The dimensions of Quad Output Models are identical to those of Single Output Models.
For DC input options and other output voltage configurations, please contact Digital Power.

EF Series: 250–500 W High Density Power Supply

AC Input Models
DC Input Models

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- 250–500 W high-density models
- Universal AC input with PFC
- 24 and 48 VDC input models available
- ORing diode for N+1 parallel operation
- Active load current share
- Ruggedized U-channel construction
- RoHS compliant
- International regulatory approvals

Single Output Models

Model	Output Power	Output Voltage	Output Current	W x L x H in. (cm)
EFO306-105	250 W	5 V	50 A	3.86 x 6.80 x 1.50 (9.80 x 17.27 x 3.81)
EFO306-112	350 W	12 V	29 A	
EFO306-124	350 W	24 V	14.5 A	
EFO306-128	350 W	28 V	12.5 A	
EFO306-148	350 W	48 V	7.2 A	
EFO400-112	400 W	12 V	33 A	
EFO400-124	400 W	24 V	16.6 A	
EFO400-128	400 W	28 V	14.3 A	
EFO400-148	400 W	48 V	8.3 A	
EFO500-112	500 W	12 V	41.7 A	
EFO500-124	500 W	24 V	20.8 A	
EFO500-148	500 W	48 V	10.4 A	

Quad Output Models

Model	Input	Output Power	V1 Output	V2 Output	V3 Output	V4 Output
EF306-433	90–264 VAC	300 W	+4 V/40 A	+3.3 V/40 A	+12 V/4 A	–12 V/1.5 A
EFO306-433	90–264 VAC	300 W	+4 V/40 A	+3.3 V/40 A	+12 V/4 A	–12 V/1.5 A

The dimensions of Quad Output Models are identical to those of Single Output Models.
For DC input options and other output voltage configurations, please contact Digital Power.

HD Series: 160 and 365 W High Density, High Efficiency Power Supplies

AC Input Models

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The HD Series PCB mounted, open frame power supplies offer industry-leading power density and efficiency with both information technology and medical safety approvals.

- Industry leading power density: > 18 W/ in.^{3}
- Safety approvals: ITE EN60950-1 and Medical EN60601-1
- High efficiency: up to 92%
- Low profile: 1.08 in. (2.74 cm) for 1 U applications
- Low conducted emissions: To EN55022 Level B with low leakage current of < 200 uA
- Industry standard footprints

10 CFM and 200 LFM Airflow Ratings

Model	Output Power	V1 Output	V2 Output	W x L x H in. (cm)
HD160-105	100 W	5 V / 20 A	12 V / 0.5 A	2.0 x 4.0 x 1.08 (5.08 x 10.16 x 2.74)
HD160-112	160 W	12 V / 13.8 A	12 V / 0.5 A	
HD160-124	160 W	24 V / 6.6 A	12 V / 0.5 A	
HD160-148	160 W	48 V / 3.3 A	12 V / 0.5 A	
HD365-112	365 W	12 V / 30.5 A	12 V / 1 A	3.0 x 5.0 x 1.3 (7.63 x 12.70 x 3.30)
HD365-124	365 W	24 V / 15.2 A	12 V / 1 A	
HD365-148	365 W	48 V / 7.6 A	12 V / 1 A	

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For other output voltage configurations, please contact Digital Power.

PoE Series: 48 and 55 W Power-over-Ethernet (PoE) Injectors

AC Input Models

DC Input Models

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The Digital Power PoE injectors provide 1 A of 48 or 55 VDC power used by 10/100 BASE-T transformers for connection to an IEEE 802.3 (10/100 BASE-T) compatible device. An RJ45 jack provides the 10/100 BASE-T data and voltages for a connection to a wireless modem. These devices feature impact-resistant enclosures and support indoor, outdoor, and DC input applications.

- Flexible cover and fan options
- CE, UL, CSA and CCC regulatory approvals
- Impact-resistant enclosures for indoor or outdoor applications
- Up to 1 A of either 48 or 55 VDC power for 10/100 BASE-T connections to IEEE 802.3 devices
- Wide output voltage adjustment range
- Low conducted emissions to EN55022 Level B
- Universal AC input or wide 12/24 VDC input range
- Compact size of 2.48 x 6.65 x 1.26 in. (6.3 x 16.0 x 3.20 cm)

Standard PoE Models

Model	Input Voltage	Output Voltage	Power	Application
0334B4848	90–264 VAC	48 VDC	48 W	AC indoor
0334B5555	90–264 VAC	55 VDC	55 W	AC indoor
0525B4848	90–264 VAC	48 VDC	48 W	AC outdoor
0525B5555	90–264 VAC	55 VDC	55 W	AC outdoor
0526D4848	10.5–32 VDC	48 VDC	48 W	DC indoor
0526D5555	10.5–32 VDC	55 VDC	55 W	DC indoor

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For information about custom, modified-standard, or value-added applications, please contact Digital Power.

Flexibility

USDP Series: 50, 70 and 100 W Flexible Power Supplies

AC Input Models
DC Input Models

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The USDP series open frame power supplies represent an industry standard footprint. Delivering up 100 W of continuous power, they provide the flexibility to meet a wide variety of design requirements. In addition to standard models, custom devices are available that offer almost any voltage and current combinations.

- Up to 4 flexible outputs
- Universal AC input models
- 24 and 48 VDC input models
- Medical versions available
- RoHS compliant
- International regulatory approvals

Single Output Models

Model	Output Power	Output Voltage	Output Current	W x L x H in. (cm)
US50-105	50 W	5 V	10 A	3.0 x 5.0 x 1.3 (7.63 x 12.70 x 3.30)
US50-112	50 W	12 V	4.2 A	
US50-115	50 W	15 V	3.33 A	
US50-124	50 W	24 V	2 A	
US50-148	50 W	48 V	1.04 A	
US70-105	70 W	5 V	10 A	3.3 x 5.0 x 1.5 (8.38 x 12.70 x 3.81)
US70-112	70 W	12 V	5 A	
US70-115	70 W	15 V	4.67 A	
US70-124	70 W	24 V	2.7 A	
US70-148	70 W	48 V	1.46 A	
US100-105	100 W	5 V	14 A	3.3 x 5.0 x 1.5 (8.38 x 12.70 x 3.81)
US100-112	100 W	12 V	8.3 A	
US100-115	100 W	15 V	6.67 A	
US100-124	100 W	24 V	4.17 A	
US100-148	100 W	48 V	2.1 A	

Multiple Output Models

Model	Output Power	V1 Output	V2 Output	V3 Output	V4 Output	W x L x H in. (cm)
US50-201	50 W	+5 V/5 A	+12 V/2 A	-	-	3.0 x 5.0 x 1.3 (7.63 x 12.70 x 3.30)
US50-301	50 W	+5 V/5 A	+12 V/2 A	–12 V/1 A	-	
US50-303	50 W	+5 V/5 A	+15 V/3 A	–15 V/2 A	-	
US50-401	50 W	+5 V/4 A	+12 V/2 A	–12 V/1 A	–5 V/0.5 A	
US70-201	70 W	+5 V/7 A	+12 V/4 A	-	-	3.3 x 5.0 x 1.5 (8.38 x 12.70 x 3.81)
US70-301	70 W	+5 V/8 A	+12 V/4 A	–12 V/2 A	-	
US70-303	70 W	+5 V/5 A	+15 V/4 A	–15 V/1 A	-	
US70-401	70 W	+5 V/7 A	+12 V/4 A	–12 V/2 A	–5 V/2 A	
US100-201	100 W	–5 V/14 A	+12 V/6 A	-	-	3.3 x 5.0 x 1.5 (8.38 x 12.70 x 3.81)
US100-301	100 W	–5 V/10 A	+12 V/6 A	–12 V/2 A	-	
US100-303	100 W	–5 V/10 A	+15 V/6 A	–15 V/2 A	-	
US100-401	100 W	–5 V/10 A	+12 V/6 A	–12 V/2 A	–5 V/2 A	

Customer Configured Selection

Model	Output Power	V1 Output	V2 Output	V3 Output	V4 Output	W x L x H in. (cm)
		2.5-48 VDC				
US50 Series	50 W	10 A Max	3 A Max	2 A Max	2 A Max	3.0 x 5.0 x 1.3 (7.63 x 12.70 x 3.30)
US70 Series	70 W	10 A Max	4 A Max	2 A Max	2 A Max	3.3 x 5.0 x 1.5 (8.38 x 12.70 x 3.81)
US100 Series	100 W	15 A Max	6 A Max	2 A Max	2 A Max	

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For DC input models, replace "US" with "DM" (for 24 V) or "DP" (for 48 V).

DPL0801 Series (300 W), DPL0402 Series (400 W), DPL5017 Series (600–800 W) Flexible Power Supplies

AC Input Models

DC Input Models

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The DPL series open frame AC to DC switching power supplies are available in 400 W to 800 W models with flexible output configurations that offer a wide range of output voltage setpoints.

- Small footprint
- Universal AC input models (DPL0801 Series)
- Remote on/off and fan fail signal, with auxiliary +12 V/300 mA fan drive circuit (DPL0801 Series)
- Universal AC with PFC input models (DPL0402 and DPL5017 Series)
- Wide output voltage adjustment range
- Available with U-channel, cover, end fan, or top fan
- Remote on/off, power good, current monitor, LED status, and remote sense (DPL0402 and DPL5017 Series)
- Optional N+1 active load current share (DPL0402 and DPL5017 Series)

300–400 W Models

Model	Output Range	Preset Voltage	Maximum Output Power or Current	
			Type U & E & F (Forced Air)	Type U (Convection)
DPL0801x-05	2–5 V	5 V	42 A	20 A
DPL0801x-09	7–11 V	9 V	27.27 A	13.64 A
DPL0801x-12	12–13.8 V	12 V	300 W	150 W
DPL0801x-15	14–16 V	15 V	300 W	150 W
DPL0801x-18	17–22 V	18 V	300 W	150 W
DPL0801x-24	23–28 V	24 V	300 W	150 W
DPL0801x-30	29–34 V	30 V	300 W	150 W
DPL0801x-36	35–43 V	36 V	300 W	150 W
DPL0801x-48	44–52 V	48 V	300 W	150 W
DPL0801x-54	53–60 V	54 V	300 W	150 W
DPL0402x-03(I)	2–3.3 V	3.3 V	45 A	60 A
DPL0402x-05(I)	5–6 V	5 V	45 A	60 A
DPL0402x-12(I)	12–15 V	12 V	400 W	250 W
DPL0402x-18(I)	16–21 V	18 V	400 W	250 W
DPL0402x-24(I)	22–30 V	24 V	400 W	250 W
DPL0402x-36(I)	31–41 V	36 V	400 W	250 W
DPL0402x-48(I)	42–58 V	54 V	400 W	250 W

600–800 W Models

Model	Output Voltage		Maximum Current Output	Maxium Power
	Preset	Range		
DPL5017Rx6-12N(I)	12 V	12–14 V	50 A	600 W
DPL5017Rx6-15N(I)	15 V	15–19 V	40 A	600 W
DPL5017Rx6-24N(I)	24 V	20–26 V	30 A	600 W
DPL5017Rx6-36N(I)	36 V	27–36 V	22.22 A	600 W
DPL5017Rx6-40N(I)	40 V	37–47 V	16.22 A	600 W
DPL5017Rx6-48N(I)	48 V	48–60 V	12.5 A	600 W
DPL5017Rx8-12N(I)	12 V	12–14 V	62.5 A	750 W
DPL5017Rx8-15N(I)	15 V	15–19 V	50 A	750 W
DPL5017Rx8-24N(I)	24 V	20-26 V	40 A	800 W
DPL5017Rx8-36N(I)	36 V	27–36 V	29.63 A	800 W
DPL5017Rx8-40N(I)	40 V	37–47 V	21.62 A	800 W
DPL5017Rx8-48N(I)	48 V	48–60 V	16.67 A	800 W

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For “X”, substitute “U” (U-channel), "C" (cover), “E” (end fan), or “F” (top fan). “I” indicates active load current share option.

COTS and Military Grade Power Solutions

Digital Power provides state-of-the-art power solutions for the most demanding military and defense applications. These high-quality, ruggedized products comply fully with MIL-STD-810 and MIL-STD-461 requirements. Suitable for applications in the harshest environments, they feature a modular design, with major components securely anchored to better withstand shock and vibration. Conformal coatings and stainless steel covers provide additional protection.

Digital Power offers a full range of services for custom military and defense projects, including:

- Complete program management
- Quality assurance and control:
  - Mil-Q 9858 A and ISO 9001:2008 compliance
  - Failure reporting, analysis, and corrective action system (FRACAS)
  - Environmental testing in accordance with MIL-STD-810
- 100% screening, ESS and ATP, including random vibration, temp cycling tests

Applications include:

- Land based: Communication
- Ground vehicles: Active protection, communication, navigation
- Naval: Shipboard radar, EW, communication
- Missiles: Ground-to-air, air-to-air, sea-to-air
- Airborne systems: EW, radar, guidance, and communication
- Unmanned aerial vehicle (UAV): Very light weight power systems

Typical product features include:

- Wide input voltage range
- Environmental conditions per MIL-STD-810
- Power output up to 25,000 W
- High efficiency: Up to 98%
- Power factor correction (PFC)
- Wide operating temperature range: –65.2 to 221 °F (–54 to 105 °C)
- Free convection, forced air cooling, and base plate cooling
- Multiple output voltages (DC and AC)
- EMI/RFI per MIL-STD-461
- High switching frequency: Up to 500 KHz
- High power density: Up to 36 W/ $in.^3$
- Redundancy and hot swap N+1
- Full approvals according to MIL-STD-704, MIL-STD-1275, and MIL-STD-1399
- Switching frequency synchronization to external clock

Digital Power
Flexible Power Solutions

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