





**AVB** (Audio - Video - Bridge) is a digital network protocol for the transport of time sensitive data via Ethernet. It is an industrial standardized protocol that is used in multimedia productions to send audio, video and other data via a network. The same network can also be used for "normal" TCP/IP communication.

Besides the laser projector PHAENON accurate, which supports both standards (ILDA and AVB), we offer three different AVB adapters that take full advantage of AVB for non-AVB laser systems.





# Specifications

**AVB** Devices

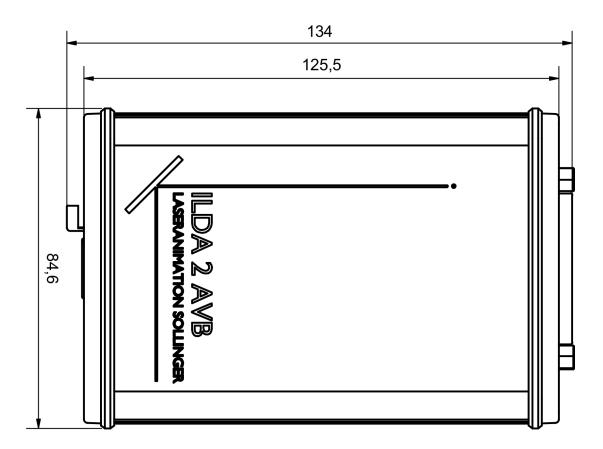
**ILDA2AVB** This device converts analog ILDA signals into the digital AVB protocol. It can be used with any laser controller that supports ILDA output.

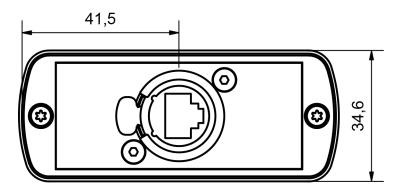
- sample rate: 48 / 96 / 192 kHz
- x/y signal + 6 colour channels
- 24bit resolution on all channels
- PoE+ Class 3 powered (5W AVG)
- etherCON connector
- robust housing (35 x 85 x 125mm)

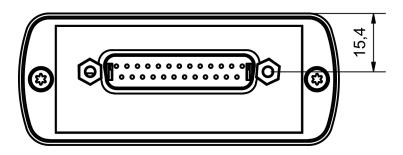
















# Specifications

**AVB** Devices

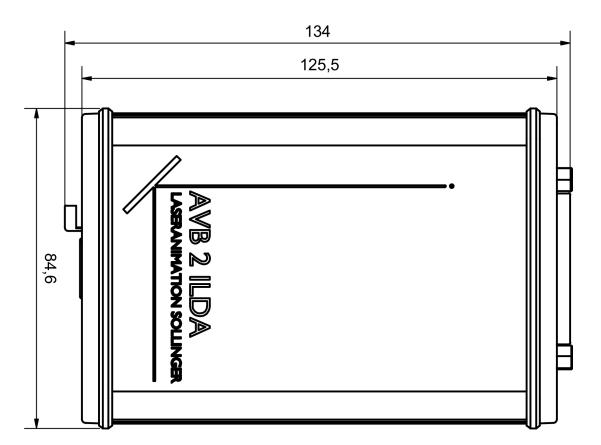
**AVB2ILDA** This device converts digital AVB protocol data into analog ILDA signals. It can be used with any laser projector that supports ILDA standard.

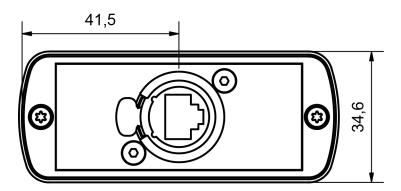
- sample rate:48 / 96 / 192 kHz
- x/y signal + 6 colour channels
- 24bit resolution on all channels
- PoE+ Class 3 powered (5W AVG)
- etherCON connector
- robust housing (35 x 85 x 125mm)
- further features are listed below

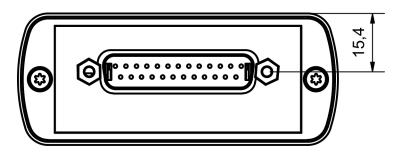
















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# Specifications

**AVB** Devices

**USB2AVB** This device converts the digital AVB protocol to USB.

- sample rate:48 / 96 / 192 kHz
- x/y signal + 6 colour channels
- 24bit resolution on all channels
- PoE+ Class 3 powered (5W AVG)
- etherCON connector
- robust housing  $(35 \times 110 \times 143 \text{mm})$
- further features are listed below





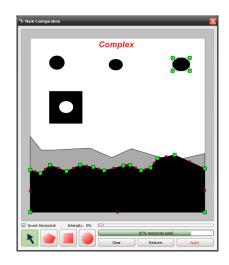




Further features included

> Electronic Masking

This important function allows limiting the laser output for certain areas. The intensity of the laser beam can be adjusted in a range from 0% to 100% for each individual shape created with the editor. This makes it possible to correctly protect specific scanning areas such as the auditorium or sectors with optical equipment (video beamers, cameras). The big advantage of this mask, which is configured in the projector, compared to a mask generated in the show controller is the fact that programming errors which may occur when a show is edited will not disable the mask.



**Color Correction** The color correction of the AVB2ILDA adapter can be used for projectors and show controller without color adjustment.

Three ILDA color channels are supported. Each color can be scaled from 0% to 100% with a resolution of 24bit. With the button "White", the laser power for each laser source is calculated which equivals True White D65.

	Hendred Color/ILDA Settings
	Color Delay Delay Red: 0.0 us
Color Adjust	Delay Green: 0 0.0 us
Setting: White 1 2 3 Advanced Edit Save	Delay Blue: 0 0.0 us
Red: ^1.00 ~0.35 100.00%   Green: ^1.00 ~0.35 100.00%   Blue: ^1.00 ~0.35 100.00%	ILDA Settings Intensity/Blank: Blanked Off On





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### DGC Mapping

With DGC (Digital Geometric Correction), the projection image can be easily corrected and used for projectors or show controllers without integrated DGC.

Sixteen different geometrical correction setups are available. For each setup the DGC Input and Output can be adjusted individually and the laser image can be corrected for projection on uncommen projection surfaces.

### For example:

The projection surface is uneven and consists of two panels positioned at an angle. One half of the DGC Input has to be displayed on the left side of the uneven projection surface and the other half on the right side.

First you choose which area of the DGC Input you want to display on the projection surface. Then, you correct the DGC Output so that the projection of the image is displayed correctly on the area of the projection surface.

B DGC [1]				-	<
1:1 + - 🗆 snap	Input	1:1 + - 🗆 sna	D	Outp	ut
1					
3					
4					
5					
6 .		A.	49	B	
8					
9 :					
10					
11 :					
13				C	
14 :			D		
15 <b>:</b> 16 <b>:</b>					
16 :					
3D					
fine				Save	

**Laser Disable** The Laser Disable is a special button which is used to disable the laser output over the Ethernet.

The Laser Disable can be integrated into and switched off easily via a network. The activity of four different Laser Disables can be controlled via the setup of the PHAENON accurate.

Laser Disable				
LD 1: Off	) Off ) On	IP: 10.30.84.80	Timeout(>60.000s)	$\bigcirc$ Off $\bigcirc$ On $0.1$ sec
LD 2: Off	) Off 😡 On	IP: 10. 30. 84. 75	Timeout(>60.000s)	○ Off ○ On 3.0 sec
LD 3: Off	) Off 😡 On	IP: 0.0.0.0	Timeout(>60.000s)	Off
LD 4: Off	) Off 😡 On	IP: 192. 168. 1. 62	Timeout(>60.000s)	Off

For recording and playback a laser show, we recommend Ableton Live or Motu Digital Performer. For generating data you can use MAXMSP or Touch Designer.



