



ARK-1123 Fanless Embedded Box COMPUTER

電腦(微型計算機)

Startup Manual

Packing List

Before you begin installing your card, please make sure that the following items have been shipped:

ARK-1123

-  1 x ARK-1123 unit
-  1 x Chinese user manual
-  1 x China RoHS
-  1 x 2 years warranty card
-  1 x power adapter

If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

Note 1: For detailed contents of ARK-1123, please refer to information on the enclosed CDROM (in PDF format).

Note 2: Acrobat Reader is required to view any PDF file. Acrobat Reader can be downloaded at:

<http://www.adobe.com/Prodindex/acrobat/readstep>.

html/ (Acrobat is a trademark of Adobe.)

ARK-1123 Specifications

[ARK-1123H]

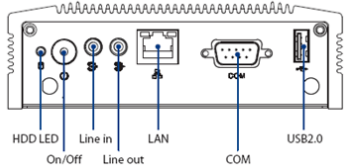
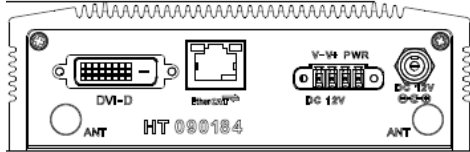
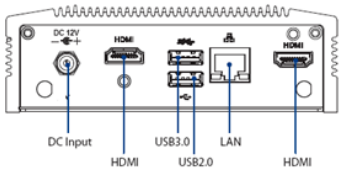
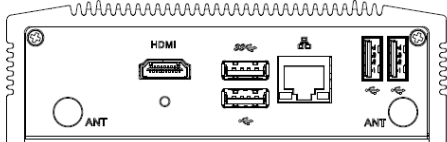
Specifications

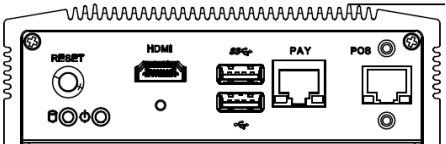
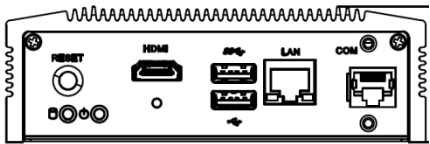
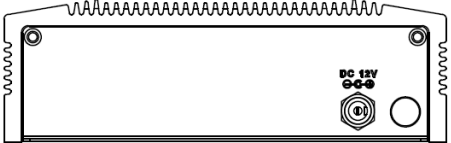
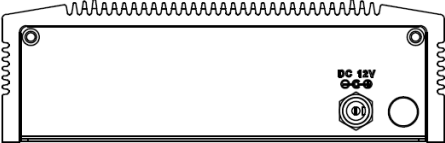
ARK-1123H-U0A2E		
Processor System	CPU	Intel® Celeron™ Processor J1900 Quad Core 2.0 GHz SoC
	Frequency	2.0 GHz (Up to 2.41 GHz w/ burst frequency enabled)
	L2 Cache	2 MB
	BIOS	AMI EFI 64 Mbit (Default BIOS is supported for 64-bit OS installation, BIOS for 32-bit OS is supported by project)
Memory	Technology	DDR3L 1333MHz
	Max. Capacity	8 GB
	Socket	1 x 204-pin SO-DIMM
Graphics	Chipset	Intel® Atom SoC integrated
	Graphic Engine	DirectX® 11.1, OGL 3.0, OCL 1.1, OGL ES 2.0 Encode: H264, MPEG2/4, VC1, WMV9 Decode: H264, MPEG2
	HDMI	2 x Lockable HDMI connector, support up to 1920 x 1080 at 60Hz (2nd HDMI w/o audio function by Intel limitation)
	Audio	ALC-888S, High Definition Audio, Line-out & Line-in
Ethernet	LAN #1	10/100/1000 Mbps Intel I210 GbE, support Wake on LAN
	LAN #2	10/100/1000 Mbps Intel I210 GbE, support Wake on LAN
I/O Interface	Serial Ports	1 x RS-232/422/485 (BIOS selectable)
	USB Interface	2 x USB 2.0 & 1 x USB3.0
Other	Watchdog timer	255-level timer interval, setup by software
Expansion	Mini PCIe	1 x Full-size Mini PCIe, support WLAN or WWAN module
Storage	2.5" Drive Bay	1 x 2.5" SATA HDD Bay (Max Height 9.5mm)
	mSATA	1 x Half-size mPCIe (Suggest to assembly by CTOS or T-Part due to complex installation)
Software Support	Microsoft Windows	WES7, Windows 7, WE8S, Windows 8 and Windows 10
	Linux	Support (by Project)
Power Requirement	Power Input Voltage	Single 12 Vdc
	Power Adapter	AC to DC, DC12 V/3 A, 36 W with threaded design
Power Consumption	Typical	5.64W
	Max.	14.04W
Mechanical	Construction	Aluminum housing
	Mounting	VESA/DIN Rail/Wall Mounting Kits (Optional)
	Dimensions (W x H x D)	133.8 x 43.1 x 94.2 mm (5.27" x 1.7" x 3.71")
	Weight	0.8kg
Environment	Operating Temperature	With extended temperature SSD/mSATA/RAM : -20 ~ 60° C with 0.7m/s air flow * With standard temperature HDD/SSD/mSATA/RAM peripherals: 0 ~ 40° C with 0.7m/s air flow
	Storage Temperature	-40 ~ 85° C (-40~185° F)
	Relative Humidity	95% @ 40° C (non-condensing)
	Vibration During Operation	With mSATA/SSD: 3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis With HDD: 0.5Grms, IEC 60068-2-64, random, 5~500Hz, 3 axes, 1hr/axis
	Shock During Operation	With mSATA/SSD: 30 G, IEC 60068-2-27, half sine, 11 ms duration With HDD: 10G, IEC 60068-2-27, half sine, 11 ms duration
Regulation	EMC	CE/FCC Class B, CCC, BSMI
	Safety	UL, CCC, BSMI, CB

* CB/UL 安規測試以 Tma = 50C 評估.

Model	ARK-1123H		
	J1900 w/ HDMI	J1900 w/ HDMI & 4 USB(不含HDD)	E3825 w/ HDMI & 4 USB(不含HDD)
Sytem PN	ARK-1123H-U0A1E	ARK-1123H-U0A2E	ARK-1123H-S3A1E
M/B PN	96S2263004E (14MPCL-2.0-2M11A)	96S2263004E (14MPCL-2.0-2M11A)	96S2263006E (14MPA-1.33-1E3825A)
D/B PN	9696M01000E	9696M01000E	9696M01000E
Remark	標準品	Certification Ready Only, 系統不導入, 後續需求走T-PN	Certification Ready Only, 系統不導入, 後續需求走T-PN
Front I/O			
PN	1960061996N001	1960061996N011	1960061996N011
Rear I/O			
PN	1960061998N001	1960061998N001	1960061998N001

Update SKU :

Model	EIS-D110	ARK-1123H
CPU	Intel Celeron J1900	Intel Celeron J1900
System PN	EIS-D110-01D0002	ARK1123H1505U-T
Main board	96S2263011E	96S2263015E
I/O board	9696M01000E (AMO-M010)	9696M01500E (AMO-M015)
Front I/O Drawing		
Rear I/O Drawing		

Model	ARK-1123H	ARK-1123H
CPU	Intel Celeron J1900	Intel Celeron J1900
System PN	ARK1123H1704E-T ARK1123H1704U-T	ARK1123H1801E-T
Main board	96S2263011E-001	96S2263004E-001
I/O board	EMO-100E-MP01E	N/A
Front I/O Drawing		
Rear I/O Drawing		

[ARK-1123C] Specifications

		ARK-1123C-S3A2E
Processor System	CPU	Intel Atom Processor E3825 Dual Core SoC
	Frequency	1.33 GHz
	L2 Cache	1 MB
	BIOS	AMI EFI 64 Mbit (Default BIOS is supported for 64-bit OS installation, BIOS for 32-bit OS is supported by project)
Memory	Technology	DDR3L 1066MHz
	Max. Capacity	8 GB
	Socket	1 x 204-pin SO-DIMM
Graphics	Chipset	Intel® Atom SoC integrated
	Graphic Engine	DirectX® 11.1, OGL 3.0, OCL 1.1, OGL ES 2.0 Encode: H264, MPEG2/4, VC1, WMV9 Decode: H264, MPEG2
	VGA	1 x VGA, support up to 1920 x 1200 at 60Hz
Audio	Main System	ALC-888S, High Definition Audio, Line-out & Line-in
Ethernet	LAN #1	10/100/1000 Mbps Intel I210 GbE, support Wake on LAN
	LAN #2	10/100/1000 Mbps Intel I210 GbE, support Wake on LAN
I/O Interface	Serial Ports	2 x RS-232/422/485 (BIOS selectable)
	USB Interface	2 x USB 2.0 & 1 x USB3.0
Other	Watchdog timer	255-level timer interval, setup by software
Expansion	Mini PCIe	1 x Full-size Mini PCIe, support WLAN or WWAN module
Storage	2.5" Drive Bay	1 x 2.5" SATA HDD Bay (Max Height 9.5mm)
	mSATA	1x Half-size mSATA (Suggest to assembly by CTOS or T-Part due to complex installation)
Software Support	Microsoft Windows	WES7, Windows 7, WEBS, Windows 8, Windows 10
	Linux	Support (by Project)
Power Requirement	Power Input Voltage	Single 12 V _{DC}
	Power Adapter	AC to DC, DC12 V/3 A, 36 W with threaded design
Power Consumption	Typical	5.28W
	Max.	8.16W
Mechanical	Construction	Aluminum housing
	Mounting	VESA/DIN Rail/Wall Mounting Kits (Optional)
	Dimensions (W x H x D)	133.8 x 43.1 x 94.2 mm (5.27" x 1.7" x 3.71")
	Weight	0.8 kg
Environment	Operating Temperature	With extended temperature SSD/mSATA/RAM: -30 ~ 70° C with 0.7m/s air flow *
	Storage Temperature	With standard temperature HDD/SSD/mSATA/RAM peripherals: 0 ~ 40° C with 0.7m/s air flow
	Relative Humidity	95% @ 40° C (non-condensing)
	Vibration During Operation	With mSATA/SSD: 3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis With HDD: 0.5Grms, IEC 60068-2-64, random, 5~500Hz, 3 axes, 1hr/axis
	Shock During Operation	With mSATA/SSD: 30 G, IEC 60068-2-27, half sine, 11 ms duration With HDD: 10G, IEC 60068-2-27, half sine, 11 ms duration
Regulation	EMC	CE/FCC Class B, CCC, BSMI
	Safety	UL, CCC, BSMI, CB

* CB/UL 安規測試以 Tma = 50C 評估.

Model	ARK-1123C		
	E3825 w/ VGA	E3825 w/ HDMI	J1900 w/ VGA
Sytem PN	ARK-1123C-S3A1E	ARK-1123C-S3A2E	ARK-10 (ARK-1123C-U0A1E)
M/B PN	96S2263005E (14MPA-1.33-1E3825A)	96S2263006E (14MPA-1.33-1E3825A)	96S2263003E (14MPCL-2.0-2M11A)
D/B PN	9696M01100E	9696M01100E	9696M01100E
Remark	標準品	Certification Ready Only, 系統不導入, 後續需求走T-PN	Certification Ready Only, 系統不導入, 後續需求走T-PN
Front I/O			
PN	1960061996N001	1960061996N001	1960061996N001
Rear I/O			
PN	1960063861N001	1960061999N001	1960063861N001

[ARK-1123L]

Specifications

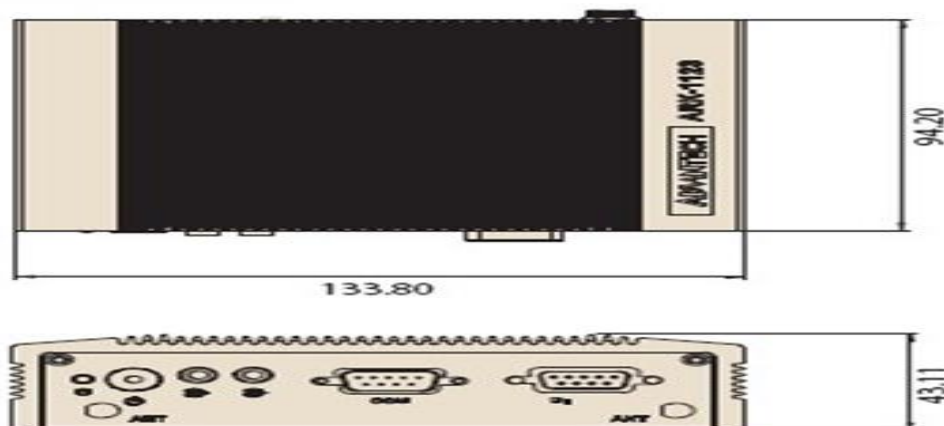
ARK-1123L-S3A2E		
Processor System	CPU	Intel Atom E3825 Dual Core SoC
	Frequency	1.33 GHz
	L2 Cache	1 MB
	BIOS	AMI EFI 64 Mbit (Default BIOS is supported for 64-bit OS installation, BIOS for 32-bit OS is supported by project)
Memory	Technology	DDR3L 1066MHz
	Max. Capacity	8 GB
	Socket	1 x 204-pin SO-DIMM
Graphics	Chipset	Intel® Atom SoC integrated
	Graphic Engine	DirectX® 11.1, OGL 3.0, OCL 1.1, OGL ES 2.0 support Encode: H264, MPEG2/4, VC1, WMV9 Decode: H264, MPEG2
	VGA	1 x VGA, support up to 1920 x 1200 at 60Hz
Audio	Main System	ALC-888S, High Definition Audio, Line-out & Line-in
Ethernet	LAN #1	10/100/1000 Mbps Intel i210 GbE, support Wake on LAN
I/O Interface	Serial Ports	1 x RS-232 & 1 x RS-232/422/485 (BIOS selectable)
	USB Interface	1 x USB 2.0 & 1 x USB3.0
Other	Watchdog timer	255-level timer interval, setup by software
	GPIO	8 bit GPIO
Expansion	Mini PCIe	1 x Full-size Mini PCIe, support WLAN or WWAN module
Storage	2.5" Drive Bay	1 x 2.5" SATA HDD Bay (Max Height 9.5mm)
	mSATA	1 x Half-size mSATA
Software Support	Microsoft Windows	WES7, Windows 7, WE8S, Windows 8 and Windows 10
	Linux	Support (by Project)
Power Requirement	Power Input Voltage	Single 12 Vdc
	Power Adapter	AC to DC, DC12 V/3 A, 36 W with threaded design
Power Consumption	Typical	5.28W
	Max.	8.16W
Mechanical	Construction	Aluminum housing
	Mounting	VESA/DIN Rail/Wall Mounting Kits (Optional)
	Dimensions (W x H x D)	133.8 x 43.1 x 94.2 mm (5.27" x 1.7" x 3.71")
	Weight	0.8kg
Environment	Operating Temperature	With extended temperature SSD/mSATA/RAM : -30 ~ 70° C with 0.7m/s air flow With standard temperature HDD/SSD/mSATA/RAM peripherals: 0 ~ 40° C with 0.7m/s air flow
	Storage Temperature	-40 ~ 85° C (-40~185° F)
	Relative Humidity	95% @ 40° C (non-condensing)
	Vibration During Operation	With mSATA/SSD: 3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis With HDD: 0.5Grms, IEC 60068-2-64, random, 5~500Hz, 3 axes, 1hr/axis
	Shock During Operation	With mSATA/SSD: 30 G, IEC 60068-2-27, half sine, 11 ms duration With HDD: 10G, IEC 60068-2-27, half sine, 11 ms duration
Regulation	EMC	CE/FCC Class A, CCC, BSMI
	Safety	UL, CCC, BSMI, CB

* CB/UL 安規測試以 Tma = 50C 評估.

Model	ARK-1123L		
	E3825 w/ VGA	E3825 w/ HDMI	J1900 w/ VGA
Sytem PN	ARK-1123L-S3A1E	ARK-1123L-S3A2E	ARK-1123L-U0A1E
M/B PN	96S2263005E (14MPA-1.33-1E3825A)	96S2263006E (14MPA-1.33-1E3825A)	96S2263003E (14MPCL-2.0-2M11A)
D/B PN	9696M01200E	9696M01200E	9696M01200E
Remark	標準品	Certification Ready Only, 系統不導入, 後續需求走T-PN	Certification Ready Only, 系統不導入, 後續需求走T-PN
Front I/O			
PN	1960061997N001	1960061997N001	1960061997N001
Rear I/O			
PN	1960063861N001	1960061999N001	1960063861N001

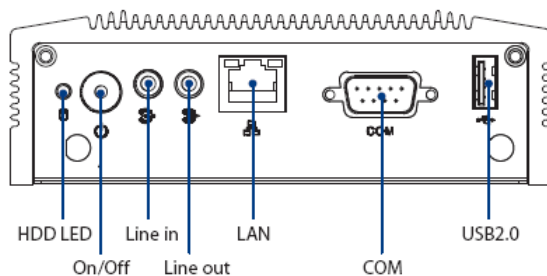
ARK-1123/EIS-D110 Dimensions

Dimensions

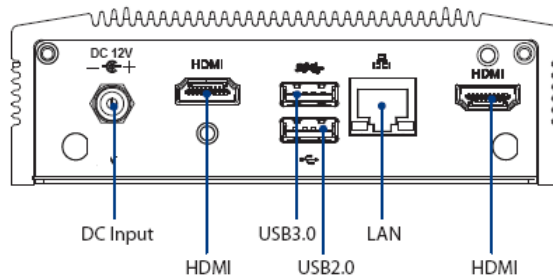


[ARK-1123H]

Front Panel External I/O Mechanical Layout/Drawing

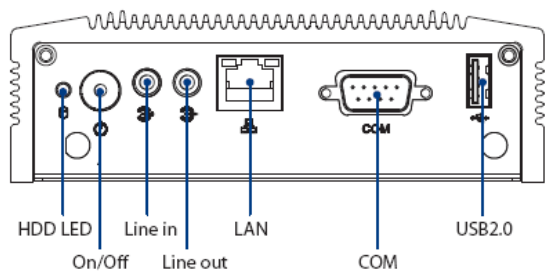


Rear Panel External I/O Mechanical Layout/Drawing

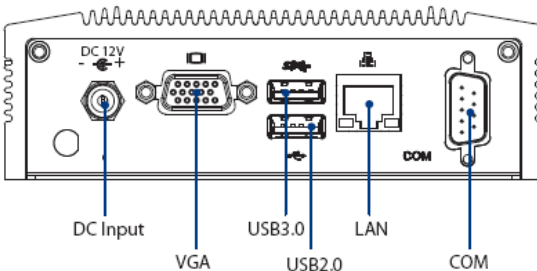


[ARK-1123C]

Front Panel External I/O Mechanical Layout/Drawing

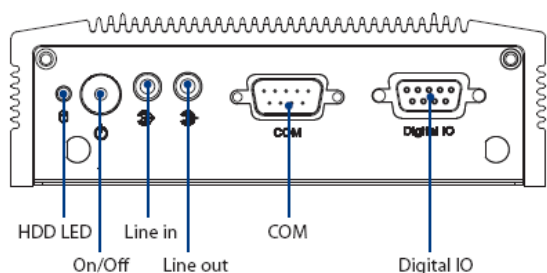


Rear Panel External I/O Mechanical Layout/Drawing

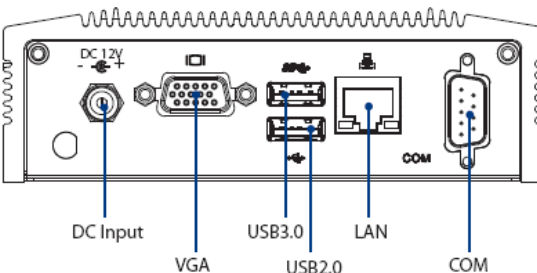


[ARK-1123L]

Front Panel External I/O Mechanical Layout/Drawing



Rear Panel External I/O Mechanical Layout/Drawing



Safety Instructions

1. Read these safety instructions carefully.
2. Keep this User Manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet. The power outlet socket should have grounded connection.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
12. Never pour any liquid into an opening. This may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
14. If one of the following situations arises, get the equipment checked by service personnel:
 - The power cord or plug is damaged.
 - Liquid has penetrated into the equipment.
 - The equipment has been exposed to moisture.
 - The equipment does not work well, or you cannot get it to work according to the user's manual.
 - The equipment has been dropped and damaged.
 - The equipment has obvious signs of breakage.
15. **DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE MAY GO BELOW -20° C (-4° F) OR ABOVE 60° C (140° F). THIS COULD DAMAGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.**
16. **CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE**

SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER, DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.

17. CAUTION: Any unverified component could cause unexpected damage. To ensure the correct installation, please always use the components (ex. screws) provided with the accessory box.
18. CAUTION: The computer is provided with a battery-powered real-time clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacture. Discard used batteries according to the manufacturers instructions.
19. CAUTION: Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges.
20. This product is intended to be supplied by an UL Listed power supply suitable for use at Tma 50 degree C min. whose output meets PS2(or LPS), ES1(or SELV) and output is rated: 12Vdc, 3A min., if need further assistance, please contact Advantech for further information.

The sound pressure level at the operator's position according to IEC 704-1:1982 is no more than 70 dB (A).

Consignes de sécurité

1. Lisez attentivement ces instructions de sécurité.
2. Conservez ce manuel de l'utilisateur pour référence ultérieure.
3. Débranchez cet équipement de toute prise secteur avant de le nettoyer. Utilisez un chiffon humide. N'utilisez pas de détergents liquides ou en spray pour le nettoyage.
4. Pour les équipements enfichables, la prise de courant doit être située près de l'équipement et doit être facilement accessible.
5. Gardez cet équipement à l'abri de l'humidité.
6. Placez cet équipement sur une surface fiable pendant l'installation. Le laisser tomber ou le laisser tomber peut provoquer des dommages.
7. Les ouvertures sur le boîtier sont destinées à la convection d'air. Protégez l'équipement contre la surchauffe. NE COUVREZ PAS LES OUVERTURES.
8. Assurez-vous que la tension de la source d'alimentation est correcte avant de connecter l'équipement à la prise de courant. La prise de courant doit avoir une connexion mise à la terre.
9. Positionnez le cordon d'alimentation de sorte que personne ne puisse marcher dessus. Ne placez rien sur le cordon d'alimentation.
10. Toutes les précautions et avertissements sur l'équipement doivent être notés.
11. Si l'équipement n'est pas utilisé pendant une longue période, débranchez-le de la source d'alimentation pour éviter tout dommage par surtension transitoire.
12. Ne versez jamais de liquide dans une ouverture. Cela peut provoquer un incendie ou un choc électrique.
13. N'ouvrez jamais l'équipement. Pour des raisons de sécurité, l'équipement ne doit être ouvert que par du personnel qualifié.
14. Si l'une des situations suivantes se présente, faites vérifier l'équipement par le personnel de service:
 - Le cordon d'alimentation ou la fiche est endommagé.
 - Du liquide a pénétré dans l'équipement.
 - L'équipement a été exposé à l'humidité.
 - L'équipement ne fonctionne pas bien ou vous ne pouvez pas le faire fonctionner selon le manuel de l'utilisateur.
 - L'équipement est tombé et a été endommagé.

■ L'équipement présente des signes évidents de rupture.

15. NE LAISSEZ PAS CET ÉQUIPEMENT DANS UN ENVIRONNEMENT OÙ LA TEMPÉRATURE DE STOCKAGE PEUT ALLER SOUS -20 ° C (-4 ° F) OU AU-DESSUS DE 60 ° C (140 ° F). CELA POURRAIT ENDOMMAGER L'ÉQUIPEMENT. L'ÉQUIPEMENT DEVRAIT ÊTRE DANS UN ENVIRONNEMENT CONTRÔLÉ.
16. ATTENTION: DANGER D'EXPLOSION SI LA BATTERIE EST REMPLACÉE INCORRECTEMENT. REMPLACER UNIQUEMENT AVEC LE MÊME TYPE OU L'ÉQUIVALENT RECOMMANDÉ PAR LE FABRICANT, JETER LES PILES USAGÉES SELON LES INSTRUCTIONS DU FABRICANT.
17. ATTENTION: Tout composant non vérifié peut provoquer des dommages inattendus. Pour garantir une installation correcte, veuillez toujours utiliser les composants (ex. Vis) fournis avec la boîte d'accessoires.
18. ATTENTION: L'ordinateur est fourni avec un circuit d'horloge en temps réel alimenté par batterie. Il existe un risque d'explosion si la batterie n'est pas remplacée correctement. Remplacez uniquement par un type identique ou équivalent recommandé par le fabricant. Jetez les piles usagées conformément aux instructions du fabricant.
19. ATTENTION: débranchez toujours complètement le cordon d'alimentation de votre châssis lorsque vous travaillez avec le matériel. N'établissez pas de connexions lorsque l'appareil est sous tension. Les composants électroniques sensibles peuvent être endommagés par des surtensions soudaines.
20. Ce produit est destiné à être alimenté par un bloc d'alimentation homologué UL adapté à une utilisation à T_{ma} 50 degrés C min. dont la sortie est conforme à PS2 (ou LPS), ES1 (ou SELV) et dont la sortie est nominale: 12Vdc, 3A min., si vous avez besoin d'aide supplémentaire, veuillez contacter Advantech pour plus d'informations.

Le niveau de pression acoustique au poste de l'opérateur selon CEI 704-1: 1982 n'est pas supérieur à 70 dB (A)