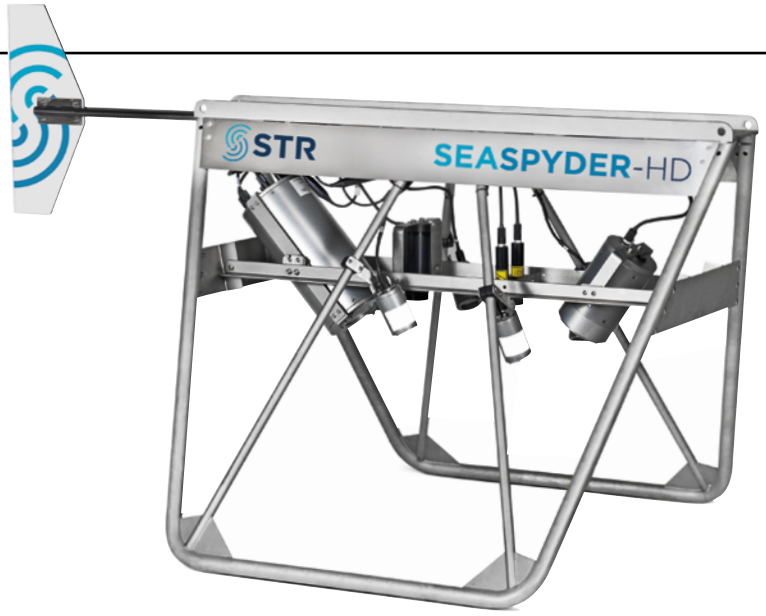
STR

SUBSEA TECHNOLOGY & RENTALS

STR SeaSpyder HD DROP CAMERA SYSTEM



The SeaSpyder Underwater Drop Camera System is part of a family of field proven camera systems manufactured by STR for the marine survey and environmental communities. This technology has been developed continually by STR for several years in order to satisfy the ever increasing demand for quality and performance.

The SeaSpyderHD is designed for operation in water depths up to 3000m utilising coaxial or fibre-optic umbilicals.

The system as standard offers simultaneous uninterrupted recording of low latency live video footage along with high resolution stills photography, along with interfacing to a wide range of sensors and dataloggers

The stills camera is fitted with a high quality 18 mega pixel digital SLR Camera offering full control of all photograpic parameters including manual focus, shutter speed and aperture. The stills camera is housed within a robust 3000m rated aluminium enclosure along with a water corrected lens and also forms the mounting point for HD video camera and quad scaling lasers.

Video footage is provided by the STR SeaSpectrumHD camera offering high quality 1080P video feed via HD-SDI over dedicated high speed fibre optic link.

All data is transferred directly to the surface unit for live interpretation, this includes HD video, stills photos, serial sensor data and Ethernet data such as an imaging sonar.

A 19" rack mount Surface Control Unit and powerful topside processor give full remote control of the camera via the easy to use GUI software.

As standard, the purpose designed camera deployment frame is fitted with a subsea electronics and camera housing, high power underwater flash, an array of four high intensity LED lamps, quad scaling lasers, altimeter, depth sensor and a heading sensor. Many other sensors are easily integrated via numerous serial & Ethernet data channels.

The system is capable of operating over a wide variety of fibre optic umbilicals allowing very high speed data transfer with extremely low latency. Operation over standard armoured coax cable up to 3000m is also supported utilising the STR SeaSpectrumIP video camera with minimal extra latency.

For ease of transportation, fast mobilisation and maximum robustness the Surface Control Unit and topside processor are housed within a shock mounted, waterproof Peli-Hardigg transportation case with internal 19" rack mounted flip out monitors.

KEY FEATURES

- Operation in water depths up to 3000m
- Simultaneous uninterrupted recording
- Interfacing to wide range of sensors and dataloggers
- High resolution stills photography
- Direct data transfer for live interpretation
- Fully remote controllable stills camera settings

STR SeaSpyder HD DROP CAMERA SYSTEM

SEASPYDER HD-SDI RACK MOUNT PROCESSOR – SP-PRO3

Hardware: Standard 19" Rack Mountable
Processor: Intel i7 3770 3.4GHz Quad-Core
Memory: 8GB DDR3 RAM
Storage: 1TB internal hard drive & 4TB removable drive in caddy
Interface: DVD-RW, 2 x 1 GigE, 6 x USB, 8 x RS232, 1x BNC HD-SDI.
Display: 2 x 19" Rack-mount Full HD LED HDMI Monitor
Power: 110/240 VAC, 50 Hz (900W)

SEASPYDER FIBRE-OPTIC & TELEMETRY SURFACE CONTROL UNIT – ST-FTSU

Power Input: 100 – 264 VAC (47 – 63 Hz) ffi 500 W max
Dimensions: 19" 4U rack mountable
Interface: 2x 100Mbps Ethernet, 1x HD-SDI Video (2x sockets), 8x RS232/485 serial ports, 6x Relay control switches for subsea RS232/485 user ports, TTL Trigger Input (option)
Cable Diagnostics: Low & High Voltage closed loop cable diagnostics, cable polarity test, cable leakage, open and short circuit protection, built in current limit. Voltage and Current LED readout. Fault Indicator LEDs and audible alarm.

SEASPYDER DROP CAMERA FRAME

Length: 2.21m (with tail fin), 1.55m (no tail fin)
Width: 1.43m
Height: 1.40m (with tail fin), 1.18m (no tail fin)
Weight in Air: 91kg (empty frame), 160kg (fully loaded), 200kg (with extra lead weight in leg tubes)

SEASPYDER TELEMETRY 18MP DIGITAL STILLS CAMERA (3000M WIDE ANGLE) - SP-TC-3000AWT

Power Output: 24VDC on User Ports (12VDC option on Port 3); 200W Max.
Interface: 1 x Underwater Flash
4 x 24VDC LED Lamps
2 x RS232 Ports with 24VDC
1 x RS232 Port with 12 VDC/ 24VDC
1 x Dual Scaling Lasers
1 x 12V LAN Port
Depth / Housing: 3000m Hard anodised aluminium
Image Size: JPEG (720 x 480) to (5184 x 3456) RAW (5184 x 3456)
ISO Sensitivity: Auto (100 – 6400), 100 – 12800
Sensor Type: 22.3 x 14.9mm CMOS 3:2
Shutter Speed: 30 – 1/4000 Sec
Aperture Range: F3.5 – F22
Focal Length: 18mm
Focus: Manual & Automatic mode
Angle of View: ≈70° in water
Lens: Fused Quartz Corrected Dome

SEASPYDER SUBSEA FIBRE-OPTIC & TELEMETRY MULTIPLEXER – SP-FTM-3000AT

Power Output: External:24VDC 300W Internal: 5,12,-12V
Interface: 2x SM Fibre, ADSL2+, 100Mbps, Ethernet, 3x RS232/485, Optional TTL trigger output
User Ports: 3x remotely configurable RS232/485 ports, 1x permanent 24V@1.6A supply, 3x relay switched 24V@1.6A Supplies with independent EMI filters.
Depth/Housing: 3000m Hard anodised aluminium
Connectors: OPTG4-2SM,2E-FCR, MINL-5515-75ohm(1c,6#22)BCRL(GS), MCBH8F, MCBH3M, MCBH16F

SEASPYDER HIGH POWER FLASH – MP-FT

Control: TTL control via digital stills camera
Power Input: Power supply via stills camera
Depth / Housing: 3000m Hard anodised aluminium

SEALIGHT LED-1-DC

Input Supply Power: 9W Typical @ 100% Illumination
Colour Temperature: 5000K
Lumen Output: 1200lm Typical
Beam Angle: 120° to 50%
Luminous Efficacy: 130lm/W typical
Depth / Housing: 3000m Stainless-steel Housing / Sapphire Lens

SEASPECTRUM - SP-HDC-3000AWT

Viewport: Quartz Dome with Underwater Correction
Field of View: SP-HDC-3000AW = 85° air/water
Sensor: 1/2.8" Panasonic 2 Mega Pixel CMOS
Min Illumination: (DSS) 0.017Lux Colour, 0.0008Lux BW (STD) 1.0Lux Colour, 0.5lux BW
Zoom: 2.8-12mm Dual-motor optical zoom / 16x Digital Zoom
Focus: Remote controlled manual/ auto-focus
Image Enhancement: Wide Dynamic Range (WDR), Digital Noise Reduction (DNR), colour configuration, defog
Digital Interface: HDSDI 1080P 25/30 fps, 720p 60/50/30/25 fps
Depth / Housing: 3000m Hard anodised aluminium

SEASPECTRUM – SP-IPC-3000A

Viewport: Acrylic Viewport
Field of View: 1080p 70° air/ 52°water 720p 85° air/ 64°water"
Sensor: 1/2.5" Aptina 5 Mega Pixel CMOS
Min Illumination: 0.1Lux Colour
Focus: Fixed Focus
Image Enhancement: Brightness, Saturation, Sharpness, Contrast
Digital Interface: Real Time Streaming Protocol RTSP
RTSP:
1080P 25/30 fps, 720p 25/30 fps (up to 2592x1920 10 fps to 1024x768 30fps available)
Digital Latency: 100-200mS Typical
Data Bitrate:
Configurable 500-8000 kbps
Depth / Housing:
3000m hard anodised aluminium

UMBILICAL OPTIONS

Rochester A301241 (0.68") (17mm) - 3000m Max

Rochester A306891 (0.498") (12.65mm) - 3000m Max

Rochester A305382 (0.39") (9.98mm) - 3500m Max

Rochester A302799 (0.45") (11.43mm) - 1500m Max

Rochester A304874 (0.25") (6.53mm) - 700m Max

Fibre = 1080P HD-SDI Video operation & 100Mbps data link

Coax = 720P HD-IP Video operation & 15Mbps data link

Operation over alternate fibre umbilicals supported, cable length limited by cable resistance Vs delivered power

Other umbilical types supported - please consult STR for further info.