

# HDselect

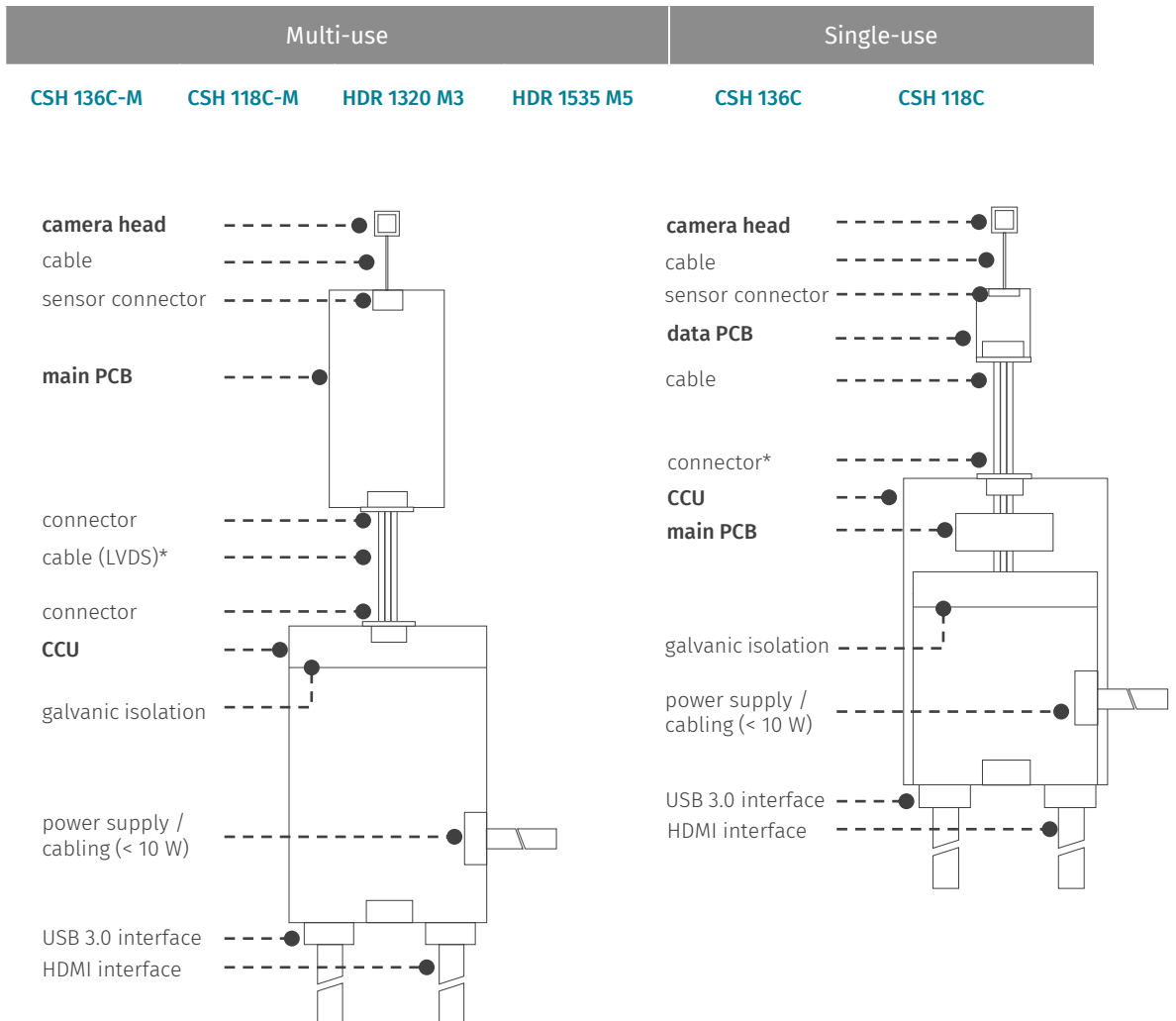
Vision Solution for Medical Endoscopy

MEDICAL VISION

## Technical Data

Type of Application	Multi-use				Single-use	
<b>Camera Module Unit</b>	<b>CSH 136C-M</b>	<b>CSH 118C-M</b>	<b>HDR 1320 M3</b>	<b>HDR 1535 M5</b>	<b>CSH 136C</b>	<b>CSH 118C</b>
<i>Sensor size</i>	1/36"	1/18"	1/9"	1/2.8"	1/36"	1/18"
<i>Native resolution [pixel]</i>	200 x 200	400 x 400	1280 x 720	1920 x 1080	200 x 200	400 x 400
<i>Max. display resolution [pixel]</i>	1080 x 1080	1080 x 1080	1280 x 720	1920 x 1080	1080 x 1080	1080 x 1080
<i>Camera head size [mm]</i>	0.65 x 0.65	1 x 1	3.2 x 3	18 x 18	0.65 x 0.65	1 x 1
<i>Max. cable length: data PCB or main PCB to head</i>	2 m	2 m	3 m	50 mm	2 m	2 m
<i>Type</i>	CMOS					
<i>Color depth (HDMI-out)</i>	8 bit					
<i>Frame rate [fps]</i>	60					
<i>Board size [ mm]</i>	45 x 14.5	45 x 14.5	34 x 18	34 x 18	45 x 14.5	45 x 14.5
<i>Operating temperature</i>	0 to 40°C					
<b>Cable from Camera Controller Unit (CCU) to Main PCB</b>					<b>Cable from Main PCB to Data PCB</b>	
<i>Max. length [m]</i>	3	3	5	5	3	3
<i>Diameter [mm]</i>	3	3	6.8	6.8	3	3
					<b>Size of Data PCB</b>	
					15 x 8.4 mm	
<b>Camera Controller Unit</b>					<b>HDR 1330 CH2 DP</b>	
<i>Cable connector</i>	6 pin (NET specific configuration: power, GND, I2C, LVDS, program)					
<i>Patient safety</i>	galvanic isolation (Type BF-classified /Body Floating)					
<i>Power consumption</i>	P < 10 W, U = 12 V ±10 %					
<i>Power supply connector</i>	3 pin ELCO, NET Standard					
<i>Power LED</i>	optional					
<i>Board size [mm]</i>	110 x 60					
<b>Interfaces</b>						
<i>HDMI</i>	1080p/60					
<i>USB 3.0</i>	up to 3 m					
<b>Software</b>						
<i>Direct Show Filter (Direct-X)</i>	For use of camera in non-NET specific software, e.g. VLC media player, amcap					
<i>Graphic card</i>	Applicable for conversion of YUV to RGB > less CPU usage (Core i5: less than 20%). Compatible with Windows 7/8/10 - 32/64 bit.					
<i>NET Viewer</i>	Viewer with built in vectorscope applicable for easy color calibration. EEPROM read/write procedure to store configuration. Shows framerate, bad and good frames.					
<i>Settings</i>	Brightness, contrast, white balance, saturation, hue, horizontal flip, color control, AE settings (e.g. long exposure)					

## Layout



\*optional

Upon request: LED driver, keyboard, EMI approved housing.

Drawings and images not to scale.

Please note that all data and illustrations are not binding and are subject to error, change and omissions without notice.