PowerBrick™5.0-*i7*

Quick Guide
Edition 2.0

Small and rugged
Industrial Computer
with Intel® Gen3 Core™ i7

Acura Embedded Systems Inc.

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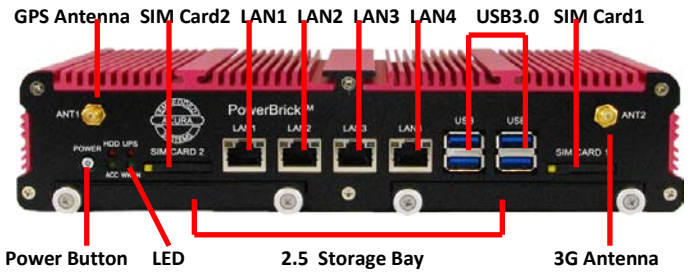
1. OVERVIEW

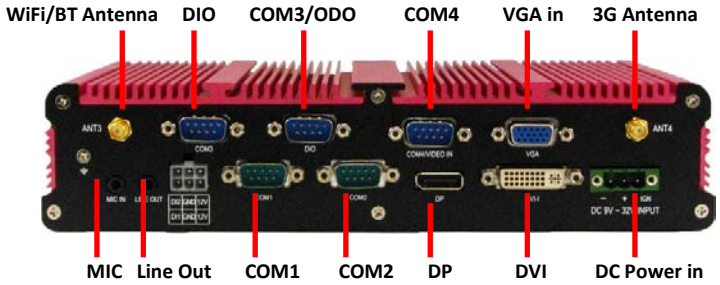
As a rugged and powerful computer, PowerBrick5.0-i7 is based on an ***Intel® Generation3 Core™i7*** *process*or and an **Intel® HD Graphics 4000** accelerating chip.Its two **Removable Dual SATA Storage** slots which have RAID feature allow to realize mirroring disk with two fast **SSD** hard drives. Also, Its memory can earily upgrade to **8 GB**. The design focuses on elements essential for a variety of industrial applications and environments excluding unneccesary hardware. The architecture is modular which allows for upgrading and expansions.

2. MAIN FEATURES

- **Power Brick 5.0-i7 front Interface**



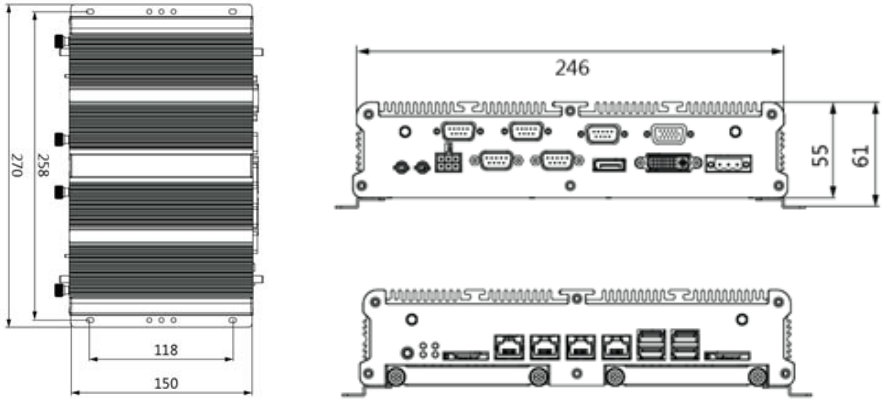
- **Power Brick 5.0-i7 rear Interface**



System

CPU	Intel Gen 3 Core i7-3517UE 1.7GHz
Chipset	QM77
Memory	1 x DDR3 1066/1333/1600 MHz SO-DIMM up to 8 GB
LAN Chipset	Intel I210-AT Gb/s Ethernet Controllers Onboard Support PXE and WOL
Audio	Realtek ALC662 HD Codec onboard

Watchdog	Watchdog Timer Support, Offer 1 – 255 Step(Optional)
Graphics	Intel® HD Graphics 4000 DirectX Video Acceleration (DXVA) for Accelerating Video
Processing	Full AVC/VC1/MPEG2 HW Decode Supports DirectX 11/10.1/10/9 and OpenGL 3.0
Resolution	Up to 1920 x 1200
Storage	Type 2 x 2.5” Drive Bay for SATA Type HDD / SSD, Support RAID 0, 1
I/O	
Serial Port	3 x RS-232 (COM1,2 with RS-422/485, RS-485 Support Auto Direction Control)
USB Port	4 x USB 3.0 Ports on Front I/O
LAN	2 x RJ45 Ports for GbE
Video Port	1 x DVI-I , 1 x VGA Output and 1x Display Port
DIO Port	4 in and 2 out with Relay 12V / 80mA
Audio	1 x Line-out (Default is 1 on Rear I/O)
SIM Card Socket	2 x SIM Card socket supported onboard with eject
Environment	
Operating Temp	-40ºC ~ 70ºC (Default CPU 17Watt)
Storage Temp	-40 ~ 80ºC
Relative Humidity	0% RH– 95% RH
Vibration (random)	2.5g@5~500 Hz with SSD
Vibration Operating	MIL-STD-810F, Method 514.5, Category 20, Ground Vehicle-Highway
Truck Storage	MIL-STD-810F, Method 514.5, Category 24, Integrity Test
Shock Operating	MIL-STD-810F, Method 516.5, Procedure I,
Crash Hazard	MIL-STD-810F, Method 516.5, Procedure V,Ground equipment=100
Power	
	Power Input 9V-32V DC Power input Power Protection Automatics Recovery Short Circuit Protection Power Management Vehicle Power Ignition for Variety Vehicle Power Off Control Power off Delay Time Setting by Software, Default is 5 Mins UPS (Battery Internal Battery Kit) for 10 Mins Operating (Optional)
Qualification	Certifications CE, FCC Class A, eMark
Mechanical	
	Construction Aluminum alloy Mounting Supports wall-mount Weight 1.780 kg (bare-bone) Dimensions 250 x 150 x 55 mm



3. SYSTEM INSTALLATION

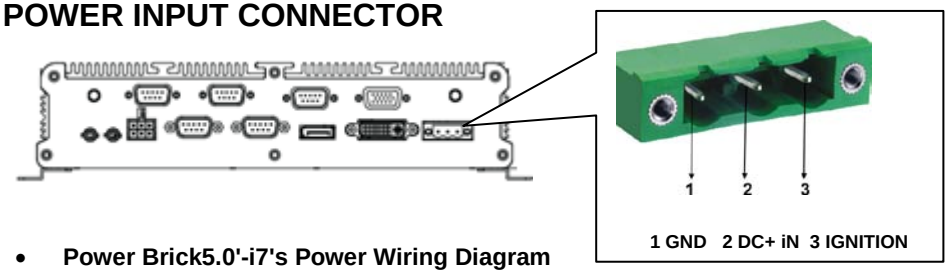
- **Installing Removable Hard Drive**
  Push the HDD Holder into the socket as shown in the picture.

- **Installing SIM Card**
  Put your SIM Card into the holder **and** Take the SIM card holder and Insert it into the socket as shown in the picture.

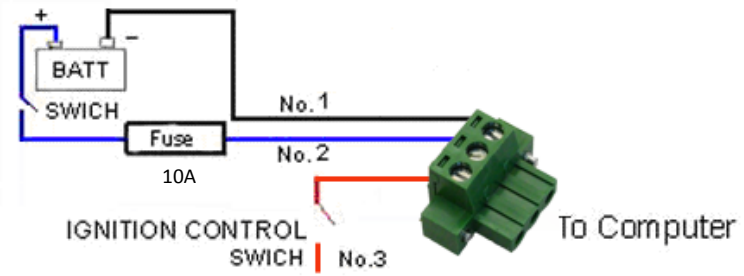
4. POWER IGNITION CONTROLS

- Ignition On/Off status detectable by SW
- If the ignition is off and the system is still on after 5 minutes, PowerBrick5.0-i7 will shut down automatically.
- If the ignition is turned on again and the power-off delay is in progress, PowerBrick5.0-i7 will cancel the delay function and will continue to operate normally.
- If the ignition is turned on again and the power-off delay ended, PowerBrick5.0-i7 will shut down completely will power-on again automatically.

5. POWER INPUT CONNECTOR



- **Power Brick5.0'-i7's Power Wiring Diagram**

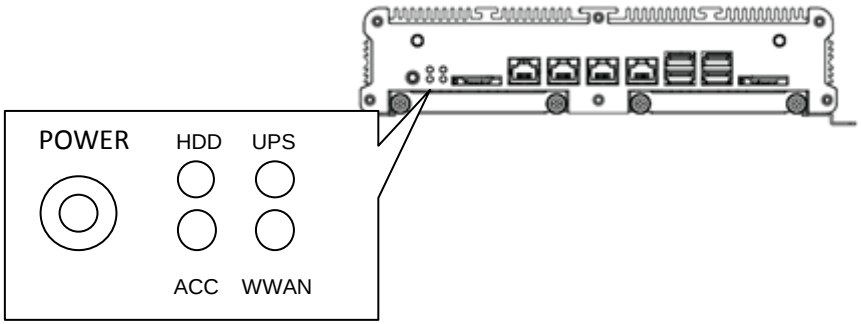


Computer connecter :

pin1-Negative
pin2-DC+ 9~32V
pin3-Ignition

If you don't use Ignition switch,
Please connect pin2 and pin3 wire together.

6. DIAGNOSIS AND MAINTENANCE



- When Main Power Switch (on the front plate) is on (pilot LED is “Blue“) and power supply is normal.
- When Main Power Switch is standby (pilot LED is “Red“) and power supply is normal.
- There are four **status** LED (on the front plate) is shown diferent colors as following.
  1. If **ACC Status** LED lit “ Green “,it indicates that Ignition is off and power supply is normal.

     If **ACC Status** LED lit flash "Green",it indicates that Ignition is on.
  2. **UPS Status** LED lit “ Red“ indicates that UPS (Optional Feature) is on.
  3. **HDD Status** LED lit flash “ Red **“** indicates hand drive proper operation and health.
  4. **WWAN Status** LED lit flash “ Green**“** indicates WWAN connecting proper operation and health.

With the unique set of products, Acura Embedded Systems remains committed to its goal of providing trouble-free and customer-friendly service. A special customer service unit has been set up specifically to cater to our esteemed customers' needs.

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