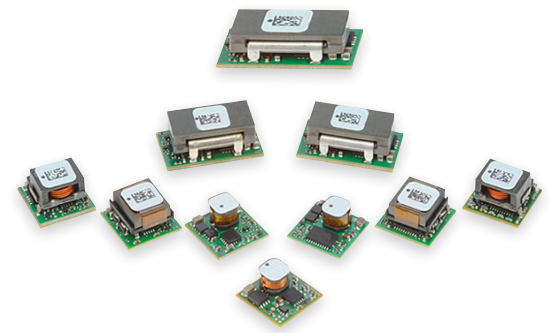


Integrated Power Solutions for DSPs & FPGAs



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 – 250 Amps (5 x 50A)
- Digital and analog design flexibility
- Leading power density
- Pre-characterized electrical and thermal performance
- International safety approvals
- EZ-Sequence™ feature for sequencing management
- Adaptive Voltage Scaling (AVS) reduces power consumption
- Proven reliability >3 billion hours MTBF
- Reduced BOM - 1 part Vs. 15 to 40
- Synchronization and Power Good features
- Wide input voltage range 3.0V to 14.4V
- High frequency switching
- Tunable Loop™ feature reduces discrete components (external input and output capacitor requirements)

Leading Density at Low Cost

GE Energy 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	Efficiency	Dimensions
PicoDLynx™	PDT003	Digital PMBus™	3.0-14.4V	0.45-5.5V	3A	94%	12.2 x 12.2 x 6.25 mm
PicoDLynx™	PDT006	Digital PMBus™	3.0-14.4V	0.45-5.5V	6A	94%	12.2 x 12.2 x 7.25 mm
PicoDLynx™	PDT012	Digital PMBus™	3.0-14.4V	0.45-5.5V	12A	96%	12.2 x 12.2 x 8.5 mm
MicroDLynx™	UDT020	Digital PMBus™	3.0-14.4V	0.45-5.5V	20A	96%	20.3 x 11.4 x 8.5 mm
MegaDLynx™	MDT040	Digital PMBus™	4.5-14.4V	0.45-2.0V	40A	91.5%	33 x 13.5 x 10.9 mm
PicoDLynx™	PVX003	Analog	3.0-14.4V	0.60-5.5V	3A	92%	12.2 x 12.2 x 6.25 mm
PicoDLynx™	PVX006	Analog	3.0-14.4V	0.60-5.5V	6A	94%	12.2 x 12.2 x 7.25 mm
PicoDLynx™	PVX012	Analog	3.0-14.4V	0.60-5.5V	12A	95%	12.2 x 12.2 x 8.5 mm
MicroDLynx™	UVT020	Analog	3.0-14.4V	0.60-5.5V	20A	96%	20.3 x 11.4 x 8.5 mm
MegaDLynx™	MVT040	Analog	4.5-14.4V	0.60-2.0V	40A	91.5%	33 x 13.5 x 10.9 mm
PicoTLynx™	APXS002	Analog	3.0-14.0V	0.60-5.5V	2A	96%	12.2 x 12.2 x 6.25 mm
MegaTLynx™	APTS030	Analog	6.0-14.0V	0.8-3.63V	30A	96%	33 x 13.5 x 10 mm
GigaTLynx™	APTS050	Analog	4.5-14.0V	0.70-2.0V	50A	95%	33 x 22.9 x 10 mm



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

Input V	0 to 2 Amp	0 to 3 Amp	3 to 6 Amp	6 to 12 Amp	12 to 20 Amp	20 to 30 Amps	30 to 40 Amps (2Vo max)	40 to 50A(2Vo max)
3-14/14.4V 4.5-14/14.4V 6-14V	APXS002A0X-SRZ	PDT/PVX003A0X3-SRZ	PDT/PVX006A0X3-SRZ	PDT/PVX012A0X3-SRZ	UDT/UVT020A0X3-SRZ	APTS030A0X3-SRPHZ3	MDT/MVT040A0X3-SRZ*	APTS050A0X3-SRPHZ* ¹

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

Input V	0 to 2 Amp	0 to 3 Amp	3 to 6 Amp	6 to 12 Amp	12 to 20 Amp	20 to 30 Amps	30 to 40 Amps (2Vo max)	40 to 50A(2Vo max)
3-14/14.4V 4.5-14/14.4V 6-14V	APXS002A0X-SRZ	PDT/PVX003A0X3-SRZ	PDT/PVX006A0X3-SRZ	PDT/PVX012A0X3-SRZ	UDT/UVT020A0X3-SRZ	APTS030A0X3-SRPHZ3	MDT/MVT040A0X3-SRZ*	APTS050A0X3-SRPHZ* ¹

Kintex™ 7 - Core and I/O Voltage: Module Output 0.87V to 3.4V

Input V	0 to 2 Amp	0 to 3 Amp	3 to 6 Amp	6 to 12 Amp	12 to 20 Amp	20 to 30 Amps	30 to 40 Amps (2Vo max)	40 to 50A(2Vo max)
3-14/14.4V 4.5-14/14.4V 6-14V	APXS002A0X-SRZ	PDT/PVX003A0X3-SRZ	PDT/PVX006A0X3-SRZ	PDT/PVX012A0X3-SRZ	UDT/UVT020A0X3-SRZ	APTS030A0X3-SRPHZ3	MDT/MVT040A0X3-SRZ*	APTS050A0X3-SRPHZ* ¹

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

Input V	0 to 2 Amp	0 to 3 Amp	3 to 6 Amp	6 to 12 Amp	12 to 20 Amp	20 to 30 Amps	30 to 40 Amps (2Vo max)	40 to 50A(2Vo max)
3-14/14.4V 4.5-14/14.4V 6-14V	APXS002A0X-SRZ	PDT/PVX003A0X3-SRZ	PDT/PVX006A0X3-SRZ	PDT/PVX012A0X3-SRZ	UDT/UVT020A0X3-SRZ	APTS030A0X3-SRPHZ3	MDT/MVT040A0X3-SRZ*	APTS050A0X3-SRPHZ* ¹

Virtex® 6 - Core Voltage: Module Output 0.9V to 2.5V

Input V	0 to 2 Amp	0 to 3 Amp	3 to 6 Amp	6 to 12 Amp	12 to 20 Amp	20 to 30 Amps	30 to 40 Amps (2Vo max)	40 to 50A(2Vo max)
3-14/14.4V 4.5-14/14.4V 6-14V	APXS002A0X-SRZ	PDT/PVX003A0X3-SRZ	PDT/PVX006A0X3-SRZ	PDT/PVX012A0X3-SRZ	UDT/UVT020A0X3-SRZ	APTS030A0X3-SRPHZ3	MDT/MVT040A0X3-SRZ*	APTS050A0X3-SRPHZ* ¹

Virtex® 5 - Core and Aux Voltage: Module Output 1.0V to 2.5V

Input V	0 to 2 Amp	0 to 3 Amp	3 to 6 Amp	6 to 12 Amp	12 to 20 Amp	20 to 30 Amps	30 to 40 Amps (2Vo max)	40 to 50A(2Vo max)
3-14/14.4V 4.5-14/14.4V 6-14V	APXS002A0X-SRZ	PDT/PVX003A0X3-SRZ	PDT/PVX006A0X3-SRZ	PDT/PVX012A0X3-SRZ	UDT/UVT020A0X3-SRZ	APTS030A0X3-SRPHZ3	MDT/MVT040A0X3-SRZ*	APTS050A0X3-SRPHZ* ¹

Virtex® 5 - I/O Voltage: Module Output 1.14V to 3.45V

Input V	0 to 2 Amp	0 to 3 Amp	3 to 6 Amp	6 to 12 Amp	12 to 20 Amp	20 to 30 Amps	30 to 40 Amps (2Vo max)	40 to 50A(2Vo max)
3-14/14.4V 4.5-14/14.4V 6-14V	APXS002A0X-SRZ	PDT/PVX003A0X3-SRZ	PDT/PVX006A0X3-SRZ	PDT/PVX012A0X3-SRZ	UDT/UVT020A0X3-SRZ	APTS030A0X3-SRPHZ3	MDT/MVT040A0X3-SRZ*	APTS050A0X3-SRPHZ* ¹

Spartan® 6 Series - Core Voltage: Module Output 1.0V to 2.5V

Input V	0 to 2 Amp	0 to 3 Amp	3 to 6 Amp	6 to 12 Amp	12 to 20 Amp	20 to 30 Amps	30 to 40 Amps (2Vo max)	40 to 50A(2Vo max)
3-14/14.4V 4.5-14/14.4V 6-14V	APXS002A0X-SRZ	PDT/PVX003A0X3-SRZ	PDT/PVX006A0X3-SRZ	PDT/PVX012A0X3-SRZ	UDT/UVT020A0X3-SRZ	APTS030A0X3-SRPHZ3	MDT/MVT040A0X3-SRZ*	APTS050A0X3-SRPHZ* ¹

Notes:

* These module can only deliver a max of 2Vout

1. Output currents above 50A are also achieved by paralleling multiple APTS050 devices. See specification for details.

All parts are non-isolated buck regulators. As such, Vin must exceed programmed Vout. See individual specifications for details.

Digital Power Insight™ Tools

The DPI kit provides power engineers with a user interface that delivers control flexibility over their digital products.

The DPI™ GUI communicates with PMBus™ enabled products, specifically Dlynx POLs, via a USB to I²C adapter. The software features continuous monitoring (polling) of input voltage, output voltage and current, as well as module status. Status changes are automatically time stamped and logged by the software and are easily exported. A Command Line Interface (CLI) is also available for a more in-depth analysis of the transmitted data across the I²C bus. The CLI is a useful tool for creating and executing user-defined routines and scripts, as well as the logging of data for future review or plotting.

In addition to its monitoring capabilities, designers can use the DPI kit to configure and reconfigure voltages, thresholds, warnings, and settings for individual power modules. All final values for the configuration specs can be saved. Engineers can also use the software's built-in auto-detect functionality to identify modules on the I²C bus.

The software enables engineers to create custom configuration files and to fine-tune and optimize a variety of parameters to ensure the highest levels of performance and efficiency. The DPI Software Tool Set is distributed as a zip file that can be downloaded from a link on the GE Energy website.

<http://www.digitalpowerinsight.com>



Note: The red line must be on the left hand side of the ribbon cable to ensure proper keying



Contact Us

For more information, call us toll free at **+1 888 546 3243**, or +1 972 244 9288 and visit us on the web at

www.ge.com/powerelectronics



GE Energy

