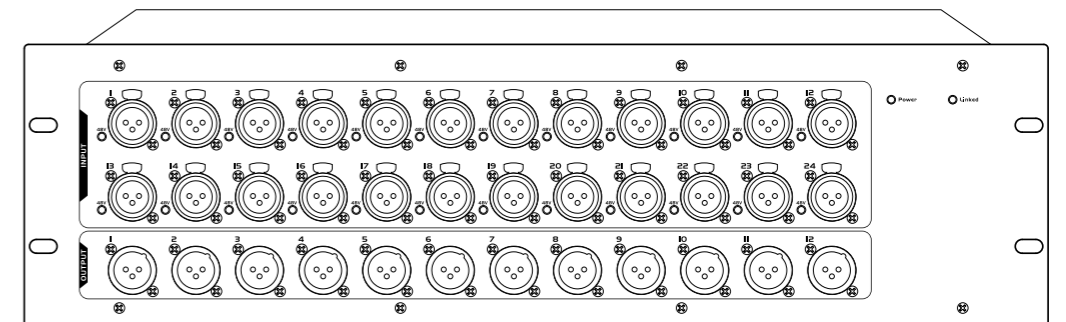


User's Manual

VOLTA DIO24

DIGITAL SNAKE SYSTEM



5. Power Switch

Push the top part of the switch to turn on and the bottom part to turn it off.

6. AC input

Used for AC input

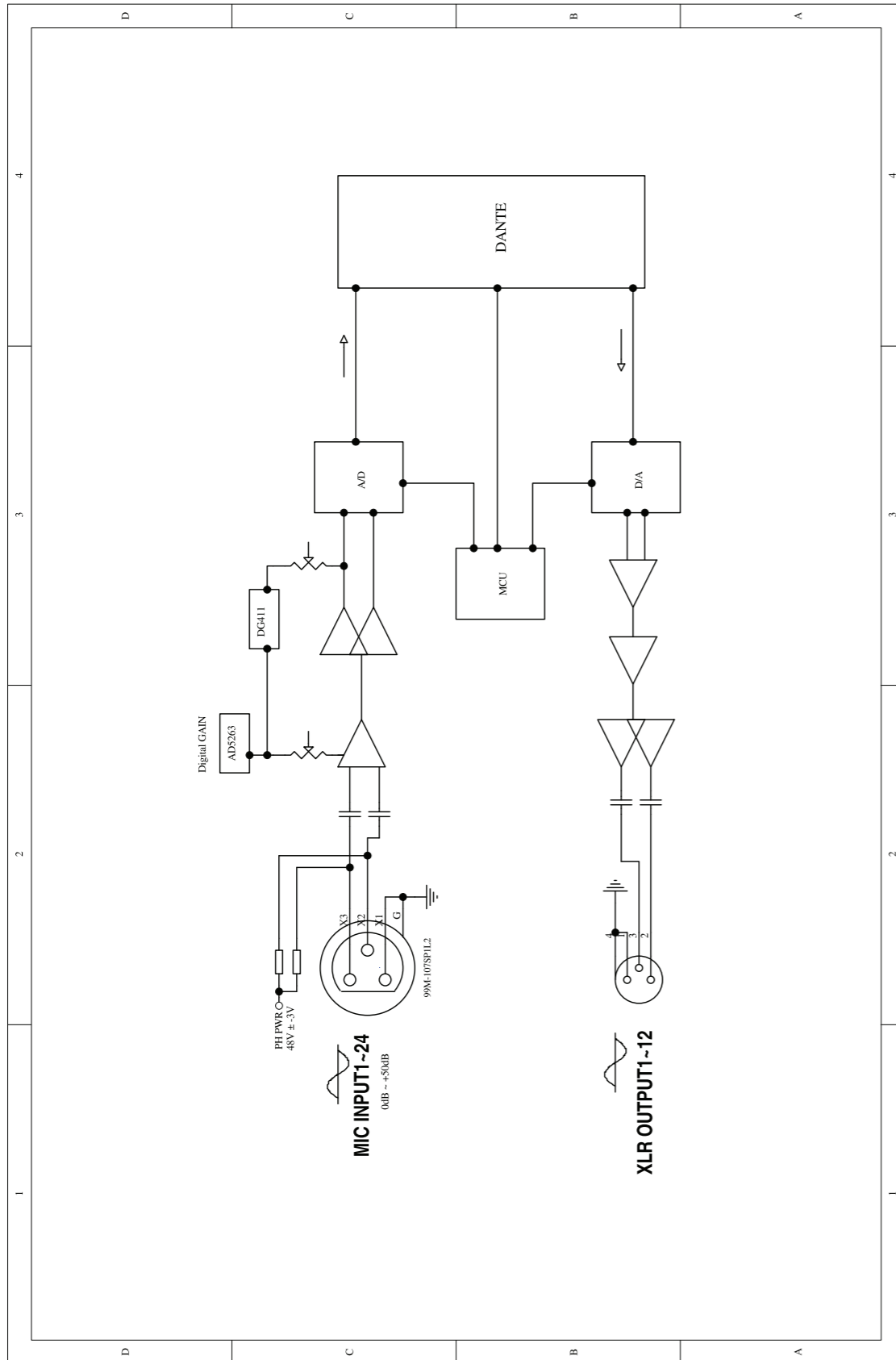
Note: 100-240V-50/60Hz. Fuse: T1.6AL AC250V. Power consumption:40W

7. DANTE port

There are two DANTE ports labeled "primary" and "secondary". Only the primary Ethernet port needs to be connected ,but if both ports are connected they become a redundant fail safe. That is, if the primary port loses communication, the secondary port quickly takes over. Careful network design and topology which takes advantage of this feature can provide extremely high reliability in critical applications.

Each Ethernet port equips with two LEDs. The yellow LED of the Secondary Ethernet port will light to show you that the Ethernet port is able to use after power on the Digital Snake System. The green LED of the Ethernet port which connected will flash if there is data transmitting.

Problem	Possible Cause	Suggested Solution
Power light doesn't on after the device powered on	The power outlet or power strip is not working	Try a different outlet or power strip
	Power cord is malfunctioning	Replace the Digital Snake System power cord
Ethernet green LED doesn't work after plugging a Digital Snake System to a router	The router isn't powered on	Power on the router
	The Ethernet cable is broken	Try a different cable
	The port on the router not work	Try plugging the cable into a different port on the router
The Digital Snake System can't be controlled by the Digital Snake System discovery software	There is no Network Interface Card (NIC) used to connect to the Cobra Net network	Select the card to severe as the network adapter used in the discovery process from the network Adapter.
The green LED of Ethernet port lights on but without output.	No signal route to the transmitter	Make sure the transmitter inputs signal
	The output channel of the receiver is not assigned signal	Make sure the output channel of the receiver has assigned signal
	The transmitter's TX bundle number and receiver's Rx bundle number are different	Make sure the bundle numbers of them are the same
	The sub-count number is less than the channel number of the receiver which you are using	Set the Sub-count number no less than the channel number which you want to use
	The value of mode Rate Control for the receiver and transmitter are different	Make sure the values of mode Rate Control of the receiver and transmitter are the same



About DANTE

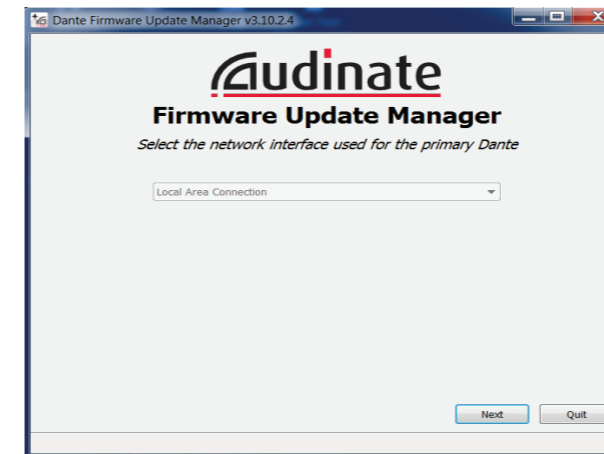
This product uses the Dante digital audio network protocol to send and receive audio signals. The default configuration network audio protocol is 24 in 12 out DANTE network audio.

Dante is a protocol developed by Audinate that is designed to deliver multichannel audio signals at various sampling and bit rates, as well as device control signals over a Gigabit Ethernet network. For information about Dante, please visit the Audinate website: <http://www.audinate.com/>

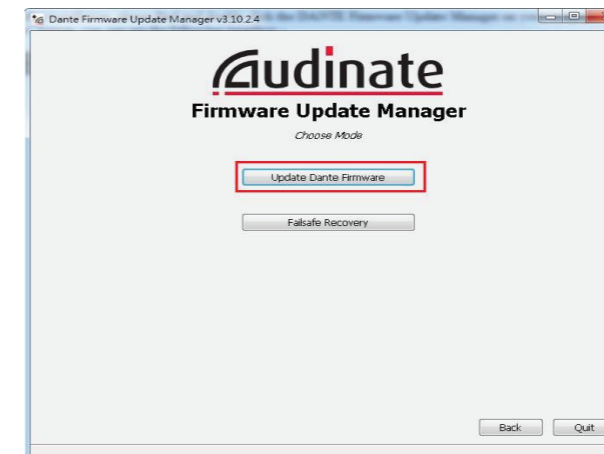
1. Firmware upgrade

The module firmware is upgradable over the network. Firmware upgrades are performed by uploading the upgrade file via either the device web interface or via the provided firmware upgrade tool. Software and firmware version information can be obtained via the device web interface or the Dante Controller. Please download the DANTE Firmware Update Manager from: www.seikaku.hk and install it. Then follow the instructions to update.

(1) After installation, please find and double click the DANTE Firmware Update Manager on your computer. Click "Next" button, you can see the following interface.

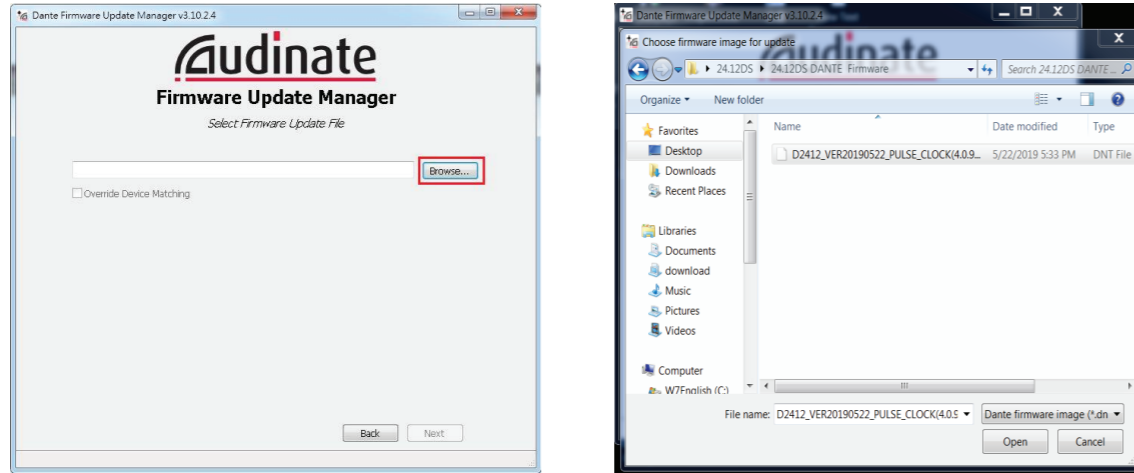


(2) Then click "Update Dante Firmware" button.



Application

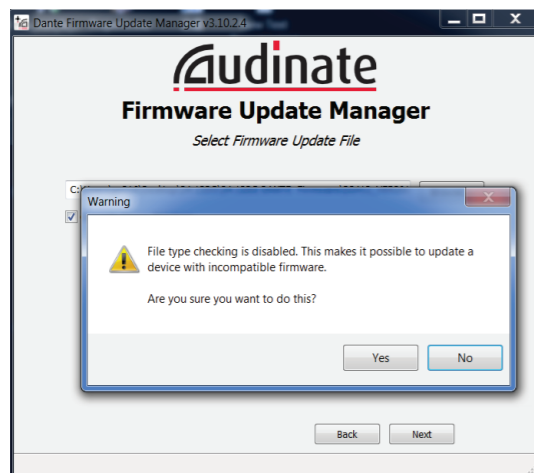
(3) Click "browse" to find the update file path and select which you want, then go "next".



(4) Click "Override Device Matching", then go "NEXT".



(5) Select "Yes" to start searching for Dante devices.

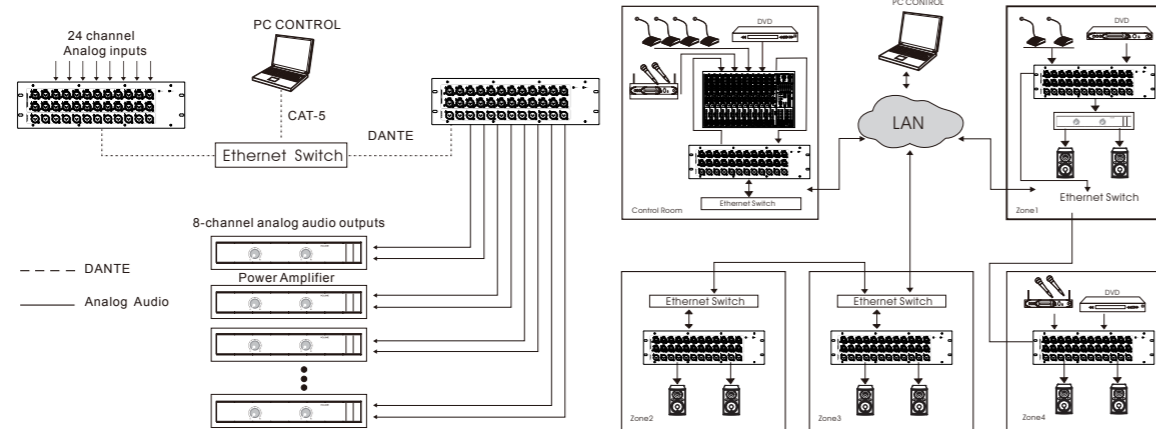


Technical Information

Microphone input	Electronically balanced
Frequency Response to Main Output	20Hz~20KHz at 0dBu ±1dB
Distortion(THD&N) to Main Output	<0.03% at 0dBu 1KHz
SNR(Signal to Noise Ratio)	108dB
Maximum Input Level	+20dBu
Phantom Power(+/-3V)	+48VDC
EIN(Input noise)	125dB
XLR outputs	
Maximum Output Level	+20dBu
System Crosstalk Adjacent Channels	
Input to Output(at +20dBu 1KHz)	-70dBu
Noise(Bus noise)	-91dBu
Digital Audio	
ADC Dynamic Range	114dB
DAC Dynamic Range	114dB
Internal Processor	32-bit , floating point
ADC,DAC bit depth	32bit
Impedances	
Microphone input	6.8KΩ
output	240Ω
operating free-air temperature range	0~40°C
storage temperature range	-20°C ~60°C

Hardware Requirements

HOOKUP



To use the Dante Controller, the following items are required:

- You must have access to a computer running Microsoft Windows XP (Service Pack 3 or higher), Vista (Service Pack 1 or higher), or Windows 7. The computer must also have an Ethernet port, which you use to connect the computer to the Digital Snake System device via an Ethernet network through a shielded CAT 5 (e) cable. This connection is necessary for using the DANTE Controller software to load configuration information into the device and also for monitoring detailed status information. Note that some status information is visible on the hardware itself.

Minimum requirements for running DANTE Controller

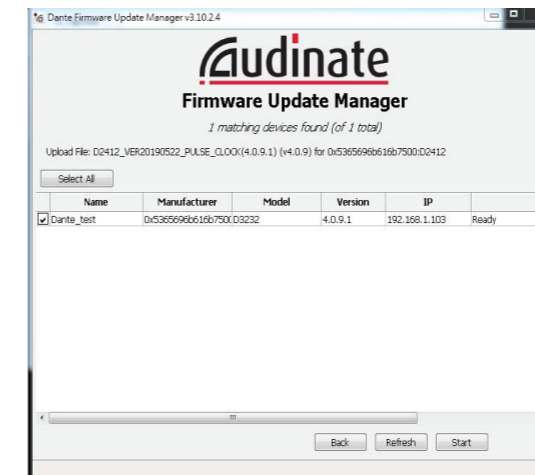
- Windows XP (32-Bit) or Vista SP1 (32 or 64 bit), 7 (32 or 64 bit)
- PC with 1.6 Ghz single Core Processor
- 1GB RAM
- 1GB available hard disk space
- Display Resolution: 1024*768
- Ethernet adapter: 100baseT

Recommendations for Best Performance

- Windows7 (32 or 64 bit)
- PC with mid-level processor @ 2 GHZ multi-core or better (for example, Intel i3, AMD Athlon II)
- 2 GB RAM
- 2 GB available hard disk space
- Display Resolution: 1152*864
- Ethernet adapter: Gigabit

Application

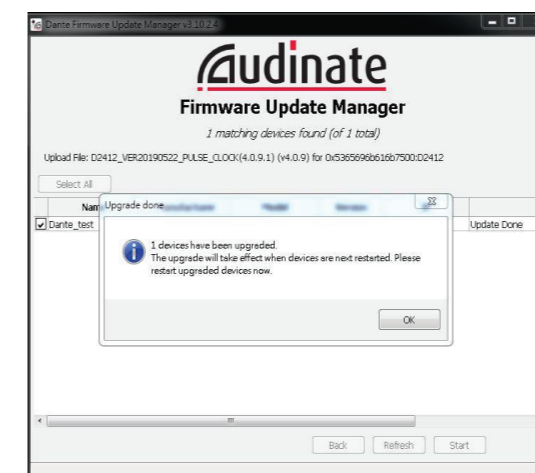
(6) Select the device that needs to be updated, then click START to start the update.



(7) Click OK and wait for the update to complete.



(8) Click OK, then the update is successful.



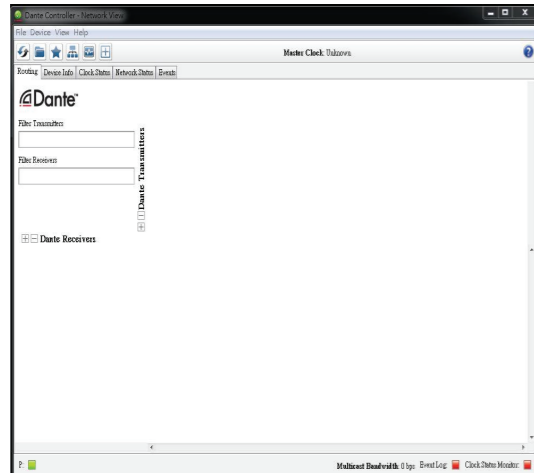
(9) The machine needs to be restarted when the power is off.

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Application

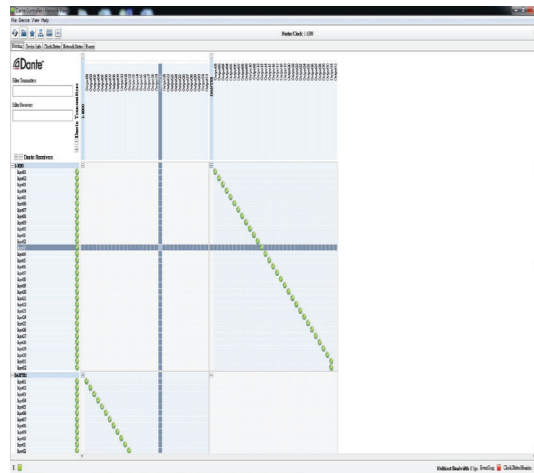
2. DANTE Controller

Find DANTE Controller on your computer, double-click to enter the interface, click the refresh button to identify devices, or click P/S in the lower right corner, as the following interface, then choose Ethernet and click OK.



The matrix is divided into transmitter and receiver two parts. The devices (two or more) connected to the same routing appear both in the transmitter and receiver end, you can select the signal sending through the matrix.

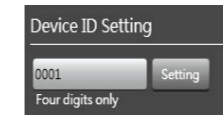
Receiver: signal input, you can send signals to the receiver of any other device, but it is the only one sending.



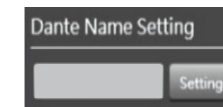
6

DSP Control

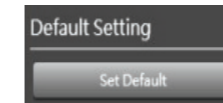
2. System interface



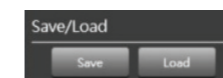
Device ID modification function:
Device ID defaults to 0001. If you do not modify the Device ID, APP will control the same device with the same Device ID.



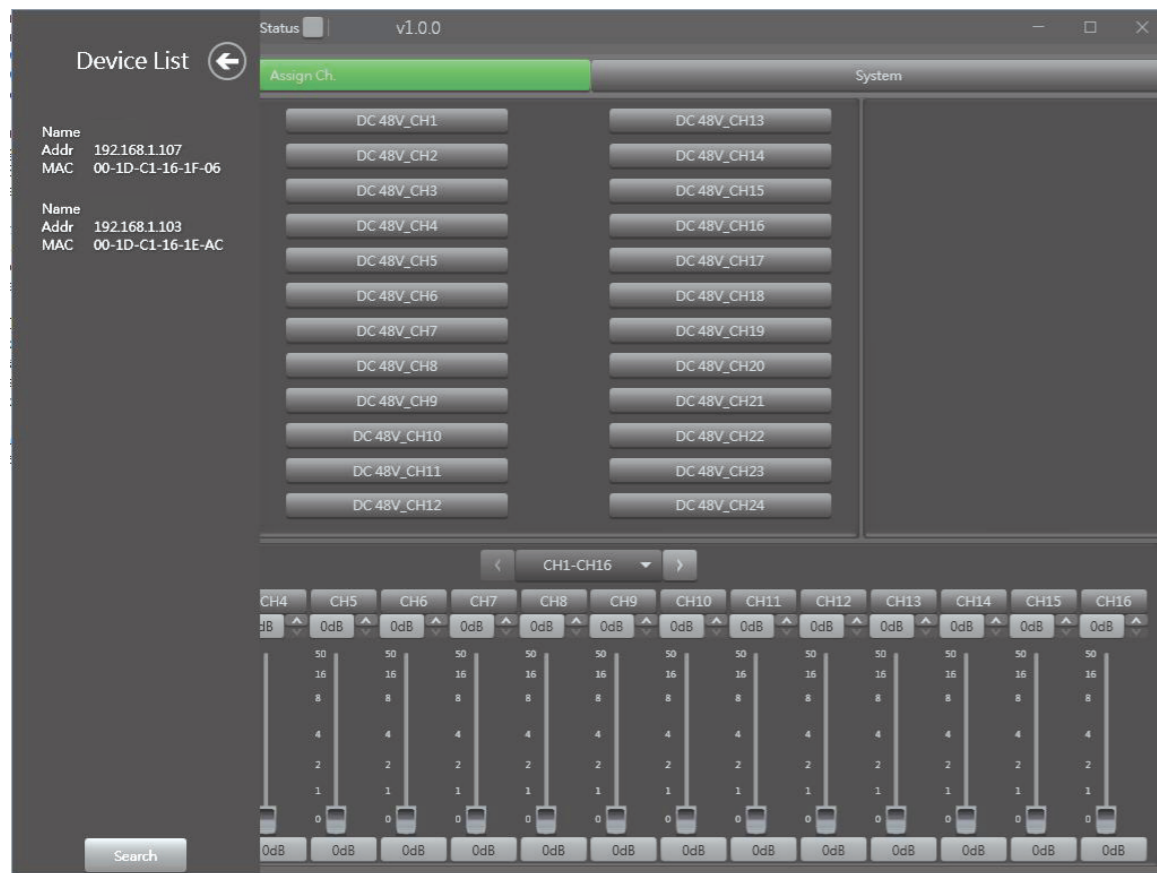
This button can be used for dante naming, touch this button, enter your favorite name, click on the settings to complete the naming, this naming will help you distinguish from other types of machines.





Default Setting : Touch this control to restore all settings to the default factory settings.

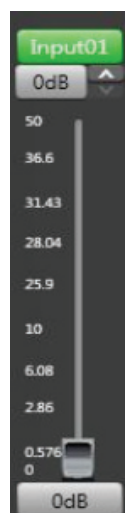


Save: Used to save the current settings .
Load: used to load presets .
By pressing this button to achieve the switching of save and load.



 Touch this icon to switch channels and enter corresponding channel, in which you can adjust channels' basis function and rename the channel, etc.

 The symbol displays the current channel in real time. Double-click this button and a virtual keyboard will appear on the screen. Please enter your preferred name on this keyboard.

 When an input channel is selected, then push rod on the screen can be slid to change its input level. The 24 main inputs can be assigned to any or all of the outputs. At the same time, touch this button to adjust the volume.

About CAT 5

Category 5 cable (Cat 5) is a twisted pair cable for carrying signals. This type of cable is used in structured cabling for computer networks such as Ethernet. The cable standard provides performance of up to 100 MHz and is suitable for 10BASE-T, 100BASE-TX (Fast Ethernet), 1000BASE-T (Gigabit Ethernet). Cat 5 is also used to carry other signals such as telephony and video. The cables is commonly connected using punch down blocks and modular connectors. Most Category 5 cables are unshielded, relying on the twisted pair design and differential signaling for noise rejection. Category 5 has been superseded by the Category 5e (enhanced) specification.

1. Cable standard

The specification for Category 5 cable was defined in ANSI/TIA/EIA-568-A, with clarification in TSB-95. These documents specify performance characteristics and test requirements for frequencies of up to 100 MHz. Cable types and connector types and cabling topologies are defined by TIA/EIA-568-B. Nearly always, 8P8C modular connectors, often referred to as RJ45, are used for connecting category 5 cable. The cable is terminated in either the T568A scheme or the T568B scheme. The two schemes work equally well and may be mixed in an installation so long as the same scheme is used on both ends of each cable.

Each of the four pairs in a Cat 5 cable has differing precise number of twists per meter to minimize cross talk between the pairs. Although cable assemblies containing 4 pairs are common, Category 5 is not limited to 4 pairs. Backbone applications involve using up to 100 pairs. This use of balanced lines helps preserve a high signal-to-noise ratio despite interference from both external sources and cross talk from other pairs.

The cable is available in both stranded and solid conductor forms. The stranded form is more flexible and withstands more bending without breaking. Permanent wiring (for example, the wiring inside the wall that connects a wall socket to a central patch panel) is solid core, while patch cables (for example, the movable cable that plugs into the wall socket on one end and a computer on the other) are stranded.

2. Maximum cable segment length

According to the ANSI/TIA/EIA standard for category 5e copper cable (TIA/EIA 568-5-A), the maximum length for a cable segment is 100 meters (330 ft). If longer runs are required, the use of active hardware such as a repeater or switch is necessary. The specifications for 10BASE-T of solid-core permanent wiring, two connectors and two stranded patch cables of 5 meters, one at each end.

3. Category 5 vs. 5e

The category 5e specification improves upon the category 5 specification by tightening some cross talk specification and introducing new cross talk specifications that were not present in the original category 5 specification. the bandwidth of category 5 and 5e is the same -100 MHz.

4. Applications

This type of cable is used in structured cabling for computer networks such as Ethernet over twisted pair. The cable standard provides performance of up to 100 MHz and is suitable for 10BASE-T, 100BASE-TX (Fast Ethernet), and 1000BASE-T (Gigable Ethernet). 10BASE-T and 100 BASE-TX Ethernet connections require two cable pairs. 1000BASE-T Ethernet connections require four cable pairs. Through the use of power over Ethernet, up to 25 watts of power can be carried over the cable in addition to Ethernet data.

5

Application

Cat 5 is also used to carry other signals such as telephony and video. In some cases, multiple signals can be carried on a signal cable; Cat 5 can carry two conventional telephone lines as well as 100BASE-TX in a single cable. The USOC/RJ-61 standard is used in multi-line telephone connections.

Various schemes exist for transporting both analog and digital video over the cable. HD BASE-T is one such scheme.

Any cable that contains air spaces can breathe in moisture, especially if the cable runs between indoor and outdoor spaces. Warm moist air can cause condensation inside the colder parts of the cable outdoors. It may be necessary to take precautions such as sealing the ends of the cables. Some cables are suitable for "direct burial", but this usually requires that the cable be get filled in order to hinder moisture migration into the cable.

When using a cable for a tower, attention must be given to vertical cable runs that may channel water into sensitive indoor equipment. This can often be solved by adding a drip-loop at the bottom of the run of cable.

Plenum-rated cables are slower to burn and produce less smoke than cables using a mantle of materials like PVC. This also affects legal requirements for a fire sprinkler system. That is if a plenum-rated cable is used, sprinkler requirement may be eliminated.

Shielded cables (FTP/S TP) are useful for environments where proximity to RF equipment may introduce electromagnetic interference, and can also be used where eavesdropping likelihood should be minimized.

6


DSP Control

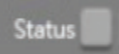
This digital Digital Snake System not only can be controlled directly on the machine, but also can be operated remotely through APP, which greatly facilitates the user's use.

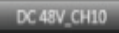
1. Assign interface

All 24 input channels can be assigned to 12 output channels in a point-to-point matrix.



 Click on the "Search icon" in the upper left corner to pop up the "Device List" list, click "Search" to search for the current online machine, and then choose to control the machine.

 Here is the information about device name and communication status. If connect status icon is green, means communication is right, while off means communication is fault.

 Touch this icon to switch channels and enter corresponding channel.