VANGUARD

INTEGRATED INSPECTION & MEASUREMENT SYSTEM

The CATHX VANGUARD system is a dual sensor stereo imaging and laser measurement system that delivers CATHX Fast Digital Inspection (FDI®) for a range of subsea ROV operations.

Full subsystem integration and field proven FDI® technologies reduce risk for uncrewed or low crewed operations while also delivering substantial operational vessel time reductions.

The CATHX VANGUARD's flexible data collection configurations ensure that optimal datasets are acquired across a range of applications to provide informed and confident decision making.

For more information our FDI® service offerings visit our website**.**

VANGUARD TECHNICAL SPECIFICATIONS

SYSTEM CAPABILITIES

Imaging	2 x Imaging Sensors	Stereo Still Imaging
		Laser Imaging
		Video Imaging
Laser	1 x <800 mW Laser	Laser Projection
Lights	2 x Synchronised Strobe Lights	Stills Imaging
		Video Imaging

OPERATING CONDITIONS

Operating Range	1 to 5 m
Operating Temperature	0 to 25 °C
Depth Rating	1,000 m

VANGUARD

VANGUARD TECHNICAL SPECIFICATIONS

MECHANICAL

Vanguard Dimensions	Length	900 mm
	Depth	244 mm
	Diameter	180 mm
LED Panel Dimensions	Length	175 mm
	Width	100mm
	Depth	19mm
Weight	In Air	29 kg
	In Water	3.5 kg
Connectors	Power	CRE BRA08M
	Ethernet & PPS	CRE BRP14M
	HD-SDI	CRE BRP00M COAX

ELECTRICAL

Power Consumption	3 Hz UHD Stills & 60 Hz Laser	~187 W
	30 Hz HD Stills & 60 Hz Laser	~530 W
Supply Voltage	Direct Power	24 V
	External Power Bottle (Optional)	110 VAC
		300 VDC

COMMUNICATION

Ethernet		Gigabit Ethernet
Time Synchronisation	PPS input	5V 10 mA
	NTP	TCP/UDP
Navigation	NMEA String	TCP/UDP
HD-SDI	Coaxial	1080p @ 30 FPS
System Control & Monitoring	Vanguard Control GUI	Via Ethernet

OPTICAL

Field of View		H67° V40° D70°
Aperture		f/2.0 to f/22
Sensor Bit Depth		12 bit
Stereo Baseline		400 mm
Luminous Power	2 x LED Panels	Up to 300,000 Lumens

LASER

Optical Power	Class 4	<800 mW
Wavelength		525 nm
NOHD in air		4.5 m
Pressure Activation Switch	Activation Depth	>60 m

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CONTROL & CONFIGURATION

Configuration		Cathx Mission Planning
		Vanguard Control GUI
QA & Monitoring		Cathx Mission Control

DATA CAPTURE

Still Imaging	JPEG (per Camera)	4096 x 3072 up to 3 FPS
		4096 x 2304 up to 7 FPS
		2048 x 1152 up to 30 FPS
Video Imaging	HD-SDI	1080p/30 FPS
		1080p/25 FPS
		720p/60 FPS
		720p/50 FPS
	MJPEG	2048 x 1152 up to 30 FPS
Laser Profiling	BIN files	Up to 60 LPS
	UDP Stream	Up to 60 LPS
Laser Resolution	2 m	Up to 1.3 mm

EXTERNAL POWER BOTTLE TECHNICAL SPECIFICATIONS

POWER BOTTLE (IF REQUIRED)

Dimensions	Length	230 mm
	Diameter	95 mm
Weight	In Air	4.2 kg
	In Water	2.4 kg
Depth Rating		2,000 m
Connectors	Power In	CRE BRB04M
	Power Out	CRE BRB08F
Power Output		24 VDC
Power Input	DC	180-350 VDC
	AC	80-150 VAC

VANGUARD

DIMENSIONS

VANGUARD

900mm
400mm
560mm

HD-SDI
CRE BRP00MCX

POWER
CRE BRA08M

Ø180mm

ETHERNET & PPS
CRE BRP1 4M

214mm
244mm

LED PANEL

175mm
100mm
19mm
23mm
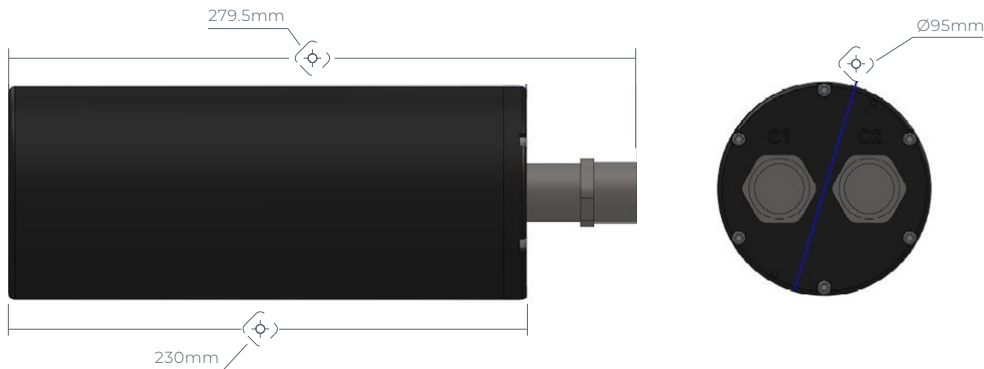
POWER BOTTLE (IF REQUIRED)

279.5mm
230mm
Ø95mm
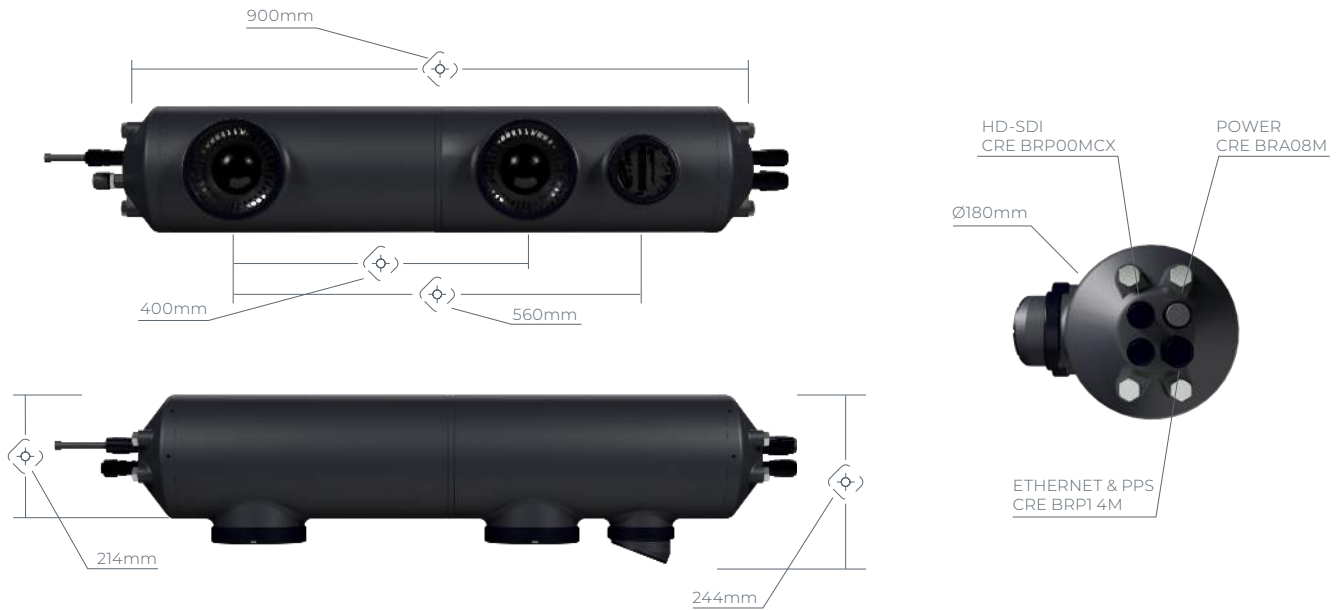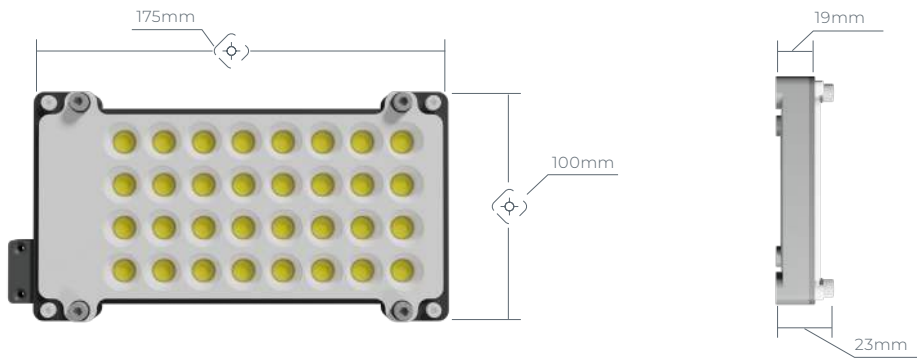
To find out more about our new CATHX VANGUARD, contact us using the details provided.

Information correct as of March 2023.
Specifications and design are subject to change without notice.

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