DMX REFERENCE

CAPTURE camera control

OGSON fixtures

Manufacturer	OGSON fixtures
GDTF file	OGSON_fixtures_CAPTURE_camera_control_49997.gdtf
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1 About this manual

This document describes the CAPTURE camera control by OGSON fixtures. It was compiled from the GDTF file OGSON_fixtures_CAPTURE_camera_control_49997.gdtf from the GDTF-Share library.

File revision: “ogi_v4”.

The DMX modes, the channel functions and the technical data are given as the GDTF file states them. Installation, operation from the device's control panel, service and safety instructions are described in the manufacturer's original user manual, which takes precedence over this document.

This document was not issued or endorsed by OGSON fixtures; product names and trademarks belong to their owners.

Safety notices are marked with signal words according to the severity of the hazard: DANGER – an imminent hazard that will result in death or serious injury; WARNING – a potential hazard that could result in death or serious injury; CAUTION – a potential hazard that could result in minor injury or property damage; NOTE – additional information for correct and safe use.

> **NOTE** This product is designed for stage and effect lighting. It is not suitable for household room illumination.

2 Quick reference

DMX modes

Mode	Channels	Units in one universe	First start addresses
Standard	12	42	1, 13, 25, 37, ...
Extended	14	36	1, 15, 29, 43, ...
Legacy 16-Bit Standard	18	28	1, 19, 37, 55, ...
Legacy 16-Bit Extended	20	25	1, 21, 41, 61, ...
Legacy 8-Bit Extended	18	28	1, 19, 37, 55, ...



Read the manual before use



Do not stare into the light



Indoor use only

3 Safety instructions



Read the manual before use



Do not stare into the light



Indoor use only

⚠ WARNING

- This device is intended for professional use. Installation, connection, setup and maintenance must be carried out only by suitably qualified persons who have read this manual.
- Use the device only for its intended purpose and as described in this manual.
- Do not open the housing and do not modify or tamper with the device. Refer all repairs to an authorized service center.
- Do not use the device if its housing, power or data cable, or a connector is damaged, if the device has been dropped, or if liquid or a foreign object has entered it. In such a case, have it checked by a service center.
- Disconnect the device from the power supply before cleaning, maintenance or any work on the connections.
- After moving the device from a cold to a warm environment, let it reach room temperature before switching it on to prevent condensation inside.
- The device is not a toy; keep it out of the reach of children.

⚠ WARNING

- This device is designed for indoor use only. Protect it from rain, splashing water, moisture and dust, and do not place containers with liquids on it.
- Do not operate the device in high humidity, near water, or where condensation can form on it.

⚠ CAUTION

- This device emits intense light. Do not look directly into the light source or the beam at close range; doing so may damage your eyes.
- Do not aim the beam at the eyes of people or animals at close range, and do not view the light source through optical instruments (binoculars, camera lenses).
- Do not aim the beam at flammable or heat-sensitive materials at close range.

4 Installation

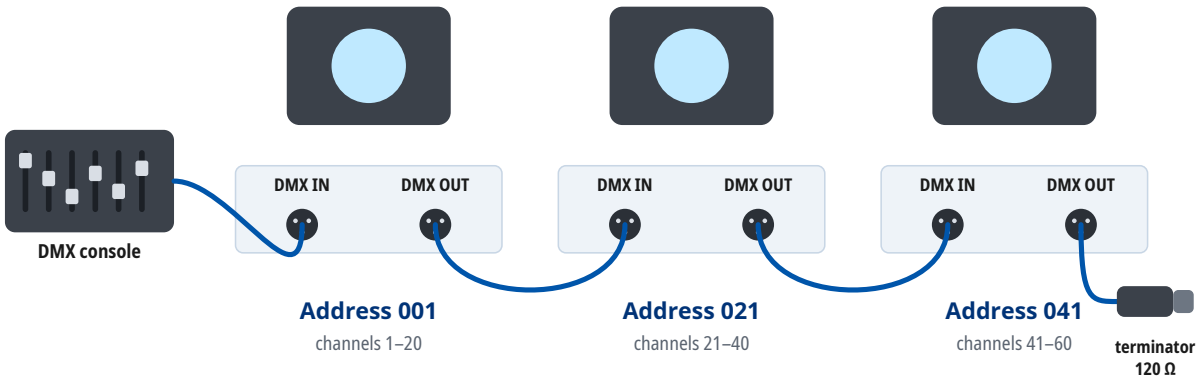
⚠ WARNING

- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Use suitable mounting hardware (for example truss clamps) and tighten all screw connections properly.
- Always secure the suspended device against falling with a safety cable of adequate load capacity, routed through a fixed point of the device and around the supporting structure.
- During installation and removal, keep people out of the area below the work position.
- Regularly inspect the fixings and the safety cable for damage, corrosion and loosening.

5 Connections

- Use shielded cable designed for DMX512 with an impedance of 110 Ω. Ordinary microphone cable is not suitable for DMX, especially over longer distances.
- Connect the devices in a daisy chain: connect the DMX OUT of one device to the DMX IN of the next. Do not split the line with Y-cables or wire it in a star; the line may be split only with a DMX splitter.
- Connect the shield to pin 1 only. Do not connect the shield (ground) to the metal shell of the connector; this can cause short circuits or erratic behavior.
- XLR pin assignment: pin 1 – shield (ground), pin 2 – Data- (Data Complement), pin 3 – Data+ (Data True). On 5-pin connectors, pins 4 and 5 are not connected; a 5-pin connector can be connected to a 3-pin one with a cable adapter.
- Terminate the end of the line (for impedance matching): plug an XLR connector with a 120 Ω, ¼ W resistor between pins 2 and 3 into the DMX OUT of the last device. This reduces the risk of erratic behavior.
- Connect no more than 32 devices to one DMX line. For more devices or longer runs, use a DMX splitter or booster.

DMX line



Mode Legacy 16-Bit Extended: every unit occupies 20 channels from its address. At most 32 units on one line; for more units or longer runs use a DMX splitter. A 120 Ω terminator closes the last DMX OUT.

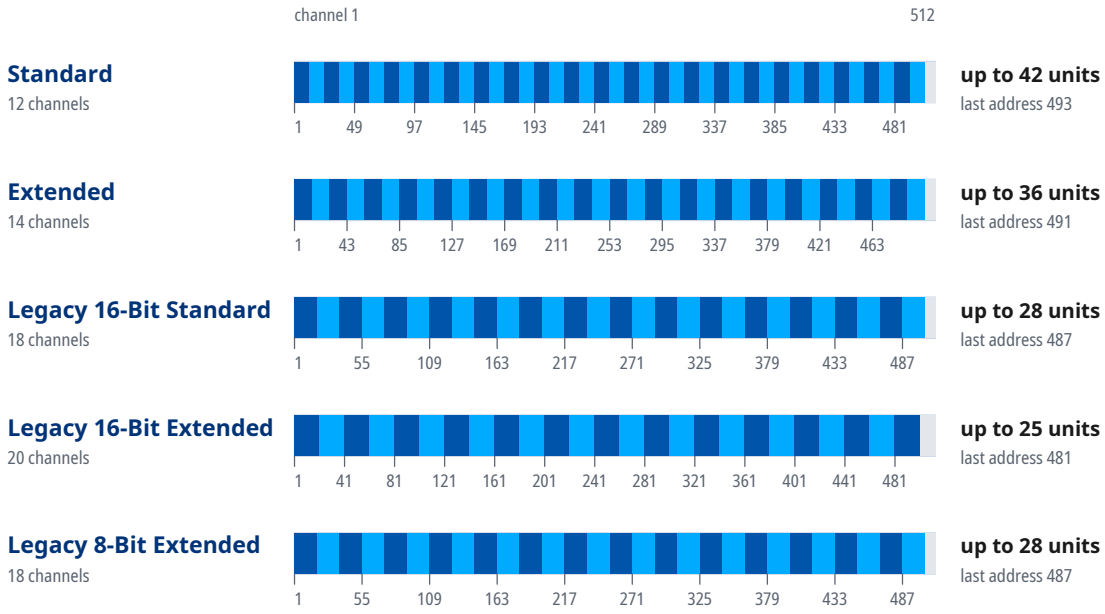
6 Operation

Setting the DMX address

- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Legacy 16-Bit Extended”: 20.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied channel does not exceed 512. Devices with the same start address and mode respond identically.
- For several devices in a row in the DMX mode “Legacy 16-Bit Extended”, you can use, for example, the start addresses 1, 21, 41, 61.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

7 DMX channels

Units in one DMX universe



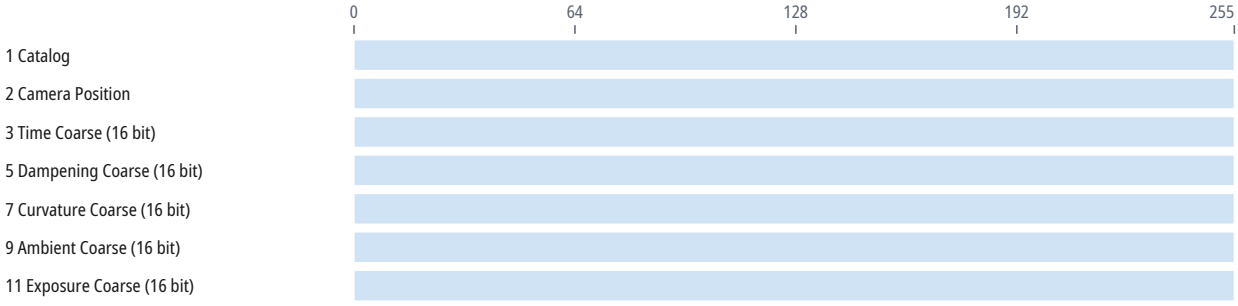
Start addresses of 20 units in the mode “Legacy 16-Bit Extended”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	101	11	201	16	301
2	21	7	121	12	221	17	321
3	41	8	141	13	241	18	341
4	61	9	161	14	261	19	361
5	81	10	181	15	281	20	381

Mode Standard

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

Channel functions at a glance

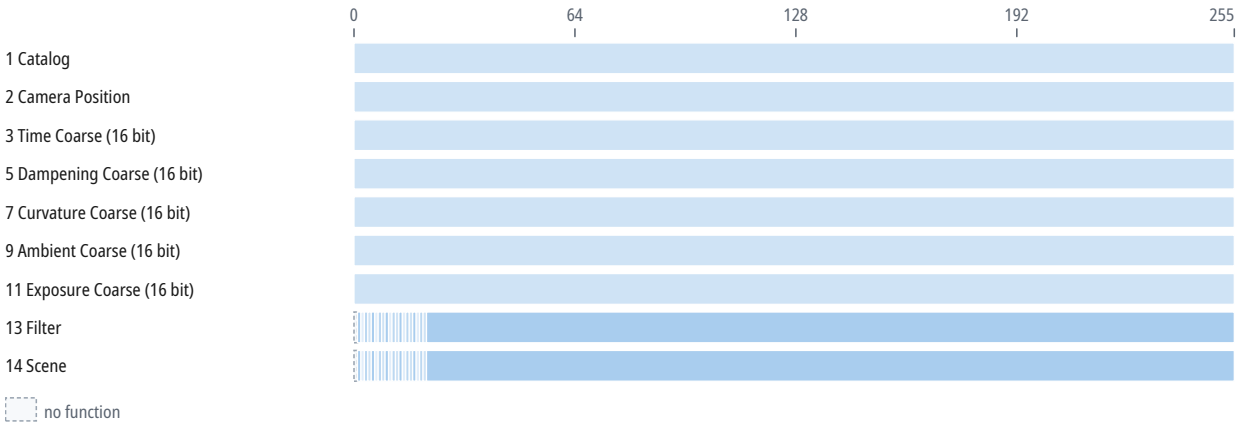


CH	Function	DMX	Description
1	Catalog	0–255	
2	Camera Position	0–255	
3	Time Coarse	0–255	
4	Time Coarse Fine	0–255	Fine adjustment of CH 3
5	Dampening Coarse	0–255	
6	Dampening Coarse Fine	0–255	Fine adjustment of CH 5
7	Curvature Coarse	0–255	
8	Curvature Coarse Fine	0–255	Fine adjustment of CH 7
9	Ambient Coarse	0–255	
10	Ambient Coarse Fine	0–255	Fine adjustment of CH 9
11	Exposure Coarse	0–255	
12	Exposure Coarse Fine	0–255	Fine adjustment of CH 11

Mode Extended

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

Channel functions at a glance

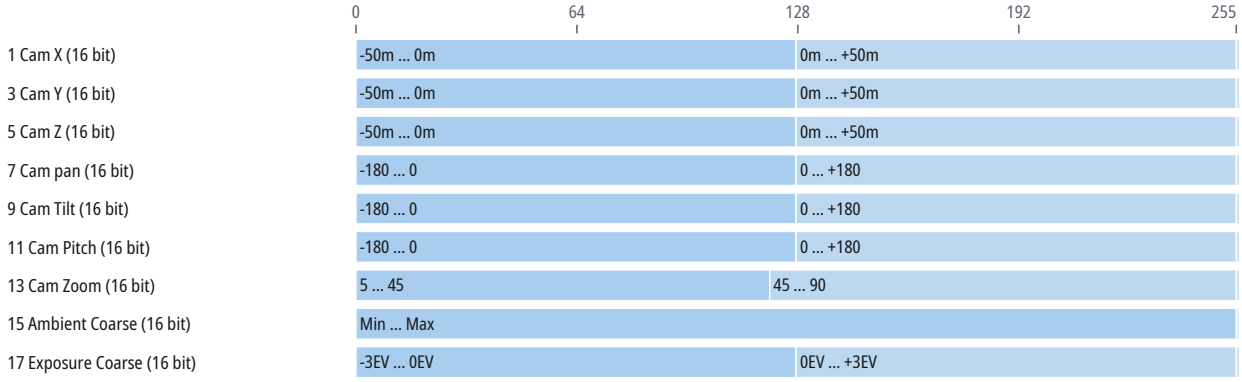


CH	Function	DMX	Description
1	Catalog	0–255	
2	Camera Position	0–255	
3	Time Coarse	0–255	
4	Time Coarse Fine	0–255	Fine adjustment of CH 3
5	Dampening Coarse	0–255	
6	Dampening Coarse Fine	0–255	Fine adjustment of CH 5
7	Curvature Coarse	0–255	
8	Curvature Coarse Fine	0–255	Fine adjustment of CH 7
9	Ambient Coarse	0–255	
10	Ambient Coarse Fine	0–255	Fine adjustment of CH 9
11	Exposure Coarse	0–255	
12	Exposure Coarse Fine	0–255	Fine adjustment of CH 11
13	Filter	0	No function
		1–20	Filter 1...20
		21–255	Filter 1
14	Scene	0	No function
		1–20	Scene 1...20
		21–255	Scene 1

Mode Legacy 16-Bit Standard

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

Channel functions at a glance



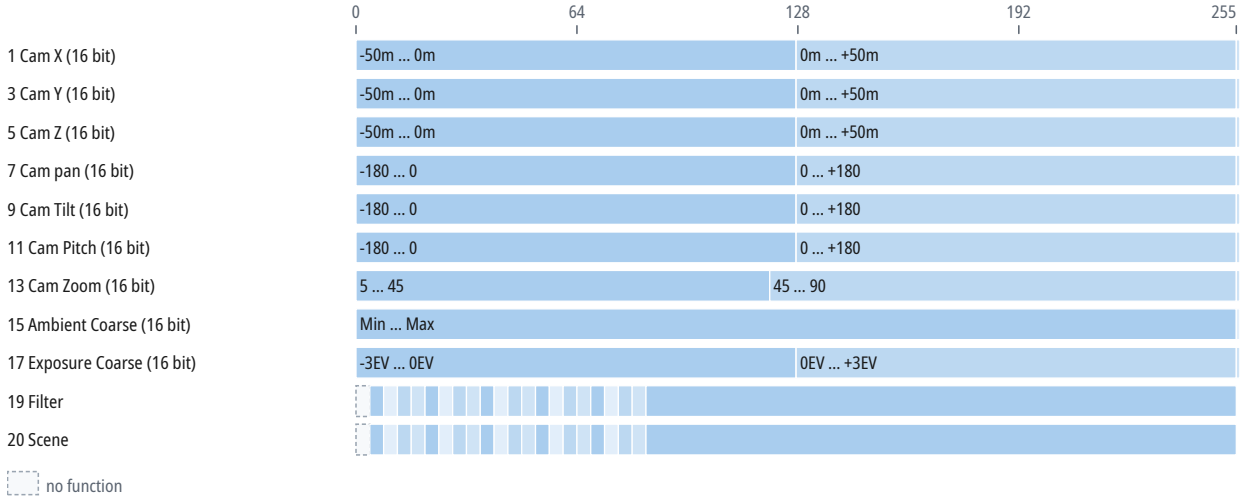
CH	Function	DMX	Description
1	Cam X	0–127	-50m ... 0m
		127	0m
		128–255	0m ... +50m
		255	+50m
2	Cam X Fine	0–255	Fine adjustment of CH 1
3	Cam Y	0–127	-50m ... 0m
		127	0m

CH	Function	DMX	Description
3	Cam Y (continued)	128–255	0m ... +50m
		255	+50m
4	Cam Y Fine	0–255	Fine adjustment of CH 3
5	Cam Z	0–127	-50m ... 0m
		127	0m
		128–255	0m ... +50m
		255	+50m
6	Cam Z Fine	0–255	Fine adjustment of CH 5
7	Cam pan	0–127	-180 ... 0
		127	0
		128–255	0 ... +180
		255	+180
8	Cam pan Fine	0–255	Fine adjustment of CH 7
9	Cam Tilt	0–127	-180 ... 0
		127	0
		128–255	0 ... +180
		255	+180
10	Cam Tilt Fine	0–255	Fine adjustment of CH 9
11	Cam Pitch	0–127	-180 ... 0
		127	0
		128–255	0 ... +180
		255	+180
12	Cam Pitch Fine	0–255	Fine adjustment of CH 11
13	Cam Zoom	0–120	5 ... 45
		120–255	45 ... 90
		255	90
14	Cam Zoom Fine	0–255	Fine adjustment of CH 13
15	Ambient Coarse	0–255	Min ... Max
		255	Max
16	Ambient Coarse Fine	0–255	Fine adjustment of CH 15
17	Exposure Coarse	0–127	-3EV ... 0EV
		127	0EV
		128–255	0EV ... +3EV
		255	+3EV
18	Exposure Coarse Fine	0–255	Fine adjustment of CH 17

Mode Legacy 16-Bit Extended

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

Channel functions at a glance



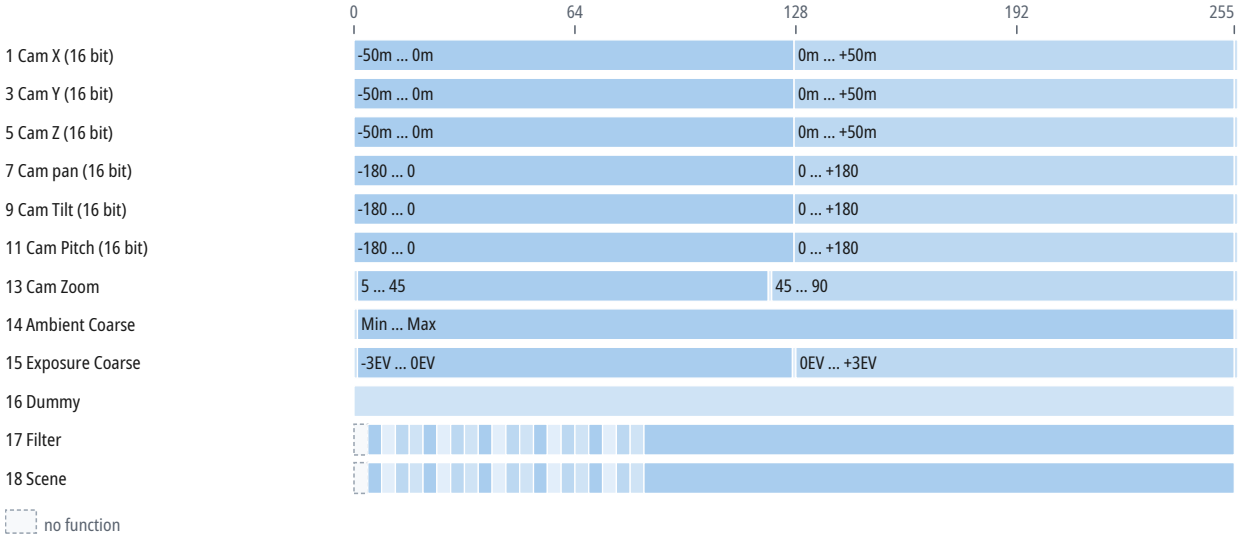
CH	Function	DMX	Description
1	Cam X		Same as CH 1 in the mode “Legacy 16-Bit Standard” (p. 7)
2	Cam X Fine	0–255	Fine adjustment of CH 1
3	Cam Y		Same as CH 3 in the mode “Legacy 16-Bit Standard” (p. 7)
4	Cam Y Fine	0–255	Fine adjustment of CH 3
5	Cam Z		Same as CH 5 in the mode “Legacy 16-Bit Standard” (p. 8)
6	Cam Z Fine	0–255	Fine adjustment of CH 5
7	Cam pan		Same as CH 7 in the mode “Legacy 16-Bit Standard” (p. 8)
8	Cam pan Fine	0–255	Fine adjustment of CH 7
9	Cam Tilt		Same as CH 9 in the mode “Legacy 16-Bit Standard” (p. 8)
10	Cam Tilt Fine	0–255	Fine adjustment of CH 9
11	Cam Pitch		Same as CH 11 in the mode “Legacy 16-Bit Standard” (p. 8)
12	Cam Pitch Fine	0–255	Fine adjustment of CH 11
13	Cam Zoom		Same as CH 13 in the mode “Legacy 16-Bit Standard” (p. 8)
14	Cam Zoom Fine	0–255	Fine adjustment of CH 13
15	Ambient Coarse		Same as CH 15 in the mode “Legacy 16-Bit Standard” (p. 8)
16	Ambient Coarse Fine	0–255	Fine adjustment of CH 15
17	Exposure Coarse		Same as CH 17 in the mode “Legacy 16-Bit Standard” (p. 8)
18	Exposure Coarse Fine	0–255	Fine adjustment of CH 17
19	Filter	0–3	No function
		4–7	Filter 1
		8–11	Filter 2
		12–15	Filter 3
		16–19	Filter 4
		20–23	Filter 5
		24–27	Filter 6

CH	Function	DMX	Description
19	Filter (continued)	28–31	Filter 7
		32–35	Filter 8
		36–39	Filter 9
		40–43	Filter 10
		44–47	Filter 11
		48–51	Filter 12
		52–55	Filter 13
		56–59	Filter 14
		60–63	Filter 15
		64–67	Filter 16
		68–71	Filter 17
		72–75	Filter 18
		76–79	Filter 19
		80–83	Filter 20
		84–255	Filter 1
20	Scene	0–3	No function
		4–7	Scene 1
		8–11	Scene 2
		12–15	Scene 3
		16–19	Scene 4
		20–23	Scene 5
		24–27	Scene 6
		28–31	Scene 7
		32–35	Scene 8
		36–39	Scene 9
		40–43	Scene 10
		44–47	Scene 11
		48–51	Scene 12
		52–55	Scene 13
		56–59	Scene 14
		60–63	Scene 15
		64–67	Scene 16
		68–71	Scene 17
		72–75	Scene 18
		76–79	Scene 19
		80–83	Scene 20
		84–255	Filter 1

Mode Legacy 8-Bit Extended

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

Channel functions at a glance



CH	Function	DMX	Description
1	Cam X		Same as CH 1 in the mode “Legacy 16-Bit Standard” (p. 7)
2	Cam X Fine	0–255	Fine adjustment of CH 1
3	Cam Y		Same as CH 3 in the mode “Legacy 16-Bit Standard” (p. 7)
4	Cam Y Fine	0–255	Fine adjustment of CH 3
5	Cam Z		Same as CH 5 in the mode “Legacy 16-Bit Standard” (p. 8)
6	Cam Z Fine	0–255	Fine adjustment of CH 5
7	Cam pan		Same as CH 7 in the mode “Legacy 16-Bit Standard” (p. 8)
8	Cam pan Fine	0–255	Fine adjustment of CH 7
9	Cam Tilt		Same as CH 9 in the mode “Legacy 16-Bit Standard” (p. 8)
10	Cam Tilt Fine	0–255	Fine adjustment of CH 9
11	Cam Pitch		Same as CH 11 in the mode “Legacy 16-Bit Standard” (p. 8)
12	Cam Pitch Fine	0–255	Fine adjustment of CH 11
13	Cam Zoom	0	5
		1–119	5 ... 45
		120	45
		121–254	45 ... 90
		255	90
14	Ambient Coarse	0	Min
		1–254	Min ... Max
		255	Max
15	Exposure Coarse	0	-3EV
		1–126	-3EV ... 0EV
		127	0EV

CH	Function	DMX	Description
15	Exposure Coarse (continued)	128–254	0EV … +3EV
		255	+3EV
16	Dummy	0–255	
17	Filter		Same as CH 19 in the mode “Legacy 16-Bit Extended” (p. 9)
18	Scene		Same as CH 20 in the mode “Legacy 16-Bit Extended” (p. 10)

8 Technical specifications

Parameter	Value
Operating temperature	0 to 40 °C

9 Maintenance and cleaning

- Before cleaning and maintenance, switch the device off, disconnect it from the power supply and let it cool down.
- Clean the housing with a soft, dry or slightly damp cloth. Do not use solvents, abrasive cleaners or pressure washers, and make sure no liquid gets into the device.
- Clean optical parts (lenses, front glass), if the device has any, with a soft lint-free cloth and a cleaner intended for optics or glass.
- Regularly inspect the housing, cables, connectors and fixings. Have damaged parts replaced by a service center.
- How often to clean depends on the environment; dust, smoke and fog make the device dirty much faster.

10 Troubleshooting

Problem	Remedy
The device does not switch on	Check the supply voltage, the cables and the fuse, if the device has one.
The device does not respond to DMX	Check the start address, the selected DMX mode and whether it matches the profile in the controller, the cable connection to DMX IN, and the controller output (universe).
The device behaves erratically or flickers	Check the terminator at the end of the line, the condition and wiring of the cables (shield on pin 1 only), the number of devices on the line (32 at most), and that the line is not split without a splitter.
Only some devices on the line respond	Check the cable and connectors between the last working and the first non-working device, and make sure all devices on the line are switched on.
Devices respond to the wrong channels or affect each other	Check that the addresses do not overlap and that the DMX mode on the devices matches the patch in the controller.
The device or the connected load does not light up although it receives DMX	Check the values of the dimmer, shutter and strobe channels against the DMX channel table.

11 Disposal

The crossed-out wheeled bin symbol on the product, in the manual or on the packaging means that the product must not be disposed of with unsorted household waste at the end of its life.

Take the end-of-life equipment to a collection point, for example a municipal collection site or a retailer. Proper disposal enables materials to be recycled and helps prevent possible negative effects on the environment and human health.

Follow the regulations applicable in your country; in the Czech Republic, take-back is governed by Act No. 542/2020 Coll., on End-of-Life Products.

Recycle the packaging materials according to their type.