

# Rigid-352



## Extreme Rugged, Intel® Atom™ D525, Fanless Embedded Controller



### Features

- **Wide Operating Temperature (-40 ~ 70°C)**
- Ultra Low Power and Fanless Design
- 2 x RS-232 and 2 x RS-232/422/485 Serial Ports with 12V Power Output
- Smarter Ignition Power Management and Low Voltage Protection
- Over-voltage and Reversed Power Input Protection
- Isolated Digital I/O with +12/+5V Power Output
- Multiple Connectivity (WiFi, HSUPA, GPS)
- Wide Range DC Power Input (6~32V)
- Rugged Design for Shock/Vibration Protection
- Easy Installation/Maintenance
- Intel® SSD Compatible

### System

<b>CPU</b>	Soldered onboard Intel® Atom™ D525 1.8GHz processor
<b>Memory</b>	2 x 204-pin Dual channel DDR3 SO-DIMM Sockets up to 4GB at 800MHz 2GB WT DDR3 memory module installed
<b>Chipset</b>	ICH8M
<b>Graphics</b>	Integrated Intel® GMA3150
<b>SATA</b>	2 x Serial ATA ports with 300MB/s HDD transfer rate
<b>Connectivity</b>	GPS module (u-blox solution) (optional) 802.11b/g/n Wireless LAN Mini-card (optional) HSUPA (3.75G) Mini-card (optional)
<b>Watchdog Timer</b>	1~255 levels reset
<b>I/O</b>	
<b>Serial Port</b>	2 x RS-232 and 2 x RS-232/422/485 ports
<b>USB Port</b>	6 x USB2.0 ports (2 x lockable connectors for four USB 2.0 ports)
<b>LAN</b>	1 x RJ-45 for Gigabit Ethernet
<b>Video Port</b>	2 x DB-15 female connectors for Analog RGB (Clone mode) 1 x DB-26 female connector for single channel 18/24-bit LVDS output
<b>Digital I/O</b>	1 x DB-26 male connector for 8-in/ 8-out isolated I/O and +12/+5V power output (rating 1A, PTC FUSE 2~2.5A)
<b>Antenna</b>	4 x SMA-Female connectors with cap for external antennas, two for WiFi, one for mobile wireless (HSUPA), one for GPS
<b>Audio</b>	Mic-in/Line-out (6W pre-amplified)
<b>Expansion Bus</b>	1 x PCIe x1 slot, 1 x PCI slot 1 x Mini-card slot 1 x Mini-card slot interconnected with SIM card socket for HSUPA module SIM card socket (outside accessible)

### Environmental

<b>Operating Temp.</b>	-40 ~ 70°C (-40 ~ 158°F), ambient w/ air flow
<b>Storage Temp.</b>	-40 ~ 85°C (-40 ~ 185°F)
<b>Relative Humidity</b>	10 ~ 95% @ 40°C (non-condensing)
<b>Vibration</b>	EN61373: 1999 Class B standard compliant
<b>Shock</b>	EN61373: 1999 Class B standard compliant

### Qualification

<b>Certification</b>	CE, FCC Class B, e1 Mark
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### Power Requirement

<b>Power Input</b>	DC input 6~32V w/ 3-pin terminal block
<b>Power Output</b>	2 x 1-pin lockable jack for 12V/1A power output
<b>FUSE</b>	1 x FUSE receptacle w/ cover (outside accessible)
<b>Power Consumption</b>	Max. 35W (w/o DC output and I/O card)

### Storage

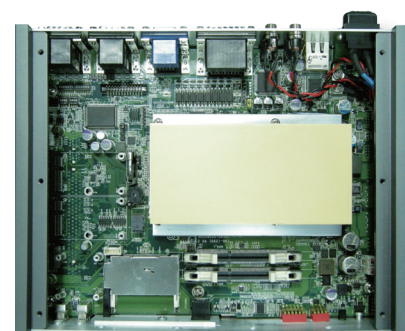
<b>Type</b>	2 x 2.5" SATA drive bay for HDD (with 9.5mm height limit)/SSD 1 x CompactFlash Type II Socket (outside accessible) 1 x SD socket (outside accessible)
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### Mechanical

<b>Construction</b>	Aluminum alloy
<b>Mounting</b>	Support wall-mounting
<b>Weight</b>	4.06 kg (8.94lb)
<b>Dimensions (W x D x H)</b>	254 x 195 x 100 mm (10" x 7.68" x 3.94")

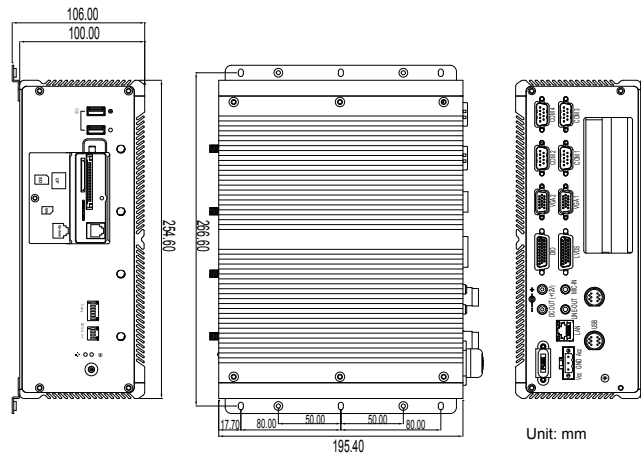
### Ordering Information

<b>Rigid-352</b>	Fanless vehicle computer
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» Fanless Design

# Dimensions



## Standard Accessories

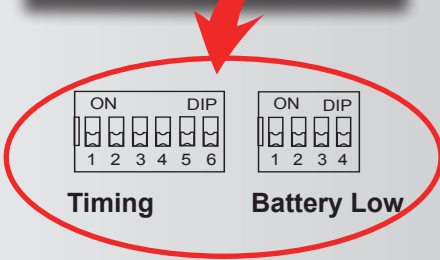
- PAC-B065W-35X**      19V/3.4A 65W AC/DC adapter kit
- WMK-5000**      Wall-mount kit for FPC-35XX Series
- CBL-3500-USB**      2-port IP67 USB cable

## Optional Configuration (CTOS\* Kit)

- MM-3I-2G**      Industrial DDR3 2GB SDRAM kit
- SSD-25040**      Intel® 2.5" 40GB SATAII SSD kit
- HSPA-SI1400**      HSUPA 3.75G module kit & internal wiring
- WIFI-IN1130**      Intel® Centrino® Advanced-N 6205 WiFi module w/ 10cm & 20cm internal wiring
- GPS-UART-kit**      u-blox GPS kit
- ANT-H11**      2dBi HSUPA antenna
- ANT-D11**      WiFi Dual-band 2.4G/5G antenna

\*CTOS means Configure-to-Order Service.

### » Front Panel



### System On/Off Timing Setting Jumper

Pin	DIP SW Auto Car Key on Detection	Description
1	On, Off (default)	Auto Power On (1 - Auto / 0 - Manual)
2	On, Off (default)	Auto Power Off (1 - Auto / 0 - Manual)
3 & 4	On, Off (default)	Power-on Waiting Time – Setup Timing (00-4s)(01-8s)(10-12s)(11-16s)
5 & 6	On, Off (default)	Power-off Waiting Time – Setup Timing (00-30s)(01-45s)(10-60s)(11-90s)

### Battery Low Setting Jumper

Pin	Battery Low	Description
1	On, Off (default)	BUS Low Voltage Detection (24V)
2	On (default), Off	CAR Low Voltage Detection (12V)
3	On, Off (default)	Normally Low Voltage Detection (9V above)
4	On, Off (default)	Car Engine Ignition Detection