IDDV-6301100

100 W DC/DC Smart single 12V Converter Module for Vehicle

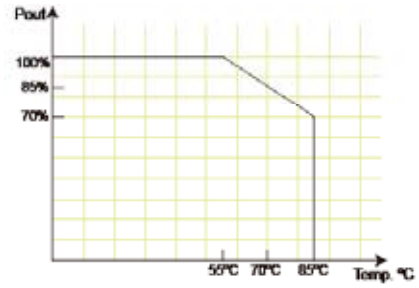
Dedicated single 12V Power for Car PC and Battery Powered Applications
Designed to provide power and to control the on/off switch of a motherboard based on the ignition status.

Features

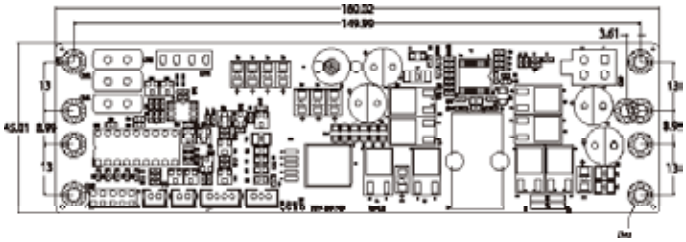
1. Wide input range: 6-30 VDC
2. Smart system on/off control
3. 6 selectable power on/off timing modes
4. Load down protection
5. Over voltage protection
6. Short circuit protection
7. Over current protection
8. Battery voltage monitor
9. Amplifier on-delay control
10. RoHS compliant
11. Compact size
12. IrDA remote control off (options)

Specifications

- Output (max.): 12 V@8 A
- Max. total output: 100 W
- Input: 6 VDC to 30 VDC
- Min. input operating voltage: 5.7 V
- Max. input operating voltage: 30 V
- Deep-discharge shut down voltage: 10.6 V
- Startup voltage: 8 V
- Efficiency: up to 90%
- Dimensions: 45 mm X 160 mm
- Weight: NW: 118 g
- Operating temperature: -20ºC ~ 85ºC
- Storage temperature: -40ºC ~ 125ºC



Dimensions (Millimeters)



PIN Assignments

CN1	Batt (+)	**CN5**	Power output connecterPin1&2:GNDPin3&4: Vcc(12V)
CN2	ACC ON	**CN6**	LED& Amplifter functionPin1&2: Connect LED(Battery function) Pin3&4: Connect to Amplifter
CN3	Batt (-)	**CN7**	Power switch for motherboard
CN4	Fuse (15A)	**CN8**	Power switch for IDDV-6301100(for manual)Pin1: Vcc(5V)Pin1: Gnd

Wire Harness Selection Guide

Input Power Connector (CN15, 16, 17)

PN: CB-BATACC-RS
Wire to battery and ACC on

Packing information

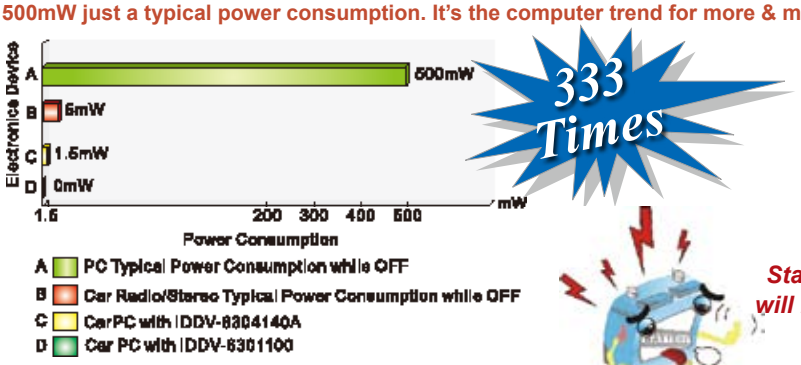
1 x IDDV-6301100
1 x Wire cable for PWR/SW AND MB/SW (P/N:32100-153400-RS)
1 x Wire cable for LED /AMP (P/N:32100-153500-RS)
1 x QIG

Ordering Information

Part No.	Description
IDDV-6301100-R10	100 W DC/DC 6-30 VDC input; single 12V output vehicle converter module

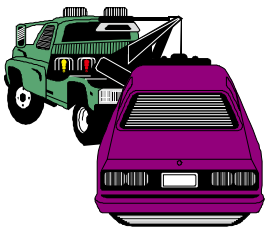
It's Not Zero Power Consumption While the PC is OFF

500mW just a typical power consumption. It's the computer trend for more & more standby power to be required.



Dead Battery

Standard ATX Power Supply will Drain out the Car Battery !



How the IDDV-6301100 work to keep your battery alive.

Step1. Ignition=Off
IDDV-6301100 cut off all the power.

Step 2. Ignition=On
Auto On(jumper select) –The uP sends an " ON" signal to the motherboard via the 2 wires connected to the motherboard's On/Off pins.
Manual On(jumper select) – Nothing happens until push the On/Off button from the IDDV-6304140A.

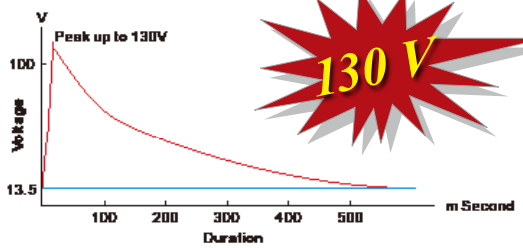
Step 3. Ignition=On
during driving: act like regular PC, turn on/off anytime by push the on/off button.

Step 4. Ignition=Off. Soft Off 10,20,30,40,50,60 Sec
IDDV-6304140A waits for "10~60" second (jumper select) and then uP send a signal to turn off motherboard. The computer should turn off gracefully by the shutdown procedure. During this period, the normal power will be available for the system perform the normal shutdown.

Step 5. Ignition=Off. Hard Off 20,40,60,80,120 Sec
12V will still available for a "20~120" second (jumper select) then it cut off by uP.

12V Battery Vehicle Load Dump Transients

'Load dump' transients occur when a battery is disconnected from the charging system during charge. The alternator, with a finite response time of 40ms to 400 ms, generates power with nowhere to go. It will damage the electronics devices.



12V System
Load Dump Transients

Load dump transients typically reach peak voltages of 130 volts in 12 volt systems with relatively slow rise times.

EMI sprays and RFI sparking is everywhere and electrical transients run zapping the embedded electronics. Electronics located in vehicle environment must withstand 600V transients and " load dump" situations.

IDDV-6301100 Wiring Diagram