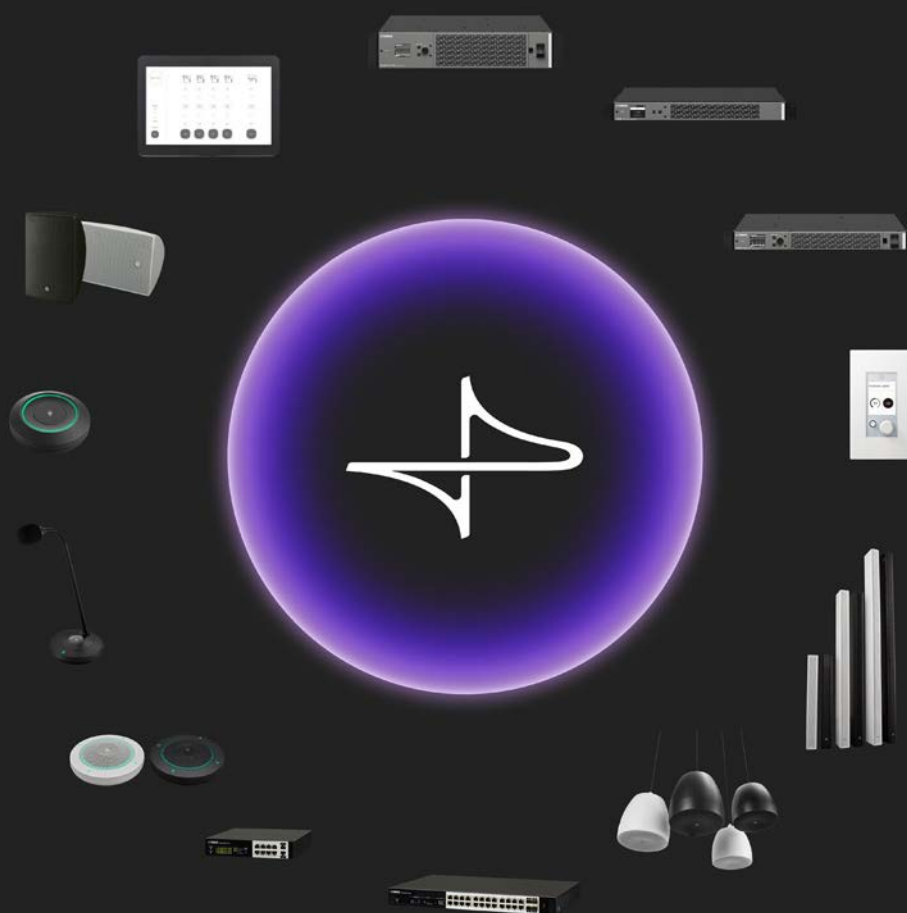


Setup Guide (Network)



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Introduction

About This Document

This document summarizes the network specifications of Yamaha professional audio products. It explains the internal network configuration and control of each product, the signal routing of a Dante network, the maximum number of connections for each application, IP address assignment, and more. For product specifications not listed in this document, refer to the manuals for the corresponding products.

Note

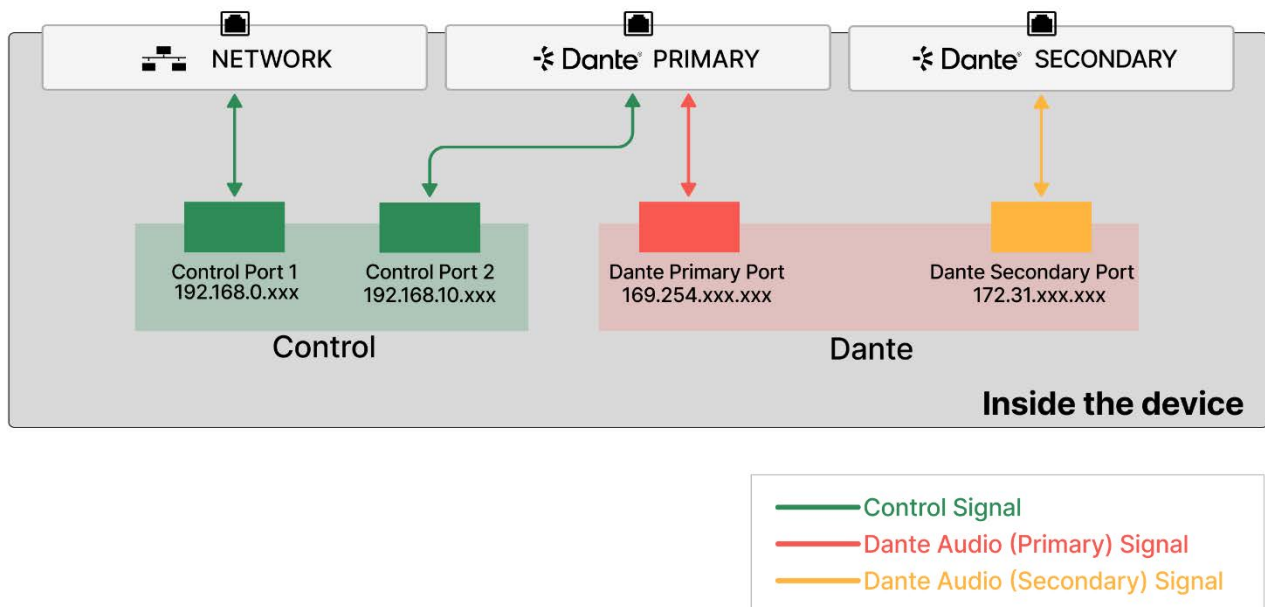
- All illustrations shown in this document are for illustrative purposes only.
- Please note that Yamaha will not be held responsible for any results or consequences of using this document.
- Company names and product names that appear in this document are registered trademarks or trademarks of the respective companies.
- The specifications listed in this document are current at the time of publication. They may be changed without notice due to firmware updates for each product, etc. For the latest information, refer to the Yamaha Pro Audio website. <https://www.yamahaproaudio.com/>

Network Configuration

This chapter explains network configuration for each product. Yamaha network audio products are categorized into several types depending on the number of physical connectors and the network interface configuration.

About Illustrations

In this document, the network configuration of each product is described using illustrations and tables similar to the ones below. This section explains the illustrations and tables.



The diagram above is a simplified diagram of the device's internal network configuration. It shows the signal flow from the NETWORK connector, Dante PRIMARY connector, and Dante SECONDARY connector. Green squares represent network interfaces used to control peripheral devices and from controllers. The red square represents Dante Primary network interface, and the yellow square represents Dante Secondary network interfaces.

Control Application	Maximum Number of Connections
ProVisionaire Kiosk 3rd Party Device	64
OSC	8
ADM-OSC	8
ProVisionaire Design	1
Sound xR Image Controller	10

The table above shows the maximum number of connections per communication protocol. This indicates the maximum number of communications that a single device can receive via each control application. In the above example, for one device, a total of 64 units can be connected via ProVisionaire Kiosk and 3rd Party Device, and can be controllable.

Device List

The products described in this document are listed below.

New CIS Ecosystem

Category	Product Number	Network Specifications Link
Processor	DME10, DME7	Type1
	DME5, DME3	Type2
Power amplifier	XMV series (Standard model)	Type6
	XMV series (Dante model)	Type3
	XMS series (Dante model)	Type2
	XMS series (Standard model)	Type6
Speaker	VXL1-16P	Type4
	VXC2P	Type4
Microphone	RM-CG	Type4
	RM-TT	Type4
	RM-WAP-16, RM-WAP-8	Type4
Control Hardware	CTL-BN1	Type6
	MCP1	Type6
	MCP2	Type6
	TCD10	Type6

Related Products

Category	Product Number	Network Specifications Link
Interface	Rio3224-D3, Rio1608-D3	Type1
	Tio1608-D2	Type3
Speaker	DZR series (Dante model)	Type5

Type1

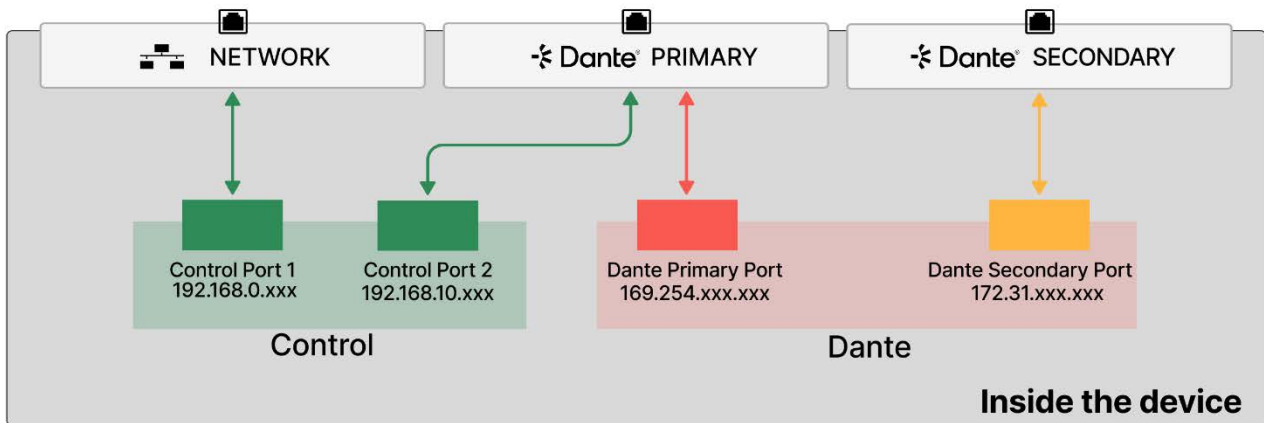
Applicable Products: DME10, DME7, Rio3224-D3, Rio1608-D3

Physical Network Connectors: NETWORK connector, Dante PRIMARY connector, Dante SECONDARY connector

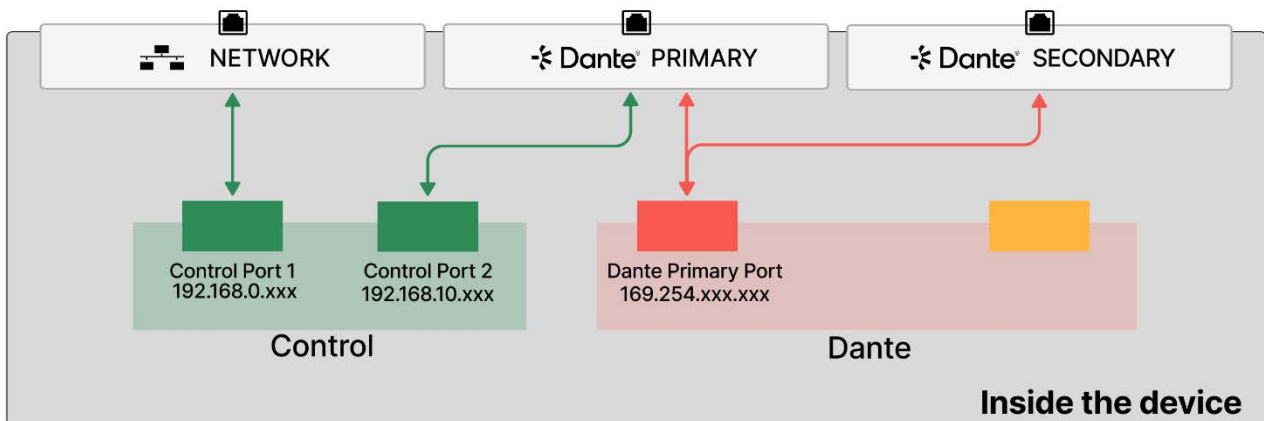
Number of Control Network Interfaces: 2

Internal Network Configuration

Redundant



Daisy Chain



— Control Signal
— Dante Audio (Primary) Signal
— Dante Audio (Secondary) Signal

Maximum Number of Connections for Each Application

■ DME10, DME7

Control Application	Maximum Number of Connections
ProVisionaire Design	1
ProVisionaire Kiosk 3rd Party Device	64
OSC	8
ADM-OSC	8
Sound xR Image Controller	10

■ Rio3224-D3, Rio1608-D3

Control Application	Maximum Number of Connections
ProVisionaire Design ProVisionaire Kiosk R-Remote	6

Type2

Applicable Products: DME5, DME3, XMS series (Dante model)

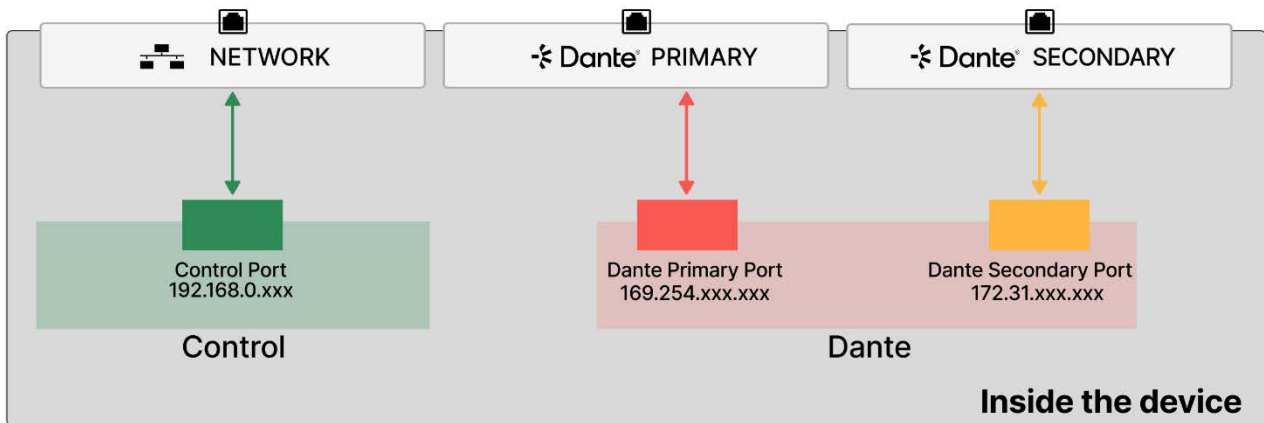
Physical Network Connectors: NETWORK connector, Dante PRIMARY connector, Dante SECONDARY connector

Number of Control Network Interfaces: 1

Internal Network Configuration

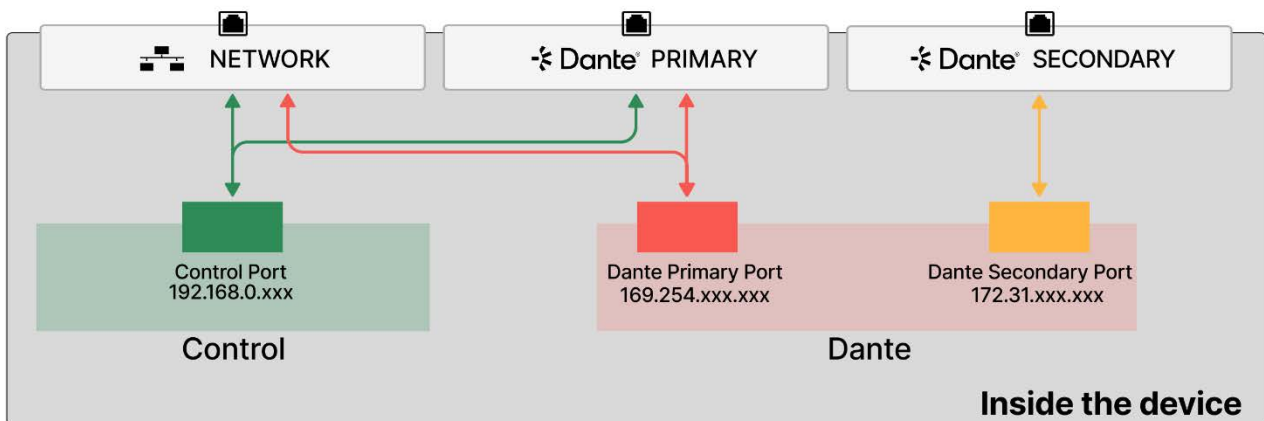
Redundant

When "Control Separated" is selected:



Redundant

When "Control Merged" is selected:



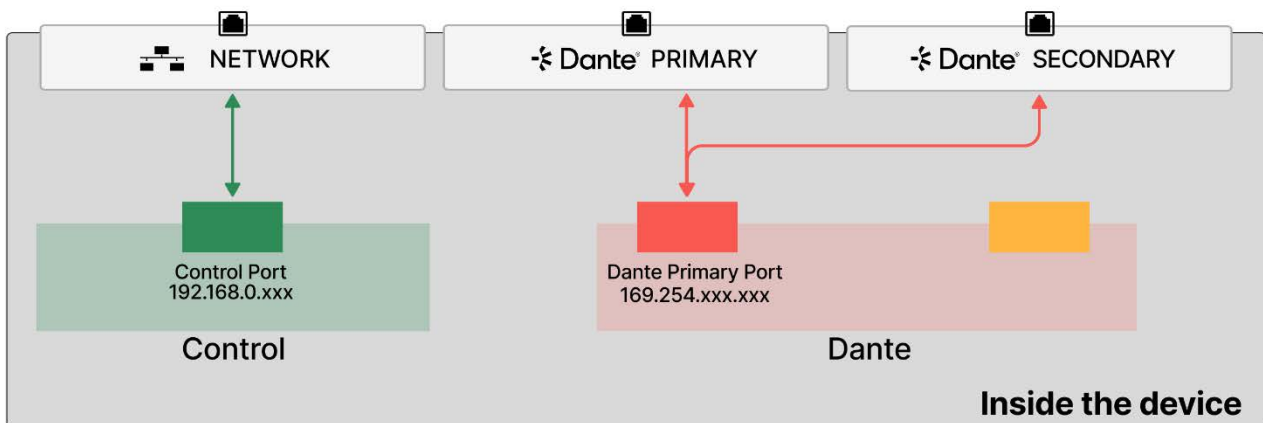
— Control Signal
 — Dante Audio (Primary) Signal
 — Dante Audio (Secondary) Signal



When "Control Merged" is selected, the NETWORK and Dante PRIMARY connectors are internally connected to each other and perform the same function. Take care when making connections to avoid network loops.

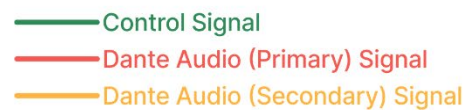
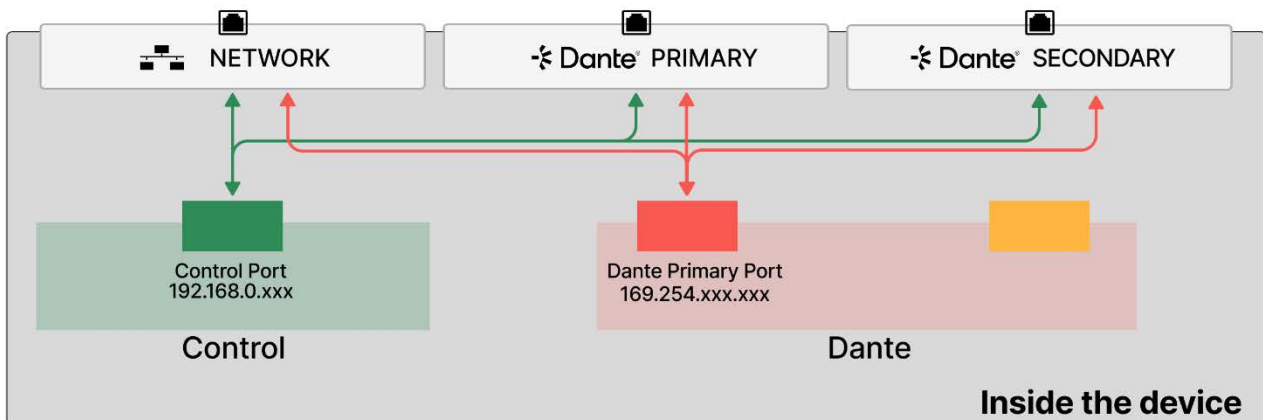
Daisy Chain

When "Control Separated" is selected:



Daisy Chain

When "Control Merged" is selected:



When "Control Merged" is selected, the NETWORK, Dante PRIMARY, and Dante SECONDARY connectors are internally connected to each other, and perform the same function. Take care when making connections to avoid network loops.

Maximum Number of Connections for Each Application

■ DME5, DME3

Control Application	Maximum Number of Connections
ProVisionaire Design	1
ProVisionaire Kiosk MCP2 3rd Party Device	64
OSC	8
TCD10 / PC Web Browser (for Custom Control Panel)	No limitations * ¹

*1 There are no theoretical limitations, but we cannot guarantee operation in actual usage environments.

■ XMS series (Dante model)

Control Application	Maximum Number of Connections
ProVisionaire Design	1
ProVisionaire Kiosk	8

Type3

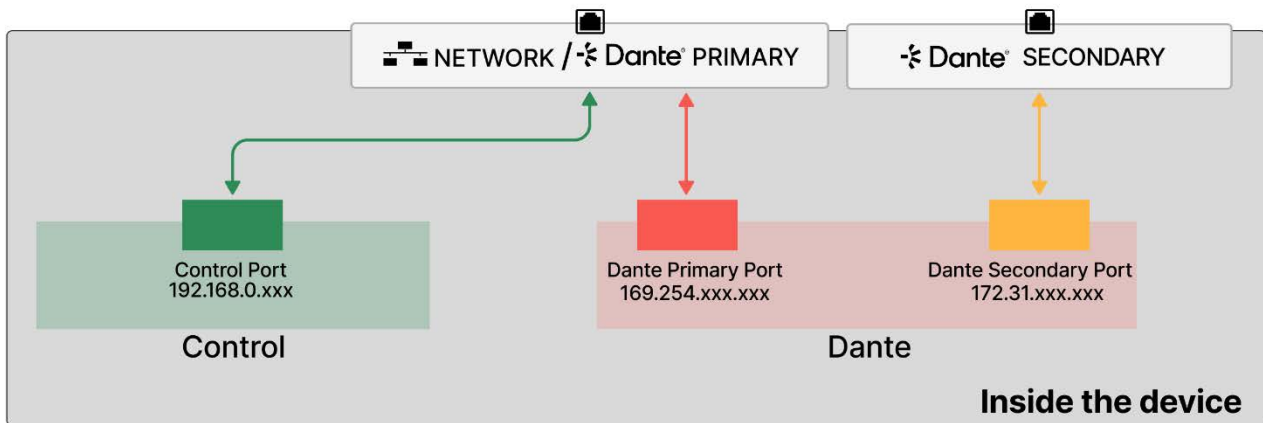
Applicable Products: Tio1608-D2, XMV series (Dante model)

Physical Network Connectors: NETWORK/Dante PRIMARY connector, Dante SECONDARY connector

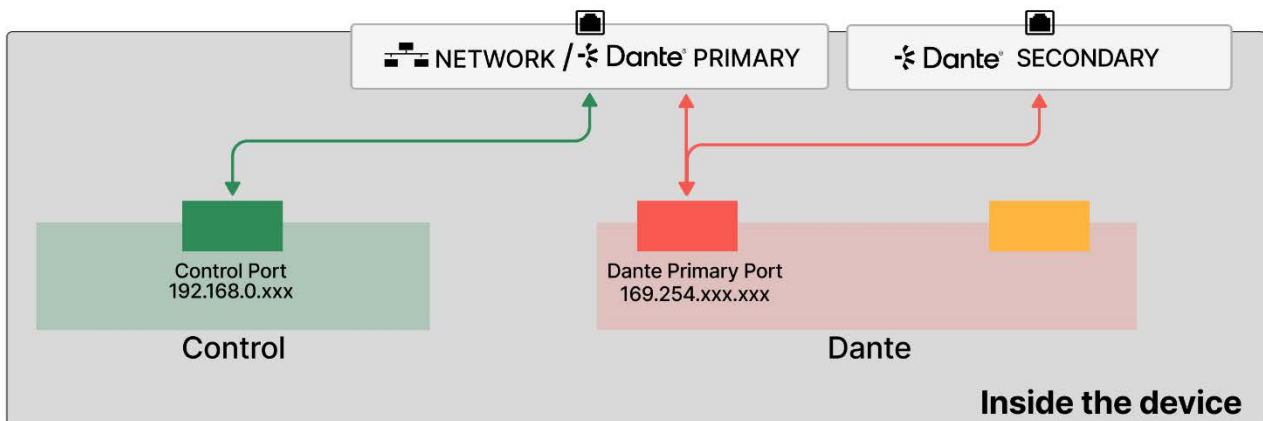
Number of Control Network Interfaces: 1

Internal Network Configuration

Redundant



Daisy Chain



— Control Signal
 — Dante Audio (Primary) Signal
 — Dante Audio (Secondary) Signal

Maximum Number of Connections for Each Application

■ Tio1608-D2

Control Application	Maximum Number of Connections
ProVisionaire Design ProVisionaire Kiosk R-Remote	6

■ XMV series (Dante model)

Control Application	Maximum Number of Connections
ProVisionaire Design	1
ProVisionaire Kiosk 3rd Party Device	8

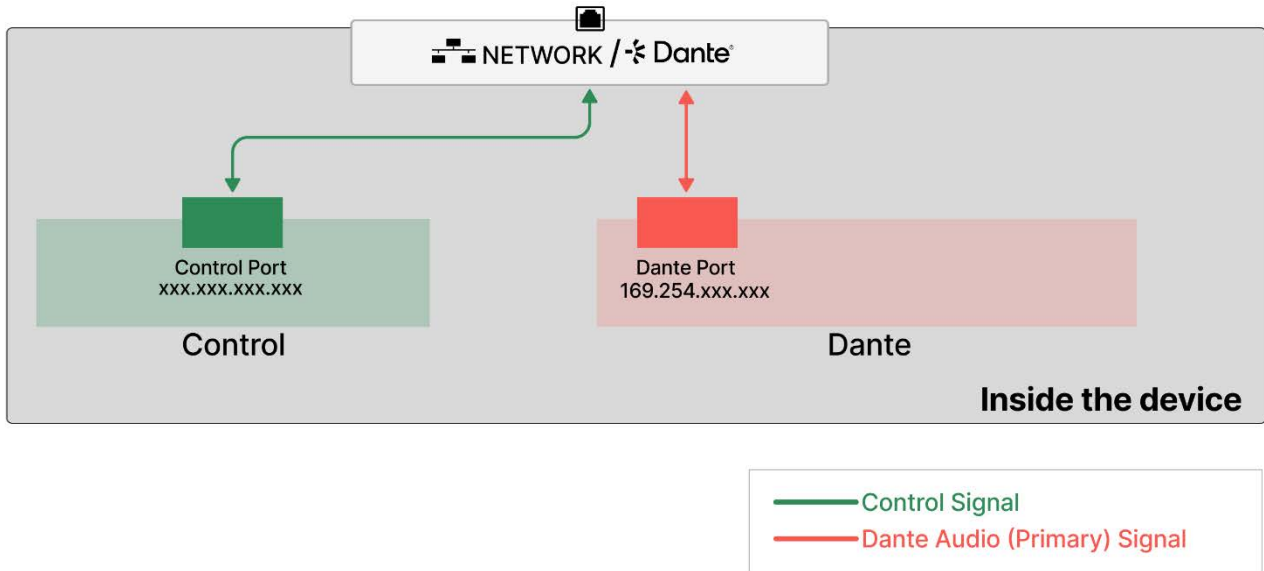
Type4

Applicable Products: VXL1-16P, VXC2P, RM-CG, RM-TT, RM-WAP-16, RM-WAP-8

Physical Network Connectors: NETWORK/Dante connectors

Number of Control Network Interfaces: 1

Internal Network Configuration



Maximum Number of Connections for Each Application

■VXL1-16P, VXC2P

Control Application	Maximum Number of Connections
ProVisionaire Design ProVisionaire Kiosk	5

■RM-CG, RM-TT

Control Application	Maximum Number of Connections
ProVisionaire Design ProVisionaire Kiosk	8

■RM-WAP-16, RM-WAP-8

Control Application	Maximum Number of Connections
ProVisionaire Design ProVisionaire Kiosk 3 rd Party Device (Q-SYS Plug In, AMX, Crestron etc.)	8

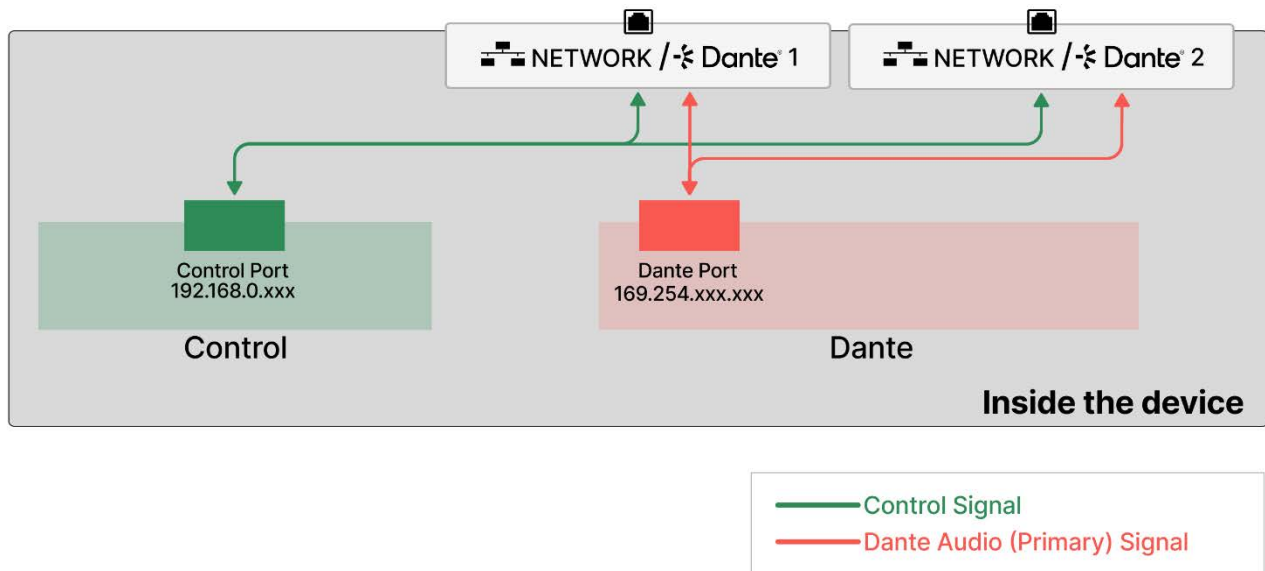
Type5

Applicable Products: DZR series (Dante model)

Physical Network Connectors: NETWORK/Dante1 connector, NETWORK/Dante2 connector

Number of Control Network Interfaces: 1

Internal Network Configuration



Maximum Number of Connections for Each Application

■ DZR series (Dante model)

Control Application	Maximum Number of Connections
ProVisionaire Design ProVisionaire Kiosk	5

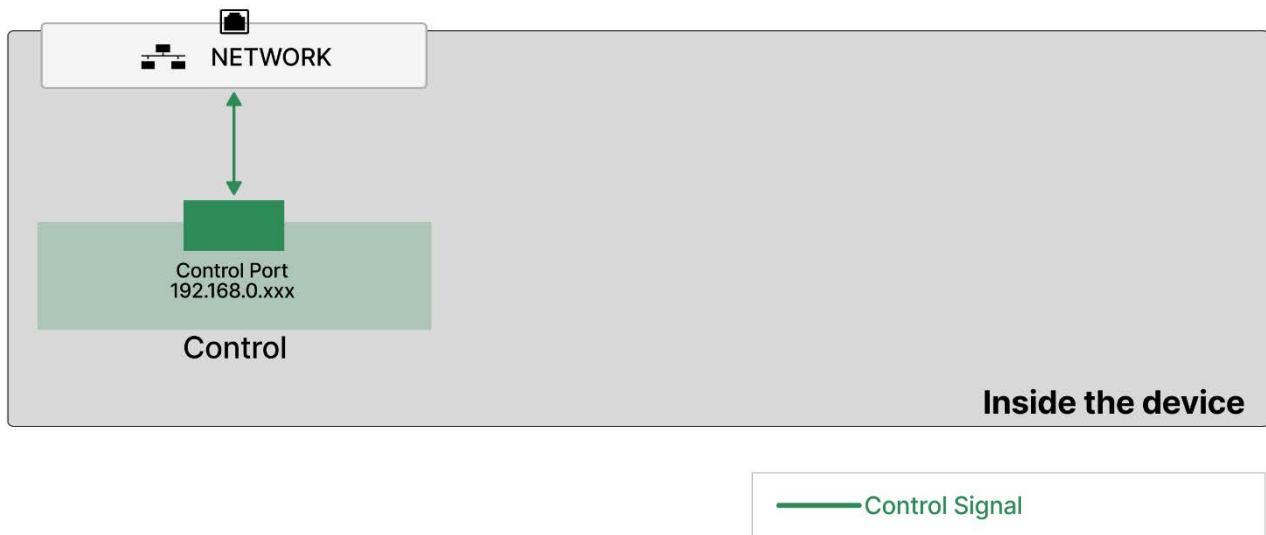
Type6

Applicable Products: XMV series (Standard model), XMS series (Standard model), CTL-BN1, MCP1, MCP2, TCD10

Physical Network Connectors: NETWORK connector

Number of Control Network Interfaces: 1

Internal Network Configuration



Maximum Number of Connections for Each Application

■XMV series (Standard model)

Control Application	Maximum Number of Connections
ProVisionaire Design	1
ProVisionaire Kiosk 3rd Party Device	8

■XMS series (Standard model)

Control Application	Maximum Number of Connections
ProVisionaire Design	1
ProVisionaire Kiosk	8

■CTL-BN1

Control Application	Maximum Number of Connections
ProVisionaire Design	1

■MCP1

Control Application	Maximum Number of Connections
ProVisionaire Design	1
3rd Party Device (AMX, Crestron, etc.)	8

■MCP2

Control Application	Maximum Number of Connections
ProVisionaire Design	1
3rd Party Device (AMX, Crestron, etc.)	5

■TCD10

Control Application	Maximum Number of Connections
TCD Manager	1

IP Address Assignment

Control IP Address Assignment

The IP addresses used to control Yamaha network devices are as follows. For more information on how to set IP addresses, refer to the respective product manuals.

- **Automatic assignment**
 - **DHCP**
If the network features a DHCP server, the IP address will be assigned to the device automatically.
 - **Auto IP**
If the network does not feature a DHCP server, the device will automatically assign a link-local address.
- **Manual assignment**
 - **Unit ID**
The Unit ID value is used as the IP address. The Unit ID is the fourth octet of the IP Address (192.168.0.Unit ID). You can set the Unit ID using the hardware DIP switches or rotary switches, the device's screen, ProVisionaire Design, etc.
 - **Manual**
You can set the IP address as you wish.

Dante IP Address Assignment

The IP addresses for Dante are as follows. Use Audinate's Dante Controller to assign them. For more information, refer to the Audinate website.

- **Automatic assignment**

If the network features a DHCP server, the IP address will be assigned automatically.

If your network does not feature a DHCP server, link-local addresses (Primary IP 169.254.x.x/16, Secondary IP 172.31.x.x/16) will be automatically assigned.
- **Manual assignment**

You can also assign the IP addresses manually.

Control IP Address Assignment List

The IP address assignment used to control each device is as follows. For products not listed in the table below, refer to the respective product manuals.

New CIS Ecosystem

Category	Model	Automatic		Manual		Default
		DHCP	Auto IP	Unit ID	Manual	
Processor	DME10, DME7	✓	*1	✓	✓	Unit ID
	DME5, DME3	✓	✓	✓	✓	Automatic*2
Power amplifier	XMV series (Standard model)	✓		✓	✓	Unit ID
	XMV series (Dante model)	✓		✓	✓	Unit ID
	XMS series	✓	✓	✓	✓	Automatic*2
Speaker	VXL1-16P	✓	✓*4	✓	✓	Unit ID
	VXC2P	✓	✓*4	✓	✓	Unit ID
Microphone	RM-CG	✓	✓		✓	Automatic*2
	RM-TT	✓	✓		✓	Automatic*2
	RM-WAP-16, RM-WAP-8	✓	✓		✓	Automatic*2
Control Hardware	CTL-BN1	✓	✓		✓	Automatic*2
	MCP1	✓	✓	✓	✓	Unit ID
	MCP2	✓	✓		✓	Automatic*2
	TCD10	✓	✓		✓	Automatic*2

Related Products

Category	Model	Automatic		Manual		Default
		DHCP	Auto IP	Unit ID	Manual	
Interface	Rio3224-D3, Rio1608-D3	✓	✓	✓	✓	*3
	Tio1608-D2	✓	✓		✓	Auto IP
Speaker	DZR series (Dante model)	✓	✓	✓	✓	Automatic*2



*1: Control Port 1 (NETWORK connector) does not support Auto IP, while Control Port 2 (Dante Primary connector) does.

*2: If a DHCP server is present on the same network, it will use DHCP; if not, it will use Auto IP.

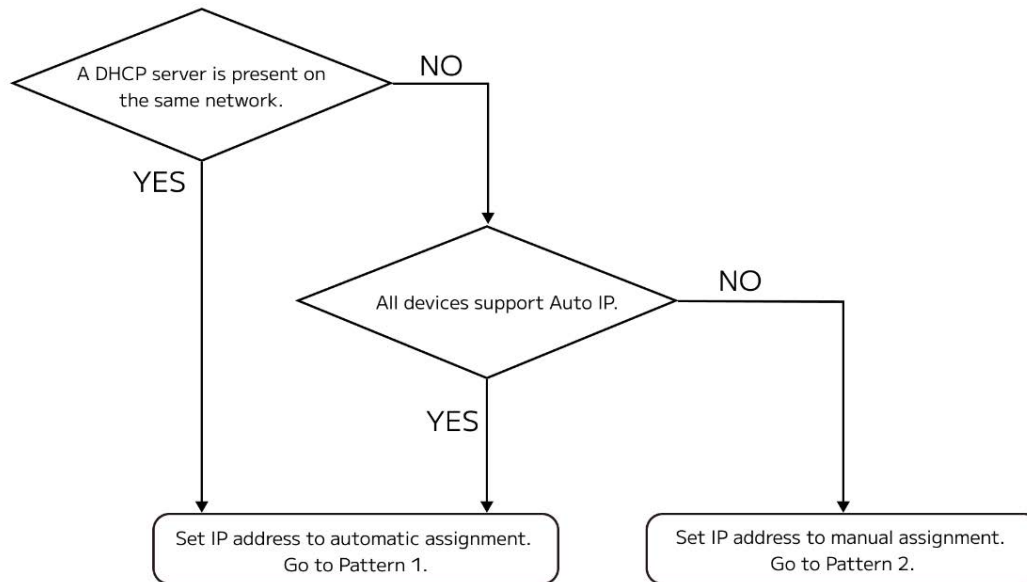
*3: Control Port 1 (NETWORK connector) uses Manual [192.168.0.2], and Control Port 2 (Dante Primary connector) uses DHCP/Auto IP.

*4: When using VXL1-16P and VXC2P in IP address auto-assignment mode (PC mode), set DIP switch 6 to OFF and restart the device.

Network Connection Method

This section explains how to connect factory-shipped devices to the control network and enable communication via ProVisionaire Design.

First, follow the flow chart below to check the system specifications. To find out whether your device supports Auto IP, refer to the ["IP Address Assignment List."](#)



All devices listed in this manual, except for the XMV series, support Auto IP. If a DHCP server is present on the network, or if the system is configured using only Auto IP compatible devices, we recommend that you use automatic IP address assignment.

Pattern 1 If a DHCP server is present or all devices support Auto IP

IP address auto-assignment will be applied, and the IP addresses of all devices will be automatically set to the same network. Simply connect devices to the same network using the following procedure to set up communication with ProVisionaire Design without manual assignment.

Network connection procedure

- If any devices have their default IP address assignments set to manual mode, change them to automatic mode and restart the devices.**
You can switch modes using the device's DIP switches, etc. For more information, refer to the manual for each device.
- Set the PC's IP address to automatic assignment.**
- Connect all devices, the PC, and the DHCP server (if any) to the network.**
- Launch ProVisionaire Design.**
- In the "Network Setup" dialog, select the checkbox for the network card that will communicate with the devices, and then click the [OK] button.**
When the file selection dialog appears, click [X] to close the screen.
- Make sure that all devices are displayed in the network area of ProVisionaire Design.**
- Assign unique Unit IDs in ProVisionaire Design.**

Pattern 2

If a DHCP server is not present, and some devices do not support Auto IP

You must manually set the IP addresses of all devices to static IP addresses.

For a smoother connection, first connect Auto IP-compatible devices to ProVisionaire Design with their IP addresses set to Auto IP, change them to static IP addresses, and then connect non-Auto IP-compatible devices.

Network connection procedure

1. **Set the PC's IP address to automatic assignment.**
2. **Connect the Auto IP-compatible devices and the PC to the network.**
Do not connect non-Auto IP-compatible devices yet.
3. **Launch ProVisionaire Design.**
4. **In the "Network Setup" dialog, select the checkbox for the network card that will communicate with the devices, and then click the [OK] button.**
When the file selection dialog appears, click [X] to close the screen.
5. **Make sure that the devices are displayed in the network area of ProVisionaire Design.**
6. **In ProVisionaire Design, go to System menu > IP Settings > IP Address and set the IP address of each device to a fixed IP address [192.168.0.xxx/255.255.255.0].**



Be careful not to duplicate IP addresses.



You can also use a function in ProVisionaire Design to set fixed IP addresses all at once. For more information, refer to the "Auto-Assign IP Addresses dialog box" section in the "Provisionaire Design User Guide."

7. **After changing the IP addresses, restart the device to apply the changes.**
8. **Set the PC's IP address to a fixed IP address [192.168.0.xxx/255.255.255.0].**
9. **Set a device that does not support Auto IP to Unit ID mode, and then set the Unit ID.**
The device's IP address will be set to "192.168.0.Unit ID/255.255.255.0".
You can switch modes and set the Unit IDs using the device's DIP switches or on the device's screen. For more information, refer to the manual for each device.



Be careful not to duplicate the IP address of another device that you have already set in step 7.

10. **Connect the non-Auto IP-compatible devices to the network.**
11. **Make sure that all devices are displayed in the network area of ProVisionaire Design.**

