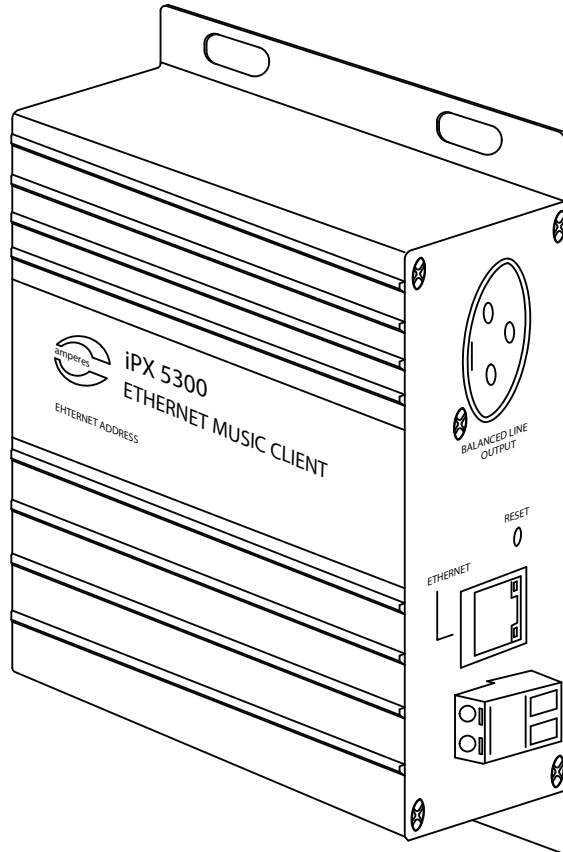




INSTRUCTION MANUAL

iPX5300 Ethernet Music Client



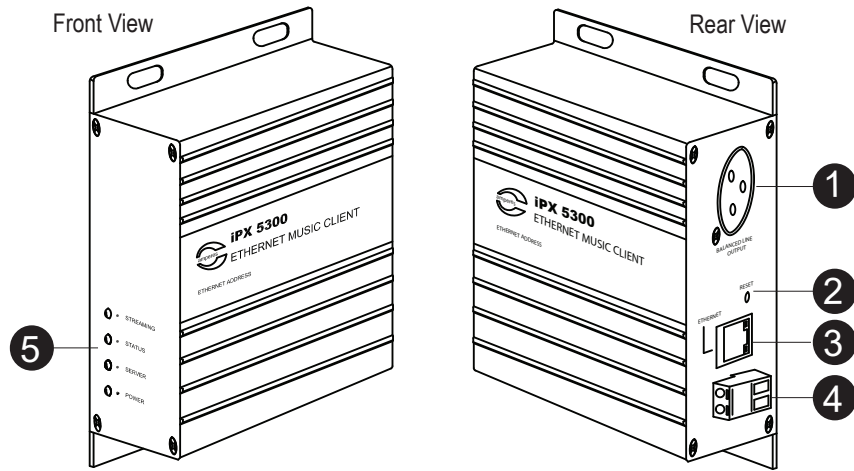
Thank you for choosing another quality product from Amperes Electronics.

Amperes iPX Series of IP equipment provides multiple advantages over conventional systems in term of cabling infrastructure and future expansions. With continuous development of more IP products in the pipeline, the possibilities of more applications based on IP shall be beyond imagination.

With iPX modules, existing conventional system can be converted into IP without much changes, thus reducing the cost of upgrading. With our policy of understanding the needs of the market, we offer some simple tools with powerful functions to achieve the needs. A simple graphical illustration and basic engineering knowledge shall be sufficient to apply these products into your installation, making it a system of countless limitations.

iPX5300 is used to received music files from music server or via PC with PMX Music Server Interface and provide a balanced audio output. This dedicated music client shall be placed in satellite buildings of a system to receive centralized BGM. Among applications shall be university complexes, multiple buildings or factories.

Parts Identification



1. AUDIO OUTPUT

Balanced line output via XLR jack.

2. RESET BUTTON

Button for resetting the unit to factory default. Use only when required as setting done previously would be lost.

3. ETHERNET PORT

Ethernet Port accept cables with RJ45 connectors.

4. POWER PORT

24V power supply.

5. INDICATOR LEDS

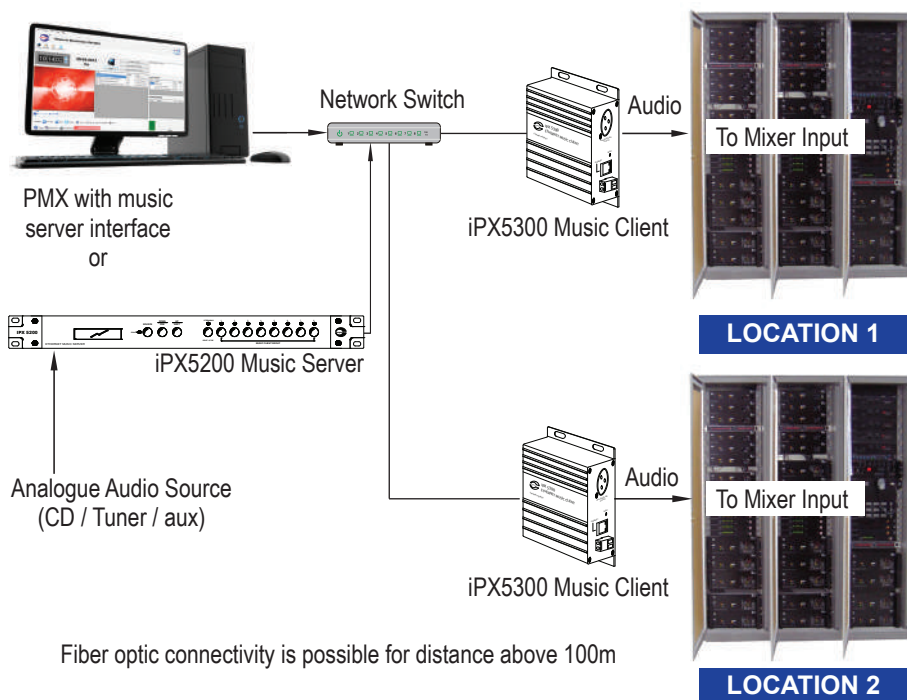
POWER - This blue LED shall lit when iPX5300 is powered ON.

SERVER - This green LED shall lit when iPX5300 successfully establish a connection with Music Server (iPX5200).

STATUS - Blink whenever there is a network activity ongoing.

STREAMING - Blink whenever iPX5200 receive streaming audio from Music Server.

Schematic Diagram

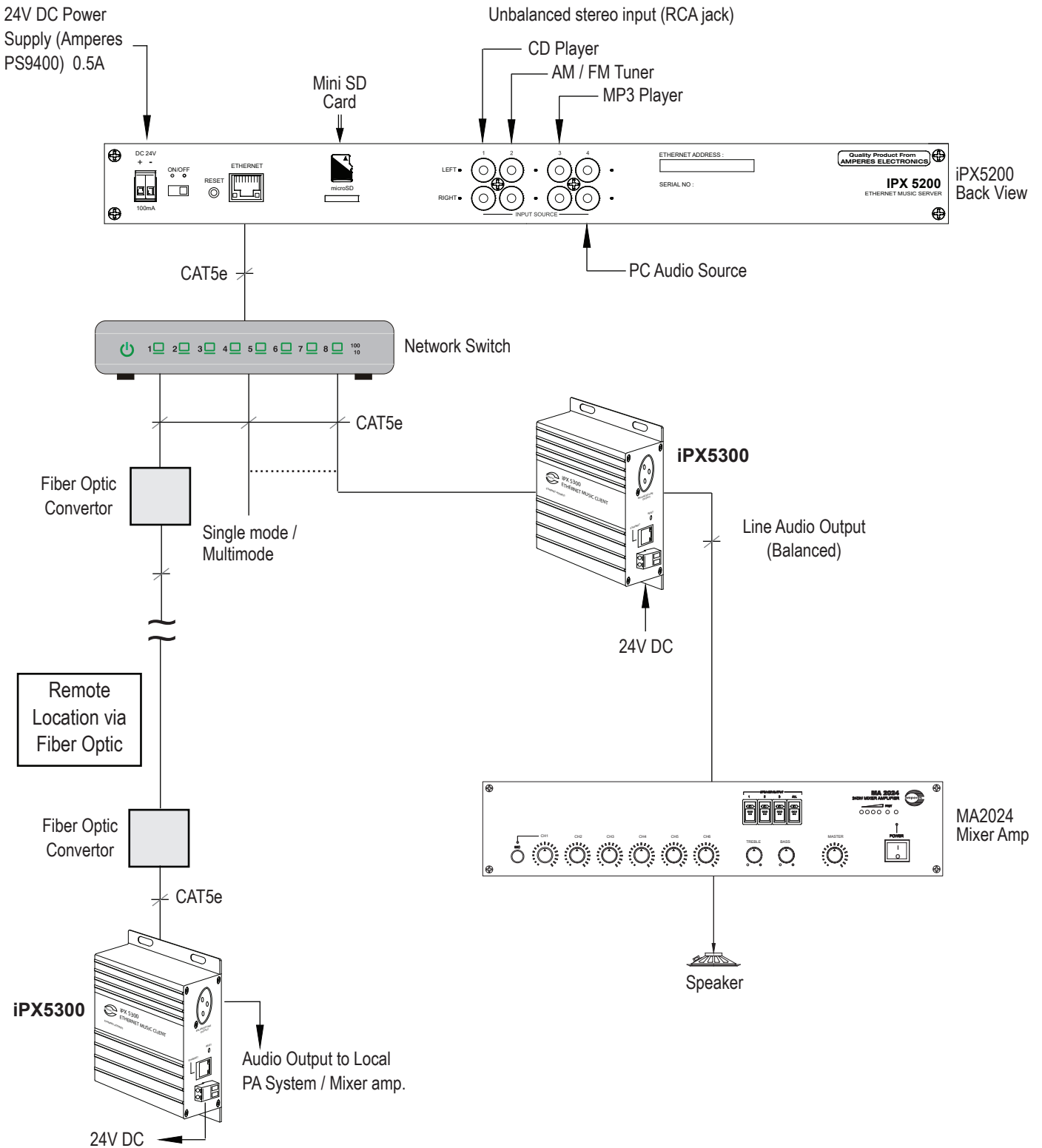


The illustration on the left shows Music Client (iPX5300) can be used alongside with a PC running PMX.

PMX is a software featured with music playing & paging capability. These audio can be fed into iPX5300 via IP network and have them broadcasted from main rack.

iPX5200 Music Server is another IP based audio source that can be worked with iPX5300. iPX5200 accept analog audio from CD / Tuner and have these audio sent to iPX5300 which placed at remote buildings via network.

Connecting to iPX5300



Device Setup Via Browser

iPX5300 shall require some simple setups, kindly follow the step by step instructions as listed below. The unit shall be connected to LAN network together with iPX5200 IP Server / PMX II to form a complete system. The default IP address is **192.168.0.100**. Login page shall appear and the default User ID and Password are both “**admin**”.

Info / Main Page

Info: Provide firmware version, network ports, IP address and connection status with Music Server. This shall be the first page once you enter the iPX5300 web page.

Network Configuration: For configuration of IP address and its related ports.

System Configuration: For Application Settings such as volume controls, User and Password setup and System’s web page and firmware updates.

DEVICE INFO

Hardware Information

Firmware Version	V02.11 (Oct 16 2019)
Hardware Revision	01.00
Serial Number	00000000000000000000
Device Name	Gnd Fir Music Client

Network Information

MAC Address	72:6A:76:15:63:36
IPV4 Address	192.168.0.100
Subnet Mask	255.255.255.0
Gateway Address	192.168.0.1

Application Information

Connection Status	Connected
Server Name	Music Server
Server IP	192.168.0.200
Data Port	3000
Stream Port	3100
Stream Mode	Multicast
Stream IP	224.1.1.11

NETWORK CONFIGURATION

Network Settings

IP Address	<input type="text" value="192.168.0.100"/>
Subnet Mask	<input type="text" value="255.255.255.0"/>
Gateway Address	<input type="text" value="192.168.0.1"/>

Application Settings

Data Port	<input type="text" value="3000"/>
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Network Configuration

Unless required, you are recommended to change the IP address only, leaving other setting such as port number as default. Once the address has been changed to suit the environment, click the “Save Changes” button.

Device Setup Via Browser

System Configuration

Application Settings:

Music Server IP: Enter iPX5200 Music Server IP address here. If PMX is used as the source, the Music Server IP shall be corresponding to the PC's IP address.

Sync With Server: If checked, whenever iPX5300 is powered ON, the Volume, Bass and Treble levels shall follow the levels configured in iPX5200.

Volume / Bass / Treble: Volume / Bass / Treble level can be adjusted here.

Group: Group refer to default clients that are able to receive streaming audio from a iPX5200 each time the iPX5200 is reset or turned on.

Example:

On an iPX5200, enable Group 1 & 2;

On an iPX5300, Group 1 is checked,

then whenever the iPX5200 is turned on, the iPX5300 will be able to play streaming music sending from the iPX5200. Any clients that are not belongs to Group 1 or 2 will not play the audio.

Device Name: A meaningful device name like "Level 1 Music Client" can be entered here. The name will be reflected in iPX5300 Info page.

Authentication: You can alter the user name and password to avoid unnecessary access to the system.

Firmware Update: Firmware is stored in the unit's memory. Should there be any updates available, use this section to perform system upgrades accordingly. Refer to next page (page 6).

The screenshot displays the 'SYSTEM CONFIGURATION' web interface. It is divided into three main sections: Application Settings, Authentication, and Firmware Update.

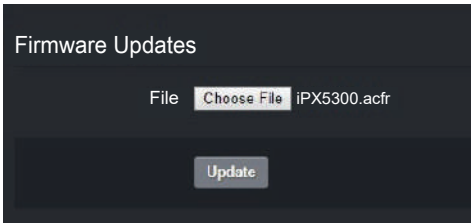
- Application Settings:** This section includes a 'Connection Mode' dropdown set to 'Auto', a 'Music Server IP' text field with '192.168.0.200', a 'Sync With Server' checkbox that is checked, and sliders for 'Volume' (00%), 'Bass' (0dB), and 'Treble' (Off). There are also buttons for 'Linear Bass Enhancement (20Hz - 150Hz)' and 'Linear Treble Enhancement (1kHz - 15kHz)'. At the bottom of this section are 'Apply' and 'Revert' buttons.
- Authentication:** This section contains fields for 'New User Name' (admin), 'Old Password', 'New Password', and 'Confirm Password'. It includes 'Save changes' and 'Cancel' buttons.
- Firmware Update:** This section has a 'File' field with a 'Choose File' button and the text 'No file selected'. Below it is an 'Update' button.

Firmware Update

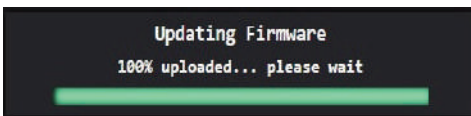
System firmware shall be updated once in a while when new features are available or to fix bugs. There are 2 methods of doing;

Update firmware in Normal Operation Mode:

1. Open a browser and type in the iPX5300 IP Address.
2. Under “System Configuration” page look for “Firmware Update” section as shown in below.



Click “ Choose File” and choose a binary file with “.acfr” extension. Click “Update”.

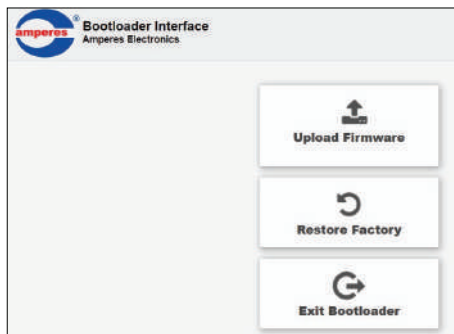


Once the update is completed, the browser should enter the login page.

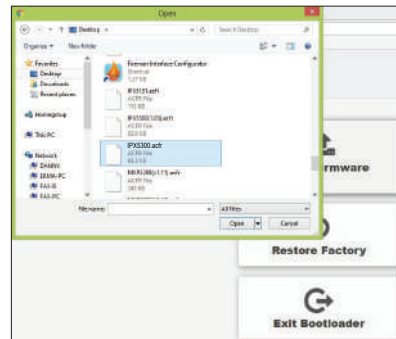
Update firmware in Bootloader Mode:

If the iPX5300 “hanged”, it is required to perform system reset by :

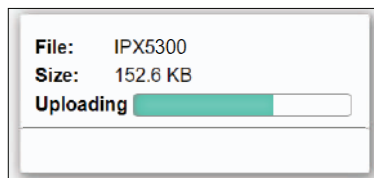
1. Press & hold the reset button until “ STREAMING ” LED is turned ON. This will set the IP address to default address 192.168.0.100.
2. Press & hold the reset button until “STATUS” LED is turned ON. This will make iPX5300 enter bootloader mode.
3. Open a browser and enter the IP address 192.168.0.100. A web page as shown below shall appear.
4. Select “ Upload Firmware ”, choose a binary file with “.acfr ” extension and click “UPLOAD”
5. Once the uploading is completed, the browser shall enter the login page.



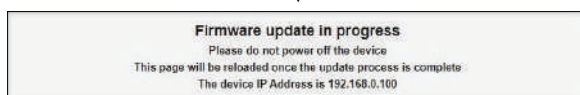
Click the Upload Firmware button to find the updated firmware file.



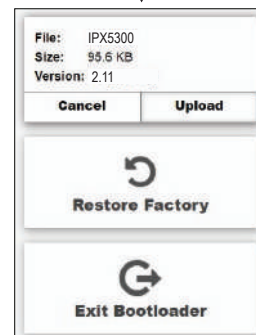
Find the updated firmware file.



Updating progress



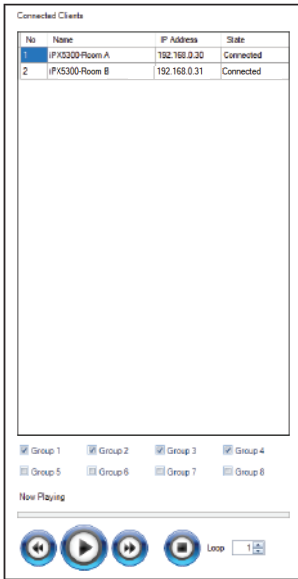
After finish updating firmware, the browser automatically restart.



Ready to upload, click Upload button to upload the firmware.

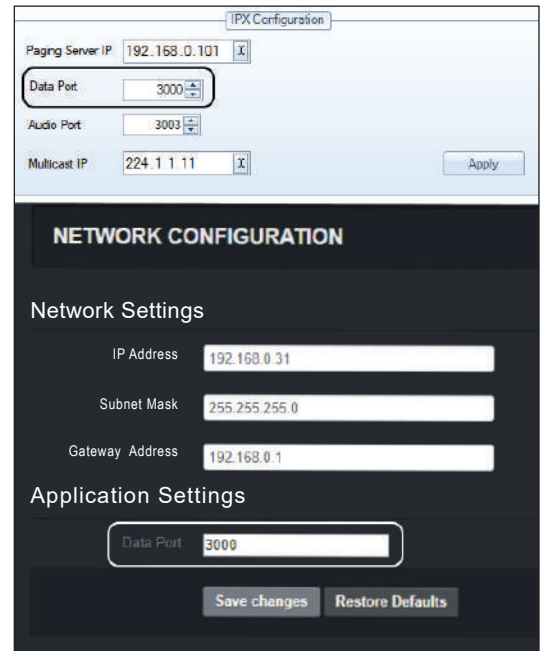
PC Interface Via PMX

The PC Interface via PMX for iPX5300 shall be used to broadcast centralized BGM to remote buildings. The play mode can be One to One, One to Multiple Sites or One to All. This shall enable the user to control the Source of BGM to be played at remote buildings from the main rack.



iPX5300 Music Clients that are connected to PMX will be listed in PMX user interface.

To allow PMX communicate with iPX5300 make sure under PMX > iPX Configuration, the 'Data Port' setting is the same as iPX5300 > NETWORK CONFIGURATION > Application Settings 'Data Port' setting.



Technical Specifications

Power Requirement: Voltage Current	12 ~ 24V DC (Normal DC 24V) <100 mA
Connectivity - LAN Interface - Common Protocols - Priority Protocols	RJ-45, 100Mb/s TCP/IP, UDP, IGMP, HTTP UDMP, ADP
Broadcast mode	Unicast / Multicast
Audio - Analogue In / out (peak-to-peak) - Input Load resistance - Input Load Capacitance - Total Harmonic Distortion (THD) - S/N Ratio (full scale signal) - Digital Format	1.25Vrms 30 Ohm 100 pF 0.1% 83 dB IMAADPCM / MP3 (CBR / 320 kbps max) / WAV
User Interface	(Web Browser) IE V8+, Firefox V22+, Google Chrome V25+, RS485
Firmware Upgrade	Via Web Browser
Operating Condition: Temperature Humidity	-20°C ~ 80°C 0 - 70%
Case: Dimension (WxHxD) Weight	100 x 147 x 40 mm 300 g

Warranty Conditions

Only Amperes Electronics Service Centres are allowed to make warranty repairs : a list of Amperes Electronics Service Centres may be asked for by the purchaser or send directly to Amperes Electronics Sdn Bhd at 70 Jalan Industri PBP 3, Tmn Perindustrian Pusat Bandar Puchong, 47100, Puchong, Selangor, Malaysia or its authorized dealers. This warranty is not valid if repairs are performed by unauthorized personnel or service centres.

This warranty covers only repairs and replacement of defective parts ; cost and risks of transportation as well as removal and installation of the product from the main system are for the account of the purchaser. This warranty shall not extend to the replacement of the unit.

This warranty does not cover damages caused by misuse, neglect, accident of the product as well as using the product with power supply voltage other than shown on the product, or any other power supply source / adaptor not recommended by the manufacturer.

This warranty does not cover damages caused by fire, earthquakes, floods, lightning and every cause not directly related to the unit.

This warranty does not include any indemnity in favor of the purchaser or the dealer for the period out of use of the unit; moreover the warranty does not cover any damages which may be caused to people and things when using the product.

This warranty certificate is valid only for the described product, and is not valid if modifications are made on this certificate or on the identification label applied on the product.

This warranty covers all the material and manufacturing defects and is valid for a period of 36 months from the date of purchase or for a specified period in countries where this is stated by a national law. In this case, the extension is valid only in the country where the product is purchased.

Amperes Electronics Sdn Bhd is not obliged to modify previously manufactured products under warranty if the design changes or improvements are made.

Disclaimer

Information contained in this manual is subject to change without prior notice and does not represent a commitment on the part of the vendor. AMPERES ELECTRONICS SDN BHD shall not be liable for any loss or damages whatsoever arising from the use of information or any error contained in this manual.

It is recommended that all services and repairs on this product be carried out by AMPERES ELECTRONICS SDN BHD or its authorized service agents.

AMPERES series must only be used for the purpose they were intended by the manufacturer and in conjunction with this operating manual.

AMPERES ELECTRONICS SDN BHD cannot accept any liability whatsoever for any loss or damages caused by service, maintenance or repair by unauthorized personnel, or by use other than that intended by the manufacturer.



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