

High density power conversion

Rugged, efficient, high-power solutions enabling longer missions and advanced defense capabilities

VICOR

On the forefront of power architectures

Maximizing power while minimizing size and weight

Vicor provides high-density power solutions critical for reducing size and weight while supporting the needs of increasing capabilities of defense systems. Rugged, efficient power modules – and open standard VITA and SOSA aligned power supplies – support the entire power delivery network from AC or high voltage to a MIL-STD 270V or 28V bus, and then to downstream loads. Patented technologies provide low EMI and stable power delivery, while the flexibility and scalability of the modular approach make change quick and easy. The high power and current delivery, strong thermal performance, and reliability of Vicor products ensure longer mission times and superior system endurance, as they have for more than 30 years in aerospace and defense applications.



Platform power



C5ISR



Missile defense



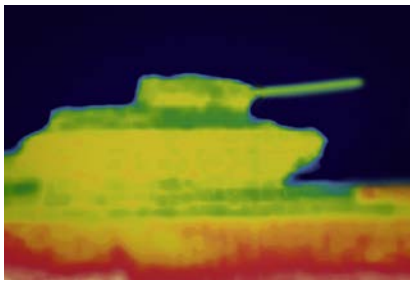
Autonomous vehicles



Directed energy systems



Radar and electronic warfare



Electro-optical and infrared sensors (EO/IR)

MIL-COTS DCM™ DC-DC converter

Rugged high power converters for 28V and 270V line inputs

The DCM is an isolated, regulated DC-DC converter, operating from an unregulated, wide range input to generate an isolated output. With its high frequency zero-voltage switching (ZVS) topology, the DCM converter delivers high efficiency across its specified input line range. Modular DCM converters used independently or with downstream point-of-load (PoL) products support efficient power distribution, providing superior power system performance and connectivity from a variety of unregulated power sources to the point of load. The DCM VIA module provides a higher level of functionality with integrated EMI filtering, tight output voltage regulation and a secondary-referenced PMBus control interface. The DCM is able to meet MIL-STD-810, MIL-STD-704, MIL-STD-1275, and DO-160 when used in conjunction with the MIL-COTS MFM filter.



Features and benefits

- Up to 500W, 17.86A continuous
- Up to 93% peak efficiency
- Up to 1,032W/in³ power density
- OV, OC, UV, short circuit & thermal protection

Input voltage range:	
9.0 – 50.0V	16.0 – 50.0V
160.0 – 420.0V	180.0 – 400.0V

Output voltage range:	
2.97 – 3.63V	3.5 – 5.5V
4.0 – 5.5V	7.2 – 13.2V
9.0 – 16.5V	14.4 – 26.4V
16.8 – 30.8V	22.0 – 30.8V
22.0 – 36.0	28.8 – 52.8V

Power:	
2322 ChiP: Up to 60W	3414 VIA: Up to 320W
3623 ChiP: Up to 320W	3714 VIA: Up to 500W
4623 ChiP: Up to 500W	5614 VIA: Up to 1,300W

Dimensions:
2322 ChiP: 24.8 x 22.8 x 7.2mm
3623 ChiP: 38.7 x 22.8 x 7.2mm
4623 ChiP: 47.9 x 22.8 x 7.2mm
3414 VIA: 85.9 x 35.5 x 9.4mm
3714 VIA: 95.1 x 35.5 x 9.4mm
5614 VIA: 141.4 x 35.5 x 9.4mm

A complete list of MIL-COTS DCMs are available at **vicorpower.com/mil-cots-dcm**

MIL-COTS BCM® bus converter

High-voltage bidirectional bus converters

The MIL-COTS Bus Converter Module (BCM) is a high efficiency (up to 98.7%), fixed ratio module operating from a 270V input voltage and delivering an isolated 28V or 48V nominal output voltage. The low weight, high efficiency and high power density enable our customers to meet their increasing SWaP-C requirements. The BCMs wide input range help achieve MIL-STD-704 E/F ranges without the need for external clamping. Low noise, high-frequency operation minimizes the size of the filter needed for MIL-STD compliance. The BCM enables system design flexibility and can be paralleled to create multi-kW arrays.



Features and benefits

- MIL-STD-704E/F compliant
- High efficiency up to 98.7%
- Power density >2,342 W/in^3, at 36.58W/gram
- Can be paralleled to create multi-kW arrays

Input voltage range:	
200 – 330V	330 – 365V
200 – 400V	360 – 400V
240 – 330V	400 – 700V
260 – 410V	500 – 800V

Output voltage range:	
8.1 – 12.8V	30.0 – 41.25V
10.3 – 11.4V	31.25 – 50.0V
11.2 – 12.5V	32.5 – 51.3V
11.8 – 13.0V	33.4 – 55.1V
16.3 – 25.6V	41.3 – 45.6V
25.0 – 43.7V	45.0 – 50.0V
25.0 – 50.0V	

Current:
Full Chip: Up to 25.8A
6123 ChiP: Up to 125A
4414 VIA: Up to 125A

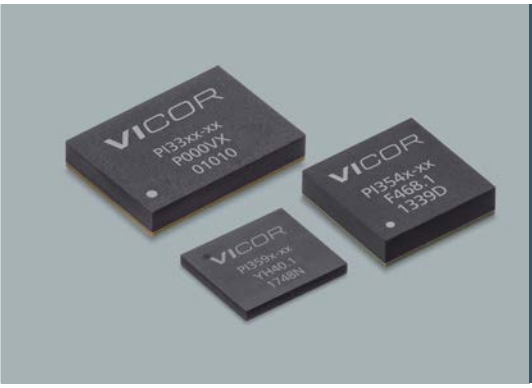
Dimensions:
Full Chip: 32.5 x 22.0 x 6.7mm
6123 ChiP: 63.3 x 22.8 x 7.2mm
4414 VIA: 110.6 x 35.5 x 9.4mm

A complete list of BCMs are available at
vicorpower.com/mil-cots-bcm

ZVS buck and buck-boost regulators

Wide range direct to PoL regulators

This series of regulators offer board-level designers maximum power density and flexibility for high-efficiency point-of-load DC-DC regulation. High performance Zero-Voltage Switching (ZVS) topology increases point-of-load performance, providing best-in-class efficiency up to 98%. They are highly integrated with control circuitry, power semiconductors and support components in a high density System in Package (SiP). It can also be configured to operate in constant-current mode with -55°C to +125°C operation.



Features and benefits

- Wide operating range
- Simple to use; fast development
- High efficiency of over 98%
- Flexible and rich feature set

ZVS buck regulators

Input voltage range:		
8.0 – 18.0V	14.0 – 42.0V	30.0 – 60.0V
8.0 – 36.0V	17.4 – 36.0V	36.0 – 60.0V
11.0 – 36.0V	20.4 – 36.0V	
Output voltage range:		
2.2 – 4.0V	4.0 – 5.5V	6.5 – 14.0V
2.3 – 4.1V	4.0 – 6.5V	10.0 – 16.0V
3.3 – 6.5V	6.5 – 13.0V	
Current/Dimensions:		
10.0 x 10.0 x 2.5mm LGA SiP: Up to 10A		
10.0 x 14.0 x 2.5mm LGA SiP: Up to 22A		

ZVS buck-boost regulators

Input voltage range:		
8.0 – 60.0V	21.0 – 60.0V	
Output voltage range:		
10.0 – 50.0V	21.0 – 36.0V	36.0 – 54.0V
Power:		
Up to 150W		
Dimensions:		
LGA SiP: 10.0 x 14.0 x 2.5mm		

A complete list of buck and buck-boost regulators are available at **vicorpower.com/buck** and **vicorpower.com/buck-boost**

MIL-COTS VITA-62 power supply

VITA-62 compliant power converters

The VITA 62 power supply is a MIL-COTS power supply that is designed for 3U Open VPX systems. This rugged, conduction-cooled model operates from a nominal 28V or 270V DC input, with predefined output voltages ranging from 3.3V to 12V, delivering up to 600W of power. Customers requiring different output voltages or power levels can request a customized power supply to meet their own specifications. This family of products has been fully tested to meet MIL-810G, MIL-461F and MIL-704F. In addition, the 28V input version also meets MIL-1275E.



Features and benefits

- Scalable OpenVPX compliant form-factor
- Over-current, -voltage & -temp protections
- MIL-STD 704F, 461F, 810G, 1275E
- No electrolytic capacitors

Input voltage range:
18 – 42VDC
18 – 45VDC
180 – 420VDC
3-Phase AC 400Hz

Output voltage:
+12V @ 40/70A
+5V @ 30/32A
+3.3V @ 6/30A
+12V @ 1A
–12V @ 1A
+28V @ 26.78A

Output power:
3U (600W total power)
6U (1000W total power)
3U (750W total power AC)

Dimensions:
3U (3.9 x 6.6 x 1.0in)
6U (9.2 x 6.6 x 1.0in)

A complete list of VITA-62 power supplies are available at **vicorpower.com/vita-62**

SOSA™ aligned power supply

SOSA-aligned power supplies

The Vicor SOSA-aligned power supply is a COTs power supply that is designed for 3U Open VPX systems that are developed to the SOSA standard. The module utilizes Vicor proprietary technology to enable high efficiency and power density for this highly rugged, conduction-cooled model. Up to four power supplies can be paralleled to increase output power capability of +12V main and +3.3V auxiliary outputs with proprietary wireless current sharing. Need for conventional current-share pins are eliminated. Current share accuracy is ±2A.



Features and benefits

- Scalable OpenVPX compliant form-factor
- Over-current, -voltage & -temp protections
- MIL-STD 704F, 461F, 810G, 1275E
- High reliability modular design

Input voltage range:
10 – 45V
18 – 45V

Output power:
150W
300W
450W
600W
800W

Dimensions:
3U (3.9 x 6.6 x 1.0in)

A complete list of SOSA power supplies are available at **vicorpower.com/sosa**

Vicor: Enabling a competitive advantage

High-performance modular power systems achieve higher levels of flexibility and scalability than ground-up custom designs. Our continual advances in power distribution architectures, conversion topologies and packaging technology will keep you ahead in system efficiency and density, converting and managing power from the source to the point-of-load. **www.vicorpower.com/defense-aero**

Vicor Power Systems

Reliable, turnkey, custom and standard, high-density power supplies



Decades of experience



Experts at leveraging high performance Vicor modules



In house mechanical, electrical, and firmware design expertise



Meets air, sea, and ground MIL-STDs



AS9100D certified, NIST compliant and ITAR registered



Rapid concept definition and prototyping



Systems from 1W to Megawatts



Rugged custom and industry standard VPX power systems

When a deadline is looming and you need to quickly and reliably design, prototype and deploy a custom power supply, let Vicor Power Systems implement an efficient, power-dense and reliable solution. To meet demanding requirements, we offer more than just custom design capability. Our engineers — with decades of MIL-STD qualification experience — will work closely with you during the process from definition and design through manufacturing to ensure you get the most efficient and flexible power supply. We are J-STD-001 and IPC-A-610 certified, and we are ITAR registered, NIST compliant and AS9100D certified. **vicorpower.com/vicor-power-systems**

VICOR

©2023 – 2026 Vicor Rev 1.4 2/2026