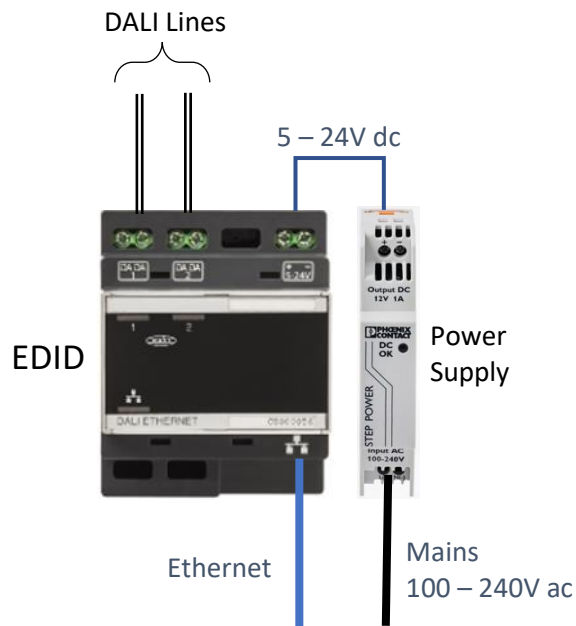


Introduction

This application note describes the use of RAPIX Ethernet DALI Interface Devices (EDIDs) as interfaces to provide additional DALI Lines for a Zone Controller.

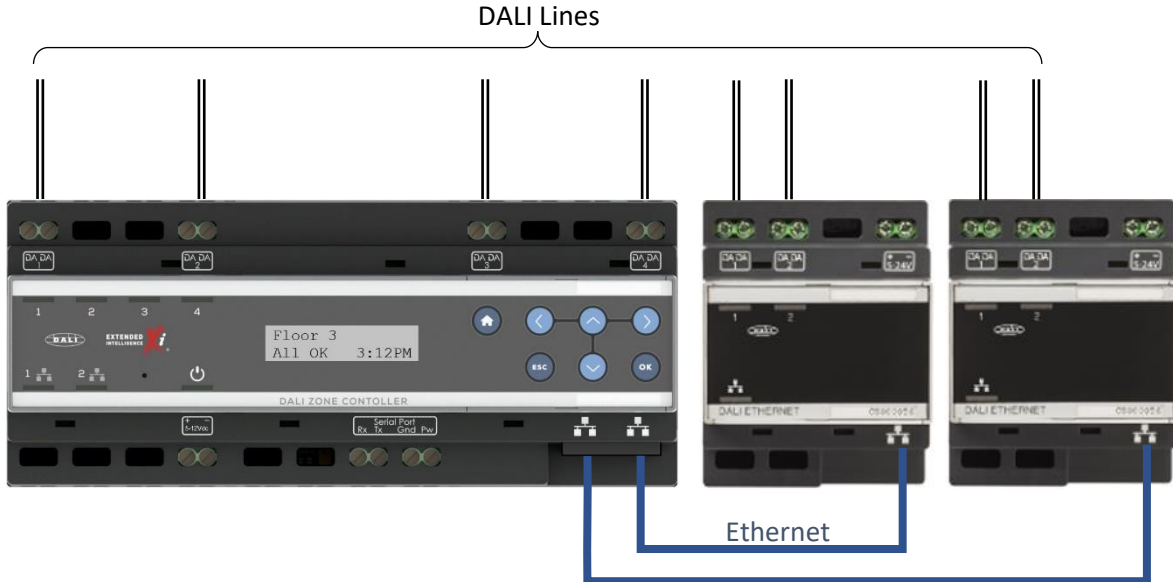
An EDID provides an Ethernet based interface to one or two DALI Lines as shown in the diagram below.



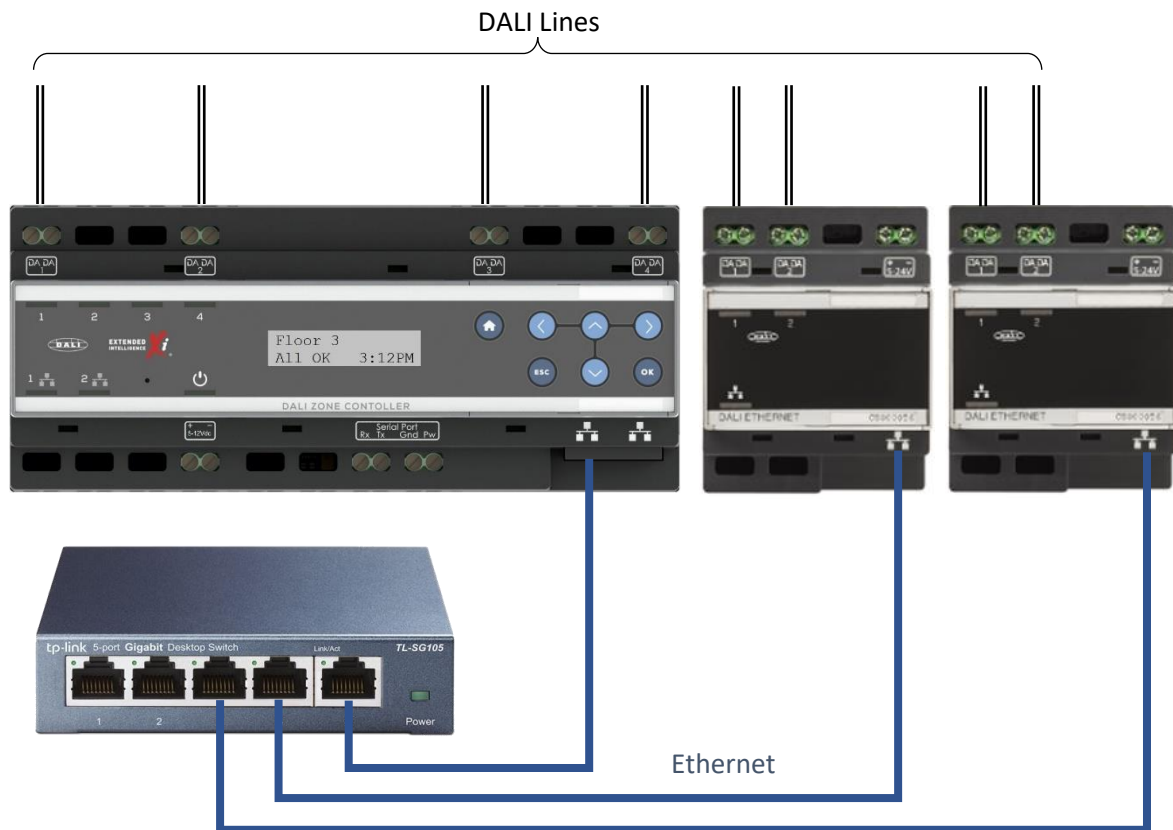
EDID Connections

Support for using EDIDs to extend a RAPIX Zone Controller by adding more DALI interfaces was added to RAPIX Integrator version 10 and Zone Controller version 9.

The Zone Controller has four in-built interfaces to DALI Lines. One or two EDIDs can be connected to a Zone Controller to provide one to four additional DALI Lines as shown in the wiring diagrams below.



Zone Controller with two directly connected EDIDs

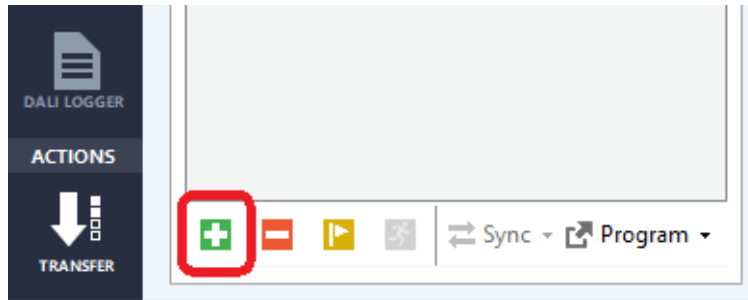


Zone Controller with two EDIDs connected through an Ethernet Switch

Configuring an EDID to be used with a Zone Controller

Adding an EDID to the Project

To add an EDID to a RAPIX Integrator project, click on the **Add a New Interface** button in the Network view:



The Add a New Interface button

The **Add Network Interface** form will be shown:

Add Network Interface

Add Network Interface
Add a Zone Controller, Ethernet DID or USB DALI Line to the project.

Enter Network Interface Details

Step 1 - Select the type of interface to add to your project:

Zone Controller
 Ethernet DID
 USB DALI Line

Step 2 - Enter in the properties for the interface:
EDID name cannot be empty

Name:

IP Address Settings

IP Address: . . .

Subnet Mask: . . .

Default Gateway: . . .

DNS Server Settings

Primary DNS Address: . . .

Secondary DNS Address: . . .

The Add Network Interface form

Either enter all details, or click on the **Discover** button, which will bring up the **Discover New Ethernet DALI Interface Devices** form:

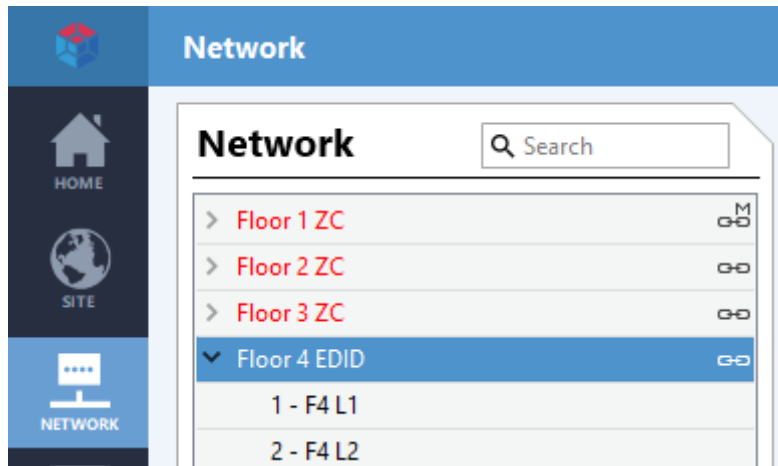
IP Address	Status
<input checked="" type="checkbox"/> 172.20.205.4	● OK

The Discover New Ethernet DALI Interface Devices form

If the EDID has the correct IP Address, then click on the **Add** button and the EDID will be added. Otherwise, click on the **DHCP/ Static IP** button to allow you to set the properties of the EDID. Note that an EDID requires a static IP Address to be used with a Zone Controller.

The DID Ethernet Properties form

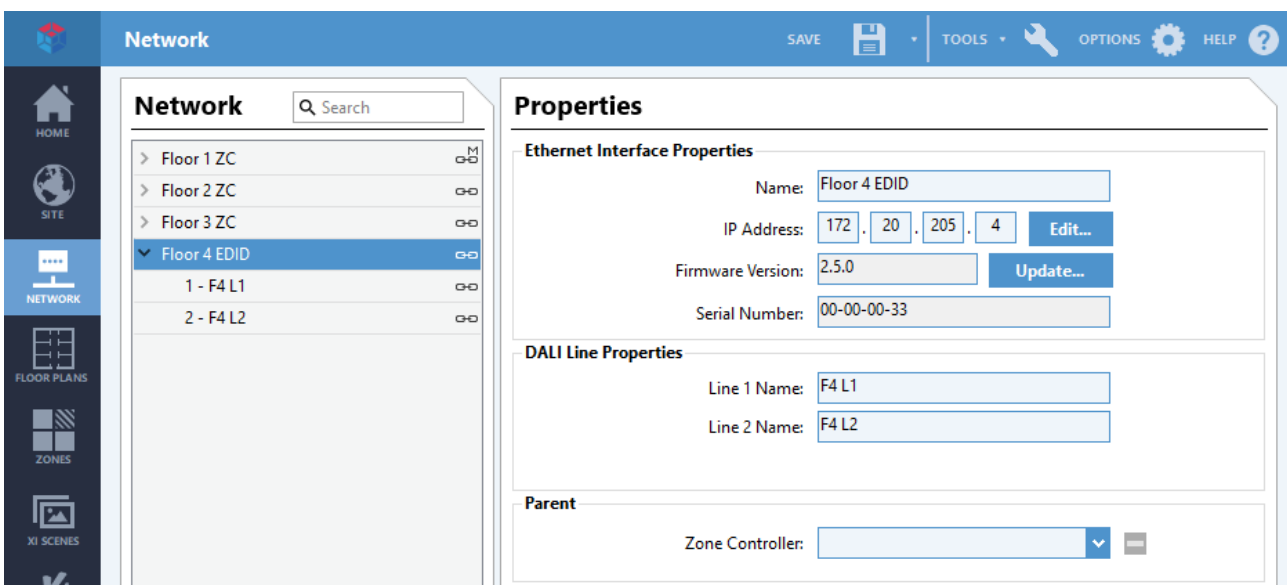
Once the EDID is added to the project, it will appear in the Network view at the same level as a Zone Controller:



A newly-added EDID in the network list

Editing the EDID Properties

To view and edit the properties of an EDID (a bit like for a Zone Controller), select it in the network view:

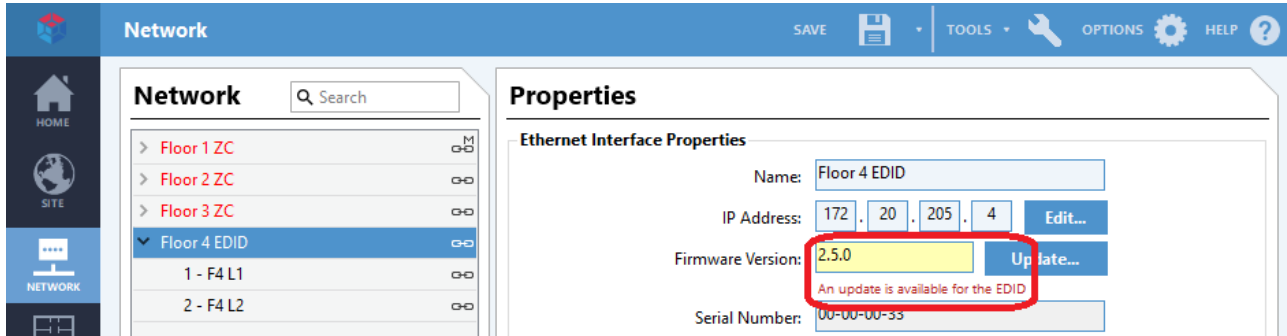


The EDID Properties editor

Updating the EDID Firmware

If the EDID firmware is out of date, a warning will be visible.

It is recommended that the firmware be updated before proceeding.



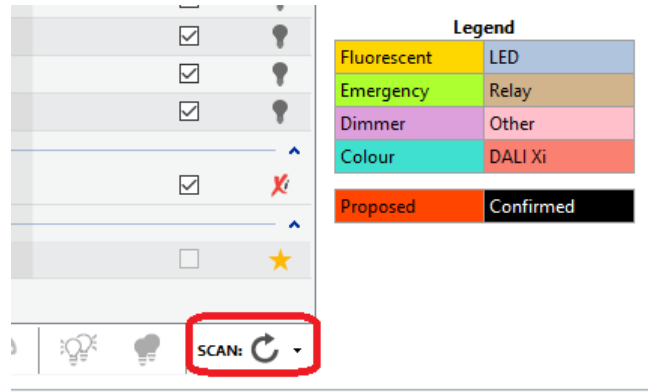
The EDID firmware update warning message

To update the EDID firmware:

1. Click on the **Update** button
2. Select the latest EDID firmware file
3. Click on **Open**
4. Wait for the update process to complete. **Do not interrupt the update process. Interrupting the update may cause the EDID to stop working.**

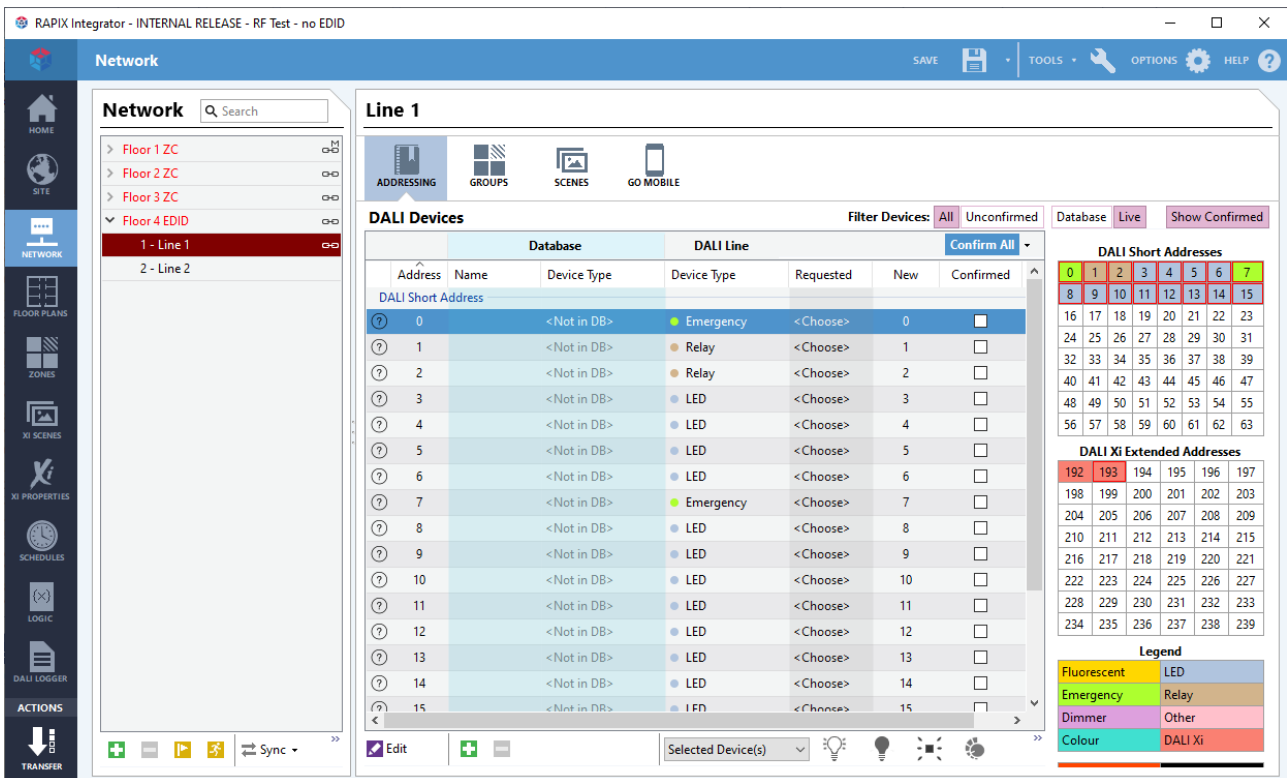
Scanning the EDID DALI Lines

After an EDID is added, there is no information about what is on the DALI Lines until they are scanned (a bit like a USB DID). Click on the **Scan** button to scan the DALI Line:



The Scan Button

Once the DALI line connected to the EDID has been scanned, it can be used the same way as any other DALI Line:

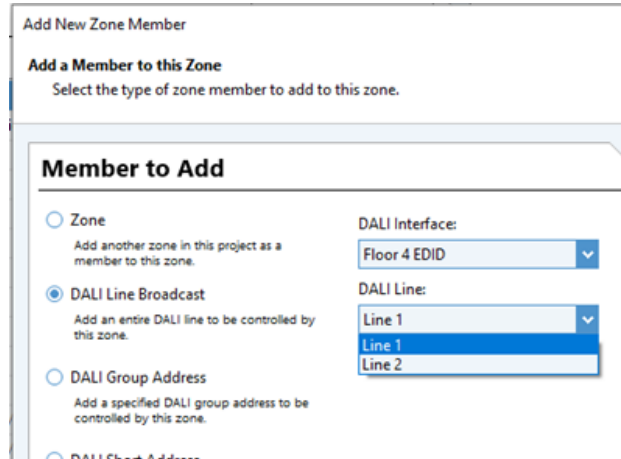


The DALI Devices on an EDID DALI Line

Using EDID DALI Lines

The EDID DALI Lines and their devices, groups and scenes can all be used once the scan is finished.

Adding a member to a Zone from an EDID DALI Line is the same as for a Zone Controller DALI Line:



Add New Zone Member

Add a Member to this Zone
Select the type of zone member to add to this zone.

Member to Add

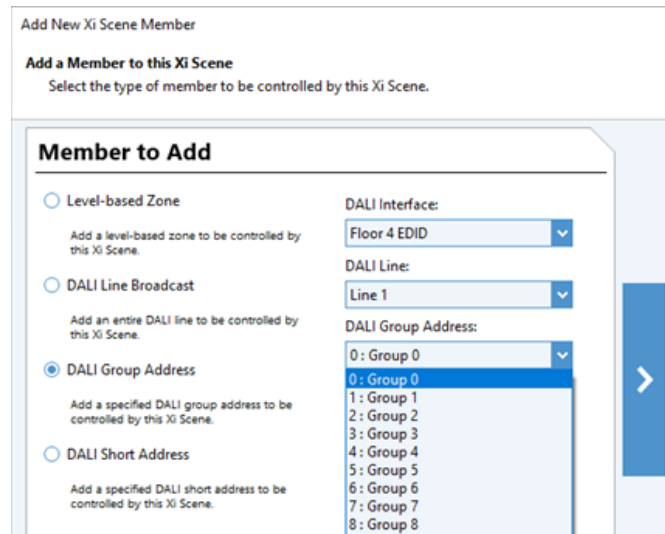
- Zone
Add another zone in this project as a member to this zone.
- DALI Line Broadcast
Add an entire DALI line to be controlled by this zone.
- DALI Group Address
Add a specified DALI group address to be controlled by this zone.
- DALI Short Address

DALI Interface: Floor 4 EDID

DALI Line: Line 1

Adding an EDID DALI Line Member to a Zone

Adding a member to an Xi Scene from an EDID DALI Line is the same as for a Zone Controller DALI Line:



Add New Xi Scene Member

Add a Member to this Xi Scene
Select the type of member to be controlled by this Xi Scene.

Member to Add

- Level-based Zone
Add a level-based zone to be controlled by this Xi Scene.
- DALI Line Broadcast
Add an entire DALI line to be controlled by this Xi Scene.
- DALI Group Address
Add a specified DALI group address to be controlled by this Xi Scene.
- DALI Short Address
Add a specified DALI short address to be controlled by this Xi Scene.

DALI Interface: Floor 4 EDID

DALI Line: Line 1

DALI Group Address: 0: Group 0

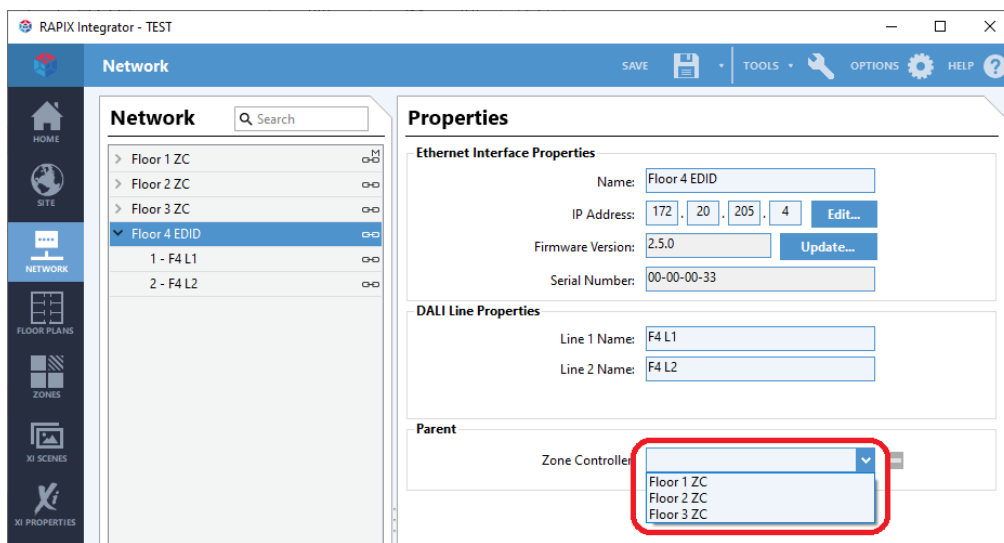
Adding an EDID DALI Group Member to an Xi Scene

Adding an EDID to a Zone Controller: Step by Step

An EDID can be added to a Zone Controller at any stage. It is personal preference whether this is done before or after creating Zones and Scenes, configuring devices etc.

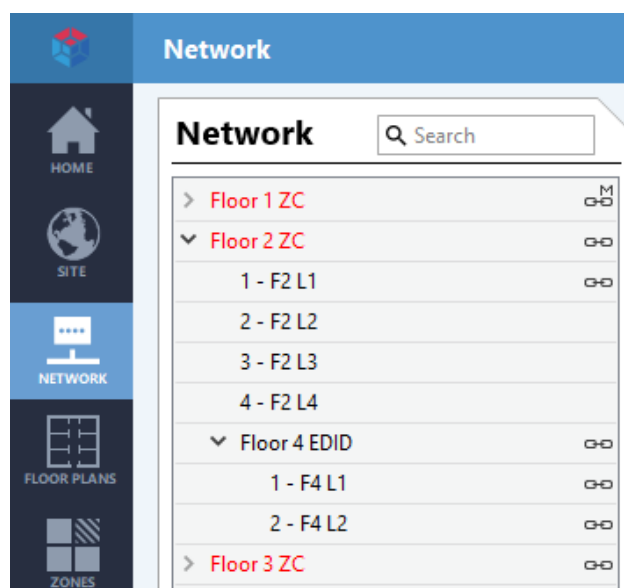
Adding the EDID to the Zone Controller allows the Zone Controller to make use of the DALI lines of that EDID.

Step 1: To add the EDID to a Zone Controller, select the EDID in the Network view, then select the parent Zone Controller:



Selecting the EDID Parent Zone Controller

Once the parent Zone Controller is selected, the EDID will move in the tree view so it sits under the parent Zone Controller:

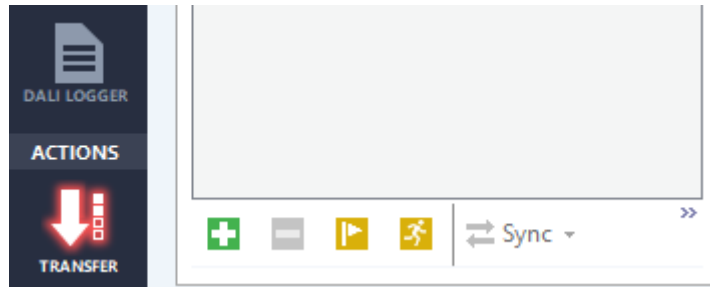


The EDID shown under its parent Zone Controller ("Floor 2 ZC")

At this stage, RAPIX Integrator is still communicating directly with the EDID. The Zone Controller is not using the EDID yet.

Once you transfer the project to the Zone Controller, it will take control of the EDID.

Step 2: Transfer the project to the Zone Controller(s):

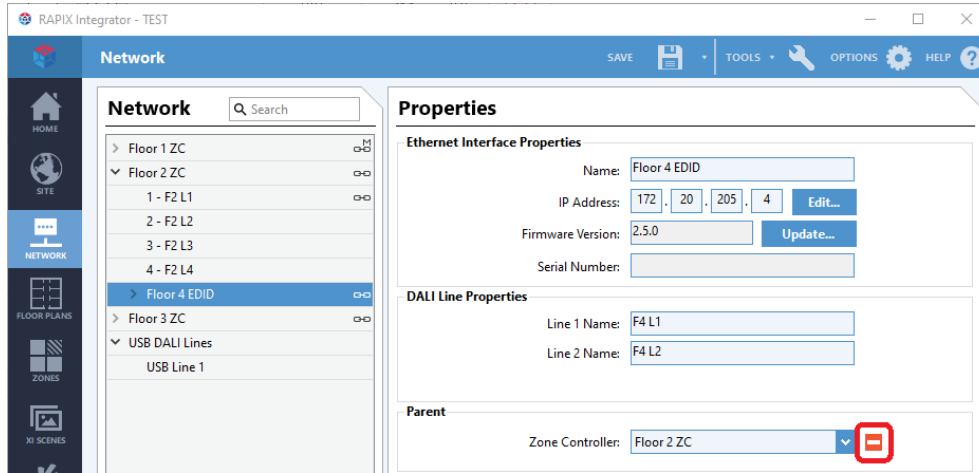


The transfer button (highlighted, indicating that a transfer is required)

Following the transfer, RAPIX Integrator will get the data for the EDID DALI Lines directly from the Zone Controller. You will not have to scan the EDID DALI Lines anymore – the data will be available instantly, just like with the directly connected Zone Controller DALI Lines.

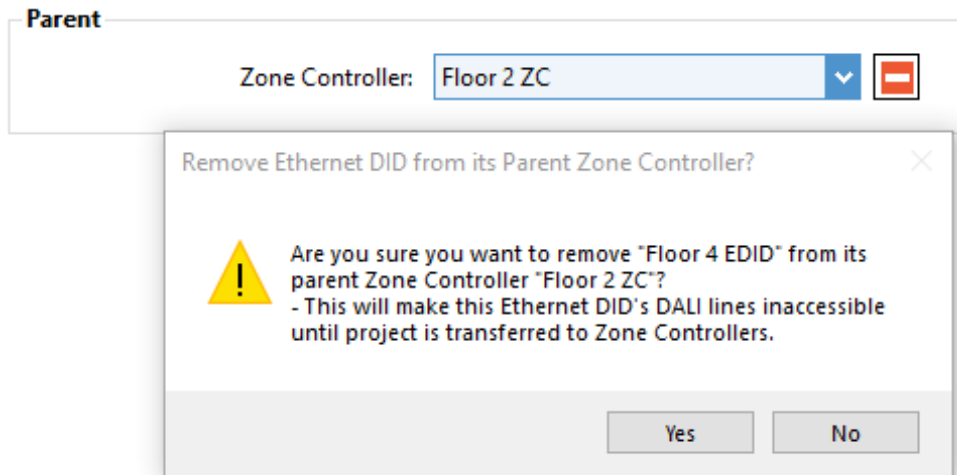
Removing an EDID from a Zone Controller

If there is a mistake, an EDID can be removed from the parent Zone Controller: just select the EDID in the network list, where the parent Zone Controller is shown, click on the delete button:



The EDID delete parent button

After deleting the parent Zone Controller, the project needs to be transferred to the Zone Controllers to complete this change. There is a warning message about this:



The parent deletion warning message

Project Report

The Project Report lists the EDID DALI Lines under the EDIDs section, but also under the parent Zone Controller for convenience.

Zone Controllers

Properties

Name	Id	IP Address	Subnet	Gateway	Primary DNS	Secondary DNS	MAC Address	O/S	Firmware
Floor 1 ZC	1	172.20.205.1	255.255.0.0	172.20.100.1	172.20.104.1	172.20.144.200	54-4A-16-89-9B-34	6.0.0	8.3.1
Floor 2 ZC	3	172.20.205.2	255.255.0.0	172.20.100.1	172.20.104.1	172.20.144.200	78-A5-04-BC-18-E7	6.0.0	8.3.1
Floor 3 ZC	2	172.20.205.3	255.255.0.0	172.20.100.1	172.20.104.1	172.20.144.200	78-A5-04-BC-14-8C	6.0.0	8.3.1

DALI Lines

Name	Line 1	Line 2	Line 3	Line 4	EDID 1, Line 1	EDID 1, Line 2	EDID 2, Line 1	EDID 2, Line 2
Floor 1 ZC	F1 L1	F1 L2	F1 L3	F1 L4	-	-	-	-
Floor 2 ZC	F2 L1	-	-	-	Line 1	Line 2	-	-
Floor 3 ZC	F3 L1	-	-	-	-	-	-	-

EDIDs

Properties

Name	Id	IP Address	Subnet	Gateway	MAC Address	Firmware	Zone Controller
Floor 4 EDID	5	172.20.205.4	255.255.0.0	172.20.100.1	00-20-4A-C0-73-16	2.4	Floor 2 ZC

DALI Lines

Name	Line 1	Line 2
Floor 4 EDID	Line 1	Line 2

The EDID data in the Project Report

Zone Controller

LCD Menu

In section 4 of the Zone Controller LCD menu, there are items for Line 1 to Line 4.

If the Zone Controller C has one EDID connected, the menu also adds Lines 5 and Line 6. If the Zone Controller has two EDIDs connected, then lines 5 to 8 are added to the menu.

Log

The Zone Controller log and compact log will report the EDID DALI Line messages as being on DALI Lines 5 to 8.

Change History

Rev	Date	Updated By	Comment
1	23 Nov 2021	DMS	First Release
2	11-Jan-2022	DMS	Added details of EDID firmware update
3	1-Apr-2022	DMS	Updated Zone Controller images to show correct power supply voltage

Contact Information

Web www.ozuno.com
All Enquiries +61 8 8362 7584 sales@ozuno.com

Ozuno Trading Pty Ltd

ABN: 96 621 194 483

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