

# ETH-GPI Link + Controller Server/Client Combinations

## Introduction

With the Device Core "TCP Server" and the Device Core "UniSketch Raw Panel" (Client) you can network SKAARHOJ controllers in unparalleled ways - not just two controllers but whole groups of them if you please. This tutorial will provide various examples on how configurations can be achieved. Some setups build further on existing Default Configurations and therefore mapping of Flag numbers might not be intuitive, but this have been done in order to utilise already exciting Default Configurations.

Most examples in this tutorial uses the Quick Bar as a reference but other controllers can be used as well. Go to [cores.skaarhoj.com](http://cores.skaarhoj.com) to see how the various configurations for the Quick Bar are made. In the illustrations on the following pages IP settings are shown. These are simply for illustrative purpose and can be changed. Notice that devices with the UniSketch Raw Panel Device Core installed must have the IP address of the TCP Server.

## 2 x ETH-GPI Link in Duplex Mode

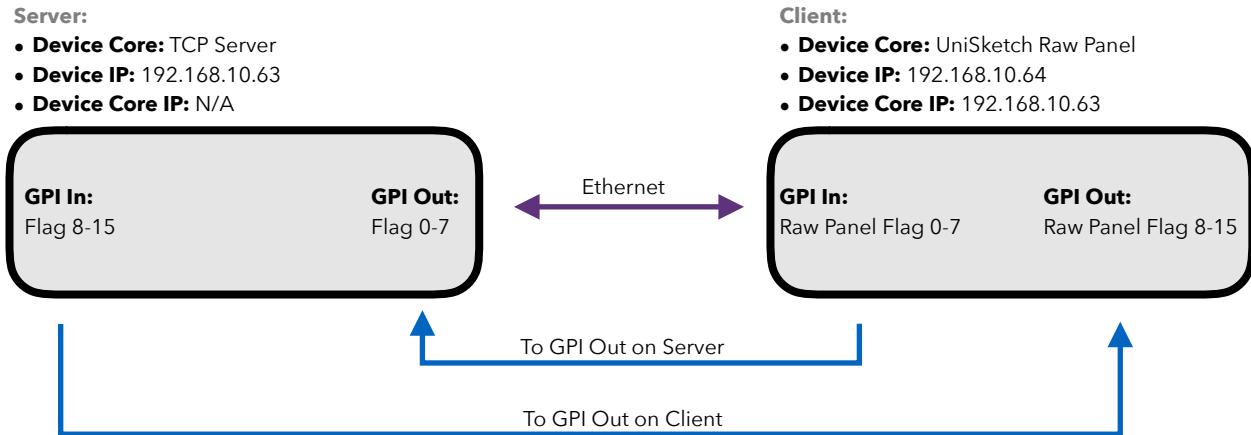
This setup is duplex. So Inputs/Outputs from each device is replicated on the other device.

- Transport GPI In trigger from Server to GPI Out on Client
- Transport GPI In trigger from Client to GPI Out on Server
- Triggers from Server to Client or from Client to Server can easily be disabled by removing actions thus removing the duplex functionality

• **Video demonstration** - [https://github.com/SKAARHOJ/Support/raw/master/Manuals/Videos/ServerClientTutorials/ETH-GPI\\_Link\\_ServerClient.mov](https://github.com/SKAARHOJ/Support/raw/master/Manuals/Videos/ServerClientTutorials/ETH-GPI_Link_ServerClient.mov)

• **Default Config Server** - 2x8 GPIO TCP Server

• **Default Config Client** - 2x8 GPIO UniSketch TCP Client



### 1 x ETH-GPI Link + 1 x Tally Box

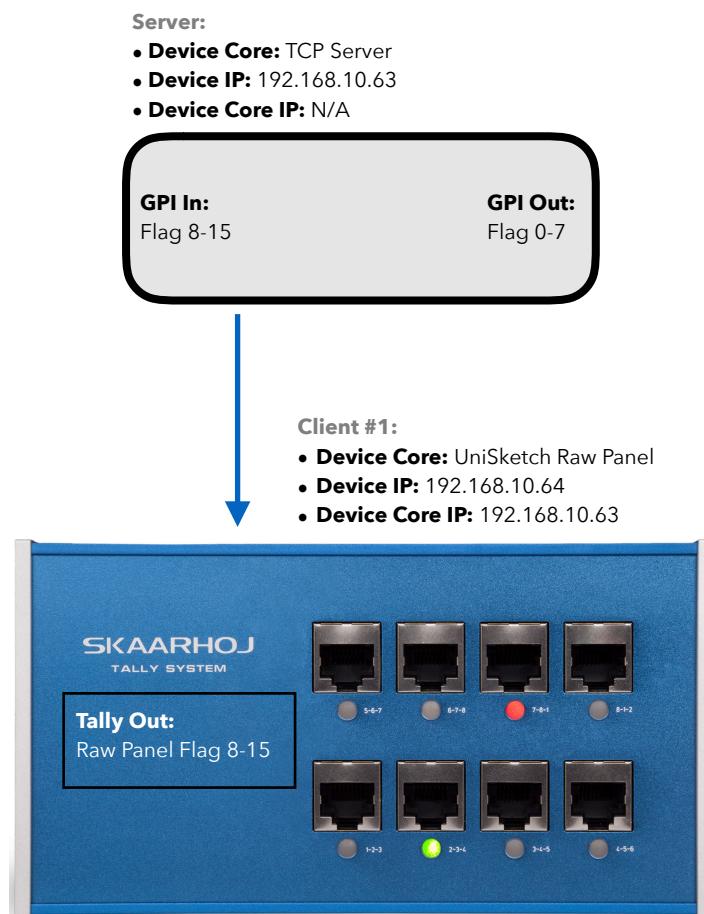
This setup sends GPI Triggers from a ETH-GPI Link to a Tally Box. This setup can be used if you want to use our Tally Box system, but we do not native IP integration with a particular device.

- Transport GPI In trigger from Server to Tally Out on Client

- **Video demonstration** - [https://github.com/SKAARHOJ/Support/raw/master/Manuals/Videos/ServerClientTutorials/ETH-GPI\\_Link\\_Server\\_Tally\\_Box\\_Client.mov](https://github.com/SKAARHOJ/Support/raw/master/Manuals/Videos/ServerClientTutorials/ETH-GPI_Link_Server_Tally_Box_Client.mov)

- **Default Config Server** - 2x8 GPIO TCP Server

- **Default Config Client** - ETH-GPI Link Interconnection. TCP Client



## Camera Selection on Secondary unit

This setup performs a camera selection on the secondary unit based on camera selection on the main unit. Example of usage is to have a PTZ controller for camera selection and pan, tilt zoom, while performing the shading on a secondary unit.

- Transport memory selection from main unit to secondary unit via "UniSketch Raw Panel: Memory"
- Notice using "Memory Groups" will not work. Single Memory values must be used i.e. "A" and not "AA". Therefore do not use the "Camera Selection" for specific Device Cores but the generic system action "System: Camera Select". Notice if Device Core Actions have "AA" as selector and not "A" it will not work.
- **Video demonstration** - <https://github.com/SKAARHOJ/Support/raw/master/Manuals/Videos/ServerClientTutorials/CameraSelectionSecondaryUnit.mov>
- **Default Config Main Unit/Client** - N/A
- **Default Config Secondary Unut/Server** - N/A

**Main Unit:**  
**Client:**

- **Device Core:** UniSketch Raw Panel
- **Device IP:** 192.168.10.222
- **Device Core IP:** 192.168.10.219
- **Camera Device Core:** Panasonic PTZ



**Secondary Unit:**  
**Server:**

- **Device Core:** TCP Server
- **Device IP:** 192.168.10.219
- **Device Core IP:** N/A

• **Camera Device Core:** Panasonic PTZ



#1	1
<b>Normal</b> System: Camera Select ▾ Cam 1 ▾ Mem A ▾ State: 0 ▾ Display Number: 1 ▾ and ▾ UniSketch Raw Panel: Memory ▾ A ▾ 1 ▾ Label: 0 ▾	
#2	2
<b>Normal</b> System: Camera Select ▾ Cam 2 ▾ Mem A ▾ State: 0 ▾ Display Number: 2 ▾ and ▾ UniSketch Raw Panel: Memory ▾ A ▾ 2 ▾ Label: 0 ▾	

#1	1
<b>Normal</b> System: Camera Select ▾ Cam 1 ▾ Mem A ▾ State: 0 ▾ Display Number: 1 ▾	
#2	2
<b>Normal</b> System: Camera Select ▾ Cam 2 ▾ Mem A ▾ State: 0 ▾ Display Number: 2 ▾	

Example of Camera Select Actions for CAM 1 + CAM 2. Notice the "UniSketch Raw Panel: Memory" action is used in addition to the regular camera select action. This ensures the memory is transmitted to the secondary nit

### 2 x ETH-GPI Link + 1 x Controller

This setup builds on top of the "2 x ETH-GPI Link in Duplex Mode" by having a controller to reflect GPI In from server and set GPI Out on Client #1. Please notice this configuration is not designed to have a controller setting GPI Outs on multiple ETH-GPI Links.

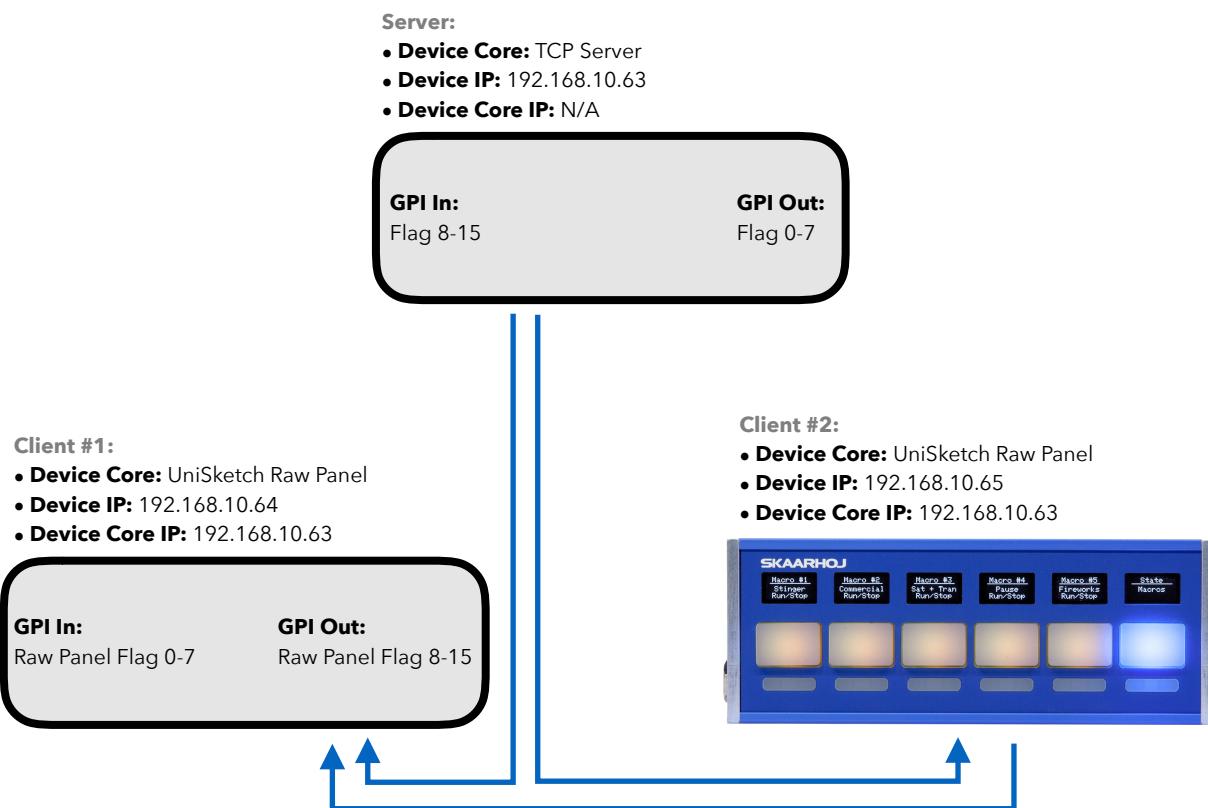
- Transport GPI In trigger from Server to GPI Out on Client #1
- Transport GPI In trigger from Client #1 to GPI Out on Server
- GPI In triggers from Server are reflected on Client #2
- GPI Out on Client #1 can be controlled on Client #2

• **Video demonstration** - [https://github.com/SKAARHOJ/Support/raw/master/Manuals/Videos/ServerClientTutorials/ETH-GPI\\_Server\\_ETH-GPI\\_Client\\_Quickbar\\_Client.mov](https://github.com/SKAARHOJ/Support/raw/master/Manuals/Videos/ServerClientTutorials/ETH-GPI_Server_ETH-GPI_Client_Quickbar_Client.mov)

• **Default Config Server** - 2x8 GPIO TCP Server

• **Default Config Client #1** - 2x8 GPIO UniSketch TCP Client

• **Default Config Client #2** - ETH-GPI Link GPIO Confidence. TCP Client



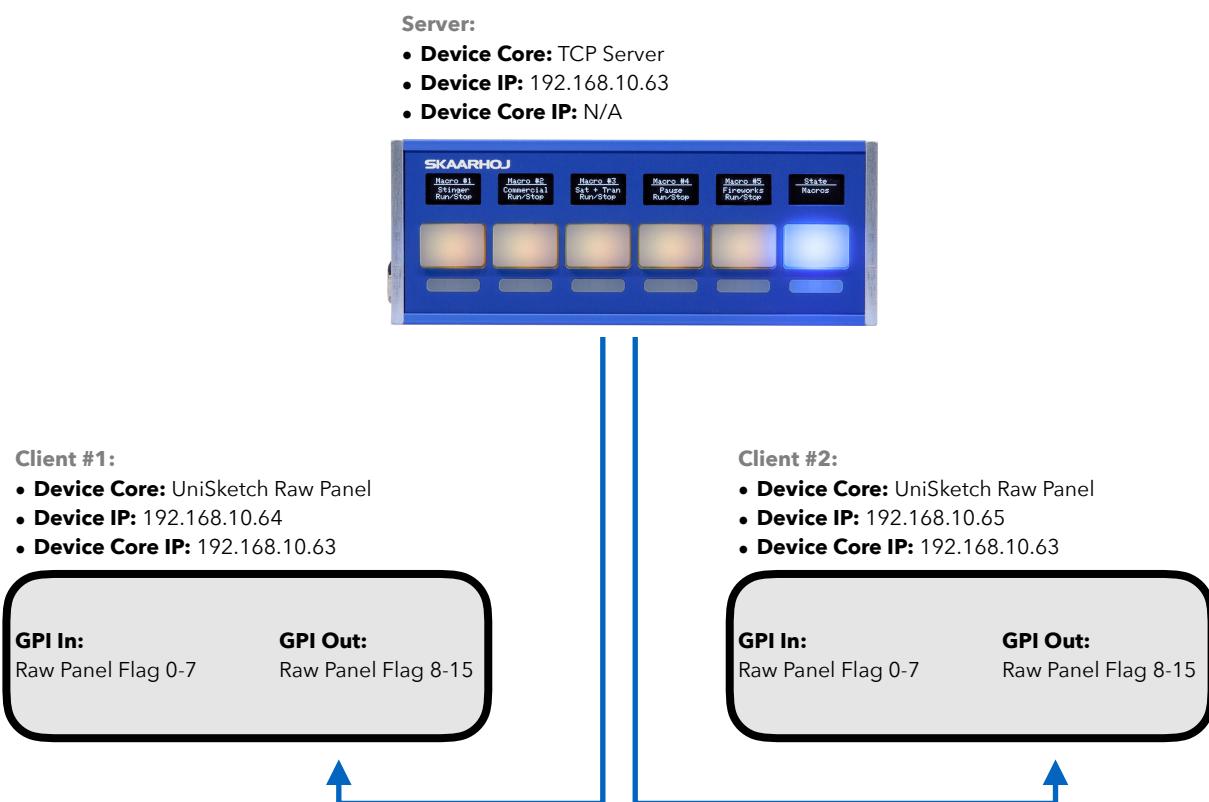
## 1 x Controller + 2 x ETH-GPI Link

This setup is for setting GPI Outs on Multiple ETH-GPI Links from a single controller

- Sets GPI Out trigger from Server to Client #1 + Client #2

- **Video demonstration** - [https://github.com/SKAARHOJ/Support/raw/master/Manuals/Videos/ServerClientTutorials/QuickBar\\_Server\\_2x\\_ETH-GPI\\_Link\\_Client.mov](https://github.com/SKAARHOJ/Support/raw/master/Manuals/Videos/ServerClientTutorials/QuickBar_Server_2x_ETH-GPI_Link_Client.mov)

- **Default Config Server** - Multiple ETH-GPI Link Control. TCP Server
- **Default Config Client #1** - 2x8 GPIO UniSketch TCP Client
- **Default Config Client #2** - 2x8 GPIO UniSketch TCP Client



## 2 x Controllers + 1 x ETH-GPI Link

This setup is for having multiple controllers to trigger GPI Out on a single ETH-GPI Link. The configuration is so that if GPI is triggered, it is reflected on all controllers, connected to the ETH-GPI Link.

- Sets GPI Out trigger from Client #1 + Client #2 + Client #x to Server
- If a GPI Out is active on the server it is reflected on the Clients

- **Video demonstration** - [https://github.com/SKAARHOJ/Support/raw/master/Manuals/Videos/ServerClientTutorials/ETH-GPI\\_Link\\_Server\\_2x\\_QuickBar\\_Client.mov](https://github.com/SKAARHOJ/Support/raw/master/Manuals/Videos/ServerClientTutorials/ETH-GPI_Link_Server_2x_QuickBar_Client.mov)
- **Default Config Server** - 2x8 GPIO TCP Server
- **Default Config Client #1** - Multiple Controller ETH-GPI Link Management. TCP Client
- **Default Config Client #2** - Multiple Controller ETH-GPI Link Management. TCP Client

