



Expansion Module

- **Expandable System**
Easily add features to the base system without making mechanical changes.
- **Upgradeable Features**
Easily upgrade your existing system to meet future application requirements.

AFOLUX GEN II

Modular Expansion Panel PC



www.ieiworld.com

About AFOLUX GEN II

15.6" Wide Modular Expansion Panel PC

IEI designed a completely new modular architecture for its new AFOLUX GEN II panel PCs. A variety of expansion module boards connecting through a common interface give it functional versatility. The AFOLUX GEN II services diverse applications and is especially suited to self-service and interactive environments.

Intel® Atom™ Solution: AFL2-W15A-N270
AMD 780E Solution: AFL2-W15A-L325

Expansion Module



Features

- **Modular All-in-One System**

Wide 15.6" all-in-one system is designed around its modularization architecture. Easy to expand and upgradeable functions via added modules increases system scalability and versatility.

- **Extraordinary Outlook**

Sleek flat-bezel design makes the screen easy to clean and delivers stylish design. Slim body with only a 5 cm depth ensures the system is perfect for any public environment.

- **Reliable Design**

IP64 compliant front panel protection resists water and dust invasion. Function modules based on board to board design ensures system reliability for delivery and transportation applications.

5-in-1 Rich Expansion

The guiding principle behind the AFOLUX GEN II is the ability to add expansion modules to the system mainboard facilitating simple expansion for system storage, PCI Express, parallel, serial and USB interface functions.

A Module Expansion

AFL2-W15A-N270

B USB Dongle Area

USB dongle area for applications

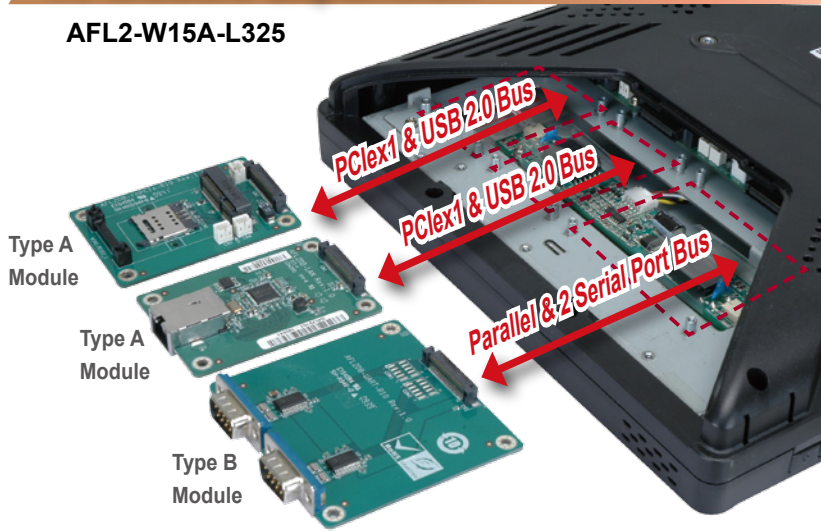
C Storage Area

» CF Type II
» SATA Storage Bay

A. Module Expansion

Rear Left Side View

AFL2-W15A-L325



1. Easy to install function modules
2. Small form factor function modules save warehouse space
3. Faster distribution to your customers
4. Customizable I/O Bracket to fit different module board connectors

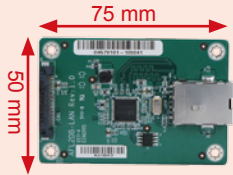


Semi-off Holes for one LAN port and two COM ports

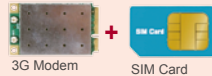


Optional Modules

Type A Module



- **AFL2DB-MPCIE-R10**
PCIe Mini Card Carrying Module



- **AFL2DB-USB3-R10**
USB 3.0 Module



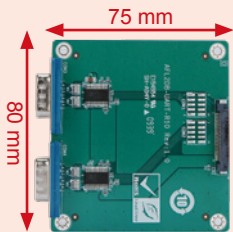
- **AFL2DB-LAN-R10**
Giga Ethernet Module



- **AFL2DB-CPT4-R10**
4 Channel Video Capture Module



Type B Module



- **AFL2DB-UART-R10**
Serial Extension Module

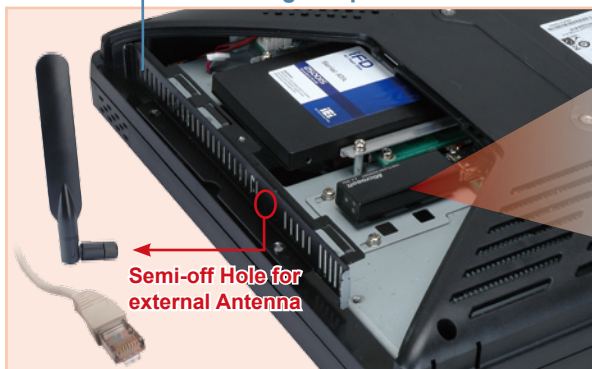


Function	Interface	IEI Module Board	Type
HSUPA 3.5G connection	PCIe Mini card	AFL2DB-MPCIE-R10 + Optional 3G Modem card	A
DVB/T/ATSC or Hybrid TV tuner	PCIe Mini card	AFL2DB-MPCIE-R10 + Optional TV tuner card	A
Ethernet	PCIe x1	AFL2DB-LAN-R10	A
USB 3.0	PCIe x1	AFL2DB-USB3-R10	A
Video capture card (4 port)	PCIe x1	AFL2DB-CPT4-R10	A
Serial Port	2 x Serial	AFL2DB-UART-R10	B

B. Universal USB Dongle Area

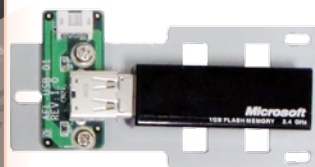
Rear Right Side View

Customizable I/O Bracket to fit the diverse USB dongle expansion

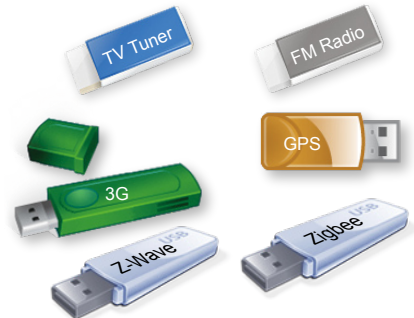


Semi-off Hole for external Antenna

Reserved internal USB slot allows fast deployment of diverse USB dongles.



Changeable bracket to support different sizes of USB dongles



AFL2-W15A-N270

C. Storage Area

Rear Right Side View



- **Storage 1:**
USB Slot
- **Storage 2:**
CF Type II Slot
- **Storage 3:**
SATA Interface
Storage Bay



Reliable Anti-Vibration SSD

2.5" SATA SSD

- Vibration: 20 G (7~2000 MHz)
- Shock: 1500 G / 0.5 ms



SATA SSD Module

- Capacity 8 GB ~ 32 GB
- Data Transfer Rate Up to 90 / 30 MB
- Power Supply: 5 V
- Power Consumption: <250 / 150 mA

Diverse Performance Options

● Reliable Fanless System-Intel® Atom™ Platform *Fanless*

High performance Intel® Atom™ CPU with low power consumption runs fast and stable for long-term usage.

● Graphic Performance System-AMD 780E Platform

- Built-in MPEG2/H.264/AVC Full HD Decoder
 - HDMI delivers the High Image Quality on the Second Display
- AFL-W15A-780E series supports high definition HDMI second display port. High-Definition Multimedia Interface (HDMI), which is a compact audio/video interface for transmitting uncompressed digital data delivering high-definition video support 1080p resolution which equates to 1,920x1,080 pixels, it also supports industry standard EIA-861B video modes including 480p, 720p, 1080i, and 1080p.



About 50 feet



Seamless Flat-Bezel Design

The AFOLUX GEN II adopts a flat glass bezel with projected capacitive or resistive touchscreen.

- Sleek and stylish design
- Perfect edge design prevents dust and water accumulation
- Easy to clean

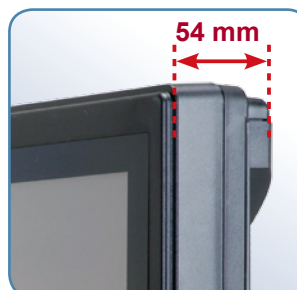


Sleek & stylish

▲ Advanced Flat-Bezel Design

Slim Body Optimizes Space Utilization

The AFOLUX GEN II packs a lot of features into an ultraslim design. Measuring at just over 54 mm and only 3.8 kg, its slim body and rich expansion capabilities are designed to fit your self-service applications.



54 mm



Slim Body

Integrated EM / Mifare RFID Reader

The integrated RFID reader in the AFOLUX GEN II system allows for great efficiency, while the Mifare reader has read/write capabilities to update tag data in the field. Together these make the AFOLUX GEN II the most advanced of interactive asset tracking and identification terminals.

RFID Specifications:

- Frequency: 125KHz or 13.56 MHz
- Reading distance: 5~7 cm
- Supports ISO 14443A Mifare® or EM Standard

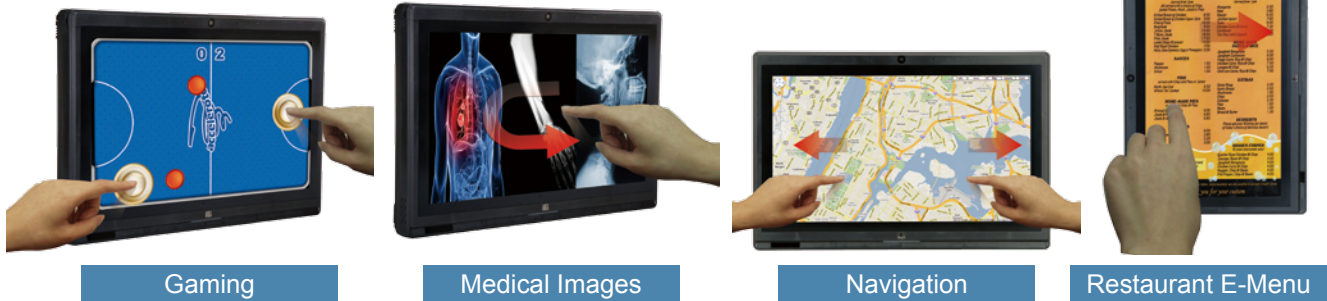
External RFID Module



Multi-touch Interaction

Projected Capacitive Touchscreen

- Freely rotate, zoom in and out to put focus on a specific photo, graphic or diagram
- Zero activation force results in a very light, quick and precise touch response
- Capable of finger or gloved hand operation



Gaming

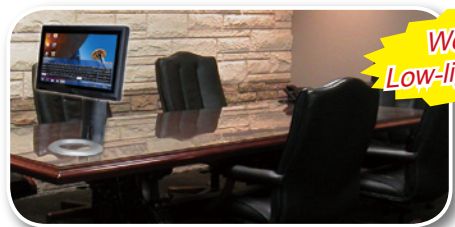
Medical Images

Navigation

Restaurant E-Menu

Video Intercom Device Ready

Ready for VoIP, door intercom, video conferencing and digital signage applications.



Webcam with Low-light Capability

- VGA resolution image sensor
- Video resolution: 1280x1024, 640x480, 352x288, 320x240, 176x144, 160x120.
- Frame rate: 640x480 @ 30fps max.
- Storage Format of Image: AVI
- Storage Format of Photograph: BMP, JPEG



Digital Microphones

Webcam

1.5 W speakers

7H Surface Hardness

Projected Capacitive Touchscreen

The AFOLUX GEN II is equipped with a projected capacitive touchscreen with a tempered glass layer perfectly suited for KIOSK and outdoor digital signage environments.

Projected Capacitive Touch Benefits:

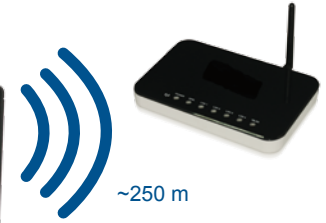
- Tempered glass layer is scratch resistant
- True flat front surface without bezel
- Works with gloved hand
- Works even if the glass is scratch
- General cleaning fluids friendly



Diverse Wireless Connectivity

• Bluetooth V2.1+EDR

Preinstalled bluetooth module communicates with a wide range of electronic devices from PDAs and cellphones to barcode readers. Good transmission performance, greater than 20 m in free space.



- Invisible antenna
- IEEE 802.11n is 27 times faster data transfer rate compared to 802.11b

• 802.11-b/g/n Wireless LAN

Integrated PIFA antenna on the AFOLUX GEN II ensures an uninterrupted wireless connection and provides up to IEEE 802.11n wide bandwidth operation. Frees cables and clutter from your workspace.

ODM Expansion Module

IEI Expansion Module Features:

- Reliable board to board connection
- IEI's self-defined module interface reduces synchronization between function and system

OEM and Custom Solutions Welcome!

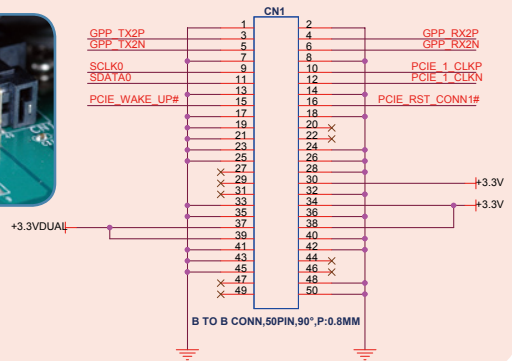


3D Graphics accelerator card



Smart Card Reader

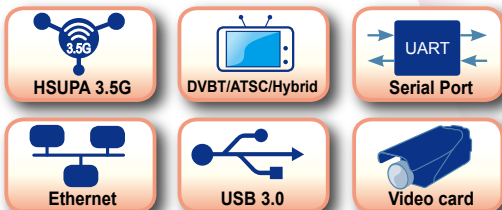
Pin Definition



Applications



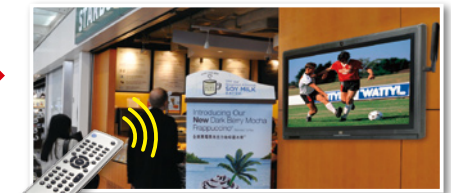
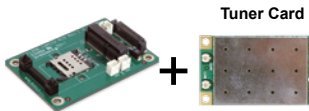
Use one system in different markets!



Digital TV

AFL2DB-MPCIE-R10

PCIe Mini TV Tuner Card

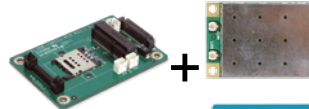


KIOSK System

3G/3.75G

AFL2DB-MPCIE-R10

3G Modem



Mobile Broadcasting System

SIM Card

SIM Card

4 Port Video Capturing

AFL2DB-CPT4-R10



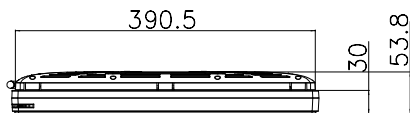
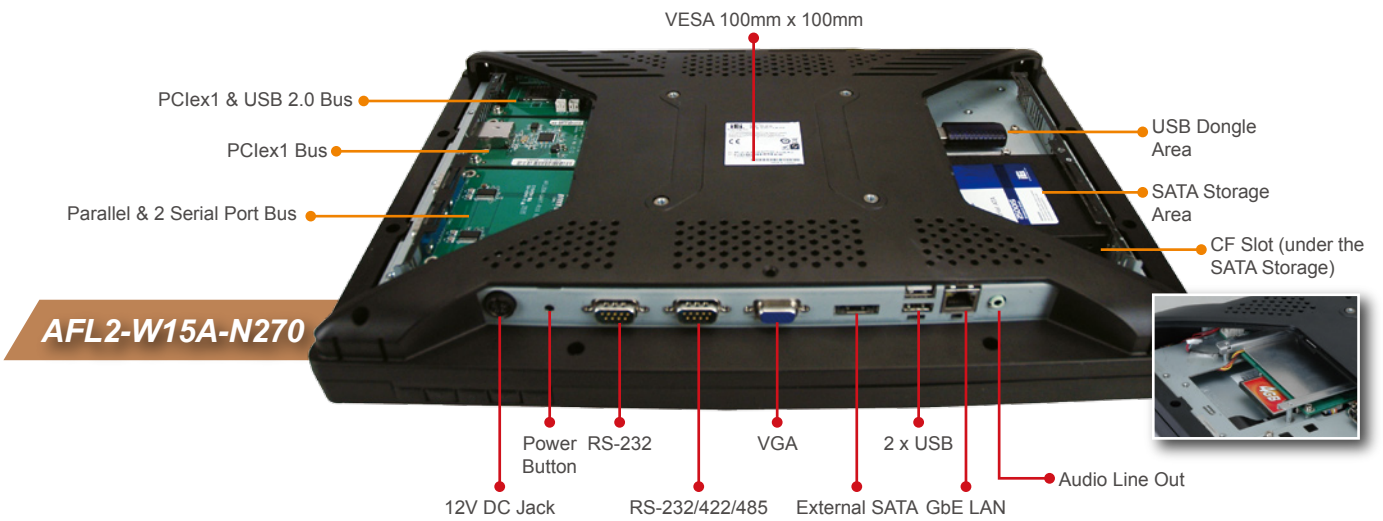
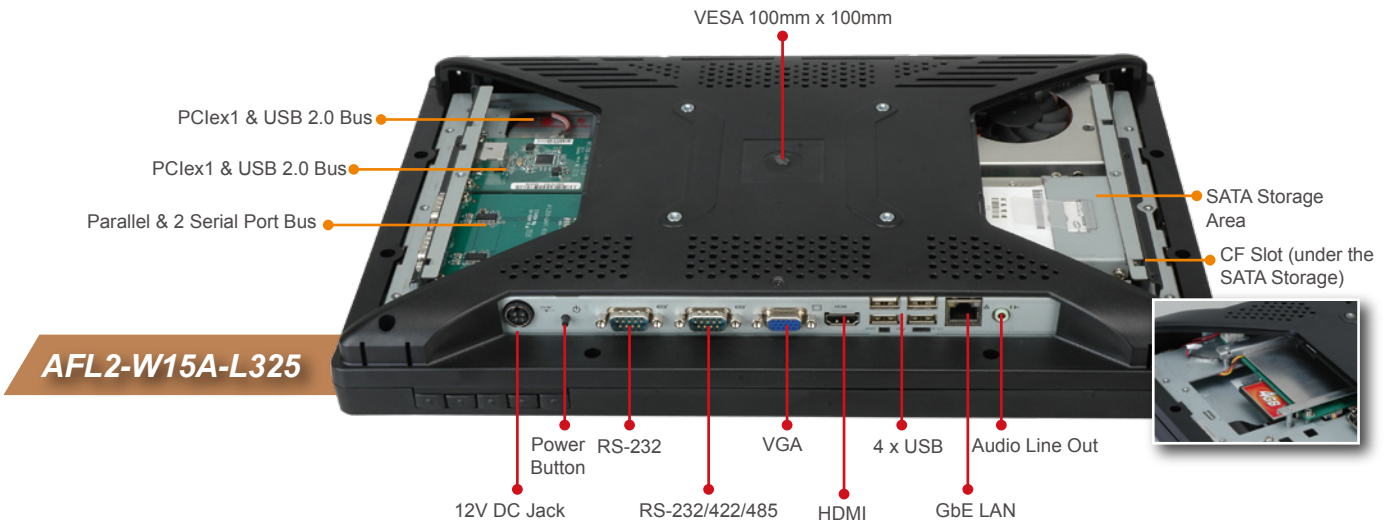
Surveillance System



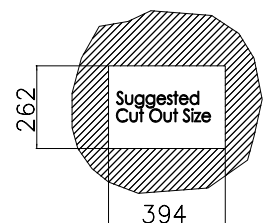
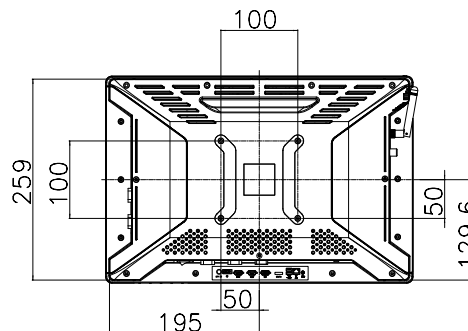
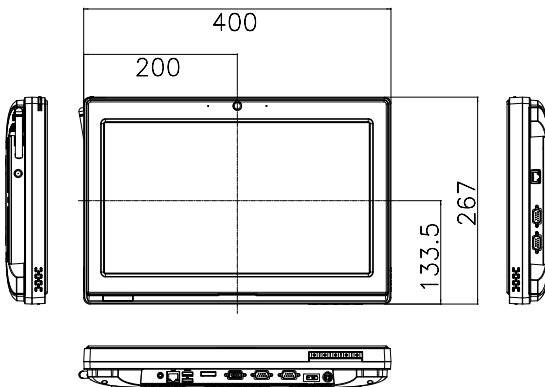
AFL2-W15A-N270 / AFL2-W15A-L325 Specifications

	AFL2-W15A-N270	AFL2-W15A-L325
LCD Specifications		
Size	Wide 15.6" TFT LCD	
Resolution	1366 x 768	
Brightness	250 cd/m ²	
Contrast Ratio	500:1	
LCD Color	16.2 M	
Pixel Pitch (mm)	0.252(H) x 0.252(V)	
Viewing Angle (H-V)	110°(H) / 85°(V)	
Backlight MTBF	50000 hrs	
System		
CPU	Intel® Atom processor N270 1.6 GHz CPU	AMD ASB1 L325 dual core 1.5 GHz CPU
Chipset	Intel® 945GSE + ICH7M	AMD 780E + SB710
RAM	Support one 400 MHz or 533 MHz DDR2 SO-DIMM (2 GB max.)	Support two 400 MHz or 533 MHz DDR2 SO-DIMM (4 GB max.)
SSD	CF Type II	CF Type II
HDD	1 x 2.5" SATA HDD Bay	1 x 2.5" SATA HDD Bay
Watchdog Timer	Software programmable supports 1~255 sec. System reset	Software programmable supports 1~255 sec. System reset
Input / Output	1 x RS-232 COM Port 1 x RS-232/422/485 COM Port 1 x RJ-45 for GbE LAN 2 x USB 2.0 1 x Power Switch 1 x Reset Button 1 x Audio Port (Line out) 1 x VGA 1 x Power jack 1 x 8bit digital IO, 4bit input/4bit output (optional) 1 x External SATA	1 x RS-232 COM Port 1 x RS-232/422/485 COM Port 1 x RJ-45 for GbE LAN 4 x USB 2.0 1 x Power Switch 1 x Reset Button 1 x Audio Port (Line out) 1 x VGA 1 x Power jack 1 x HDMI 1 x 8bit digital IO, 4bit input/4bit output (optional)
Expansion Interface	2 x PCIe x 1, 1 x USB Dongle, 1 x Parallel port expansion, 2 x Serial port expansion	2 x PCIe x 1, 1 x Parallel port expansion, 2 x Serial port expansion
Other Features		
Audio	AMP 1.5 W + 1.5 W (Internal speaker)	
Camera	1.3 M pixel with low light function	
RFID Reader	EM 125 KHz or Mifare 13.56MHz Card Reader (optional)	
OSD Function	LCD on/off, Brightness Up/Down, Volume Up/Down	
	Ambient Light Sensor	
Infrared Remote Controller	LCD on/off, Brightness Up/Down, Volume Up/Down	
TouchScreen	Resistive type 5-wire flat touch window Or Projective Capacitive type flat touch window	
Wireless		
	1 x Optional HSUPA Mobile Module (PCIe mini card interface) (Support GSM 850, EGSM 900, DCS 1800 & 1900) 1 x Wireless Lan 802.11-b/g/n Module (internal PCIe Mini card interface) 1 x Bluetooth Function (internal USB interface, Bluetooth V2.1+EDR)	Supported Bands *HSPA/UMTS — 800/850/900/1900/2100 MHz *Quad-band EDGE/GPRS/GSM — 850/900/1800/1900 MHz *Dual-band EV-DO/CDMA — 800/1900 MHz
Physical		
Construction Front Panel	ABS + PC Plastic front frame	
Mounting	VESA 100 mm x 100mm	
Color	Black C	
Dimensions (mm)	400(W) x 267(H) x 54(D)	
Weight (N/G)	3.8 kg	
Environment		
Temperature (°C)	Operation: -10°C ~ 50°C, Storage: -20°C ~ 60°C	
IP Level	Front Panel IP64	
Safety & EMI	CE / FCC / CB / CCC	
Power		
Power Supply	60 W Power Adapter » Input: 90VAC~264VAC, 50/60Hz » Output: 12VDC	84 W Power Adapter » Input: 90VAC~264VAC, 50/60Hz » Output: 12VDC
Power Requirement	12VDC	
Power Consumption	51 W	68 W

AFOLUX GEN III



AFL2-W15A-N270 / AFL2-W15A-L325 Dimensions (mm)



Optional Kit

Options	AFL2-W15A-N270/R (Resistive type touch)	AFL2-W15A-N270/PC (PCT type touch)	AFL2-W15A-L325/R (Resistive type touch)	AFL2-W15A-L325/PC (PCT type touch)																								
Panel Mounting Kit	AFL2PK-W15A-R10																											
Wall Mounting Kit	AFLWK-19																											
ARM	ARM-11-RS / ARM-31-RS																											
STAND	STAND-A19 / STAND-B19 / STAND-210-R11																											
OS	<table border="1"> <tr> <td>Win CE 6.0</td> <td>AFL2CF-W15-N270-CE060-R10 (128 MB CF card)</td> <td></td> <td></td> <td>N/A</td> </tr> <tr> <td>Win XPE</td> <td>AFL2CF-W15-N270-XPE-R10 (1 GB CF card)</td> <td></td> <td>AFL2CF-W15-L325-XPE-R10 (1GB CF card)</td> <td></td> </tr> <tr> <td>Linux</td> <td colspan="2">AFL2CF-W15-N270-LNX-R10 (2 GB CF card)</td> <td colspan="2">AFL2CF-W15-L325-LNX-R10 (2GB CF card)</td> </tr> <tr> <td rowspan="2">Win 7</td> <td>AFL2CF-W15-N270-WES7E-R10 (2 GB CF card)</td> <td>AFL2CF-W15-N270-WES7P-R10 (2 GB CF card)</td> <td>AFL2CF-W15-780-WES7E-R10 (2 GB CF card)</td> <td>AFL2CF-W15-780-WES7P-R10 (2 GB CF card)</td> </tr> <tr> <td>AFL2SD-W15-N270-WES7E-R10 (4GB SATA SSD module)</td> <td>AFL2SD-W15-N270-WES7P-R10 (4GB SATA SSD module)</td> <td>AFL2SD-W15-780-WES7E-R10 (4 GB SATA SSD module)</td> <td>AFL2SD-W15-780-WES7P-R10 (4 GB SATA SSD module)</td> </tr> </table>				Win CE 6.0	AFL2CF-W15-N270-CE060-R10 (128 MB CF card)			N/A	Win XPE	AFL2CF-W15-N270-XPE-R10 (1 GB CF card)		AFL2CF-W15-L325-XPE-R10 (1GB CF card)		Linux	AFL2CF-W15-N270-LNX-R10 (2 GB CF card)		AFL2CF-W15-L325-LNX-R10 (2GB CF card)		Win 7	AFL2CF-W15-N270-WES7E-R10 (2 GB CF card)	AFL2CF-W15-N270-WES7P-R10 (2 GB CF card)	AFL2CF-W15-780-WES7E-R10 (2 GB CF card)	AFL2CF-W15-780-WES7P-R10 (2 GB CF card)	AFL2SD-W15-N270-WES7E-R10 (4GB SATA SSD module)	AFL2SD-W15-N270-WES7P-R10 (4GB SATA SSD module)	AFL2SD-W15-780-WES7E-R10 (4 GB SATA SSD module)	AFL2SD-W15-780-WES7P-R10 (4 GB SATA SSD module)
Win CE 6.0	AFL2CF-W15-N270-CE060-R10 (128 MB CF card)			N/A																								
Win XPE	AFL2CF-W15-N270-XPE-R10 (1 GB CF card)		AFL2CF-W15-L325-XPE-R10 (1GB CF card)																									
Linux	AFL2CF-W15-N270-LNX-R10 (2 GB CF card)		AFL2CF-W15-L325-LNX-R10 (2GB CF card)																									
Win 7	AFL2CF-W15-N270-WES7E-R10 (2 GB CF card)	AFL2CF-W15-N270-WES7P-R10 (2 GB CF card)	AFL2CF-W15-780-WES7E-R10 (2 GB CF card)	AFL2CF-W15-780-WES7P-R10 (2 GB CF card)																								
	AFL2SD-W15-N270-WES7E-R10 (4GB SATA SSD module)	AFL2SD-W15-N270-WES7P-R10 (4GB SATA SSD module)	AFL2SD-W15-780-WES7E-R10 (4 GB SATA SSD module)	AFL2SD-W15-780-WES7P-R10 (4 GB SATA SSD module)																								
DC 12V Input UPS	AUPS-B10-R10 (VESA 100, DC 12V input, 12V output 100 W UPS module with 3800 mAH)																											
DC 9~36V Input UPS	AUPS-B20-R10 (VESA 100, DC 9~36V input, 12V output 100 W UPS module with 3800 mAH)																											

Packing List

Item	P/N	Q'ty	Specifications
Touch Pen	43125-0002C0-00-RS	1	
Power Adapter	63000-FSP060DBAB1554-RS (for Intel N270 platform) 63000-FSP084DMBA1308-RS (for AMD L325 platform)	1	90~264V;12V;60W 90~264V;12V;84W
Power Cord	32000-000002-RS	1	1750mm;European Standard
User's Manual CD ROM	7B000-000087-RS	1	
Screws	44013-030041-RS	4	
Remote Controller	7Z000-8T00320ICP05G-RS	1	

Ordering Information

Resistive Type Touch		
Intel® Atom™	AFL2-W15A-N270/R/1G-R10	15.6" 250cd/m² WXGA+ fanless panel PC with Intel® Atom™ N270 1.6 GHz, 802.11b/g/n wireless module, Bluetooth module, Resistive touch screen, 1.3 M camera, microphone, 1GB DDR2 RAM, RoHS
	AFL2-W15A-N270/R-EM/1G-R10	15.6" 250cd/m² WXGA+ fanless panel PC with Intel® Atom™ N270 1.6 GHz, 802.11b/g/n wireless module, Bluetooth module, Resistive touch screen, 1.3M camera, microphone, 1GB DDR2 RAM, EM card reader
	AFL2-W15A-N270/R-MF/1G-R10	15.6" 250cd/m² WXGA+ fanless panel PC with Intel® Atom™ N270 1.6 GHz, 802.11b/g/n wireless module, Bluetooth module, Resistive touch screen, 1.3 M camera, microphone, 1 GB DDR2 RAM, Mifare card reader
AMD 780E	AFL2-W15A-L325/R/1G-R10	15.6" 250cd/m² WXGA+ panel PC with AMD 780E + L325 dual core 1.5 GHz CPU, 802.11b/g/n wireless module, Bluetooth module, Resistive touch screen, 1.3 M camera, microphone, 1GB DDR2 RAM, RoHS
	AFL2-W15A-L325/R-EM/1G-R10	15.6" 250cd/m² WXGA+ panel PC with AMD 780E + L325 dual core 1.5GHz CPU, 802.11b/g/n wireless module, Bluetooth module, Resistive touch screen, 1.3M camera, microphone, 1GB DDR2 RAM, EM card reader
	AFL2-W15A-L325/R-MF/1G-R10	15.6" 250cd/m² WXGA+ panel PC with AMD 780E + L325 dual core 1.5 GHz CPU, 802.11b/g/n wireless module, Bluetooth module, Resistive touch screen, 1.3 M camera,microphone, 1GB DDR2 RAM, Mifare card reader
Projective Capacitive Type Touch		
Intel® Atom™	AFL2-W15A-N270/PC/1G-R10	15.6" 250cd/m² WXGA+ fanless panel PC with Intel® Atom™ N270 1.6 GHz, 802.11b/g/n wireless module, Bluetooth module, Projective capacitive touchscreen, 1.3 M camera, microphone, 1GB DDR2 RAM, RoHS
	AFL2-W15A-N270/PC-EM/1G-R10	15.6" 250cd/m² WXGA+ fanless panel PC with Intel® Atom™ N270 1.6 GHz, 802.11b/g/n wireless module, Bluetooth module, Projective capacitive touchscreen, 1.3 M camera, microphone, 1GB DDR2 RAM, EM card reader
	AFL2-W15A-N270/PC-MF/1G-R10	15.6" 250cd/m² WXGA+ fanless panel PC with Intel® Atom™ N270 1.6 GHz, 802.11b/g/n wireless module, Bluetooth module, Projective capacitive touchscreen, 1.3 M camera, microphone, 1GB DDR2 RAM, Mifare card reader
AMD 780E	AFL2-W15A-L325/PC/1G-R10	15.6" 250cd/m² WXGA+ panel PC with AMD 780E + L325 dual core 1.5 GHz CPU, 802.11b/g/n wireless module, Bluetooth module, Projective capacitive touchscreen, 1.3 M camera, microphone, 1 GB DDR2 RAM, RoHS
	AFL2-W15A-L325/PC-EM/1G-R10	15.6" 250cd/m² WXGA+ panel PC with AMD 780E + L325 dual core 1.5 GHz CPU, 802.11b/g/n wireless module, Bluetooth module, Projective capacitive touchscreen, 1.3M camera, microphone, 1GB DDR2 RAM, EM card reader
	AFL2-W15A-L325/PC-MF/1G-R10	15.6" 250cd/m² WXGA+ panel PC with AMD 780E + L325 dual core 1.5 GHz CPU, 802.11b/g/n wireless module, Bluetooth module, Projective capacitive touchscreen, 1.3 M camera, microphone, 1GB DDR2 RAM, Mifare card reader

Optional Module

P/N	AFL2DB-UART-R10	AFL2DB-LAN-R10	AFL2DB-MPCIE-R10	AFL2DB-USB3-R10	AFL2DB-CPT4-R10*
Function	2 x UART by DB9 connector	1 x GbE LAN by RJ-45 connector	1 x PCIe mini card with SIM card holder	1 x USB 3.0 port	4 x Video Capture port by DB9 connector
Board Size (mm)	80 x 75	50 x 75	50 x 75	50 x 75	50 x 75
Interface	UART	PCIe x1	PCIe x1	PCIe x1	PCIe x1

* Parking with one video capture card and one DB9 to 4 BNC connector cable



Retail



Mobile Broadcasting System



Surveillance System



Headquarters

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