

Mini-ITX Mobile-PC

Introduction

OPUS Solutions Mobile-PC is designed specifically for Mini-ITX motherboards used in an automotive environment. This Product brings a new dimension to your 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 Mobile-PC can accommodate a Mini-ITX motherboard. The Mobile-PC can enjoy a wide selection of hardware and software that are available for a PC platform. Thus, the Mobile-PC is an ideal choice for a fully expandable computer at a reasonable system cost. The system can be upgraded, when required, without losing all the initial investment, unlike laptops.

The Mobile-PC is constructed with a heavy gauge aluminum sheet metal. The case is ruggedly built to withstand the shock and vibration that are encountered in a tough mobile environment. The case is designed with easy accessibility to I/Os, cables and CD/ DVD ROM Drive or removable Hard Drive. The I/O connectors and cables are covered to protect it from accidental damage. The Mobile-PC has a security lock to prevent unauthorized access inside the unit. The hard drive is protected from shock and vibration by a specially designed isolation mount. A daughter card retain bracket is designed in to prevent Cards from sliding out during shock and vibration.

The Mobile-PCs DC-DC Power supply has a micro-controller that controls and monitors various functions of the power supply operation. It monitors automobile battery voltage to protect against deep discharge. The Ignition lead is monitored to start the Mobile-PC when the ignition is turned on and to implement a safe shutdown procedure. It controls and monitors motherboard signals to provide smooth power-up and power down sequences. In addition, it also responds to shut down, stand-by and hibernate modes. The power supply can be programmed to shut down the PC after a delay of up to one hour. The power supply outputs are monitored to assure proper PC operation. A green LED indicator in the power supply continually reports the power system status and health. It is also used for troubleshooting.

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

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

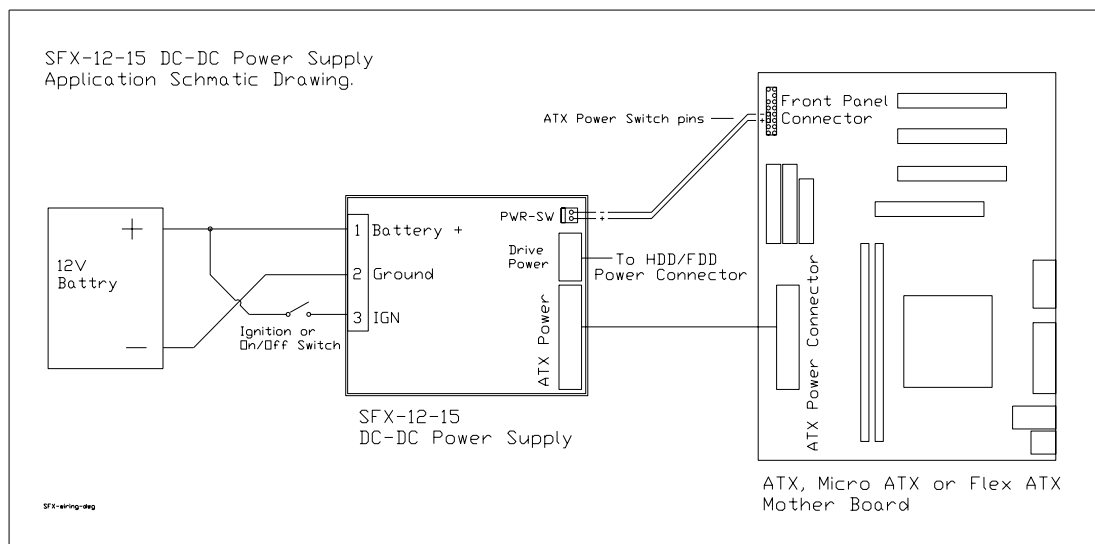
Features

- 12V or 24V models
- Wide input voltage range
- Does not Re-boot PC during engine restart/cranking
- Load dump protected
- High efficiency power supply (extended battery life)
- Microprocessor controlled power supply
- Built in diagnostics for troubleshooting.
- Ignition or on/off switch input
- Automatic shutdown at low battery voltage to protect battery
- Extended operating temperature range
- Hard drive is protected against shock and vibration
- Mini-ITX motherboard compatible
- Simple to Install
- Flexible mounting options

Applications

- Full featured expandable mobile PC
- Law enforcement vehicle computers
- Fire truck computer systems
- Mobile video surveillance systems
- Mobile GPS & tracking systems
- Mobile MP3 and multimedia computers
- Computers in trucks, RVs, boats, aircrafts, etc.
- Computers in inventory carts, dispensing carts, etc.

Motherboard Wiring Example



DC-DC Power supply Technical Specifications

Input:	12V	24V	
Normal input voltage range:	7V to 18V DC	18V to 36V DC	
Low battery shutdown voltage:	11.7 Volts ±. 75V		
Low battery detection duration:	10 Sec.		
Input current drain:			
Power down/ Standby mode:	0.025 A		
Output:	160W	Ripple	Regulation
+3.3V:	10A max, 15A pk,	50mV p-p max	2%
+5 V:	10 A max, 15A pk	50mV p-p max	2%
+12 V:	5 A max, 6.5 A pk	50mV p-p max	2%
-12 V:	0.2 A max, .4 A pk,	150mV p-p max	10%
5 V standby:	1 A max, 1.2 A pk	50mV p-p max	2%
Power supply efficiency	> 90% at optimum loads		
MTBF:	150,000 hrs		
Operating Temperature Range:	-25°C to 70°C		
Ignition/ Power switch current drain:	<10 mA		
Input Fuse:	20A ATO replaceable (Automotive blade fuse)		
Input Power Mating connector:	Plug: AMP P/N: 350766-1 Crimps: Amp P/N: 640310-3 and 350919-3		
Output Power Connectors:	20 pin ATX Mother power connector, cable length 240 mm long 8 pin Drive power connector to 3 HDD and 1 FDD power connectors 2 pin ATX power Switch connector, cable length 420mm		
External Dimensions:	100mm(W) x 125mm (D) x 63.5mm (H) 3.94" (W) x 4.92" (D) x 2.5" (H)		

Mobile-PC Case Specification:

External Dimensions:	13" W x 15.5"D x 5.6"H.
Motherboard:	Mini-ITX mother board compatible
Expansion:	7 slots.
Drives mounts:	1 x 3.5" Hard drive mount with shock and vibration isolation. 1x 5.25" Bay front accessible (CD-ROM, DVD ROM, CD-RW or removable HDD)
Security Lock:	4 pin cam lock
Mounting:	
Bottom plate mounting:	Four holes are located on the bottom corners of the chassis for # 8 screws.
Other mounting options:	Mobile-PC Shock mount kit. (Adds 2" to the height of the Mobile-PC) Floor mount bracket kit Slide rail mount kit
Hard drive heater and controller option	Call for detail
Hard Drive heater trigger temperature	Below 8deg C. +- 3deg. Computer will not be turned below trigger temp.
Specifications subject to change without notice	

Ordering Information

Part Number	Description
MPC-ATX-CPS-A	Mobile-PC Case and Power supply only
MPC-ATX-xx	Custom configuration available, Call Sales for detail

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