

High Voltage DC Power Supply System for Communication Applications



Overview

This article presents a scalable and stackable -48 V DC PoL solution that will address the high density power usage situations created by these high density networks from the tremendous growth in network traffic. Telecom and wireless network systems typically operate on -48 V DC power. As DC power. Certain applications call for DC voltages that are much higher than the typical 12V, 24V, and 48V seen in industrial battery-powered designs and intermediate bus architectures, or the standard 5V and lower used in board-level point-of-load implementations. These small form factor POL modules, now available in Single In-line Package (SIP) and surface mount device. XP Power's high voltage DC-DC converters provide low ripple and noise, voltage and current control, output regulation and monitoring, and input and output protection with built-in industry safety approvals and extensive design validation and testing processes that you can count on.



Article Content

Nov 04, 2025

High-Voltage Programmable DC Power Supplies for 600-V to 1000-V ...

A High Voltage DC Power Supply is an electrical device that converts standard AC input or low voltage DC into a higher, regulated DC output. These supplies are designed to deliver stable

Jul 09, 2025

Programmable Power

The AMETEK Programmable Power designs, manufactures, and markets precision, ac & dc programmable power supplies, electronic loads, application-specific

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Microsemi Products | Microchip Technology

Microsemi Corporation offered a comprehensive portfolio of semiconductor and system solutions for communications, defense and security, aerospace and

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A comprehensive review of distributed power system

This paper presents a review of available high voltage options for telecom power distribution and developments, implementations and challenges

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Building a Better -48 VDC Power Supply for 5G and

This article presents a scalable and stackable -48 V DC PoL solution that will address the high density power usage situations created by these high density

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Understanding High Voltage DC Power Supply: Applications ...

Integration with real-time simulation systems for software-in-the-loop (SIL) testing. Aerospace & Defense: Radar systems, directed energy weapons, and avionics testing. High

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High-voltage direct current

A high-voltage direct current (HVDC) system uses direct current (DC) and high voltages (currently between 100 kV and 800 kV) for electric power transmission. It

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Magna-Power Introduces New High Voltage 1U DC Power Supply

Magna-Power expands its SLx Series 1U programmable DC power supply with new 2000, 2500, and 3000 Vdc floating models from 1.5 kW to 10 kW.

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High Voltage DC

XP Power's high voltage DC-DC converters provide low ripple and noise, voltage and current control, output regulation and monitoring, and input and output protection

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How to Test High-Voltage DC Dropouts | Keysight

Validating high-voltage DC equipment under transient and steady-state conditions requires power supplies capable of precise control, high voltage output, and reliable measurement. The Keysight

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High Voltage Equipment DC Power Frequency High Voltage Generator

The DC high voltage generator has realized high quality, portable, and can withstand rated voltage discharge without damage. It has the characteristics of large output power and small volume, reliable

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Communications System Power Supply Designs

A power efficient design is required that supplies both the higher voltage analog circuits and multiple tightly regulated low-voltage supplies for the high-speed digital communications ASICs and FPGAs.

Oct 23, 2025

DC High Voltage Generator Withstand Voltage Test Leakage Current

Integrated dc high voltage generator adopts integrated design scheme: double pressure cylinder and Host are placed in one chassis, combined with new technology, select new device, realize small size,

Apr 11, 2026

Power Solutions for Communications Applications | Vicor

Vicor has a complete portfolio of scalable power components. From the source to the point of load Vicor can meet all your communication needs.

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TI Reference Designs Library

The power reference design parameter search will return results only for power reference designs. To optimize product selection for power reference designs, quick search recommendations will be

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2400V 780A |15-45kW Wide Input Voltage Programmable Single DC Power ...

Luoyang Juhong Optoelectronic Technology Co., Ltd. has been deeply engaged in non-standard customized power supplies and system integration solutions for many years and has built solid

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MEAN WELL High Voltage DC (HVDC)Output:

Provides single-phase and three-phase three-wire or three-phase four-wire AC power supply applications, and a variety of standard power supplies with high

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Chroma 62000D Series Bidirectional DC Power Supply

Chroma 62000D programmable bidirectional DC power supplies provide both power source and load characteristics, ideal for testing renewable energy power systems such as PV, storage, and EV

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Infineon Battery-Charging System Uses USB-C PD

A traditional battery-charging system (Figure 2) uses an external AC-to-DC power adapter along with a DC battery-charging unit. Here, the AC-to-DC

Sep 24, 2025

High Voltage Power Supply

A high voltage power supply provides precise, stable power for applications requiring thousands of volts with minimal ripple and noise. Designed for semiconductor

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High Voltage DC Power Supply: Advanced Solutions for Precision

Discover superior high voltage DC power supplies featuring advanced regulation technology, comprehensive safety systems, and exceptional electromagnetic compatibility for industrial, scientific,

Apr 13, 2026

High-Voltage DC Power Supplies | Excelitas

As a leading figure in the design and manufacture of high voltage units requiring a high power DC power source, Excelitas leverages a deep understanding of high

Dec 13, 2025

Single & Three Phase AC Power Supply | Asterion AC

Looking for programmable AC and DC power? With high power density in 1U / 2U / 4U / 14U chassis up to 18kVA, the Asterion AC Series is perfect for AC power

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