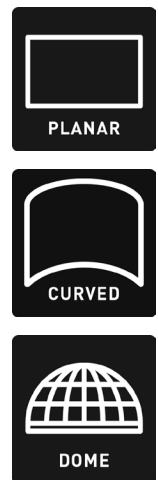
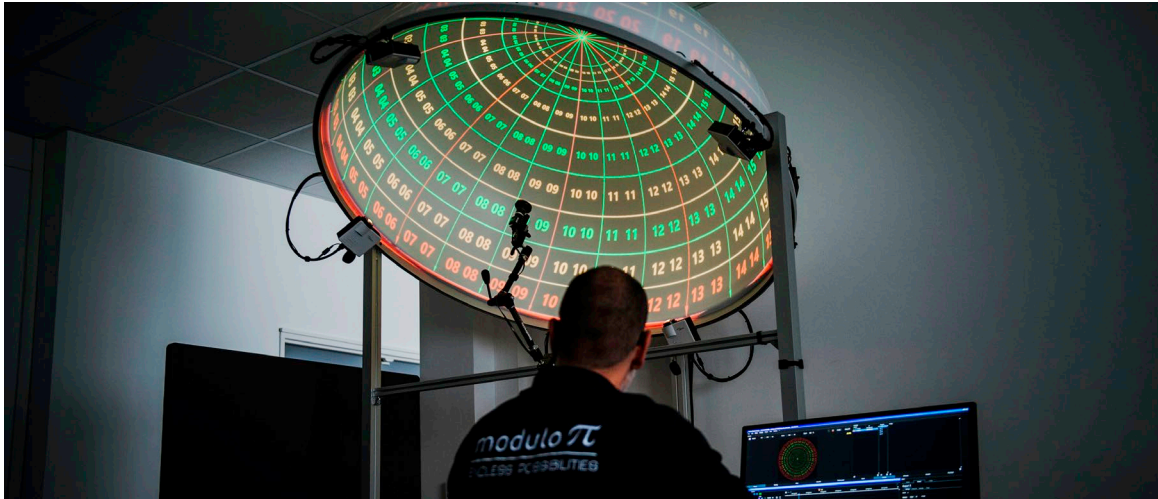


# Auto-Calibration



## Multi-projector auto-calibration system by Modulo Pi

REF: AUTOCAL-1-OUT

### Optional module for automatic multi-projector calibration

Achieve a perfectly warped and blended projection within minutes thanks to Modulo Pi's auto-calibration solution. Available as an option for the **Modulo Player** and **Modulo Kinetic** media servers, the auto-calibration feature allows to automatically align multiple video-projectors on **planar, curved, and dome surfaces** for a pixel-perfect projection.

Developped by Modulo Pi, the auto-calibration module relies on PoE cameras for fast and simplified cabling. Use one camera to capture your whole projection surface, and the auto-calibration module will do the rest. Your Modulo Pi media server will project a series of patterns, and video-projectors will automatically align in a few minutes. The versatile masking feature ensures a perfectly fine-tuned projection.

With the auto-calibration option added in your **Modulo Player** and **Modulo Kinetic** media servers, you will benefit from a **reliable and significantly simplified workflow**: Get a high-precision edge blending, warping, and play your content within minutes, and with zero latency.

## Hardware specifications

### Dongle

Dongle-based option for Modulo Player and Modulo Kinetic  
Dongle embedded in server or available as stand-alone  
Dongle must remain connected to server(s)

### Outputs

Support of independent calibration groups  
Support of stacked video-projectors (dual, triad, quad...)  
Price per output. Contact us for more details.



Optional travel case  
with custom inserts

### Model



### Media servers

Mono server supported<sup>(1)</sup>

Mono & multi-servers supported  
Unlimited number of servers

### Outputs / Canvas

Up to 6 outputs WQXGA<sup>(2)</sup> or 4 outputs up to 4K<sup>(3)</sup>

Up to 6 outputs WQXGA<sup>(2)</sup> or 4 outputs up to 4K<sup>(3)</sup> in mono-server config.  
Unlimited number of outputs in multi-servers configuration  
Unlimited resolution in multi-servers configuration

<sup>(1)</sup> Compatible with Modulo Player Remote for PC only

<sup>(2)</sup> 2560x1600

<sup>(3)</sup> 4096x2160

## Reference

AUTOCAL-1-OUT	Multi-projector auto-calibration module (price per output)
AUTOCAL-LUCAM	PoE camera with 1 x 15m cable
AUTOCAL-FILENS	High resolution fish-eye lens
AUTOCAL-8LENS	High resolution 8 mm lens
AUTOCAL-CASE	Travel case with custom inserts for 1 x PoE camera, 15m cable, auto-calibration dongle, and up to 2 lenses

## Camera specifications

### Camera and lens

Power over Ethernet camera for fast and simplified cabling  
Compatible with fish-eye lenses for dome configurations  
One camera required for each auto-calibration group

References supported below. Available through Modulo Pi,  
or directly through the manufacturers or resellers.



[LUCID - Triton 20 MP](#)



[FUJINON - FE185](#)



[FUJINON - CF8ZA-1S](#)

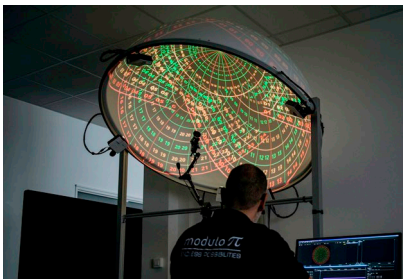
## Software specifications

### Software

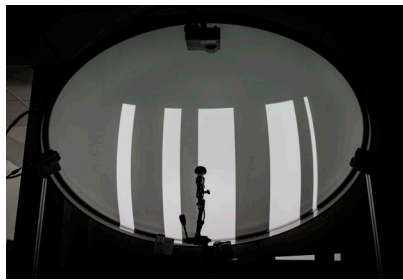
Auto-calibration wizard embedded in Modulo Player and  
Modulo Kinetic for quick and easy calibration  
One-click calibration mode

Advanced masking feature for pixel-perfect projection  
Global warping capability  
Zero latency

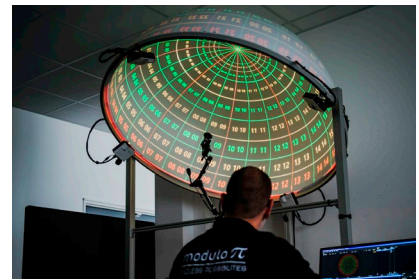
### Process



Dome before calibration  
5 video-projectors - 1 PoE Camera

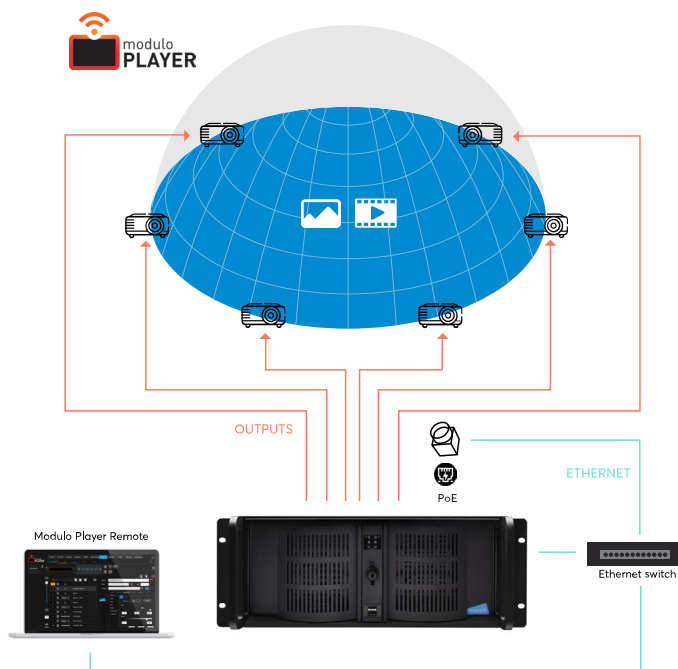


Patterns projected during  
auto-calibration phase



Dome after calibration with  
automatic blending and warping

### Mono-server configuration Diagram with Modulo Player and a dome screen



### Multi-server configuration Diagram with Modulo Kinetic and a semi-elliptical screen

