

# AFOLUX All-in-One Touch Panel PC

www.ieiworld.com

## AFL-07A-N270

### 7" Fanless Widescreen WVGA Touch Panel PC

Intel® Atom™ N270 1.6G Processor

## AFL-08AH-N270

### 8.4" Fanless SVGA High Brightness Touch Panel PC

Intel® Atom™ N270 1.6G Processor

## AFL-10A-N270

### 10.4" Fanless SVGA Touch Panel PC

Intel® Atom™ N270 1.6G Processor

## AFL-12A-N270

### 12.1" Fanless XGA Touch Panel PC

Intel® Atom™ N270 1.6G Processor

## AFL-15A-N270

### 15" Fanless XGA Touch Panel PC

Intel® Atom™ N270 1.6G Processor

Intel® Atom™ Processor on board



Intel® Atom™ Processor



N270 with 512KB L2 cache 1.6GHz

**TDP : 2.5W!**

#### Benefit

- Embedded CPU makes the system more stable
- Low power consumption increase the system life-cycle

#### ► Features

- 7"~15" fanless system with resistive touch screen
- System memory up to 2 GB SDRAM
- Built-in 802.11b/g Wireless LAN
- Built-in Bluetooth module
- Built-in two 1.5 W speakers
- Built-in HSDPA module for mobile connection (Optional)
- One compact flash slot
- IP 64 compliant front panel



7"

8.4~12.1"

15"



#### ► Specifications

**450 nits  
High Brightness**

| Model                      | AFL-07A-N270                                                                                                           | AFL-08AH-N270           | AFL-10A-N270                                                        | AFL-12A-N270                                                                              | AFL-15A-N270                                                                                                                                                                                                        | AFL-15AE-N270                                                    |
|----------------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| LCD Size                   | 7"                                                                                                                     | 8.4"                    | 10.4"                                                               | 12.1"                                                                                     | 15"                                                                                                                                                                                                                 | 15"                                                              |
| Max Resolution             | 800 * 480                                                                                                              | 800 * 600               | 800 * 600                                                           | 1024 * 768                                                                                | 1024 * 768                                                                                                                                                                                                          | 1024 * 768                                                       |
| Brightness (cd/m2)         | 350                                                                                                                    | 450                     | 400                                                                 | 400                                                                                       | 350                                                                                                                                                                                                                 | 250                                                              |
| Contrast Ratio             | 400:1                                                                                                                  | 500:1                   | 500:1                                                               | 500:1                                                                                     | 700:1                                                                                                                                                                                                               | 600:1                                                            |
| LCD Color                  | 262K                                                                                                                   | 262K                    | 262K                                                                | 262K                                                                                      | 262K                                                                                                                                                                                                                | 16.7M                                                            |
| Pixel Pitch (mm)           | 0.1905(H) x 0.1905(V)                                                                                                  | 0.213(H) x 0.213(V)     | 211.2(H) x 158.4(V)                                                 | 0.240(H) x 0.240(V)                                                                       | 0.297(H) x 0.297(V)                                                                                                                                                                                                 | 0.297(H) x 0.297(V)                                              |
| Viewing Angle (H-V)        | 140/110                                                                                                                | 120/100                 | 120/100                                                             | 160/160                                                                                   | 140/125                                                                                                                                                                                                             | 160/160                                                          |
| Backlight MTBF             | 50000 hrs                                                                                                              | 50000 hrs               | 50000 hrs                                                           | 50000 hrs                                                                                 | 50000 hrs                                                                                                                                                                                                           | 40000 hrs                                                        |
| SBC Model                  | AFLMB-N270-R10                                                                                                         |                         |                                                                     |                                                                                           | AFLMB2-N270-R10                                                                                                                                                                                                     |                                                                  |
| CPU                        | N270 (Atom 1.6G)                                                                                                       |                         |                                                                     |                                                                                           |                                                                                                                                                                                                                     |                                                                  |
| Chipset                    | Intel 945GSE / ICH7M                                                                                                   |                         |                                                                     |                                                                                           |                                                                                                                                                                                                                     |                                                                  |
| RAM                        | Supports one 2GB (maximum) 400MHz or 533MHz DDR2 SO-DIMM                                                               |                         |                                                                     |                                                                                           | Support two 200-pin 4GB (maximum) 400MHz DDR II SO-DIMM                                                                                                                                                             |                                                                  |
| I/O Ports and Switches     | 1 x RS-232 / 2 x USB 2.0 / 1 x RS-232/422/485<br>1 x Power Switch / 1 x Reset Button<br>2 x LAN Ports / 1 x Audio Jack |                         |                                                                     |                                                                                           | 1 x VGA / 1 x RS232 COM Port<br>1 x RS232 or 422/485 COM Port<br>2 x RTL8111CP for Giga LAN<br>4 x USB 2.0 / 1 x Audio Jack (Line-out)<br>1 x Power Switch / 1 x Reset Button<br>1 x Power Jack / 1 x AT/ATX Switch |                                                                  |
| SSD                        | CF Type II                                                                                                             |                         |                                                                     |                                                                                           |                                                                                                                                                                                                                     |                                                                  |
| Watchdog Timer             | Software programmable supports 1~255 sec. System reset                                                                 |                         |                                                                     |                                                                                           |                                                                                                                                                                                                                     |                                                                  |
| Audio                      | AMP 1.5W + AMP 1.5W                                                                                                    |                         |                                                                     |                                                                                           |                                                                                                                                                                                                                     |                                                                  |
| Expansion                  | 1 x Mini PCIe ( Wireless 802.11 b/g LAN Module ) ,<br>1 x Bluetooth Module (USB Interface, Bluetooth V2.0)             |                         |                                                                     |                                                                                           | 1 x PCIe mini card (802.11 b/g)(Wireless LAN Module)<br>1 x Bluetooth Module (internal USB interface, Bluetooth V2.0)                                                                                               |                                                                  |
| HDD Drive Bay              | N/A                                                                                                                    | N/A                     | N/A                                                                 | 1 x 2.5" SATA HDD or HSDPA module                                                         | 1 x 2.5" SATA HDD bay or<br>Optional HSDPA Module                                                                                                                                                                   | 1 x 2.5" SATA HDD bay or<br>Optional HSDPA Module                |
| Optional HSDPA Module      | No                                                                                                                     |                         | Yes                                                                 |                                                                                           |                                                                                                                                                                                                                     |                                                                  |
| Construction Material      | ABS + PC Plastic front frame                                                                                           |                         |                                                                     |                                                                                           |                                                                                                                                                                                                                     |                                                                  |
| LED Function               | 1 x Power ON/OFF LED on front panel                                                                                    |                         |                                                                     |                                                                                           |                                                                                                                                                                                                                     |                                                                  |
| Mounting                   | Panel, Wall, Rack, Stand or Arm VESA<br>75mm x 75mm                                                                    |                         | Panel, Wall, Rack, Stand or Arm VESA<br>75mm x 75mm / 100mm x 100mm |                                                                                           | Panel, Wall, Rack, Stand or Arm VESA<br>100mm x 100mm                                                                                                                                                               |                                                                  |
| Front Panel Color          | Gray 7539U                                                                                                             | Gray 7539U              | Gray 7539U                                                          | Gray 7539U                                                                                | Silver                                                                                                                                                                                                              | Silver                                                           |
| Dimensions (WxHxD) (mm)    | 226 x 140 x 40.18                                                                                                      | 233.86 x 183.86 x 41.09 | 276 x 227 x 50.7                                                    | 304 x 246 x 49.5                                                                          | 394 x 309 x 61                                                                                                                                                                                                      | 394 x 309 x 61                                                   |
| Operation Temperature (°C) | -10°C~50°C with CF Card                                                                                                |                         |                                                                     | -10°C~50°C with CF Card<br>0°C~40°C with HDD                                              | 0~40°C with SATA HDD<br>0~50°C with CF Card or 2.5" SSD SATA HDD                                                                                                                                                    | 0~40°C with SATA HDD<br>0~50°C with CF Card or 2.5" SSD SATA HDD |
| Storage Temperature (°C)   | -20°C~60°C                                                                                                             | -20°C~60°C              | -20°C~60°C                                                          | -20°C~60°C                                                                                | -20°C~60°C                                                                                                                                                                                                          | -20°C~60°C                                                       |
| Net Weight                 | 0.6 Kg                                                                                                                 | 0.8 Kg                  | 1.4 Kg                                                              | 1.8 Kg                                                                                    | 3.2 kg                                                                                                                                                                                                              | 3.2 kg                                                           |
| IP Level (front panel)     | IP64                                                                                                                   | IP64                    | IP64                                                                | IP64                                                                                      | IP64                                                                                                                                                                                                                | IP64                                                             |
| Safety & EMC               | CE/FCC/CB/CCC                                                                                                          |                         |                                                                     |                                                                                           |                                                                                                                                                                                                                     |                                                                  |
| Touch Screen               | Resistive Type 4-Wire (touch controller IC is on board)                                                                |                         | Resistive Type 5-Wire (touch controller IC is on board)             |                                                                                           |                                                                                                                                                                                                                     |                                                                  |
| Power Adapter              | P/N:63000-FSP0361AD101C-RS Power:36W<br>Input: 90VAC~264VAC @ 50/60Hz<br>Output:12VDC                                  |                         |                                                                     | P/N:63000-FSP0481AD101C-RS<br>Power:48W<br>Input: 90VAC~264VAC @ 50/60Hz<br>Output: 12VDC | P/N:63000-FSP0601AD101C746-RS Power:60W<br>Input: 90VAC~264VAC @ 50/60Hz<br>Output: 12VDC                                                                                                                           |                                                                  |
| Power Requirement          | 12VDC                                                                                                                  | 12VDC                   | 12VDC                                                               | 12VDC                                                                                     | 12VDC                                                                                                                                                                                                               | 12VDC                                                            |
| Power Consumption          | 23W                                                                                                                    | 25W                     | 28W                                                                 | 41W                                                                                       | 41W                                                                                                                                                                                                                 | 40W                                                              |

The IEI Intel® Atom™ AFL PPC portfolio include the following size 7"~15" .

The 45 nm Intel® Atom™ processor N270 has a 1.60 GHz clock speed and a 533 MHz FSB with a 512 KB L2 cache. The Intel® Atom™ is interfaced through the 533 MHz FSB to an Intel® 945GSE graphics memory controller hub (GMCH) which is in turn interfaced through a high-speed direct media interface (DMI) to an Intel® Mobil ICH7-M I/O controller hub (ICH).

The IEI AFOLUX Intel® Atom™ platforms are sophisticated, low-power PPC that provide the essential features for a low-cost, high-throughput system.

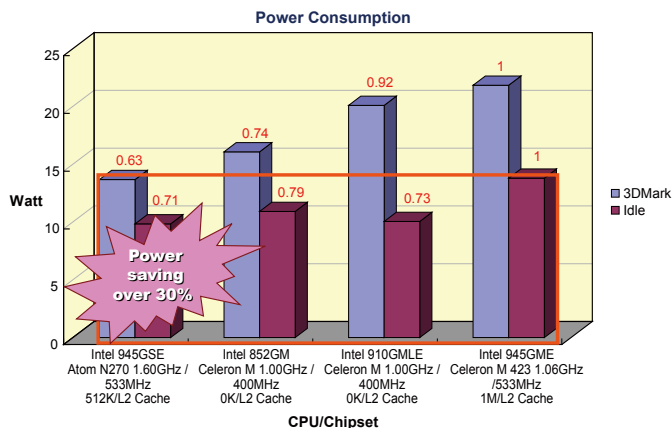
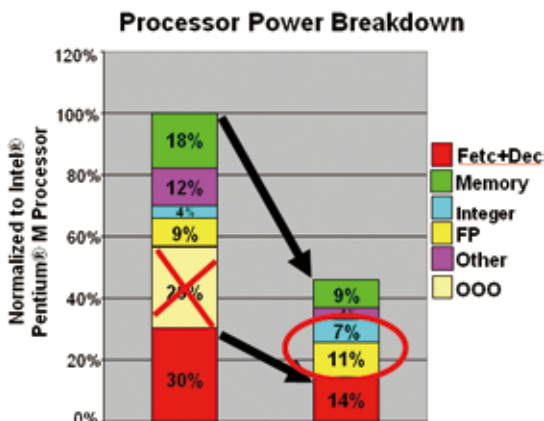
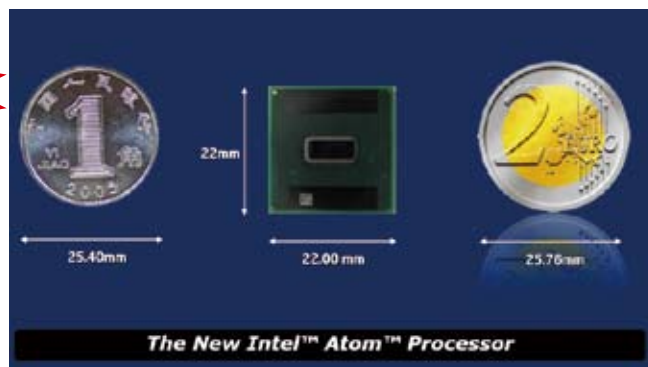


**23W ~ 41W Ultra Low Power Consumption**

## • ATOM Power Efficiency

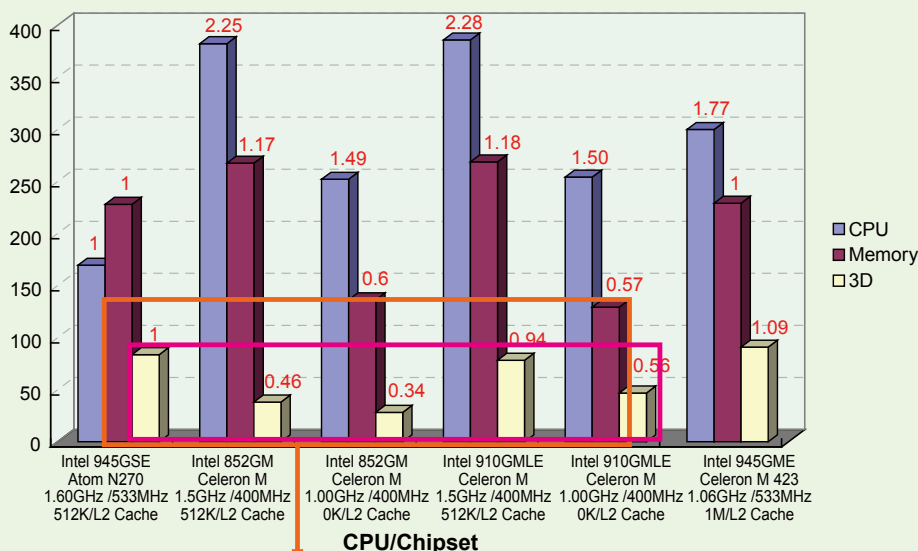
New Microarchitecture design for Intel® Atom™ CPU, reduce 50% power consumption.

**Reduce 50% Power Consumption**



## • ATOM Performance

Passmark Performance



**Memory Performance 40% better than Intel 915GMEL/1GZ & 852GM/1GZ**

**Graphic Performance 40% better than Intel 910GMLE/1GZ, 65% better than 852GM/1GZ**

## • 7"~15" Compact Fanless All-in-One Panel PC

### A. Reliable Fanless System

- Less down time
- Extended operational lives as they are not exposed to overheating problems caused by fan failures
- Reduce maintenance costs

**Reduce 50% Power Consumption**

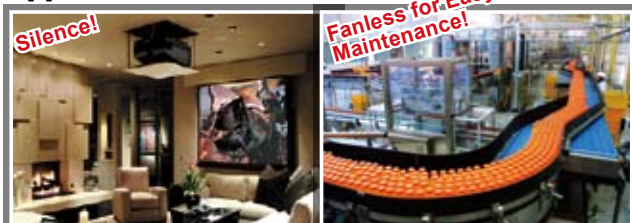
### CPU Comparison Table (Intel® Celeron® M / Intel® Atom™)

| Chipset                         | 910GMLE                               | 945GSE                                                                    |
|---------------------------------|---------------------------------------|---------------------------------------------------------------------------|
| Graphic Core                    | Intel® Graphics Media Accelerator 900 | Intel® Graphics Media Accelerator 900                                     |
| Frequencies                     | 1.0 GHz                               | 1.1 GHz, 1.6 GHz                                                          |
| Process Technology              | 90 nm                                 | 45nm                                                                      |
| FSB                             | 533 MHz                               | 533 MHz, 400 MHz                                                          |
| TDP                             | 5.5 W                                 | 2.5 W <b>Win!!</b>                                                        |
| L2 cache                        | 512KB L2 Cache                        | 512KB L2 Cache                                                            |
| Multi Media Instruction Support | SSE, SSE2                             | SSE, SSE2, SSE3                                                           |
| Low Power Features              | -                                     | Enhanced Intel SpeedStep® Technology<br>Hardware Coordinated P & C States |

#### Thermals

- Intel® Atom™ processor- SC TDP = 2.5W;
- 82945GSE TDP= 4W
- ICH7M= 1.5W

### Applications



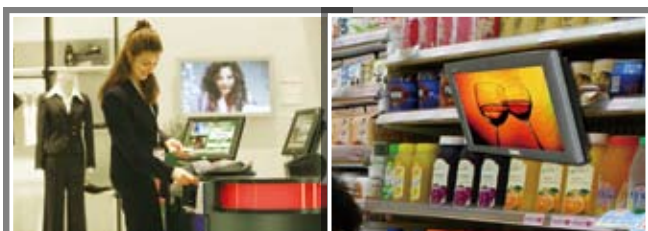
Home Automation

Factory Automation

### B. Excellent Digital Media Playback

AFOLUX PPC ATOM series integrated with Intel® Graphics Media Accelerator (GMA) 900 graphiccore for much better graphic playing.

### Applications



POS System

Digital Signage



### C. High Speed WiFi 802.11 b/g WLAN Networking

802.11b/g Wi-Fi, which gives you up to broadband-speed browsing and connectivity, compared to traditional wired LAN.



#### Hidden Antenna Inside

Integrated PIFA antenna on the AFOLUX ensures an uninterrupted wireless connection. PIFA (Planar Inverted F Antenna) type antenna 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.

|                        | 802.11b            | 802.11g            |
|------------------------|--------------------|--------------------|
| Data Rate (Mbps)       | 11                 | 54                 |
| Range (Radius Indoor)  | 38 Meters          | 38 Meters          |
| Range (Radius Outdoor) | 140 Meters         | 140 Meters         |
| Radio Frequency        | 2.4 GHz to 2.5 GHz | 2.4 GHz to 2.5 GHz |

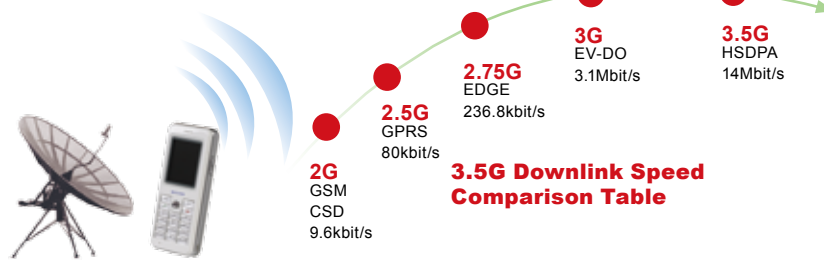
### D. HSDPA Mobile Solution (Optional for 10.4~15" AFOLUX PPC)

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



#### Credit Card Service in the Vehicle

GSM networks allow for rapid connectivity to the Internet, sending data in short bursts on the move.



#### 3.5G Downlink Speed Comparison Table

High connections to HSDPA-enabled cellular networks all over the world.

## AT Mode



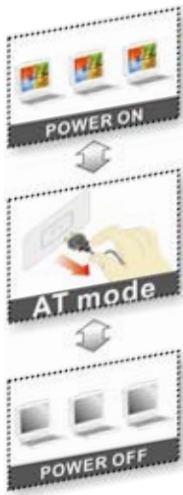
Work flow



ATM



Information kiosk



### ● Easy to turn on/ off with wall/ panel mounting

When implemented in shop flow applications it is easier to control the power through the central plug rather than a power switch.

### ● Automatic start when power connected

When in the AT mode the power is controlled by the central power unit. In AT mode the AFOLUX panel PC automatically starts when the power is connected. This enables multiple panel PCs on a production line to be controlled from a single point.

## ATX Mode



Security surveillance



Advertising terminal

POS



### ● Power management

ATX mode has a power management function inside that turns the system to standby mode to save power when the panel PC is not used. Therefore, when being used in POS applications, real power savings can be achieved.

### ● Remote control advantage

The standby function on the ATX mode power supply allows the AFOLUX panel PC to be turned on/off remotely via network. Users can set up each panel PC to be turned on/off at different times. Remote power mode control is perfect for advertising applications. Broadcasting times for each AFOLUX can be set at a single terminal and controlled remotely.

## ● V-Stand - VESA Standard multi-mounting stand

IEI patented multi-mounting V-Stand allows 0° to 90° adjustable Wall/Ceiling/Desk/Rear/Side mounting to meet diverse applications, mounting on kitchen, room and shelf.

### Features:

- 0° to 90° adjustable hinge design allows comfortable viewing
- Standard VESA 75/100 Compliance
- Heat dissipation holes designed
- Compact size easy to use and mount anywhere

**NEW !**



### D. 5.6" ~ 12.1" AFOLUX PPC/Monitor Compatible



## The Benefits~

### A. One fits all solution

V-Stand is designed around compact and tilt adjustable. Providing mobility and ergonomic comfort fits common wall mounting and ceiling mounting situations.

#### Wall Mounting



Entry-Master Systems



Back office POS system

#### Ceiling Mounting



Car PC



Medical Control Panel

### B. 0° to 90° Excellent adjustability

you can change the angle of the stand from 0° to 90° to reach almost any point with ergonomic features for comfortable viewing.

**No Hinge Limitation !**

### C. Space saving and easy to install



POS system



Self-ordering System



1: Tighten the screws in the rear of the AFOLUX PPC VESA mounting holes



2: Select the position to mount stand kit



3: Plug in the system to operate

Compact size provides mobility



## • Wall Mount



Food ordering Kiosk on the wall enhance the efficiency

Requires no cut out in the wall surface. It mounts directly on the existing wall or desk.

Fastening the retention screw to secure the PPC



AFLWK-12 for 7"~12.1" PPC (VESA 75)



## • Desktop Stand

Adjustable stand kit allow users to work in comfort, reducing neck and back strain from improperly positioned screens and easily movable to anywhere.



### Easy Stand



STAND-A08



STAND-A12



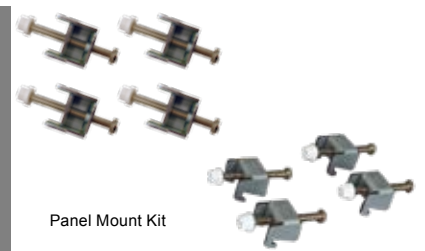
Forward & Back Tilt

## • Panel Mount

Requires a cut out in the wall surface. With four clamps to tighten the screws that pass through the panel mounting clamps



Easy installed in the KIOSK enclosure



Panel Mount Kit



## • ARM

Adjustable monitor arms could be easily mounted on the wall, ceiling, and desk.



**Easy cable organize !!**



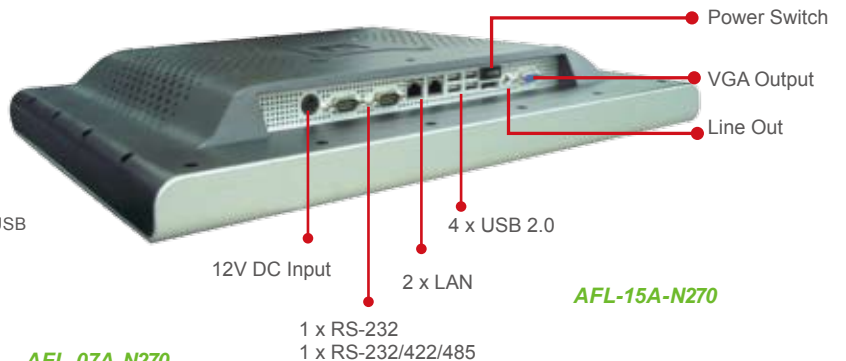
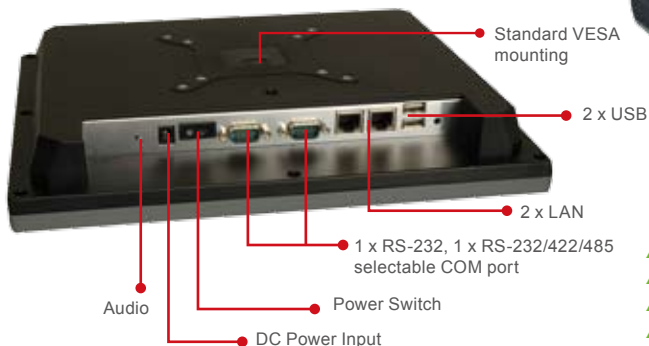
ARM-11-RS



ARM-31-RS

Mounting with adjustable arms to everywhere

## ► Fully Integrated I/O

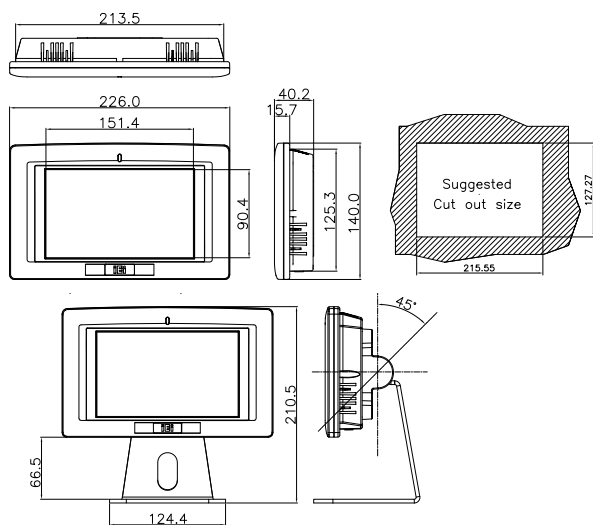


AFL-15A-N270

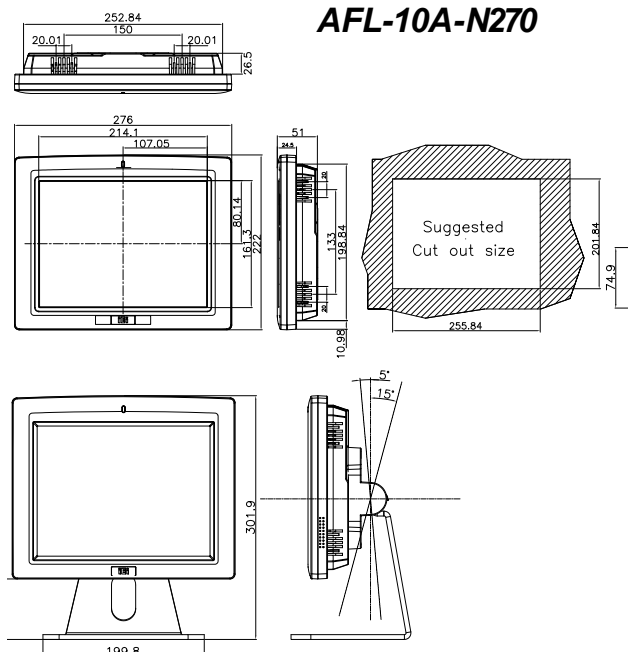
AFL-07A-N270  
AFL-08AH-N270  
AFL-10A-N270  
AFL-12A-N270

► **Dimensions (Unit:mm)**

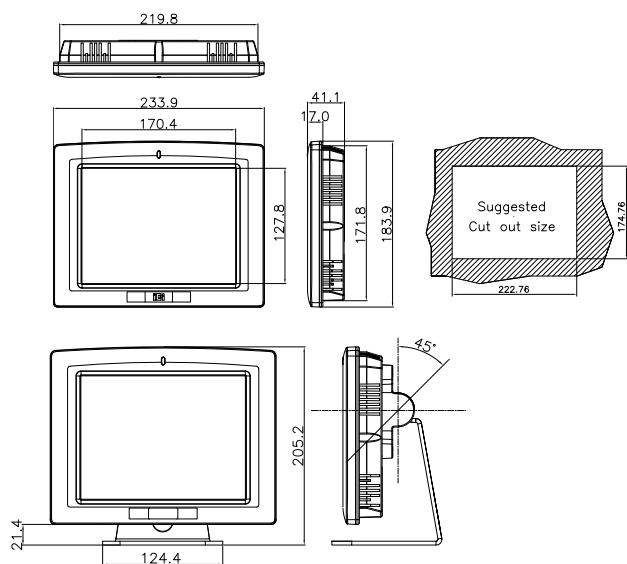
**AFL-07A-N270**



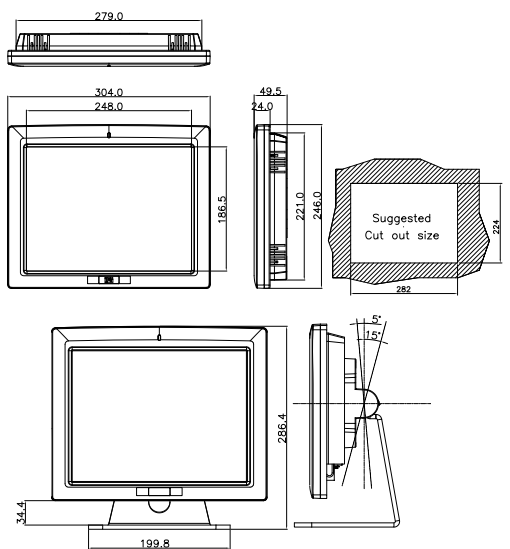
**AFL-10A-N270**



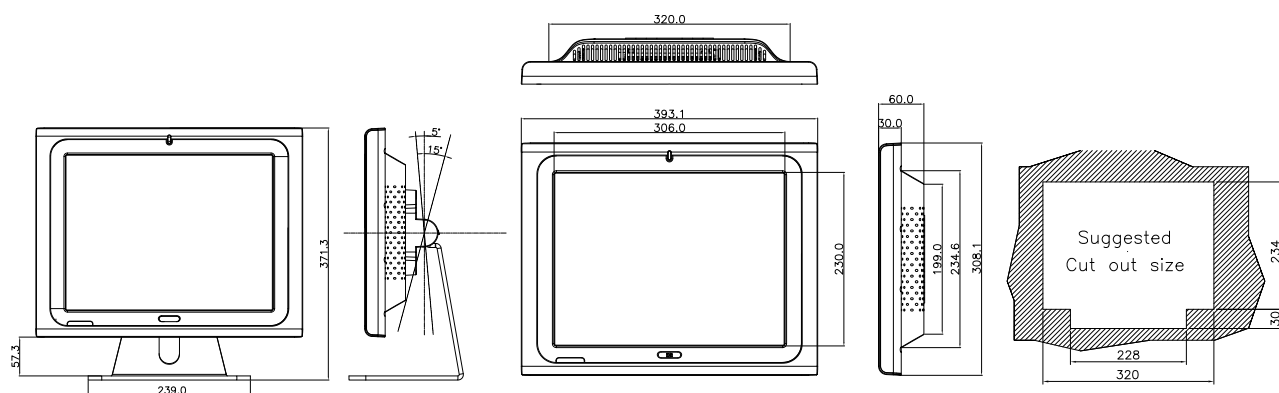
**AFL-08AH-N270**



**AFL-12A-N270**



**AFL-15A-N270**



## ► Options

|                           |            | AFL-07A-N270                             | AFL-08AH-N270       | AFL-10A-N270        | AFL-12A-N270        | AFL-15A-N270                          |
|---------------------------|------------|------------------------------------------|---------------------|---------------------|---------------------|---------------------------------------|
| Panel Mounting Kit        |            | AFLPK-12                                 |                     |                     |                     | AFLPK-15                              |
| Wall Mounting Kit         |            | AFLWK-12                                 |                     |                     |                     | AFLWK-19                              |
| Rack Mounting Kit         |            | AFLRK-07                                 | AFLRK-08            | AFLRK-10            | AFLRK-12            | AFLPK-15                              |
| ARM                       |            | ARM-11-RS / ARM-31-RS                    |                     |                     |                     | ARM-11-RS, ARM-31-RS                  |
| STAND                     |            | STAND-A12<br>STAND-100-RS / STAND-150-RS |                     |                     |                     | STAND-A19, STAND-B19,<br>STAND-210-RS |
| VSTAND                    |            | VSTAND-A07                               | VSTAND-A10          |                     | VSTAND-A12          | N/A                                   |
| OS                        | Win CE 6.0 | AFLCF-07-N270-CE060                      | AFLCF-08-N270-CE060 | AFLCF-10-N270-CE060 | AFLCF-12-N270-CE060 | AFLCF-15-N270-CE060-R10               |
|                           | Win XPE    | AFLCF-07-N270-XPE                        | AFLCF-08-N270-XPE   | AFLCF-10-N270-XPE   | AFLCF-12-N270-XPE   | AFLCF-15-N270-XPE-R10                 |
| DC to DC converter module |            | IDD-930160-KIT                           |                     |                     |                     | N/A                                   |
| Hybrid Card Reader        |            | AFLP-08AMSI-U                            | AFLP-08AMSI-U       | AFLP-10AMSI-U       | AFLP-12AMSI-U       | AFLP-17AMSI-U                         |
| Magnetic Stripe Reader    |            | AFLP-08AMSR-U                            | AFLP-08AMSR-U       | AFLP-10AMSR-U       | AFLP-12AMSR-U       | AFLP-17AMSI-U                         |
| DC 12V Input UPS          |            | AUPS-A10-R10                             |                     |                     |                     | AUPS-B10-R10                          |
| DC 9-36V Input UPS        |            | AUPS-A20-R10                             |                     |                     |                     | AUPS-B20-R10                          |

## ► Packing List

| Item                 | P/N                                                                                     | Q'ty | Specifications           |
|----------------------|-----------------------------------------------------------------------------------------|------|--------------------------|
| Screws               | 44013-030041-RS                                                                         | 4    | M3;ø5mm                  |
| Power Adapter        | 63000-FSP0361AD101C-RS (AFL-07A/08AH/10A-N270)<br>63000-FSP0481AD101C-RS (AFL-12A-N270) |      | 90~264V;12V;36W          |
| Power Cable          | 32000-000002-RS                                                                         | 1    | 1750MM,European Standard |
| User's Manual CD ROM | 7B000-000087-RS                                                                         | 1    |                          |
| Touch Pen            | XTR104-0002-RS                                                                          | 1    |                          |

## ► Ordering Information

| Part Number                        | Description                                                                                                                                                |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AFL-07A-N270/WT-R/1GB-R10          | 7", 350cd/m <sup>2</sup> WVGA fanless panel PC with Intel® Atom™ N270 1.6GHz,802.11b/g wireless module, bluetooth module, touch screen ,1GB DDR2 533,RoHS  |
| AFL-08AH-N270/WT-R/1GB-R10         | 8.4" 450cd/m <sup>2</sup> SVGA fanless panel PC with Intel® Atom™ N270 1.6GHz,802.11b/g wireless module,bluetooth module, touch screen ,1GB DDR2 533,RoHS  |
| AFL-10A-N270/WT-R/1GB-R10          | 10.4" 400cd/m <sup>2</sup> SVGA fanless panel PC with Intel® Atom™ N270 1.6GHz,802.11b/g wireless module,bluetooth module, touch screen ,1GB DDR2 533,RoHS |
| AFL-12A-N270/WT-R/1GB-R10          | 12.1" 400cd/m <sup>2</sup> XGA fanless panel PC with Intel® Atom™ N270 1.6GHz,802.11b/g wireless module,bluetooth module, touch screen ,1GB DDR2 533,RoHS  |
| AFL-15AE-N270/WT-R/1GB-R10         | 15" 250cd/m <sup>2</sup> XGA panel PC with INTEL ATOM N270 1.6GHz CPU,1GB DDR2 RAM,802.11 b/g wireless module,touch screen,Bluetooth,RoHS                  |
| AFL-15A-N270/WT-R/1GB-R10          | 15" 350cd/m <sup>2</sup> XGA panel PC with INTEL ATOM N270 1.6GHz CPU,1GB DDR2 RAM,802.11 b/g wireless module,touch screen,Bluetooth,RoHS                  |
| AFL-15AE-N270/WT-R/1GB/HSDPA01-R10 | 15" 250cd/m <sup>2</sup> XGA panel PC with Core 2 Dou T7500 2.2GHz CPU,2GB DDR2 RAM,802.11 b/g wireless module,touch screen,Bluetooth,HS DPA01,RoHS        |
| AFL-15A-N270/WT-R/1GB/HSDPA01-R10  | 15" 350cd/m <sup>2</sup> XGA panel PC with Core 2 Dou T7500 2.2GHz CPU,2GB DDR2 RAM,802.11 b/g wireless module,touch screen,Bluetooth,HS DPA01,RoHS        |