

# FPC-3500

## Robust Vehicle Computer with Intel® Atom™ D525 Platform



### Features

- **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 on/off, Delay-time and Battery Low Voltage Protection
- Over-voltage and Reversed Power Input Protection
- Isolated Digital I/O with +12/+5V Power Output
- Multiple Connectivities (WiFi, HSUPA, GPS)
- Wide Range DC Power Input (6~32V)
- Rugged Design for Shock/Vibration Protection
- 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
<b>Chipset</b>	ICH8M
<b>Graphics</b>	Integrated Intel® GMA3150
<b>SATA</b>	2 x Serial ATA ports with 300MB/s HDD transfer rate GPS module (u-blox solution) (optional)
<b>Connectivity</b>	802.11 b/g/n Wireless LAN Mini-card (optional) HSUPA (3.75G) Mini-card (optional)
<b>Watchdog Timer</b>	1~255 levels reset

### I/O

<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 4 x 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 male connector for single/dual channel 18/24-bit LVDS output 1 x 16-bit digital I/O (8-in / 8-out)
<b>Digital I/O</b>	1 x DB-26 female 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' holes for external antennas, two for WiFi, one for HSUPA, one for GPS
<b>Audio</b>	Mic-in/Line-out (6W pre-amplified) 1 x PCIe x1 slot 1 x Mini-card slot for optional WiFi module
<b>Expansion Bus</b>	1 x Mini-card slot interconnected with SIM card socket for HSUPA module 1 x SIM card socket (outside accessible)

### Environmental

<b>Operating Temp.</b>	-25 ~ 55°C (-13 ~ 131°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 A, 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

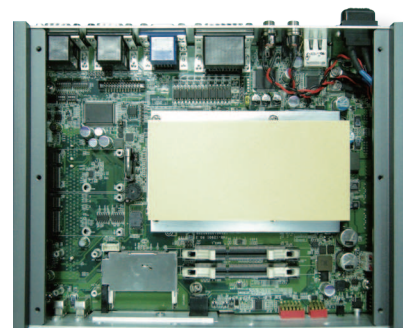
	1 x 2.5" SATA drive bay for HDD (with 9.5mm height limit)/SSD
<b>Type</b>	1 x CompactFlash Type II socket (outside accessible) 1 x SD socket (outside accessible)

### Mechanical

<b>Construction</b>	Aluminum alloy
<b>Mounting</b>	Wall-mount
<b>Weight</b>	3.76 kg (8.27 lb)
<b>Dimensions (W x D x H)</b>	254 x 195 x 80 mm (10" x 7.68" x 3.15")

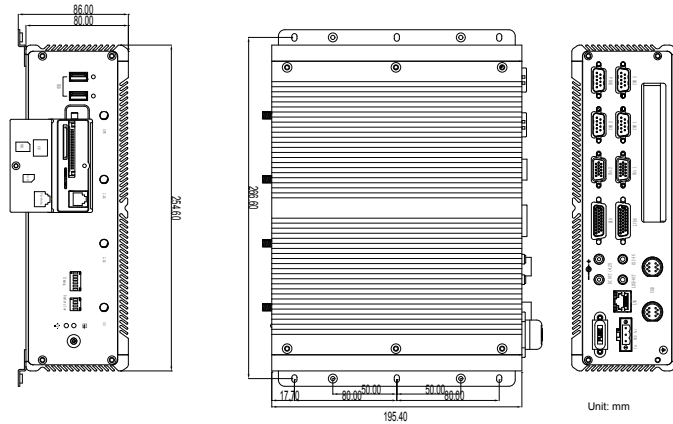
### Ordering Information

<b>FPC-3500B</b>	Vehicle Box Barebone w/o memory & storage with one PCIe x1 slot
<b>FPC-3500A</b>	FPC-3500B with HSUPA, GPS and WiFi



» 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-3C-2G**

DDR3-1333 2GB SDRAM



**SSD-25040**

Intel® 2.5" 40GB SATAII SSD kit



**HSPA-SI1400**

HSUPA 3.75G module kit & internal wiring



**WIFI-IN1300**

Intel® Centrino® Advanced-N 6205 WiFi module w/ 20cm internal wiring



**GPS-UART-kit**

u-blox GPS kit



**ANT-H11**

2dBi HSUPA antenna

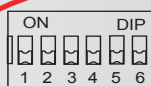
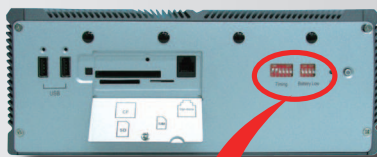


**ANT-D11**

WiFi Dual-band 2.4G/5G antenna

\*CTOS means Configure-to-Order Service.

### » Front Panel



Timing



Battery Low

### 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