

YSC-HD-AK1 HDMI / HD-SDI



Remote Head –Kamera
1/2.7“ CMOS
2.14 Megapixel Sensor
image memory



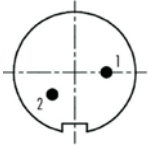
Video Output |1| HDMI
Video Output |2| HD-SDI
Video Output |3| HD-SDI

signal system 1080p/30fps

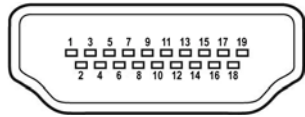


YSC-HD-AK1

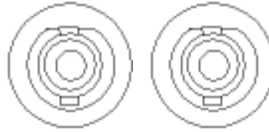
HDMI / HD-SDI



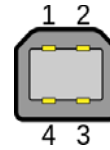
POWER



HDMI



HD-SDI



USB



Pin	Signal
1	+12V DC
2	GND

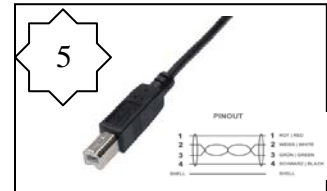


Pin	Signal
1	TMDS D2+
2	TMDS D2 S
3	TMDS D2-
4	TMDS D1+
5	TMDS D1 S
6	TMDS D1-
7	TMDS D0+
8	TMDS D0 S
9	TMDS Takt 0-
10	TMDS Takt +
11	TMDS Takt S
12	TMDS Takt -
13	CEC
14	Reserviert
15	SCL
16	SDA
17	DDC/CED
18	+5V
19	Hot-Plug-Erkennung



Pin	Signal
1	HD-SDI
2	GND

Pin	Signal
1	HD-SDI
2	GND



Pin	Signal
1	+5V DC
2	Daten -
3	Daten +
4	GND



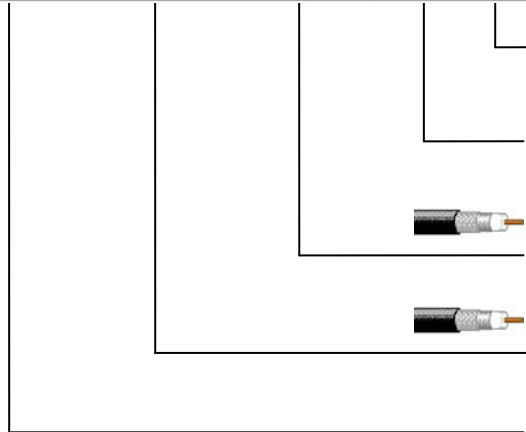
camera head



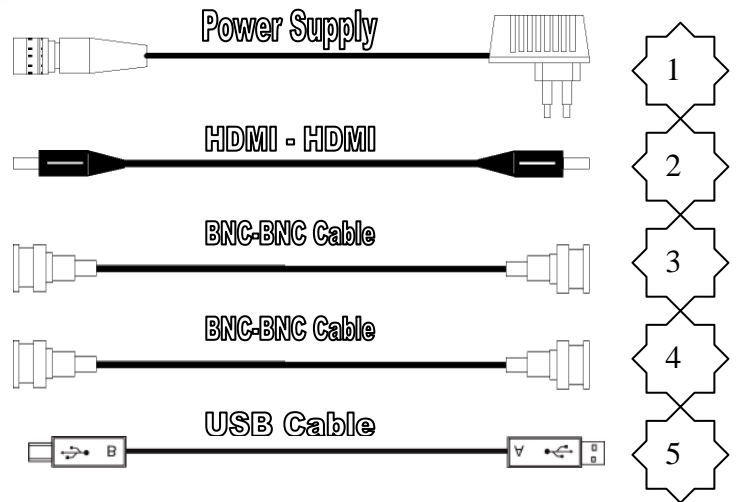
Pin	Signal
1	Video N
2	Video P
3	n.c
4	n.c
5	GND
6	DC +5V
7	OV SIOD
8	OV SIOC

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connection diagram



Vergleich PAL / 720p / 1080p			
	PAL	720P	1080p
vertical resolution	576 image lines	720 image lines	1080 image lines
horizontal resolution	720 image lines	1280 image lines	1920 image lines
pixels	414.720	921.000	2.073.600
repeat image	interlaced	progressive	progressive

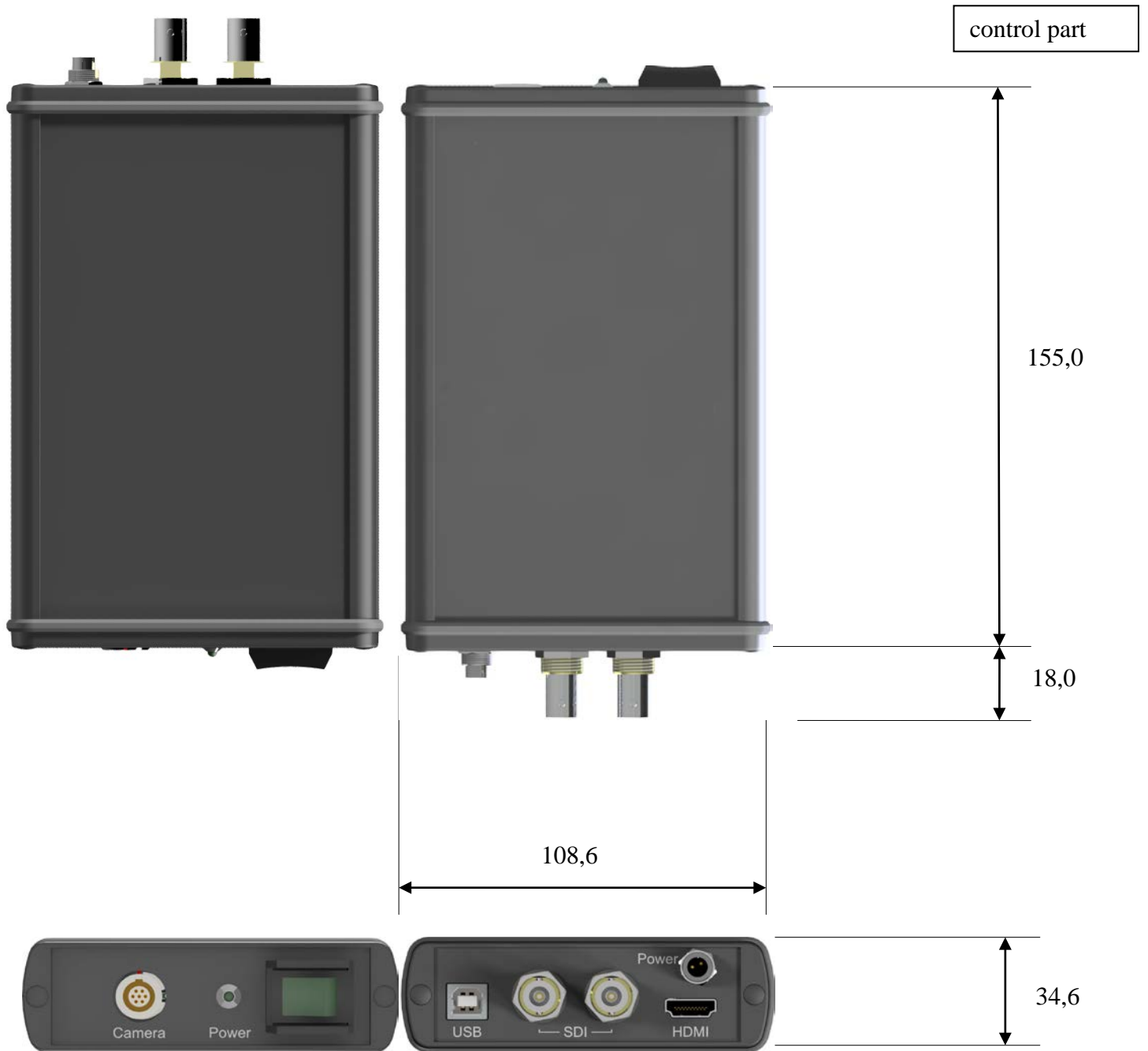
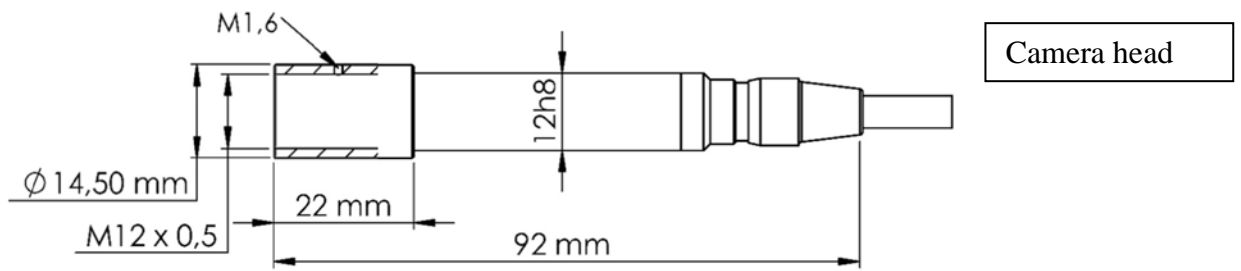
Video Bandwidth		
frames (p)	fields (i)	Pixelrate
1080p60		1920 × 1080 × 60 Hz = 124,4 Mpx/s
1080p50		1920 × 1080 × 50 Hz = 103,7 Mpx/s
1080p30	1080i60	1920 × 1080 × 30 Hz = 62,2 Mpx/s
720p60		1280 × 720 × 60 Hz = 55,3 Mpx/s
1080p25	1080i50	1920 × 1080 × 25 Hz = 51,8 Mpx/s
1080p24		1920 × 1080 × 24 Hz = 49,8 Mpx/s
720p50		1280 × 720 × 50 Hz = 46,1 Mpx/s
720p30	720i60	1280 × 720 × 30 Hz = 27,6 Mpx/s
720p25	720i50	1280 × 720 × 25 Hz = 23 Mpx/s
720p24		1280 × 720 × 24 Hz = 22,1 Mpx/s



High Definition Serial Digital Interface Norm: SMPTE 292M
 The SDI interface is electrically based on coaxial cables with an impedance of 75 Ω and uses BNC connectors for connection. The cables and connector types used were taken from the previous analog video signal standard. The maximum cable length is 100 m when using high-quality cables with HD-SDI. The voltage swing is 800 mV (± 10%).

HDMI (High-Definition Multimedia Interface) is a proprietary audio/video interface for transmitting uncompressed video data and compressed or uncompressed digital audio data from an HDMI-compliant source device, to a compatible computer monitor, video projector, digital television, HDMI is a digital replacement for analog video standards.

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Parameter

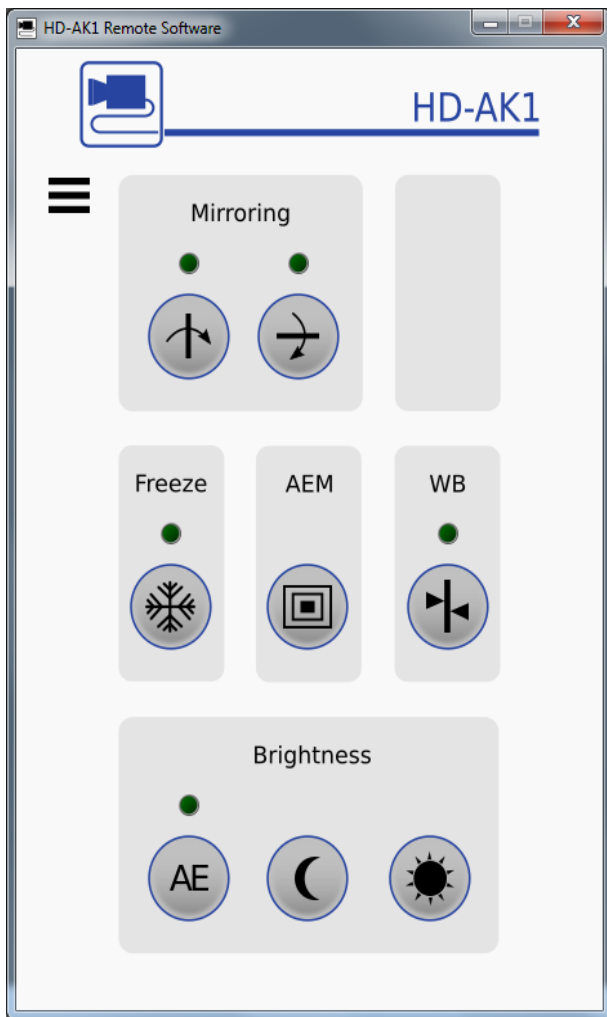
Image sensor	1/2.7-type CMOS OV2715
Number of effective pixels	2.14 Megapixels 1920 x 1080 Pixel
Pixel	3µm x 3µm
Signal system	1080p/30
S/N ratio	More than 69 dB
Exposure control	AE Auto (AGC + Shutter), Manual
Shutter speed	Auto / Manual 1/50s to 1/10.000s, 8 steps
Sync system	Internal
Sharpness Level	8 steps 0-7
White balance	Auto, One-push, Manual
Lens thread	M15,5x0,5
Picture effects	Mirror image H and V
Picture freeze	Yes
Video output HD	HDMI, 2x HD-SDI
Camera control interface	USB (RS232)
Power requirements	8.0 – 28.0 V DC
Power consumption	3.8 W
Operating temperature	- 5°C to +60°C (23°F to 140°F)
Storage temperature	-20°C to +70°C (-4°F to 150°F)
Operating humidity	20% to 80%
Storage humidity	20% to 95%
Controller Dimensions (W x H x D)	155mm x 108.6mm x 34.6mm / Mass 400 g
Head Dimensions (Ø x L)	Ø12.0mm x 85.0mm / Mass 50 g
Cable Dimensions (Ø x L)	Ø5.0mm / Ø7.0mm x 3000mm / Mass 150 g

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 <p>Power Supply NT8/12 HR 12VDC 2pin Connector [A11-200520xx]</p>	 <p>Externe USB-3.0-HDMI- Capture-Konverter [A11-10054043]</p> 
 <p>BNC-Cable 2m [A11-30039036] BNC-Cable 5m [A11-30039010] BNC-Cable 10m [A11-30039031]</p>	 <p>Externe USB-3.0-HD-SDI- Capture-Konverter [A11-10054044]</p> 
 <p>HDMI-HDMI 2m [A11-30039122] HDMI-HDMI 3m [A11-30039096] HDMI-DVI 3m [A11-30039097]</p>	 <p>PC Card HDMI-Capture Magewell Pro Capture HDMI [A11-10054045]</p>
 <p>USB-Cable A-B 1,8m [A11-30038012] USB-Cable A-B 5m [A11-30038066]</p>	 <p>PC Card HD-SDI-Capture Magewell Pro Capture SDI SD / HD / 3G-SDI [A11-10054047]</p>
 <p>Lens 6 mm [A11-10046123]</p>	 <p>Lens 9 mm [A11-10046125]</p>
 <p>Lens 16 mm [A11-10046190]</p>	 <p>Lens 25 mm [A11-10046191]</p>

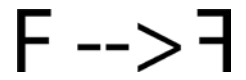
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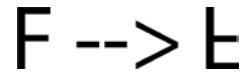
Mirroring

The running picture
Becomes shown mirrored



Mirroring

The running picture
Becomes shown mirrored



Freeze

The current picture is frozen



AEM Automatic Exposure Mode

Definition of the measuring range for the
brightness measurement spot / center / full
screen / Special feature 2x zoom



WB White Balance

A white balance of the image is performed



AE Automatic Exposure

The image brightness is automatically adjusted



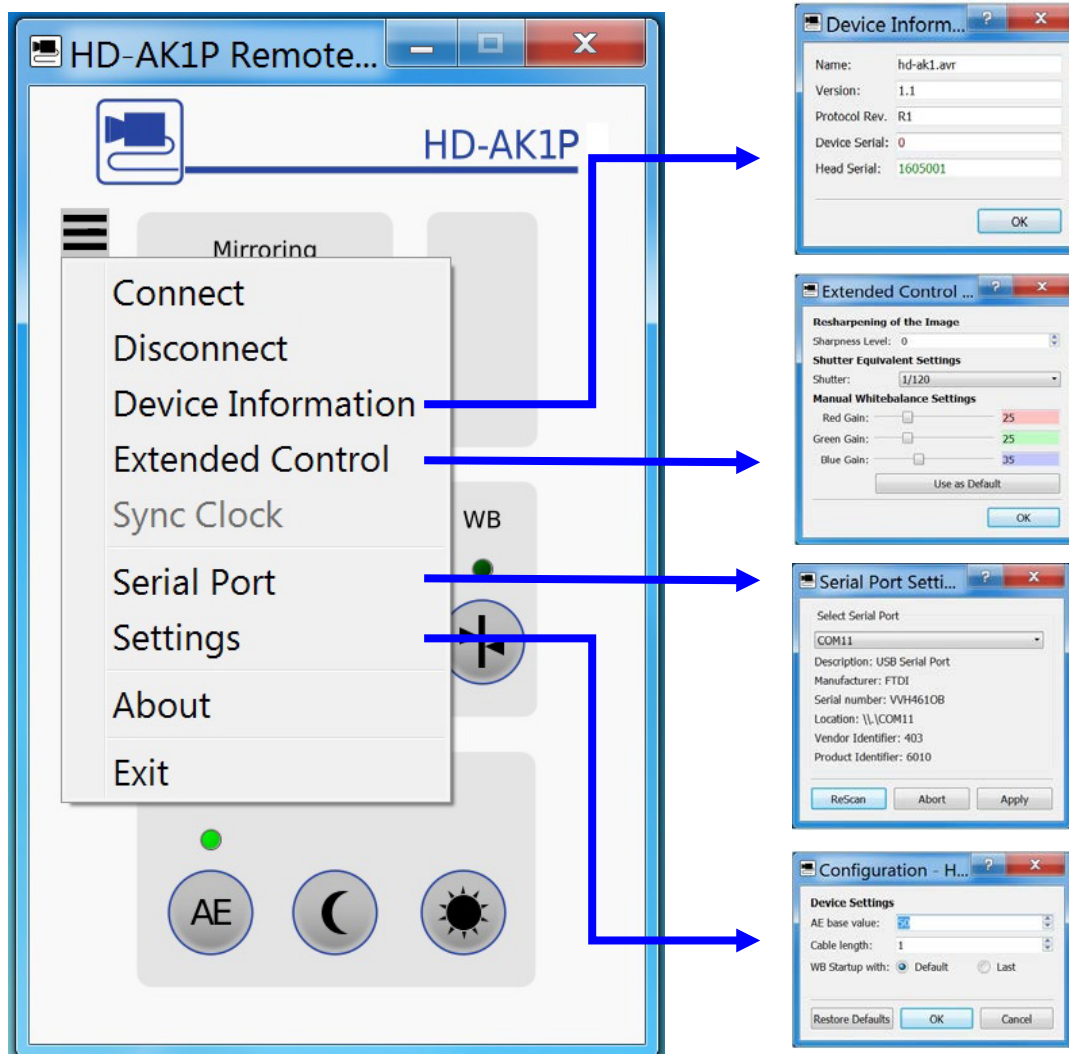
Brightness

The image brightness is reduced



Brightness

The image brightness we increased



In order to remote control the camera follow the steps as described below:

- Connect the camera with computer using the USB port
- Install the supplied drivers (FTDI) as well as the HD-AK remote software
- Start HD-AK1 remote software
- Choose “Serial Port” tab of the menu and click “ReScan” Button
- Use the Serial Port drop down menu to choose the correct port (usually it is the port with the highest available number) and click “Apply” button
- Click “Connect” tab in the menu (a message appears in the lower end of the remote software stating if the connection has been successfully implemented)