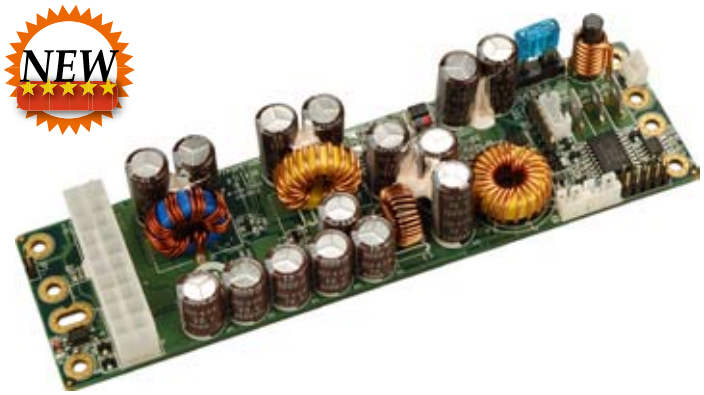
IDDV-6304140A

140W DC/DC Smart ATX Converter Module for Vehicle

RoHS Lead Free



Dedicated ATX Power for Car PC and Battery Powered Applications

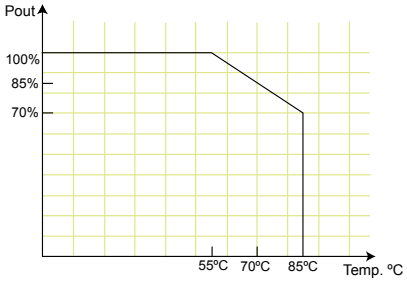
Designed to provide power and to control the On/Off switch of a motherboard based on ignition status.

Features

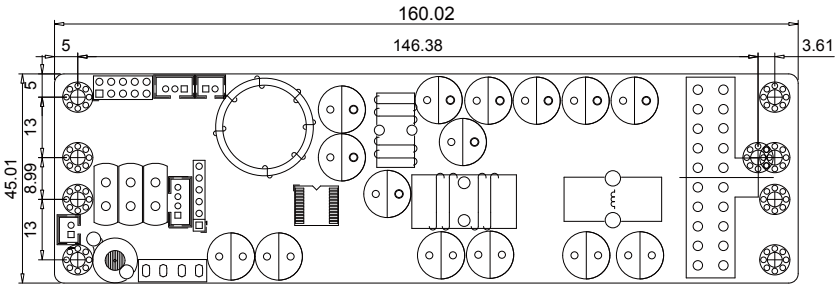
1. Wide Input Range: 6-30V DC
2. Smart system on/off control
3. 6 selectable power on/off timing modes
4. Load Down Protection
5. Over Voltage Protection
6. Short Circuit Protection
7. Over Current Protection
8. Battery Voltage Monitor
9. Amplifier On-Delay control
10. RoHS Compliant
11. Compact Size
12. IrDA Remote Control off (Options)

Specifications

- Output: 5V@10A (Max.), 3.3@10A (Max.), 12V@4A (Max.), -12V@0.15A (Max.) & 5VSB@1.5A (Max.)
- Max. Total Output: 140W
- Input: 6VDC to 30VDC
  Min. Input Operating Voltage: 5.7V
  Max. Input Operating Voltage: 30V
- Deep-Discharge Shut down Voltage: 10.6V
- Startup Voltage: 8V
- Efficiency: up to 90%
- Dimensionss: 45mm X 160mm
- Weight: NW: 118g
- Operating Temperature: -20°C ~ 85°C
- Storage Temperature: -40°C ~ 125°C



Dimensions (Millimeters)



PIN Assignments

Input Power Connector

CN15	Batt (+)
CN16	ACC ON
CN17	Batt (-)

Output Power Connector

J1	Standard 20 Pins ATX

Wire Harness Selection Guide

SBC Main Power (J1)

PN: CB-ATX20PIO-RS
20 Pins ATX to 20 Pins ATX / SATA / HDD Cables

Input Power Connector (CN15, 16, 17)

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

Packing information

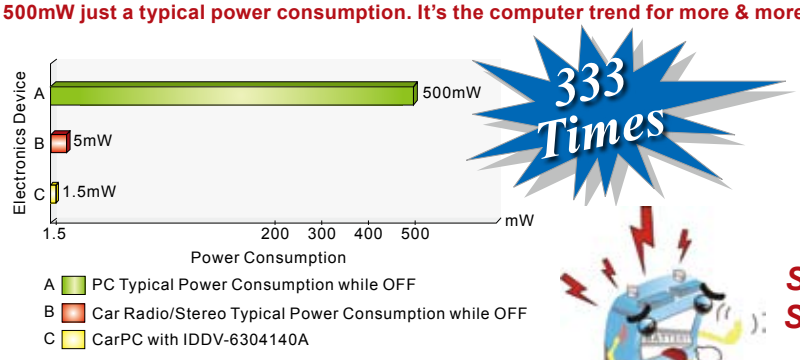
- **1 x IDDV-6304140A**
- **1 x QIG**
- **1 x WIRE CABLE FOR PWR/SW AND MB/SW (P/N: 32100-153400-RS)**
- **1 x WIRE CABLE FOR LED /AMP (P/N: 32100-153500-RS)**

Ordering Information

Part No.	Description
IDDV-6304140A-R10	140W DC/DC 6-30VDC input; Vehicle Converter Module
CB-ATX20PIO-RS	30cm, 20 Pins ATX to 20 Pins ATX / SATA (20cm) / HDD Cables
CB-BATACC-RS	30cm, Wire to Battery and ACC on

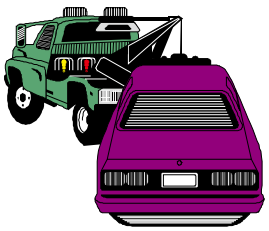
It's Not Zero Power Consumption While the PC is OFF

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-6304140A work to keep your battery alive.

Step1. Ignition=Off

IDDV-6304140A cuts off all the power rails included 5VSB, internal µP power consumption keep less than 1.5mW.

Step2. Ignition=On (ACC On)

The IDDV-6304140A waits for 10 sec. Then turn on the 5VSB rail.

Auto On(jumper select) - After 1 sec. The µP 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.

Step3. Ignition=On

during driving: act like regular PC, turn on/off anytime by push the on/off button.

Step4. Ignition=Soft Off.

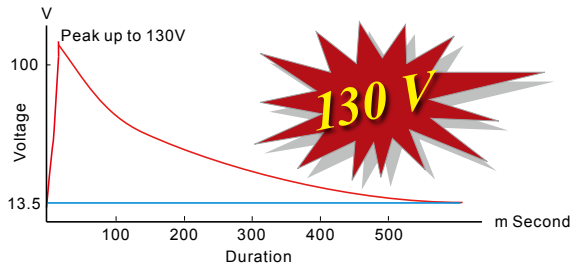
IDDV-6304140A waits for "10~40" second (jumper select) and then µP send a signal to turn off motherboard. The computer should turn off gracefully by the shutdown procedure. During this period, the normal power will be available for the system perform the normal shutdown.

Step5. Ignition=Hard Off.

5VSB will still available for a 0, 45 seconds, 1 hour, never (jumper select) then it cut off by µP. At this stage, the system will keep the min. power consumption that the system won't drain out car battery.

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-6304140A Wiring Diagram