

## Kongres Container

# Schematic diagram of the power supply system of a communication base station



## Overview

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How does a telecommunications system work?

Since most telecommunications equipment at the site requires a DC voltage supply, the AC power from either the electric grid or the diesel generator is converted to -48 V DC by the rectifiers. These redundant rectifiers are used to convert the AC power to -48 V DC power used to trickle charge the batteries as well as support the critical loads.

What is a multi-output power supply design?

Multiple output designs may also employ a complex regulation scheme which senses multiple outputs to control the feedback loop. Voice-over-Internet-Protocol (VoIP), Digital Subscriber Line (DSL), and Third-generation (3G) base stations all necessitate varying degrees of complexity in power supply design.

What types of power systems are used in communications infrastructure equipment?

Communications infrastructure equipment employs a variety of power system components. Power factor corrected (PFC) AC/DC power supplies with load sharing and redundancy (N+1) at the front-end feed dense, high efficiency DC/DC modules and point-of-load converters on the back-end.

What is a preferred power supply architecture for DSL applications?

A preferred power supply architecture for DSL applications is illustrated in Fig. 2. A push-pull converter is used to convert the 48V input voltage to +/-12V and to provide electrical isolation. Synchronous buck converters powered off of the +12V rail generate various low-voltage outputs.

What is a Telecom DC power system?

The telecom DC power system typically includes the national electricity grid system, a diesel generator, a self-acting AC automatic transfer switch (ATS), a power distribution system, solar panels or boards, controllers and chargers,

rectifiers, backup batteries arranged in series, and the corresponding cables and breakers. Figure 1.

What is a power supply circuit in a T801 transceiver?

The power supply circuits provide the operating power for the various modules in the transceiver. Electronic regulation is used to provide stable, low ripple output voltages of +5, +10, and 13.6 VDC. AC power is applied to the primary of T801 through line fuse F801 and POWER switch SW 801A.

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