GE
Integrated Power Solutions for FPGAs and SOCs

GE Energy POL power converters provide small, efficient, and reliable power electronics modules for FPGAs and DSPs. Our high-density POL (point-of-load) DC-DC converters provide a cost-effective solution to power silicon that includes DSP Core and I/O requirements ranging from 0.45 to 5.5V.

Our standards-based, modular solutions deliver a lower total system cost; provide three times better transient response, have a smaller footprint; and are easier to implement than discrete solutions.

- Accelerate time to market
- Reduce risk of design errors
- Scalable offering from 2-360 Amps (3x120A)
- Digital and analog design flexibility
- Leading power density

- Pre-characterized electrical and thermal performance\
- International safety approvals
- EZ-Sequence™ feature for analog sequencing management
- Tunable Loop™ feature reduces discrete components (external input and output capacitor requirements)

Leading Density at Low Cost

GE Tunable Loop™ products ensure low cost implementation of board mounted power in standards-based DOSA footprints

Product Family	Output Models	Communication	Input Voltage	Output Voltage	Output Current	Peak Efficiency	Dimensions
ePicoDLynx™	PDT003	Digital PMBus™	3.0-14.4V	0.45-5.5V	3A	96%	12.2 x 12.2 x 6.25 mm
PicoDLynxII™	PJT004	Digital PMBus™	4.5-14.4V	0.51-5.5V	4A	97.5%	12.2 x 12.2 x 7.5 mm
PicoDLynx™	PDT006	Digital PMBus™	3.0-14.4V	0.45-5.5V	6A	95%	12.2 x 12.2 x 7.25 mm
PicoDLynxII™	PJT007	Digital PMBus™	4.5-14.4V	0.51-5.5V	7A	97.5%	12.2 x 12.2 x 7.5 mm
SlimLynx™	PNDT006	Digital PMBus™	3.0-14.4V	0.45-5.50V	6A	95%	12.2 x 12.2 x 2.8 mm
Dual MicroDLynx™	UDXS0606	Digital PMBus™	4.5-14.4V	0.51-5.50V	2 x 6A	97%	20.3 x 11.4 x 8.5 mm
PicoDLynx™	PDT012	Digital PMBus™	3.0-14.4V	0.45-5.50V	12A	97%	12.2 x 12.2 x 8.5 mm
Dual MicroDLynx™	UDXS0606	Digital PMBus™	4.5-14.4V	0.51-5.50V	2 x 6A	97%	20.3 x 11.4 x 8.5 mm
Dual MicroDLynx™	UDXS1212	Digital PMBus™	4.5-14.4V	0.51-5.50V	2 x 12A	97%	20.3 x 11.4 x 8.5 mm
SlimLynx™	PNDT012	Digital PMBus™	3.0-14.4V	0.45-5.50V	12A	96%	12.2 x 12.2 x 2.9 mm
PicoDLynxII™	PJT014	Digital PMBus™	4.5-14.4V	0.51-5.5V	14A	97%	12.2 x 12.2 x 8.5 mm
PicoDLynxII™	PJT020	Digital PMBus™	4.5-14.4V	0.51-3.63V	20A	97%	12.2 x 12.2 x 8.5 mm
PicoDLynxII™	UJT035	Digital PMBus™	4.5-14.4V	0.51-3.63V	35A	97%	20.3 x 11.4 x 11 mm
MegaDLynx™	MDT040	Digital PMBus™	4.5-14.4V	0.45 to 2.0V	40A	95%	33 x 13.5 x 10.9 mm
GigaDLynx™	GDT080	Digital PMBus™	4.5-14.0V	0.5 to 2.0V	80A	96%	33 x 22.9 x 12.7 mm
TeraDLynx™	TJT120	Digital PMBus™	7-14V	0.6 to 1.5V	120A	95.5%	53.8 x 31.7 x 13.3 mm
TeraDLynx™	TJT170	Digital PMBus™	7-14V	0.6 to 1.5V	170A	95.5%	53.8 x 31.7 x 13.3 mm
TeraDLynx™	TJT120P	Digital PMBus™	7-14V	0.6 to 1.5V	120, 240, 360A	95.5%	53.8 x 31.7 x 13.3 mm
TLynx™	APXS002	Analog	3.0-14V	0.6-5.5V	2A	96%	12.2 x 12.2 x 6.25 mm
PicoDLynx™	PVX003	Analog	3.0-14.4V	0.6-5.5V	3A	94%	12.2 x 12.2 x 6.25 mm
PicoDLynx™	PVX006	Analog	3.0-14.4V	0.6-5.5V	6A	94%	12.2 x 12.2 X 7.25 mm
PicoDLynxII™	PKX007	Analog	4.5-14.4V	0.6-5.5V	7A	97.5%	12.2 x 12.2 x 7.5 mm
PicoDLynx™	PVX012	Analog	3.0-14.4V	0.60-5.5V	12A	96%	12.2 x 12.2 x 8.5 mm
Dual MicroDLynx™	UVXS1212	Analog	4.5-14.4V	0.51-5.50V	2 x 12A	97%	20.3 x 11.4 x 8.5 mm
PicoDLynxII™	PKX014	Analog	4.5-14.4V	0.6-5.5V	14A	97%	12.2 x 12.2 x 8.5 mm
PicoDLynxII™	PKX020	Analog	4.5-14.4V	0.51-3.63V	20A	97%	12.2 x 12.2 x 8.5 mm
MegaDLynx™	MVT040	Analog	4.5-14.4V	0.6 -2.0V	40A	95%	33 x 13.5 x 10.9 mm
GigaTLynx™	APTS050	Analog	4.5-14.0V	0.60-2.0V	50A	95%	33 x 22.9 x 10 mm

Xilinx Power Requirement by Part Number

Zynq™, Artix™, Kintex™,, Spartan™ and Virtex™ are registered trademarks of the Xilinx™ Corporation.
Always refer to manufacturer's specification for correct and up-to-date power information

Zynq™-Ultrascale+ - Core and I/O Voltage: Module Output 0.72V to 1.8V

Input Voltage	0 to 3A	3 to 7A	7 to 20A	20 to 40A	40 to 80A	80 to 170A	170 to 360A
3 – 14/14.4V	APXS002, PDT003	PDT006, PNDT006	PDT012, PNDT012				
4.5 – 14/14.4V		PJT004, UDXS0606, PJT007	PJT007, UDXS1212, PJT014, PJT020	UJT035, MDT040	GDT080		
7 – 14V						TJT120, TJT170	2xTJT120p, 3xTJT120p

Zynq™-7000 - Core and I/O Voltage: Module Output 0.87V to 3.47V

Input Voltage	0 to 3A	3 to 7A	7 to 20A	20 to 40A	40 to 80A	80 to 170A	170 to 360A
3 – 14/14.4V	APXS002, PDT003	PDT006, PNDT006	PDT012, PNDT012				
4.5 – 14/14.4V		PJT004, UDXS0606, PJT007	PJT007, UDXS1212, PJT014, PJT020	UJT035, MDT040	GDT080		
7 – 14V						TJT120, TJT170	2xTJT120p, 3xTJT120p

Artix™ 7 - Core and I/O Voltage: Module Output 0.87V to 3.47V

Input Voltage	0 to 3A	3 to 7A	7 to 20A	20 to 40A	40 to 80A	80 to 170A
3 – 14/14.4V	APXS002, PDT003	PDT006, PNDT006	PDT012, PNDT012			
4.5 – 14/14.4V		PJT004, UDXS0606, PJT007	PJT007, UDXS1212, PJT014, PJT020	UJT035, MDT040	GDT080	
7 – 14V						TJT120, TJT170

Kintex™-Ultrascale+ - Core and I/O Voltage: Module Output 0.72V to 1.8V

Input Voltage	0 to 3A	3 to 7A	7 to 20A	20 to 40A	40 to 80A	80 to 170A	170 to 360A
3 – 14/14.4V	APXS002, PDT003	PDT006, PNDT006	PDT012, PNDT012				
4.5 – 14/14.4V		PJT004, UDXS0606, PJT007	PJT007, UDXS1212, PJT014, PJT020	UJT035, MDT040	GDT080		
7 – 14V						TJT120, TJT170	2xTJT120p, 3xTJT120p

Kintex™-Ultrascale - Core and I/O Voltage: Module Output 0.9V to 1.8V

Input Voltage	0 to 3A	3 to 7A	7 to 20A	20 to 40A	40 to 80A	80 to 170A	170 to 360A
3 – 14/14.4V	APXS002, PDT003	PDT006, PNDT006	PDT012, PNDT012				
4.5 – 14/14.4V		PJT004, UDXS0606, PJT007	PJT007, UDXS1212, PJT014, PJT020	UJT035, MDT040	GDT080		
7 – 14V						TJT120, TJT170	2xTJT120p, 3xTJT120p

Kintex™ 7 - Core and I/O Voltage: Module Output 0.87V to 3.47V

Input Voltage	0 to 3A	3 to 7A	7 to 20A	20 to 40A	40 to 80A	80 to 170A
3 – 14/14.4V	APXS002, PDT003	PDT006, PNDT006	PDT012, PNDT012			
4.5 – 14/14.4V		PJT004, UDXS0606, PJT007	PJT007, UDXS1212, PJT014, PJT020	UJT035, MDT040	GDT080	
7 – 14V						TJT120, TJT170

Virtex™-Ultrascale+ - Core and I/O Voltage: Module Output 0.72V to 1.8V

Input Voltage	0 to 3A	3 to 7A	7 to 20A	20 to 40A	40 to 80A	80 to 170A	170 to 360A
3 – 14/14.4V	APXS002, PDT003	PDT006, PNDT006	PDT012, PNDT012				
4.5 – 14/14.4V		PJT004, UDXS0606, PJT007	PJT007, UDXS1212, PJT014, PJT020	UJT035, MDT040	GDT080		
7 – 14V						TJT120, TJT170	2xTJT120p, 3xTJT120p

Xilinx Power Requirement by Part Number
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VirtexTM-Ultrascale – Core and I/O Voltage: Module Output 0.95V to 1.8V

Input Voltage	0 to 3A	3 to 7A	7 to 20A	20 to 40A	40 to 80A	80 to 170A	170 to 360A
3 – 14/14.4V	APXS002, PDT003	PDT006, PNDT006	PDT012, PNDT012				
4.5 – 14/14.4V		PJT004, UDXS0606, PJT007	PJT007, UDXS1212, PJT014, PJT020	UJT035, MDT040	GDT080		
7 – 14V						TJT120, TJT170	2xTJT120p, 3xTJT120p

Virtex® 7 – Core and I/O Voltage: Module Output 0.9V to 3.3V

Input Voltage	0 to 3A	3 to 7A	7 to 20A	20 to 40A	40 to 80A	80 to 170A
3 – 14/14.4V	APXS002, PDT003	PDT006, PNDT006	PDT012, PNDT012			
4.5 – 14/14.4V		PJT004, UDXS0606, PJT007	PJT007, UDXS1212, PJT014, PJT020	UJT035, MDT040	GDT080	
7 – 14V						TJT120, TJT170

Virtex® 6 – Core and I/O Voltage: Module Output 0.9V to 2.5V

Input Voltage	0 to 3A	3 to 7A	7 to 20A	20 to 40A	40 to 80A	80 to 170A
3 – 14/14.4V	APXS002, PDT003, PVX003	PDT006, PNDT006	PDT012, PNDT012, PVX012			
4.5 – 14/14.4V		PJT004, UDXS0606, PJT007, PKX007	PJT007, UDXS1212, UVXS1212, PJT014, PKX014, PJT020, PKX020	UJT035, MDT040, MVT040	GDT080, APTS050	
7 – 14V						TJT120, TJT170

Virtex® 5 – Core, I/O and Aux Voltage: Module Output 1V to 3.45V

Input Voltage	0 to 3A	3 to 7A	7 to 20A	20 to 40A	40 to 80A	80 to 170A
3 – 14/14.4V	APXS002, PDT003, PVX003	PDT006, PNDT006	PDT012, PNDT012, PVX012			
4.5 – 14/14.4V		PJT004, UDXS0606, PJT007, PKX007	PJT007, UDXS1212, UVXS1212, PJT014, PKX014, PJT020, PKX020	UJT035, MDT040, MVT040	GDT080, APTS050	
7 – 14V						TJT120, TJT170

Spartan® 7 – Core Voltage: Module Output 1V to 1.8V

Input Voltage	0 to 3A	3 to 7A	7 to 20A	20 to 40A	40 to 80A	80 to 170A
3 – 14/14.4V	APXS002, PDT003, PVX003	PDT006, PNDT006	PDT012, PNDT012, PVX012			
4.5 – 14/14.4V		PJT004, UDXS0606, PJT007, PKX007	PJT007, UDXS1212, UVXS1212, PJT014, PKX014, PJT020, PKX020	UJT035, MDT040, MVT040	GDT080, APTS050	
7 – 14V						TJT120, TJT170

Spartan® 6 – Core Voltage: Module Output 1V to 2.5V

Input Voltage	0 to 3A	3 to 7A	7 to 20A	20 to 40A	40 to 80A	80 to 170A
3 – 14/14.4V	APXS002, PDT003, PVX003	PDT006, PNDT006	PDT012, PNDT012, PVX012			
4.5 – 14/14.4V		PJT004, UDXS0606, PJT007, PKX007	PJT007, UDXS1212, UVXS1212, PJT014, PKX014, PJT020, PKX020	UJT035, MDT040, MVT040	GDT080, APTS050	
7 – 14V						TJT120, TJT170

Digital Power Insight (DPI)™

Set of Tools to interact with GE PMBus™ enabled DC-DC power modules

- Easy to use software running on Windows PC

- Use with GE USB-to-1^{2}C translator to communicate with modules

- Multiple tools with graphical or command line type interfaces

- Rich set of functions, including setup and configuring of modules, control and read back of module data

The Digital Power Insight™ (DPI) software suite along with GE's latest Digital Point-of-Load (POL) modules and Digital Bus Converters allows customers to communicate with the modules via the PMBus interface without writing any software. With a set of three tools (command line interface based DPI-CLI, a simple, fixed-format graphical user interface DPI-GUI and the full-featured, multi-window ProGUI), the user has a range of user interfaces to match their development and testing needs. The table below provides a quick summary of the features and capabilities of the three tools.

Features	DPI-CLI	DPI-GUI	DPI-ProGUI
Find all the modules connected to I2C Bus	●	Up to 6	●
Query and adjust individual module parameters	●	●	●
Query and adjust small group of modules (≤6)	●	●	●
Query and adjust small group of modules (1-64)	●		●
Continuous polling of modules to collect and display data	●	●	●
Store recorded data in a file	●		●
Plot waveform of module data			●
Creating and Storage of Module Configuration		●	●
Scripting Capability	●		●

The DPI Software Tool Set is distributed as a zip file that can be downloaded from a link on the GE website.
http://www.geindustrial.com/tools-and-calculators

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