Digital Power
Flexible Power Solutions





Military Power Solutions

Powering Defense Platforms. Supporting Mission Critical Systems.

Power conversion and integration for defense platforms.

VEHICLE ELECTRICAL & HARNESSES

DPW01 / DPW03 / DPW201 / DPW202

Custom Harness Design & Intelligent Power Distribution

TACTICAL DC CONVERSION

DC boost / DC buck / LVD

500 W conversion and battery protection

MISSION & CHASSIS POWER

DPLVS102-28-17 / DUC800-28

DC DC Multi-Outputs and Universal Chassis Power

POWER MANAGEMENT (PDU)

PD12V-12RSW / DCP1224-VD

Protected distribution and driver control

SMART-SWITCH TACTICAL UPS AND AIRBORNE POWER

DUPXXX-12M

Fast transfer and battery charging

RF & MICROWAVE SOLUTIONS

Oscillators / Converters / FemtoSix

Signal generation, conversion and precision timing

DRONE SOLUTIONS

Tactical FPV / Multirotor platforms

ISR platforms and multirotor development

EMBEDDED MISSION & RUGGED RACK POWER

VPX & RUGGEDIZED CPCI

3U / 6U power and ruggedized R options

EXPANDED POWER PORTFOLIO

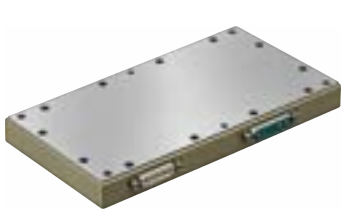
HD500 / HD1000 / DC-DC modules

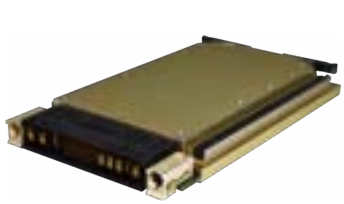
High-density AC-DC and isolated DC-DC power

FROM VEHICLE POWER SYSTEMS TO MISSION-CRITICAL ELECTRONICS FOR LAND, AIR, AND SEA







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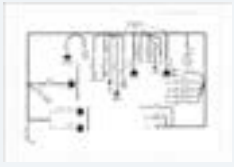
VEHICLE ELECTRICAL & HARNESS INTEGRATION

Advanced Tactical Vehicle Electrical & Harness System

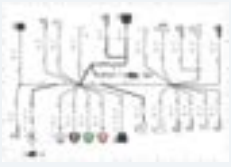
DPW01 / DPW03 / DPW201 / DPW202 | Integrated Power Distribution & Ruggedized Interconnection



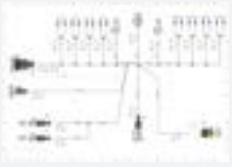
DPW01



DPW03



DPW201



DPW202



VEHICLE APPLICATION

Model	Role / what it does	Application
DPW01	**Primary cable harness:** Combines power, control and signal routing across vehicle controls, distribution points and subsystem interfaces.	Ground vehicles, UGVs, communications and onboard sensors.
DPW03	**Chassis harness:** Main vehicle backbone for engine and structural systems, sensors and rear-connected loads.	
DPW201	**Dashboard harness:** Connects operator controls, switch panels, cabin electronics, lighting, USB and auxiliary interfaces.	
DPW202	**Rear auxiliary harness:** Routes rear lighting, beacon, backup alarm and mission-equipment connections.	

Select the harness by routing, connector requirements and subsystem interfaces. Final electrical and sealing requirements are configured for the vehicle.

Parameter	Shared family capability
DC platforms	12 V / 24 V / 28 V
Protection / sealing	5-80 A typical circuit protection; IP67 / IP68 options
Signal integration	CAN bus / analog / digital I/O
Temperature	-20°C to +85°C operating (configurable)
Management	Programmable LVLD; relay / solid-state switching options
Construction	Shielding; reinforced routing; over-mold / potting options

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TACTICAL VEHICLE POWER

Tactical DC Conversion & Battery Protection

DC boost, DC buck and low-voltage load disconnect



DN500M-24T

DC-DC Boost Converter



DN500M-28T

DC-DC Buck Converter



VEHICLE APPLICATION

Parameter	DN500M-24T	DN500M-28T	Application
Input	11-20 VDC	24-36 VDC	Tactical vehicles, mobile communications and vehicle battery protection.
Output / power	Regulated 24 VDC; 500 W nominal	Regulated 24 VDC; 500 W nominal	
Temperature / sealing	-40°C to +75°C baseplate; IP67	-40°C to +80°C baseplate; IP67	
Key features	Up to 96% at 14 V, no line loss; 1+1 sharing	1+1 active sharing; fault / overload LED	
Protection	100 V input-spike protection; output protection	100 V input-spike protection; output protection	

Individual converter limits apply. Buck input range normalized from source 36-24 V notation.

DPLVD-1014 | Low-voltage load disconnect



Parameter	DPLVD-1014	Application
Operating voltage	12 V Vehicle system; 7-20 VDC	Vehicle battery protection and low-voltage load management.
	24 V and 28 V Vehicle systems; 24-36 VDC	
Relay drive	2 A maximum source current; short-circuit protected	
Thresholds	Disconnect 11.4 V; Reconnect 12.4 V (±0.2 V)	
	Disconnect 8 V; Reconnect 13 V (±0.2 V)	
	Disconnect 22.5 V; Reconnect 26 V (±0.2 V)	
Construction / alarms	IP67 sealed; LED and buzzer outputs; programmable thresholds	

Controls an external relay; 2 A is relay-drive current, not switched load capacity.

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MISSION ELECTRONICS & DEPLOYABLE POWER

Multi-Output DC & Universal Chassis Power

DPLVS102-28-17 and DUC800-28 | Multi Output DC Power and Chassis PSU

DPLVS102-28-17
Multi-output converter

Converts a nominal 28 V vehicle bus into 17 regulated rails for digital processors, analog sensors and auxiliary loads. Separate analog and digital returns support mixed-signal integration, while fast startup and fault protection serve navigation, radar and surveillance electronics.





Parameter	Key specification	Application
Input / outputs	16-36 VDC; 17 regulated outputs	Navigation, radar and integrated mission electronics.
Rails / returns	3.3 V, 5 V; ±15 V; ±70 V; ±140 V; separate analog / digital returns	
Startup / efficiency	≤50 ms; ≥86% at nominal input and full load	

Confirm rail currents, combined output loading and grounding requirements.

DUC800-28
Universal chassis PSU

An 800 W universal AC-input chassis supply with dual independent 24-28 VDC rails and 50 ms hold-up. Its modular chassis-side format supports tactical computing and deployable communications equipment. Select the ruggedized variant and connector configuration for the installation.





Parameter	Key specification	Application
Input / power	90-264 VAC, 50-60 Hz; 800 W continuous capability	Communications shelters, expeditionary command posts and tactical networking.
Outputs / hold-up	Dual 24-28 VDC outputs; 50 ms hold-up	
Operating / power factor	-20°C to +55°C; 0.95 minimum power factor	
MIL connectors	MS3474L12-3P input; MS3474L14-4S output	

Confirm the ruggedized configuration, output setup and load split.

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VEHICLE POWER DISTRIBUTION & CONTROL

Power Management Systems (PDU)

Protected load distribution and a centralized driver interface

PD12V-12RSW | 12-channel PDU

Combines 12-channel power distribution, relay switching and configurable circuit protection in a compact vehicle panel. A high-current busbar supports switched and unswitched 12 V loads, while integrated USB and 12 V service outputs supply auxiliary equipment.





Parameter	Key specification	Application
Input / circuits	12 VDC nominal; 12 output circuits	Ground vehicles and mission subsystem distribution.
Protection / architecture	5-30 A configurable thermal breakers; switched / unswitched +12 V busbar	
Service outputs	USB: 5 V, 2 × 2.1 A; 12 V service socket	

Configure circuit-breaker ratings and switched / unswitched load assignments.

DCP1224-VD
Driver control panel

Centralizes instrumentation, vehicle control and low-voltage battery protection for 12 V / 24 V systems. The driver interface monitors vehicle status and controls lighting, infrared, drivetrain and auxiliary functions. A serviceable modular harness supports panel integration and maintenance.





Parameter	Key specification	Application
Vehicle architecture	12 V / 24 V operation	Tactical reconnaissance and custom defense vehicles.
Monitoring / controls	Speed, RPM, voltage, fuel, temperature; lighting, IR, drivetrain and auxiliary loads	
Battery / integration	Integrated LVLD; serviceable modular harness	

Configure panel layout, LVLD thresholds, connectors and load ratings.

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TACTICAL POWER CONTINUITY

Smart-Switch Tactical UPS

DUPXXX-12M | Battery switching and charging in one system

DUPXXX-12M

Tactical Mobile and Ground UPS System for transportable communications and vehicle-mounted electronics. Ultra-fast switching, high-efficiency charging, and real-time status indicators ensure reliable and uninterrupted operation during critical missions





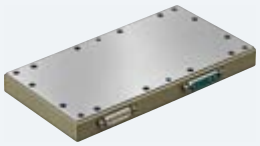
Parameter	Key specification	Condition / selection	Application
Input	10.5-36 VDC	Prime DC source	Tactical Command and Control (TC2) systems, UEV, military-secured communications, and tactical vehicle-based platforms.
Power transmission	Up to 350 W	Selected configuration	
Switching time	Less than 500 µs	Source transition	
Transfer thresholds	Battery: 10.5 V; prime: 11.7 V	Source specification	
Battery compatibility	BB2590 Li-ion / BB390 NiMH	Select charging profile	
Charging power	17 W / 25 W options	Configuration-specific	
Operating temperature	-20°C to +60°C	Installation requirements apply	
Control / indication	On/off switch, LEDs and fuel gauge	Battery and DC-input status	

Ruggedized High-Altitude Airborne Power Supply

For multi-mission maritime aircraft applications

200 W for mission displays, sensors and command-and-control electronics. Three-phase 115 VAC nominal input at 395-405 Hz; 28 VDC at 7.14 A plus auxiliary 12 VDC. Greater than 85% efficiency at full load and 75 W partial load.





Parameter	Key specification	Application
Operating temperature	-40°C to +70°C	Suitable for maritime patrol, anti-submarine warfare (ASW), anti-surface warfare (ASuW), and intelligence, surveillance, and reconnaissance (ISR) missions
Cooling / construction	Conduction cooled; fanless	
Size / weight	9.0 × 5.0 × 1.0 in; 3 lb 3 oz maximum	
Design requirements	Designed to meet MIL-STD-704E, MIL-STD-461E and MIL-STD-810	

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RF, MICROWAVE & PRECISION TIMING

RF & Microwave Solutions

Signal generation, frequency conversion and low-jitter timing for defense electronics

Tunable oscillators & filters

Low phase-noise microwave sources and fast-tuning filters support radar, electronic warfare and communications across land, air and sea platforms. Compact, rugged modules resist environmental drift.



Solution	Key characteristics	Application
Oscillators & filters	Portfolio frequency range: 2-60 GHz; low phase noise; rapid tuning; notch and bandpass filters	Radar, communications, electronic support and threat detection; CIWS / C-RAM radar and RWR / ESM subsystems.
Custom YIG tuned oscillators	Tunable microwave signal generation; low phase-noise signal sources	
Signal processing modules	Multipliers, amplifiers, down conversion and signal synthesis	

Integrated Microwave Converters

For RWR, ESM and ECM test systems, data links and radar modules. Agile local oscillators, careful frequency planning and analog signal processing support signal fidelity and wide dynamic range.



Parameter	Key specification	Application
Frequency coverage	0.1-20 GHz and 0.1-40 GHz configurations	RWR, ESM and ECM test systems; data links and radar modules.
Signal performance	Low spurious signals and two-tone IMD; wideband passband flatness	

FemtoSix | Microwave Clock Source

Externally referenced 2.56 GHz timing for AESA radar, EW and direct RF sampling. Supports coherent sampling and ADC / DAC signal-to-noise performance.



Parameter	Key specification	Application
Frequency / reference	2.56 GHz nominal center; 10.0 MHz nominal external reference	AESA radar, electronic warfare, direct RF sampling and coherent phased-array timing.
Jitter	5 fs RMS nominal; 6 fs maximum; integrated over 12 kHz-20 MHz	
Differential output	0-6 dBm into 100 ohms at +25°C; 100-ohm nominal impedance	
Temperature	Specified: -25°C to +70°C; functional: -40°C to +85°C	

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ISR & TACTICAL MULTIROTOR PLATFORMS

Drone Solutions

Compact FPV platforms and an in-house multirotor development program

Lightweight Tactical FPV Drone

Compact 10-inch carbon airframe for small tactical drone platforms. Field deployment is reported in Ukraine, with U.S. integration and assembly in Idaho alongside a Ukrainian design partner.



Parameter	Reported specification	Application
Flight range / speed	Up to 21 km reported range; 80 km/h reported cruising speed	ISR and tactical observation using compact FPV / small drone platforms, with daylight or thermal imaging.
Payload / duration	2.9-3.0 kg capacity; up to 18 minutes maximum duration	
Imaging	Day 1500 TVL and Thermal 640 sensor options	
Communications	Frequency-hopping control; multi-band video with band / channel switching	

Procurement status: U.S. distribution is subject to current export restrictions. Ukrainian-designed, Idaho-assembled; country-of-origin and export documentation are provided for procurement review.

Tactical Multirotor Development Platform

Larger tactical multirotor under evaluation for U.S. assembly, mission-payload integration and compliant component sourcing. In-house Idaho design with configuration control.



Parameter	Architecture / program status	Application
Control / sensors	Dual-band 900 MHz and 2.4 GHz command and telemetry; daylight and thermal imaging	ISR and tactical multirotor mission-payload integration, with daylight and thermal imaging. Development and pre-production evaluation.
Program stage	Pre-production evaluation; airframe configuration under review	
Sourcing / qualification	NDAA-aligned sourcing and Blue UAS vetting under evaluation	
Distribution review	Export-control and distribution documentation in preparation	

Development platform: no combat deployment history reported. Compliance and qualification documentation remain in preparation; formal Blue UAS listing is to be pursued.

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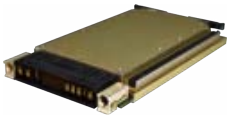
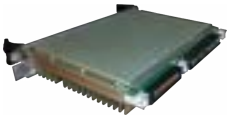
EMBEDDED MISSION & RUGGED RACK POWER

VPX & Ruggedized Compact PCI

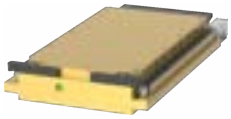
VITA 62 VPX and Compact PCI R configurations



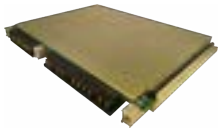
DPM4050



DPM4468



DPM4071



DPM4069



3U R



6U R

VPX MODEL SELECTION

Model / format	Input	Rated power	Output architecture	Application
DPM4050 / 3U DC	16-36 VDC	150 W	12 V, 3.3 V, 5 V + aux	Embedded mission computing, rugged communications and radar.
DPM4468 / 6U DC	18-36 VDC	Up to 900 W	2 × 12 V; 5 V + aux	
DPM4071 / 3U AC	103-125 V phase-neutral; 400 Hz, 3-phase	800 W class	28 V main; 3.3 V aux	
DPM4069 / 6U AC	85-265 VAC; 50 / 60 / 400 Hz, 1-phase	Up to 1 kW class	12 V / 5 V main + aux	

Cooling and management are model-specific. Individual rail maxima are not additive; confirm combined output and EMC-filter requirements.

COMPACT PCI R — RUGGEDIZED OPTIONS

Full R model numbers	Input	Power range	Output rails	Application
CPCI-AC-3U-200R **CPCI-AC-3U-300R**	85-264 VAC	200-300 W	+5 V, +3.3 V, ±12 V	Rugged rack computing, control and communications systems.
CPCI-AC-6U-600R **CPCI-AC-6U-650R**	85-264 VAC; 47-63 Hz	600-650 W	+5 V, +3.3 V, ±12 V	
CPCI-DC-3U-200/24R **CPCI-DC-3U-300/24R** **CPCI-DC-3U-200/48R** **CPCI-DC-3U-300/48R**	18-36 / 20-36 VDC; 36-72 VDC	200-300 W	+5 V, +3.3 V, ±12 V	
CPCI-DC-6U-350/24R **CPCI-DC-6U-400/24R** **CPCI-DC-6U-400/48R** **CPCI-DC-6U-500/48R** **CPCI-DC-6U-600/48R** **CPCI-DC-6U-650/48R**	18-36 / 20-36 VDC; 36-72 VDC	350-650 W	+5 V, +3.3 V, ±12 V	

Specify the R suffix. Conformal coating and enhanced shock / vibration; current sharing and ORing. Forced-air and combined rail limits apply. 6U R: 20 g ±3 g shock, 20 ms; 4 GRMS vibration.

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AC-DC & DC-DC POWER

Expanded Power Supply Portfolio

HD500 / HD1000 | AC-DC and DC-DC brick modules

HIGH-DENSITY AC-DC POWER



HD500



HD1000

Compact, ruggedized brick power converters deliver robust AC/DC and DC/DC onboard distribution featuring integrated fault protection and remote on/off control. Engineered for mission-critical environment support operations across varying load demands and ambient temperature conditions.

Series	Input	Output / rated power
HD500U / HD500E	90-264 VAC	12 / 24 / 48 V; 500 W with 20 CFM airflow
HD1000	90-264 VAC	12 V: 800 W; 24 / 48 V: 1000 W

HD500 convection ratings depend on output and enclosure (200-350 W). Follow airflow and temperature derating for both series.

AC-DC & DC-DC BRICK MODULES



DPAJCV150



DPQB24-12-150



DPQB48-12-12-150



DPSV24-28-350

Model	Input	Output / power	Key functions
DPAJCV150	90-264 VAC; 127-370 VDC	12 / 24 / 48 V; 150 W	Remote on/off; adjustable output; OCP / OVP / short-circuit protection
DPQB24-12-150	18-36 VDC	12 V / 12.5 A; 150 W	Quarter brick; remote sense; 90-110% trim
DPQB48-12-150	36-75 VDC	12 V / 12.5 A; 150 W	Quarter brick; remote sense; 90-110% trim
DPSV24-28-350	18-36 VDC	28 V / 12.5 A; 350 W	Half brick; remote sense; 90-115% trim

Distributed DC power conversion with remote on/off and fault protection. Thermal performance depends on cooling, loading and baseplate / ambient conditions.

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