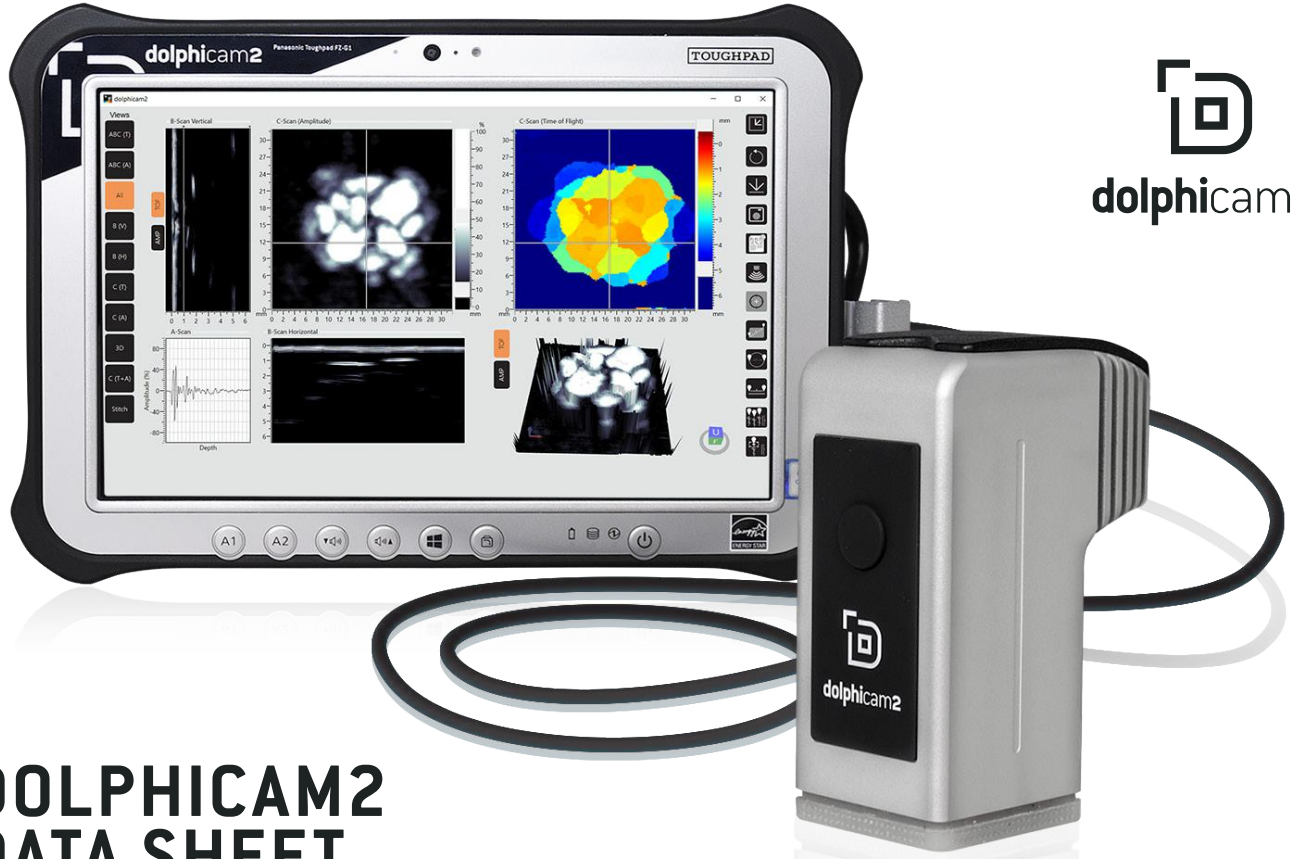


dolphicam2

DOLPHICAM2 DATA SHEET

	AEROSPACE	AUTOMOTIVE	MARINE	WIND ENERGY	OIL & GAS	PIPE & WELD INSPECTIONS	PRODUCTION
MARKETS							
APPLICATIONS	Impact damage. Lightning strikes CFRP. Bond inspection in CFRP or multi-materials such as CFRP and aluminium. Drilled hole CFRP.	Inspection impact damage CFRP. Adhesive Joints with carbon, steel, aluminium, multi-materials and multilayers. Bond inspection in CFRP & multi-materials, such as CFRP/aluminium.	Impact damage. Lightning strikes CFRP. Bond inspection in CFRP. Air holes in coating-GFRP.	GFRP/CFRP inspection, corrosion mapping, crack- or void-detection. Debonding and delamination in pipes and laminates.	Debonding multilayer structures.	Friction/HDPE welds void detection.	Bond inspection in CFRP & multi-material (ex: CFRP/aluminum). Drilled hole CFRP, Corrosion inspection in pipes and laminates. Cracks and voids in metals (titan, aluminium, steel, etc).

THE DOLPHICAM2 PLATFORM

Ultrasound Imaging platform for NDT

MATERIAL INSPECTION CAPABILITIES:
METALS | CFRP | GFRP | GLARE

INSPECTION DEPT: up to 60mm*

FULL MATRIX CAPTURE (FMC)

Frequency range: 0.5 – 15MHz
Transducer arrays: 128 x 128
Transducer elements: 16 384
TRM dimentions: 40 mm x 40 mm
Element Pitch: 250 µm (10 mils)

SCANS/VISUALISATION-MODES
VIEW: A-scan, B-scan, C-scan (2D), or 3D
OPTIONS: Amplitude or Time-of-Flight

Real-time visualisation

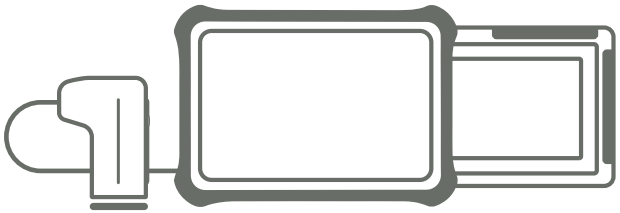
LARGE AREA STITCHING

PLATFORM WEIGHT : 3.0 kg/ 7 lbs.

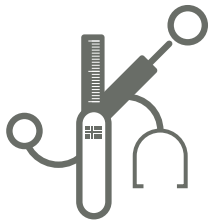
MADE IN NORWAY

Dolphicam2 is developed and manufactured in Norway by Dolphitech AS. We work with a global network of partners to deliver the most innovative and feature-rich NDT platform on the market.

* This is material dependent



TECHNICAL SPECIFICATION



PHYSICAL	
Total Weight (black box + TRM + Toughpad)	3045 grams (6.7 lbs.)
Transducer Module (TRM)	265 grams (0.58 lbs.) 84 x 40 x 40 mm (3.3 x 1.57 x 1.57 “)
black box	985 grams (2.167 lbs.) 200 x 130 x 32 mm (7.87 x 5.12 x 1.26 “)
TOUGHPAD FZ-G1	
Display	Touch screen – 10.1” (1920 x 1200)
OS & Software	Windows 10 – **dolphi**cam**2** Software installed
CPU, Storage, RAM	Intel i5, 256GB SSD, 8GB RAM
BLACK BOX POWER	
Power supply	Battery/charger (12V DC)
Battery specification	Re-chargeable Li-ion battery pack (7.2V 6.7Ah)
Battery life	5-6 hours of continuous scanning
CONNECTIVITY & IO	
Communication	USB C 3.0, USB A 2.0, Ethernet
Transducer ports	2 x Quadrature Encoder & GPIO (General Purpose In/Out) DSUB-9 (for X-Y scanning)
Notifications	Audio Buzzer
ENVIRONMENTAL	
Operating Temperature	0˚C to +40˚ C (32˚F to 104˚F)
Operating Temp with Degrading	-20˚C to +50˚C (-4˚F to 122˚F)
Storage Temperature	-20˚C to 65˚C (-4˚F to 149˚F)
Max operating altitude	2000 meters (6562 feet)
Ingress Protection	IP66
Decreasing linearity to 50% relative humidity at 40˚C	Maximum relative humidity 80% for temperatures up to 31˚C. Decreasing linearity to 50% relative humidity at 40˚C.
EMC	EN61326, FCC part 15B, FCC part 18
Vibration and Shock	Mil-STD810G 516.6
Electrical Safety	IEC-61010-1:2010

TRANSDUCER TECHNOLOGY	
Transducer type	Matrix (2D-array)
Transducer arrays	128 × 128
Transducer elements	16 384
Element size	210 µm
Element pitch	250 µm (10 mils)
TRM frontface dimensions	40 x 40 mm
TRM active area	32 x 32 mm
Receiver Channels	32 (parallel acquisitions)
Receiver Bandwidth	0.5MHz to 15MHz
Acquisition/Frame Rate (Scan stream or FMC)	5 to 50 frames/sec
Digitizing (Sampling) Rate	50 to 65 MHz (Up-sampled to 200 MHz)
A-scan resolution	12 bits (+/- 2048) Up sampled to 16 bits (+/-32 768)
Transmit Pulse	0-70 V square wave
Rise/Fall time	~ 5 ns
GENERAL FUNCTIONALITY	
Scans/visualisation-modes	A-scan B-scan Horizontal & Vertical C-scan Amplitude & Time-of-Flight 3D Amplitude & Time-of-Flight Stitching
Measurements	Depth B-scan Depth & Amplitude in C-scan Rectangle (Width, Height, Area) Circular (Diameter, Circumference, Area)
Reporting	Images & settings
Full Matrix Capture (FMC)	Save & Load FMC – Post process on FMC
Configuration Settings	Save & Load
Others	Colour Focus Reset settings to default Save screenshot GUI scan button Expanded view

TRANSDUCER FUNCTIONALITY	
Gain	-40dB to 0dB
Time Corrected Gain (TCG)	0 to 10 dB/µs
Transmit Elements (Aperture)	1 – 32
Averaging	1 – 16
Pulse length	5 – 635 ns (5 ns increments)
COVERAGE FUNCTIONALITY	
Delay	1 – 82 µs (delay between transmit and acquisition)
Depth	1 – 120 mm @ 6000 m/s
Speed of Sound	100 – 20 000 m/s (Preset list)
Gates	Up to 3 separate gates
Amplitude Threshold	The threshold for each gate
Capture Method (for C-Scan)	Max Absolute, Max Negative, Max Positive
A/B Scan Mode (RF)	Full, Absolute, Envelope
Colour Palettes	Jet, Grey, Grey-inverted, Autumn, Bone, Winter, Rainbow, Ocean, Summer, Spring, HSV, Pink, Hot
Image Filter	None, Gaussian, Median
CALIBRATION	
TRM Calibration/balancing	Amplitude Time-of-Flight
USER PREFERENCES	
Measurement Unit	Millimeters, Inches, Mils
STITCHING	
Manual Stitching	No accessories needed
GridTool Stitching	Used with Grid Tool
Encoder Stitching	X and Y – Used with any quadrature encoders

DATASHEET VERSION 1 | OCT 2019

More information or request a demo

www.**dolphi**tech.com