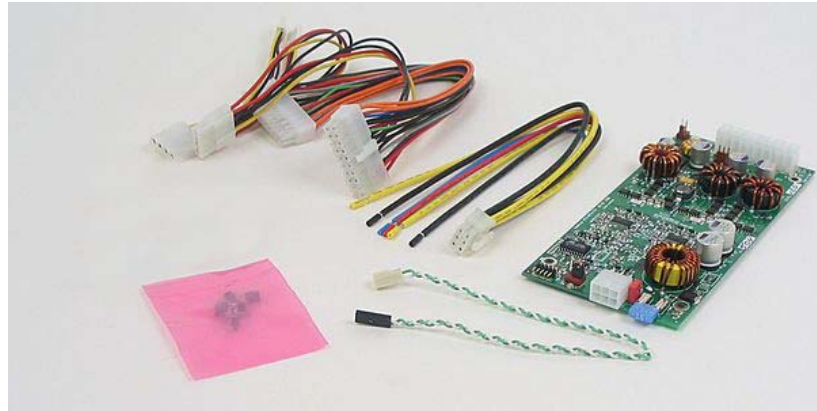


OPUS Solutions DCX3.120x intelligent DC-DC power supply (Patent Pending) is designed specifically for AT, ATX, uATX, FlexATX, Mini ITX motherboards. This product brings a new dimension to PC's mobility. Just get in your vehicle and start the engine; your PC is ready to go. When you switch off the ignition the PC can go into shut down, standby or hibernate modes automatically, no switch to fiddle or fuss!



The DCX3.120x DC-DC power supply has a micro-controller that controls and monitors various functions of the power supply operation. It monitors vehicle battery voltage to protect against deep discharge. The ignition lead is monitored to start the PC when the ignition is turned on and to implement safe shutdown procedure. It controls and monitors motherboard signals to provide smooth power-up and power-down sequences. The power supply can be configured to shut down the PC after a predetermined delay of up to 60 min. The power supply outputs are monitored to assure proper PC operation. Wake on interrupt feature in DC-DC together with Wake on LAN function on motherboards can be used to access the vehicle/mobile PC over wireless network without turning on the ignition switch for up to 20 min. at a time. This feature is useful for updating, uploading and down loading data/files of the car PC remotely. A green LED indicator in the power supply continually indicates the status and health. It is also used for troubleshooting.

Remote/trigger output of the DC-DC can be used to turn on/off slave devices such as head units, Audio Amplifiers, LCD monitors, DVD players, Two way radio units, etc.

There are features that are built-in for trouble free-free and safe PC operation. The input power is protected against transients, load dumps and double battery conditions. The PC does not reboot during engine start or cranking.

It also uses state-of-the-art technologies and most advanced techniques to maximize efficiency, performance and reliability. Simply put, there is no other PC power supply like it.

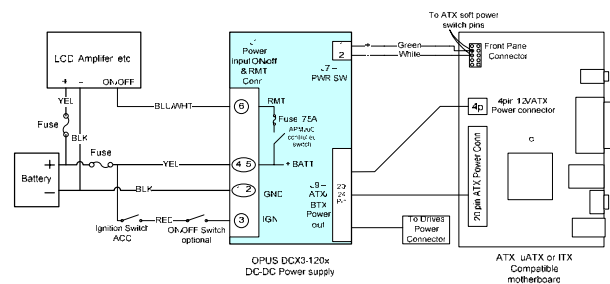
Features

- 12V and 24V system compatible
- Wide input voltage range
- Does not Re-boot PC during engine restart/cranking
- Load dump protected
- High efficiency (extended battery life)
- Ignition or on/off switch input
- Delayed shut down timer
- Start-up and shut-down voltage selection
- Automatic shutdown at low battery voltage to protect battery
- Built in diagnostics for troubleshooting.
- Extended operating temperature range
- AT, ATX, BTX or ITX motherboard compatible
- Simple to Install
- Flexible standby power control
- Wake on interrupt when ignition is off
- Remote/trigger output to turn on/off slave devices

Applications

- Full featured expandable mobile PC
- Law enforcement vehicle computers
- Telematics
- Mobile GPS & tracking systems
- Mobile multimedia rear seat entainment
- Computers in Trucks, RVs, Boats, Aircrafts, etc.
- Computers in inventory carts, dispensing carts, etc.

Application Wiring Example



Technical Specifications

Input:

Normal operating input voltage range: 7V to 32V DC
 Peak input voltage range: 7V to 36V DC (less than 5min at 50% duty cycle repetition)
 Idle state power consumption: < 3mA (without any output loads)
 Input Protection: LC Pi filter & transient protection
 Input Fuse: 15A mini Blade (Automotive mini blade fuse)
 Input Power Mating connector: Plug: Molex: 39-01-2060; 2 x 6 Mini Foot Jr.

| Output: | 12V System use | 24V system use | Ripple | Line + load Regulation |
|------------------------------------|---|-------------------|---------------|------------------------|
| | 120W | 100W | | |
| +3.3V: | 8A max, 12A pk, | 6.5A max, 10A pk | 50mv p-p max | 1% |
| +5 V: | 8A max, 12A pk | 7A max, 10A pk | 50mv p-p max | 1% |
| +12 V: | 3.5A max, 4.5A pk | 3A max, 4A pk | 100mv p-p max | 1.5% |
| -12 V: | .5 A max, 0.6 A pk, | .3A max, 0.5A pk | 100mv p-p max | 10% |
| 5 V standby: | 1.5 A max, 2.0 A pk | 1.2A max, 1.8A pk | 50mv p-p max | 1% |
| Power supplies overall efficiency: | > 91% for 12V system and 87% for 24V system | | | |

Note: Power supply output is derated to 100W for 24V system use

Transient Response: 5uS to stead-state output voltage (with in 0.2% of Vout) for 10- 90% load change
 Output Stability: 0.1% of Vout after 10 minute warm-up
 Output Power Mating connector: Plug: Molex: 39-01-2200; 2 x 10 Mini Foot Jr.
 Main Power output: Plug: Molex: 22-01-3027; 2 pin polarized locking conn.
 Power switch connector:

General

Shut Down Delay Time: 10 sec. (Default), 5min, 10 min, 15min, 30 min, 60min or 120min (set by Jumper)
 Start-up Voltage: 9.5V, 10.5V, 11.5V or 12.0V ± 0.25V (Jumper selectable)
 Low battery shutdown voltage: 8.5V, 9.5V, 10.5V or 11V ± 0.25V
 Low battery detection duration: 10 Sec.
 Wake on interrupt operation time: 20 minutes (while Ignition is Off)
 Ignition or ON/OFF input current: <5 mA
 Remote/trigger output source current: 0.30A max. (Switched Battery)
 MTBF: 250,000 hrs min.
 Cooling: Forced air or thermal coupling to heat sink for loads above 80 W.
 Operating Temperature Range: -20°C to 65°C

External Dimensions

DC-DC PCB Module dimensions: 180mm (D) x 78mm (w) x 16mm (H)
 6.7" x 3.1" x 0.63"
 Weight: 150 Grams, 0.35 lb
 DC-DC Open frame dimensions: 200mm (D) x 82mm (w) x 20mm (H)
 7.8" x 3.23" x 0.77"

Ordering Information

| Part Number | Description |
|-------------|---|
| DCX3.120 | 120W intelligent Vehicle DC-DC power supply |