



Shop Floor

# IEI AFOLUX All-in-One Panel PC

15"~19" High Performance Fanless Panel PC

**2008 New!**

Fanless · Intel® Celeron® M 1.0 GHz 512 KB cache



Medical

### Best Choices for High Performance Requirements

AFOLUX fanless panel PC with Intel® Celeron® M 1.0GHz with 512 KB L2 cache are ideal high-performance platforms for integration into:

- Industrial automation systems
- Medical applications
- Gaming platforms
- Home Automation



Digital Signage



Automation

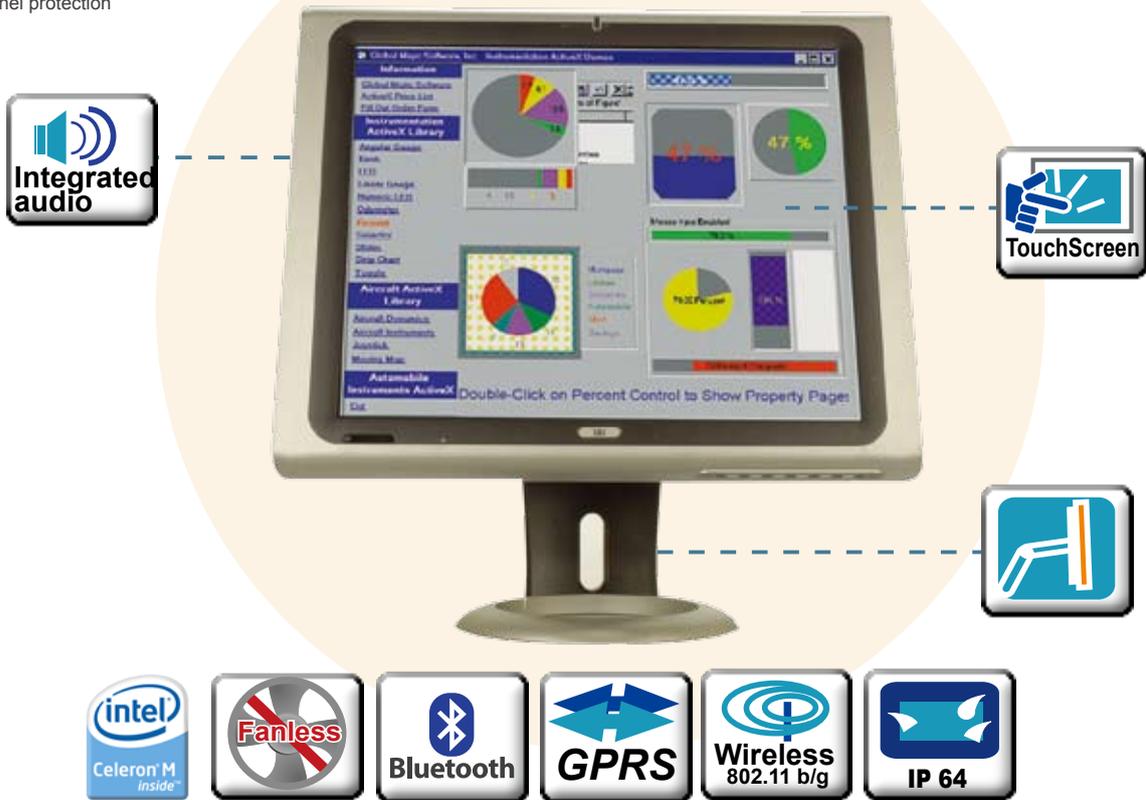


# High Performance 、 Fanless 、 Compact

The performance and features of the AFL-915 series make them suitable for a wide range of high end applications that demand speed and graphics capabilities, including kiosks, telecommunications, graphics intensive medical applications, gaming applications and others.

## AFOLUX High Computing Panel PC

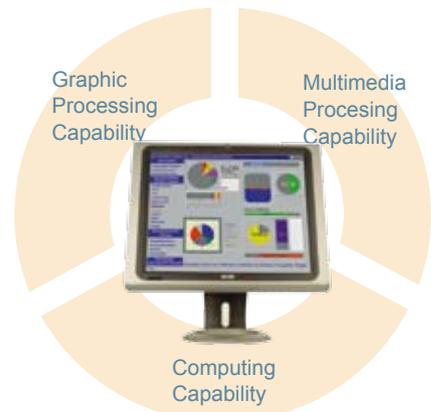
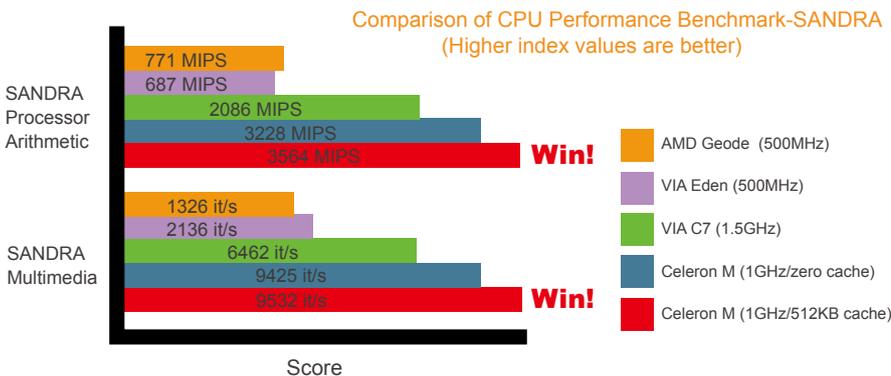
- 15"~19" TFT LCD
- High performance Intel® Celeron® M 1.0GHz with 512 KB L2 cache
- One 1.0 GB (max.) DDR2 SO-DIMM supported/
  - Two 2.0 GB (max.) DDR2 SO-DIMM supported (Operating Temperature :0°C~ ~ 35°C)
- Two built-in speakers and one audio line-out extend voice functions for Kiosks, POS and advertising applications
- Built-in Bluetooth module increase peripheral device connections
- Optional GPRS for the best mobile network solution
- Selectable AT/ATX power mode
- IEI exclusive iSMM system management module for system's auto diagnosis
- Watchdog timer with automatic system restart function decreases maintenance costs and suitable for 24-hour service applications
- Fanless design reduces system noise and decreases maintenance expenses caused by fan failures
- Resistive touch panel allows users to easily operate the system
- IP 64 front panel protection



## Excellent Computational and Multimedia Performance

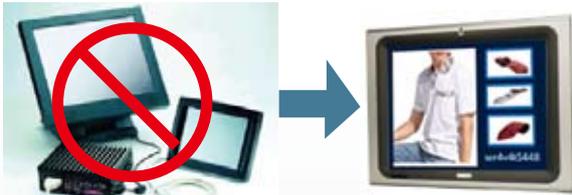
The high performance Intel® Celeron® M 1.0GHz with 512 KB L2 cache processor offers the best combination of high performance computing features with the lowest power dissipation.

Intel® Celeron® M 1.0 GHz 512 KB cache



Explore a Wider World of High Computing Applications

Multimedia Entertainment Platform



Traditional System      AFOLUX PPC

	Embedded system + monitor	All-in-One Unit
Building cost	High	Low
Maintenance	Complicated	Easy
Appearance	a PC with lots of cables	Simple and Luxury
Space Occupy	High	Low

(1) Stylish Design and built-in Speakers-

Stylish and compact unit with two built-in 3W speakers and one audio line-out extend voice functions for Kiosks, POS and advertising applications

(2) Selectable Power Mode-

Selecting whether to booting the system in AT or ATX mode enables versatile system control and reduces maintenance costs

(3) Wireless-

Data update and transmission by wireless LAN

(4) VESA Mounting Support-

VESA mounting design can conveniently mount AFOLUX in any environments

(5) Built-in Bluetooth Module

Bluetooth technology rids systems of cables to create free space and reduce the risk of injury caused by the plugging in of cables to electronic appliances.



Interactive Kiosk



Digital Signage



POS



Gaming

Industrial Computing Platform



Fanless Design

(1) Fanless-

Fanless design reduces system noise making it ideal for medical applications.

(2) IP 64 Front Panel Protection-

The IP 64 front panel ensures the AFL can operate in harsh environments and that the front panel can easily be kept clean with chemical cleanser

(3) User-friendly and easily accessible platform

(4) Touch Panel Front Screen

Resistive touch panel allows users to easily operate the system

(5) Optional GPRS Module-

Mobile data computing via GPRS high-speed packet data technology



Medical Image Terminal



Industrial Automation



Network Security



Transportation

# Fully I/O Support

The system supports a wide array of I/O devices for communication with peripherals, networked systems and specialized devices.

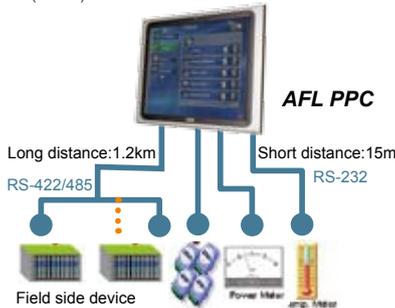


## • RS-232/422/485 Fast Transmission

*Faster! Farther!*

When communicating at high data rates, or over long distances in real world environments, single ended methods are often inadequate. Differential data .

- RS-422 (differential) was designed for greater distances and higher Baud rates than RS-232.
- RS-485 meets the requirements for a truly multi-point communications network, and the standard specifies up to 32 drivers and 32 receivers on a single (2-wire)



## • Dual 10/100/Gigabit Ethernet Support

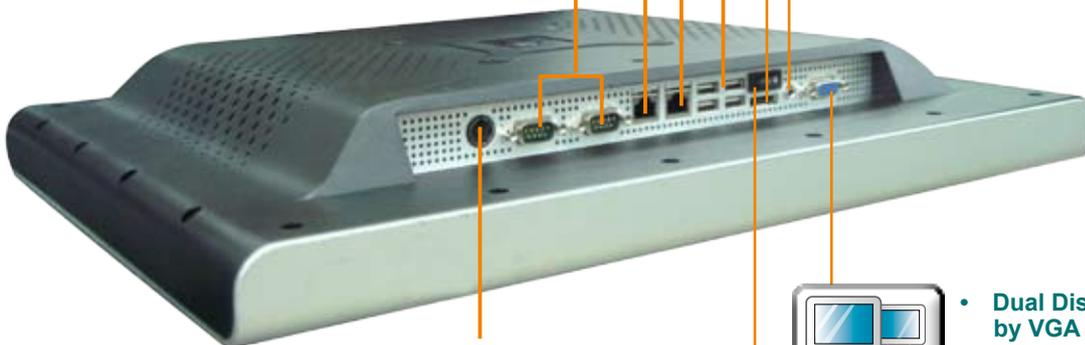
Allocating factory zone and data storage zone to reduce the network collision and crash or virus infection.



## • 4 x USB 2.0

## • External SATA

## • Line-out



## • 12V DC In



## • Dual Display by VGA connector



## • Power Switch:



### AT Mode

In AT mode the AFOLUX panel PC automatically starts when the central plug is connected.



System Powered On/Off by Central Plug

**Easily Power On/Off in mounting situation**  
System booted by central plug not individual switch, conveniently used in mounting applications which is difficult to power the system by switch.

### Easily boot many systems

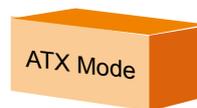
Enabling multiple systems through the central power unit.



Wall Mount



Public Information KIOSK



### ATX Mode

In ATX mode the AFOLUX panel PC can be individually booted via remote network.



System powered on/off remotely via network



POS

### Power Saving

Standby mode activated, when the system is not used.

### Remote Control

Users can set up each panel PC to be turned on/off at different time via remote network.



Security Surveillance

# Value-Added Network Connection



A preinstalled bluetooth module communicates with a wide range of electronic products from PDAs, cellphones and printers, to barcode readers.

**Connect More!**



Headset for gaming device



Cellular phone control and monitoring of logistics service vehicles



## Best Control Master

- Better link quality through accurate frequency selection
- High speed transmission advantage through USB 2.0 interface
- Direct communication between WLAN device and Bluetooth device through a collaborative coexisting design
- Performance maximization through data prioritization technology
- High connection efficiency supports both page scan and inquiry scan modes



An optional IEI GPRS module on the AFOLUX all-in-one panel PC enables easier access to the internet through a GSM network allowing web browsing, corporate & internet Email, vehicle positioning, remote LAN access, and document sharing/ collaborative working.

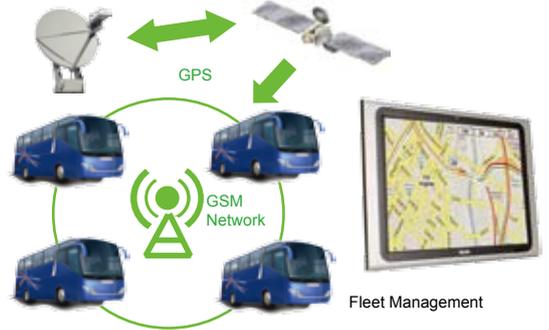
**Connect anytime !**



Fleet Management



Railway Information System



## Best Mobile Solution

- Send and receive data in packet transfer mode
- Efficient use of radio bandwidth
- Constant connectivity
- Cost effective



The integrated PIFA antenna on the AFOLUX ensures an uninterrupted wireless connection. PIFA type antennas can receive high-quality, uniform signals in any location from all directions without any signal degradation or impedance and are the most efficient antennas on the market today. PIFA enhances transmission and reception through a special cubic structure to ensure optimum wireless performance.

**Connect Reliably !**



PIFA antenna inside

### Embedded PIFA Antenna



Home Automation

## 802.11 b/g Compliance for Complete Interoperability

The built-in PIFA antenna for WLAN 802.11b/g, reduces the hazard of network collisions and crashes or virus infections.

# Value Added Software

## 1. Watch Dog Timer



AFOLUX panel PC with reliable watchdog timer (WDT) function which is provided to ensure that standalone systems can always recover from catastrophic conditions that cause the CPU to crash. This condition may have occurred by external EMIs or a software bug. When the CPU stops working correctly, Watchdog Timer either performs a hardware reset (cold boot) or a Non-Maskable Interrupt (NMI) to bring the system back to a known state.



In most cases there is no user around to reset the computer when things go wrong. That job is occupied by the watchdog timer.

### Benefits

- Making your service systems more self-reliant
- Decreasing maintenance cost



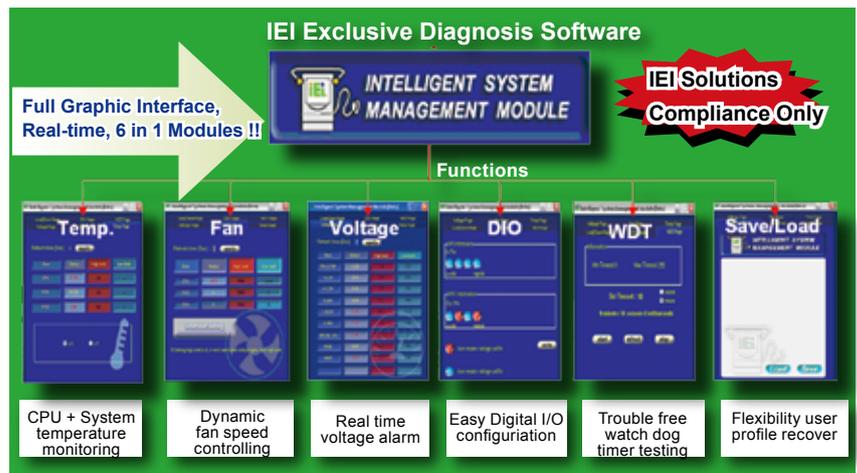
## 2. Intelligent System Management Module (iSMM)

# iSMM

IEI iSMM is a system health supervision API which utilizes sensor chips on IEI motherboards to track system and CPU temperatures, voltages, cooling fan speed., WDT and Digital I/O set up status . By quickly capturing and feedback system health data, users can prevent disasters such as system instability or damage.

### Features

- External and on-chip voltages data feedback
- CPU & System temp data feedback
- Cooling fan speed data feedback
- Cooling fan speed controlled by PWM/On-Off/ Automatic Mode
- Warning signals by beeper and sound effect
- WDT Test
- Programmable Digital I/O
- System health configurations save and load



## 3. Embedded OS Supports

IEI provides optional pre-installed Windows® XP Embedded or Windows® CE 5.0 and CE 6.0 turnkey solutions tailored for the AFOLUX series. These turnkey solutions have one Compact Flash memory card with either Windows® XP Embedded or Windows® CE 5.0 and CE 6.0 with either CE 5.0 or Windows pre-installed, one Windows® XP Embedded or Windows® CE 5.0 license, and one CD that contains all related SDK (Software Development Kit) and user manuals.

128 MB

Include:

- Windows® CE OS image with license
- Thin Client turnkey solutions
- SDK

1 GB

Include:

- Windows® XPE OS image with license
- Thin Client turnkey solutions



AFLCF-15-915-CE050  
AFLCF-17-915-CE050  
AFLCF-19-915-CE050



AFLCF-15-915-CE060  
AFLCF-17-915-CE060  
AFLCF-19-915-CE060



AFLCF-15-915-XPE  
AFLCF-17-915-XPE  
AFLCF-19-915-XPE

# Industrial Grade Compliance

## Rugged Design

The AFOLUX panel PC are equipped with a drive kit to increase the resistance of the hard drive to sideshocks and vibrations. The drive kit extends the drive life cycle in environments such as vehicles and marine applications.



## IP 64 Front Panel Compliance

The AFOLUX front panel is IP 64 compliant. IP 64 compliance guarantees the front panel is dustproof and water-proof. The AFOLUX front panel can withstand any industrial environment where dust and drizzle is encountered.



## IEI Quick Mounting Technology

### VESA Mounting Standards

The AFOLUX panel PC series has four mounting holes compliant with the VESA mounting standard (75mm x 75mm/100mm x 100mm) on the rear panel for stand mounting and other mounting methods.

### Stands

STAND-A19 supports up to 7.5Kg (for AFL-15A/17A/19A series)  
 STAND-B19 supports up to 7.2Kg (for AFL-15A/17A/19A series)

#### Easy Stand



STAND-A19

Forward & Back Tilt

#### Comfortable Stand



Portrait/Landscape

Height Adjustment(13 cm)

STAND-B19

Right/Left Pan (270°)

Forward & Back Tilt(+25°/-5°)

### Panel Mount Kits



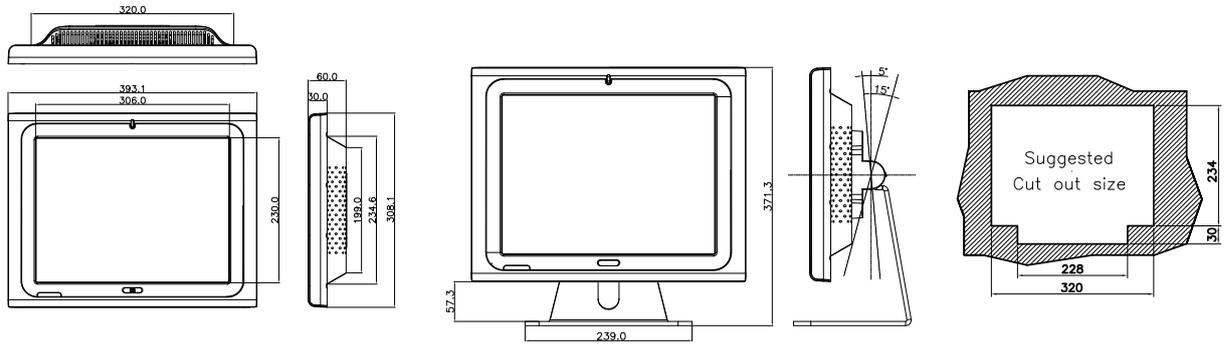
### Wall Mount Kits



## Dimensions (Unit:mm)

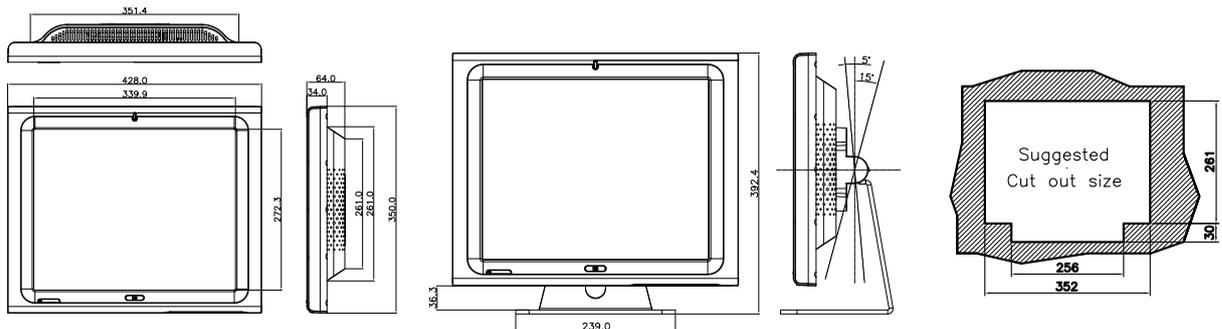
**AFL-15A**  
only 3.7kg

AFL-15A



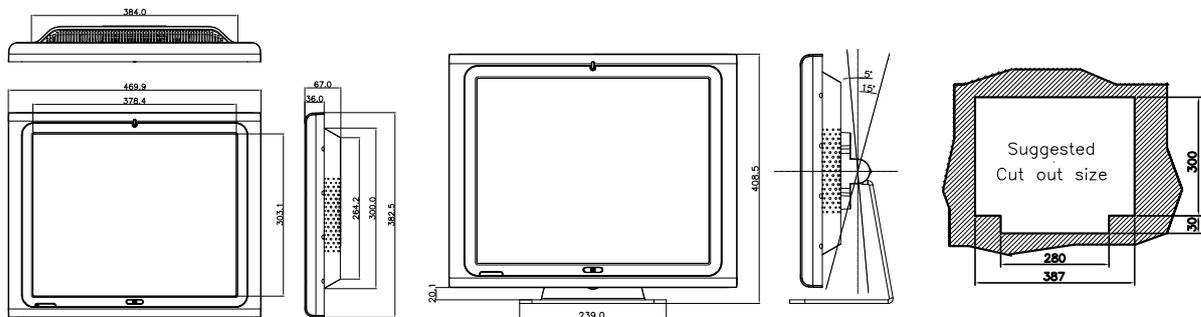
**AFL-17A**  
only 5.4kg

AFL-17A



**AFL-19A**  
only 5.8kg

AFL-19A



## Specifications

Model	AFL-15A-915	AFL-17A-915	AFL-19A-915
LCD Size	15"	17"	19"
Max Resolution	1024 x 768	1280 x 1024	1280 x 1024
Brightness (cd/m2)	350	300	300
Contrast Ratio	700:1	800:1	800:1
LCD Color	262K	16.7M	16.7M
Pixel Pitch (mm)	0.297(H) x 0.297(V)	0.264(H) x 0.264(V)	0.294(H) x 0.294(V)
Viewing Angle (H-V)	140(H) / 125(V)	160(H) / 160(V)	160(H) / 160(V)
Backlight MTBF	50000	50000	50000
SBC Model	AFLMB-9152-R10	AFLMB-9152-R10	AFLMB-9152-R10
CPU	Intel® Celeron® M (1.0GHz) with 512KB L2 Cache	Intel® Celeron® M (1.0GHz) with 512KB L2 Cache	Intel® Celeron® M (1.0GHz) with 512KB L2 Cache
Chipset	Intel® 915GM Express / 910GMLE	Intel® 915GM Express / 910GMLE	Intel® 915GM Express / 910GMLE
Memory	Supports One 1.0 GB (max.) DDR2 SO-DIMM /Two 2.0 GB (max.) DDR2 SO-DIMM (Operating Temperature :0°C~35°C)	Supports One 1.0 GB (max.) DDR2 SO-DIMM /Two 2.0 GB (max.) DDR2 SO-DIMM (Operating Temperature :0°C~35°C)	Supports One 1.0 GB (max.) DDR2 SO-DIMM /Two 2.0 GB (max.) DDR2 SO-DIMM (Operating Temperature :0°C~35°C)
I/O Ports and Switches	1 x External SATA	1 x External SATA	1x External SATA
	1 x RS-232 COM port	1 x RS-232 COM port	1 x RS-232 COM port
	1 x RS-232/422/485 COM port	1 x RS-232/422/485 COM port	1 x RS-232/422/485 COM port
	2 x RJ-45 for GbE	2 x RJ-45 for GbE	2 x RJ-45 for GbE
	4 x USB 2.0	4 x USB 2.0	4 x USB 2.0
	1 x Power Switch	1 x Power Switch	1 x Power Switch
	1 x Reset Button	1 x Reset Button	1 x Reset Button
	1 x VGA port	1 x VGA port	1 x VGA port
SSD	CF Type II	CF Type II	CF Type II
Watchdog Timer	Software Programmable supports 1~255 sec. System reset	Software Programmable supports 1~255 sec. System reset	Software Programmable supports 1~255 sec. System reset
Audio	AMP 1.5W + AMP 1.5W	AMP 1.5W + AMP 1.5W	AMP 3W + AMP 3W
Expansion	1 x Wireless LAN Module ( Mini PCIe Interface )	1 x Wireless LAN Module ( Mini PCIe Interface )	1 x Wireless LAN Module ( Mini PCIe Interface )
HDD Drive Bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay
Optional GPRS Module(support GSM 850,EGSM 900,DCS 1800 & PCS1900)	N/A	N/A	Yes
Construction Material	ABS + PC Plastic front frame	ABS + PC Plastic front frame	ABS + PC Plastic front frame
LED Functions	1 x Power ON/OFF LED on front panel	1 x Power ON/OFF LED on front panel	1 x Power ON/OFF LED on front panel
Mounting	Panel, Wall, Rack, Stand and Arm (VESA 100mm x 100mm)	Panel, Wall, Rack, Stand and Arm (VESA 100mm x 100mm)	Panel, Wall,Stand and Arm (VESA 100mm x 100mm)
Front Panel Color	Silver	Silver	Silver
Dimension (WxHxD) (mm)	394 x 309 x 61	428 x 350 x 65	470x 383 x 67
Operation Temperature (°C)	0°C~40°C with HDD	0°C~40°C with HDD	0°C~40°C with HDD
	0°C~45°C with CF card or SATA interface 2.5" SSD HDD.	0°C~45°C with CF card or SATA interface 2.5" SSD HDD.	0°C~45°C with CF card or SATA interface 2.5" SSD HDD.
Storate Temperature (°C)	-20°C~60°C	-20°C~60°C	-20°C~60°C
Net Weight	3.7 Kg	5.4 Kg	5.8 Kg
IP Level (front panel)	IP 64	IP 64	IP 64
EMC	CE,FCC,CCC,CB	CE,FCC,CCC,CB	CE,FCC,CCC,CB
Safety	UL,CCC	UL,CCC	UL,CCC
Touch Screen	Resistive Type 5-Wire (touch controller IC is on board)	Resistive Type 5-Wire (touch controller IC is on board)	Resistive Type 5-Wire (touch controller IC is on board)
Power Adapter	Power: 60W Input: 90VAC~264VAC@50/60Hz Output:12VDC	Power: 84W Input: 90VAC~264VAC@50/60Hz Output:12VDC	Power: 84W Input: 90VAC~264VAC@50/60Hz Output:12VDC
Power Requirement	12VDC	12VDC	12VDC
Power Consumption	38W	52W	54W

## Optional Internal GPRS Spec (P/N: GPRS01)

EDGE/GPRS/GSM Air interface	Quad-band operation GSM850, EGSM 900, DCS 1800, PCS 1900
	GSM Power Class 4 (2W) for 850/900 bands, GSM Power Class 1 (1W) for 1800/1900 bands
	EDGE class E2 (+27dBm in 850/900 bands, +26dBm in 1800/1900 bands)
	GSM/GPRS Rel '97; PCS1900 Rel '98; EGPRS Rel '99 compliant
EGPRS/GPRS (PS) feature set	GPRS Class 10, coding schemes 1-4
	EDGE Class 10, Multi-slot classes 1-9
	GPRS/EGPRS class B type 1 MT
	Link Adaptation
	Incremental redundancy (IR)
Operating System Supported	Windows 2000/XP Home/XP Pro
USB Interface	USB2.0 +5V DC
SIM Card Interface	3.0V interface
Temperature	-30°C to +65°C
Humidity	up to 95% non-condensing
Dimensions	109.3 x 42.7 x 17.7mm

## Built-in Bluetooth Spec

(USB 2.0 interface) (P/N:BT01)

Standard	Bluetooth V2.0
Frequency Band	2.402GHz ~ 2.480GHz unlicensed ISM band
Modulation Method	GFSK for 1Mbps; /4-DQPSK for 2Mbps; 8-DPSK for 3Mbps
Spread Spectrum	FHSS (Frequency Hopping Spread Spectrum)
RF Output Power	Class 2 (under 4 dBm)
Antenna terminal	50 Ohms
DC power	DC 3.3 V or DC 5V
I/O interface	USB v2.0 compliant interface
Two GPIO interface	LED link indicator interface
Dimension	35 x 11 mm
Operating system supported	Windows XP, 2000, 98SE, Me

## Options

LCD Size	15"	17"	19"
Panel mounting kit	AFLPK-15	AFLPK-17	AFLPK-19
Wall mounting kit	AFLWK-19		
Rack mounting kit	AFLRK-15	AFLRK-17	N/A
LCD Monitor Stand	STAND-A19 / STAND-B19		
OS: WIN CE 5.0	AFLCF-15-915-CE050	AFLCF-17-915-CE050	AFLCF-19-915-CE050
OS: WIN CE 6.0	AFLCF-15-915-CE060	AFLCF-17-915-CE060	AFLCF-19-915-CE060
OS: WIN XPE	AFLCF-15-915-XPE	AFLCF-17-915-XPE	AFLCF-19-915-XPE
* OS image with WINCE or WPE license and IEI Thin Client software package included in the CF card			
* CF card capacity with CE 5.0/CE 6.0:128MB, with XPE:1GB			

## Packing List

1x Power Cable	1x User Manual-CDROM	1x Screw Kit
1x Touch Pen	1x SATA HDD Cable	1x External SATA Cable
1x 60W Power Adapter (For AFL-15A-915)	1x 84W Power Adapter (For AFL-17A-915 and AFL-19A-915)	

## Ordering Information

\*\* (GPRS01) for optional GPRS module. GPRS module for AFL-19A model only

### AFL-15A-915

- AFL-15A-915-10G/WT-R/512MB  
15" XGA panel PC w/ Celeron M 1.0GHz 512K cache CPU, 512MB DDR2 RAM, 802.11 b/g wireless module, touch screen, Bluetooth, RoHS

### AFL-17A-915

- AFL-17A-915-10G/WT-R/512MB  
17" SXGA panel PC w/ Celeron M 1.0GHz 512K cache CPU, 512MB DDR2 RAM, 802.11 b/g wireless module, touch screen, Bluetooth, RoHS

### AFL-19A-915

- AFL-19A-915-10G/WT-R/512MB  
19" SXGA panel PC w/ Celeron M 1.0GHz 512K cache CPU, 512MB DDR2 RAM, 802.11 b/g wireless module, touch screen, Bluetooth, RoHS
- AFL-19A-915-10G/WT-R/512MB/GPRS01  
19" SXGA panel PC w/ Celeron M 1.0GHz 512K cache CPU, 512MB DDR2 RAM, 802.11 b/g wireless module, touch screen, Bluetooth, GPRS, RoHS



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