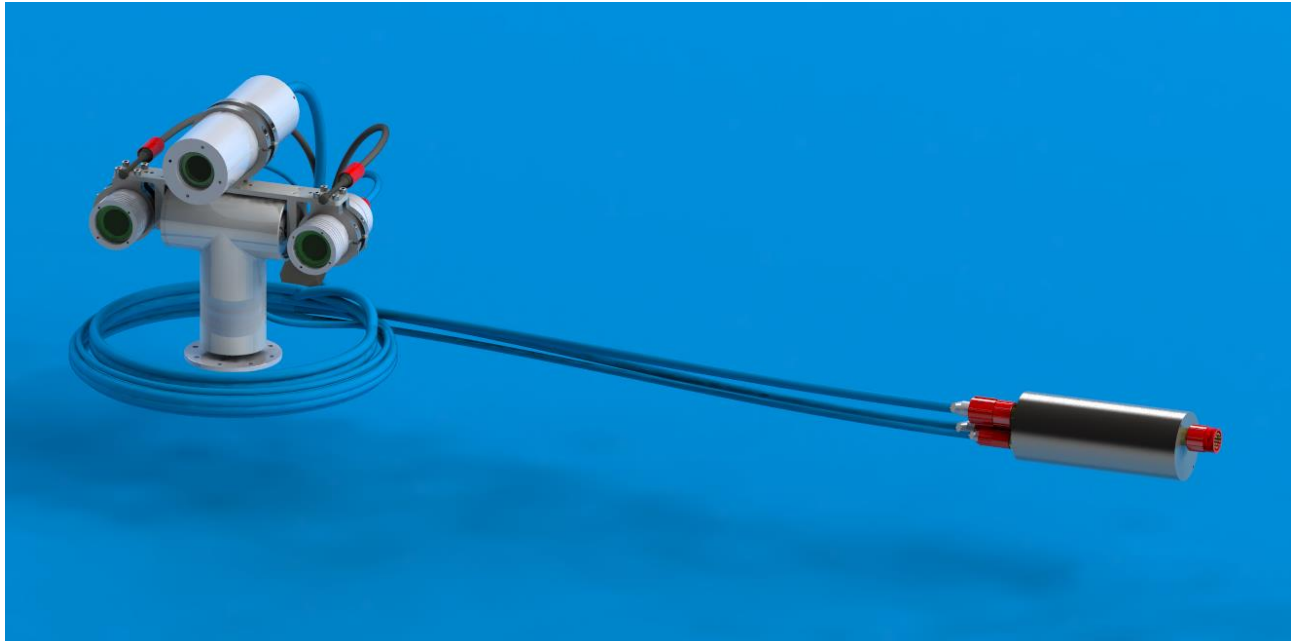


High Definition Subsea Ethernet Camera System



Key Benefits

- Superior images quality with 5Mpixel sensor
- Ethernet interface gives video access from web browser
- Multiview real time video streaming with individually configurable streams
- Uncompressed high quality video saved local on 32GB flash memory
- Using the same metals to ensure anodic index
- Low power consumption
- Open API software interface

System specifications

Electrical

Operating voltage:	24 VDC
Power consumption:	< 160W with 2 LEDs on

Mechanical

Weight in water:	9kg without lasers, cable and SDB.
Height:	340mm
Width:	360mm
Depth:	310mm without cable
Housing material:	Stainless steel(SS316) or Titanium(6AL-4V)
Window material:	Sapphire

Environmental

Operating temperature:	-10°C ... +40°C
Deep rating:	3000m or 6000m with external compensation

Component specifications

Camera

Image sensor:	Progressive scan RGB CMOS 1/2.5"
Lens:	Manual varifocal f=3.5 – 10 mm, F1.6, P-Iris Angle of view: 65°
Minimum illumination:	Color: 0.5 lux, F1.6, B/W: 0.08 lux, F1.6
Shutter time:	1/25500 s to 1/6 s
Video compression:	H.264 (MPEG-4 Part 10/AVC, Baseline profile), Motion JPEG
Resolutions:	2560x1920 (5 MP) to 160x90
Frame rate H.264:	5 MP mode: 12 fps in all resolutions 3 MP mode: 20 fps in all resolutions 2 MP and HDTV 1080p mode: 30 fps in all resolutions
Frame rate Motion JPEG:	5 MP mode: 12 fps in all resolutions 3 MP mode: 20 fps in all resolutions HDTV 1080p (1920x1080) mode and 2 MP 4:3 (1600x1200) mode: 30 fps in all resolutions
Video streaming:	Multiple, individually configurable streams in H.264 and Motion JPEG Controllable frame rate and bandwidth VBR/CBR H.264
Multiview streaming:	Up to 8 individually cropped out view areas. When streaming 4 view areas in VGA resolution, the rate is 12 fps per stream in H.264/Motion JPEG (5 MP capture mode)
Zoom:	Digital, preset positions
Image settings:	Compression, color, brightness, sharpness, contrast, white balance, exposure control, exposure zones, backlight compensation, fine tuning of behavior at low light Rotation: 0°, 90°, 180°, 270° Mirroring of images Text and image overlay Privacy mask, Wide dynamic range — dynamic contrast
Application Programming Interface:	Open API for software integration
Intelligent video:	Video motion detection, active tampering alarm
Triggers:	Intelligent video, day/night mode, digital I/O, manual trigger, PTZ preset, PTZ moving, network lost, storage status, system initializing
Actions:	File upload via FTP, HTTP and email Notification via email, HTTP and TCP Video recording to edge storage Pre- and post-alarm video buffering, Zoom preset Day/night vision mode
Video access from web browser:	Camera live view Video recording to file (ASF) Customizable HTML pages Windows 7, Windows Vista, Windows XP, Windows Server 2008, Windows Server 2003 DirectX 9c or higher
Ethernet over STP:	10BASE-T/100BASE-TX
Security:	Password protection, IP address filtering, HTTPS encryption*, IEEE 802.1X network access control*, digest authentication, user access log
Supported protocols:	IPv4/v6, HTTP, HTTPS*, SSL/TLS*, QoS Layer 3 DiffServ, FTP, SMTP, Bonjour, UPnP, SNMPv1/v2c/v3(MIB-II), DNS, DynDNS, NTP, RTSP, RTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS. (* software from www.openssl.org)
Power consumption:	9W
Physical dimension:	Diameter: 88mm, length: 268mm
Weight in water:	4.1kg

LED lights

Light output:	4800 lumens, dimmable
Color temperature:	3000-6500K
Color:	Red, green or blue
LED lifespan:	>70% after 60000hours
Efficiency:	89 lumens/watt
Thermal protection:	Auto shutoff
Beam angle:	Flood: 90 degrees
Power consumption:	54W
Physical dimension:	Diameter: 66mm, length: 142mm
Weight in water:	0.5kg

LASER

Wavelength:	514nm, green
Output power:	50 mW, dimmable
Line straightness (%)>25mm:	0.1
Line uniformity:	95%
Line fan angle:	53.9°
Shapes:	Single line, crosshair, dot line, 7x7 dot matrix, single dot, parallel lines, 4x4 grid, single circle, 7 concentric circles
Power consumption:	2W
Physical dimension:	Diameter: 50.4mm, length: 149mm
Weight in water:	<0.5kg

Pan & Tilt device

Wavelength	
Torque:	14Nm each axis
Rotation speed:	3-10degrees/s
Pan range:	±170 degrees
Tilt range:	±90 degrees
Power consumption:	Static: 5W, Static with brake: 32W, Max dynamic: 40W
Physical dimension:	Height: 207mm, Width: 169mm, Depth: 84mm
Weight in water:	3.2kg

Subsea Distribution Bottle

Communication interface:	Ethernet, Serial RS232, Serial RS485, Analog IO, Digital IO
Power consumption:	2W
Physical dimension:	Diameter: 88mm, length: 150mm
Weight in water:	4.0kg

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