DOLPHIN 32/128

Powerful Phased-Array Ultrasonic instrument

Main features:

- **High pulsing power**
  - 200V negative square wave pulse
- **Fast sampling frequency**
  - 125 Mhz
- **Multiplexed architecture**
  - 32 x 128
- **Supported methods:**
  - Phased-Array
  - Time of Flight Diffraction
  - Mono-element Pulse Echo
  - Automated Ultrasonic Testing

Dolphin 32/128 comes in an industrial grade housing and easily fits into a multitude of inspection system scenarios. **Dolphin 32/128** has a completely sealed enclosure that provides protection from environmental and radiological contamination to ensure integrity in electronic performance and allow serviceability throughout the life of the product.

Dolphin 32/128 is equipped with 128 multiplexed phased array channels with aperture of 32 elements. Additionally 4 mono channels can work both in pulse echo and pitch-and-catch modes. In total up to 16 probes can be connected to the instrument at the same time.

Dolphin 32/128 is compatible with **SignyOne Software Package** which is a unique solution for job preparation, acquisition, analysis and report preparation for ultrasound inspections. It supports manual and automatic acquisitions for all ultrasound techniques: Phased-Array, TOFD, conventional Pitch & Catch as well as conventional Pulse Echo.

Key features of the **SignyOne Software Package provides**: manual and automatic inspections, time based, 1-axis or 2-axes encoder triggering and multi-probe support. It offers multiple interactive display screens with A-Scans, B-Scans, C-Scans, D-scans, S-scans and FFT, user customization of interface and saving/loading layouts and beam setups. SignyOne is compatible with all Dolphin instruments. The gigabit ethernet connection with the instrument enables online data visualization during acquisition.

INETEC | Dolenica 28 | HR - 10250 Zagreb
T +385 1 659 45 55 | **E** inetec@inetec.hr | www.inetec.hr

INETEC

Powerful Phased-Array Ultrasonic instruments

GENERAL	DOLPHIN 32/128	DOLPHIN 128/128PR
Phased Array (PAUT)	32/128	128/128 PR
PAUT Connector	IPEX or Hypertronic (via adapter)	2x Hypertronic
Conventional/Mono (UT)	Up to 4 independent channels, allowing any TX/RX combination	Up to 16 independent channels, allowing any TX/RX combination
IP Level	IP54	
Power Supply Voltage	100-240 VAC	
Power Supply Frequency	50 – 60 Hz	
PULSERS		
Pulse Shape	Unipolar Negative Square Wave	
High-Voltage Supply	Adjustable from 30 to 200 V	
Pulse Width	Adjustable from 20 to 1000 ns	
Output Impedance	6 Ohms	
Trigger	Free-running or on 1-axis or 2-axis encoder position	
RECEIVERS		
Input Impedance	50 Ohms	
Analog Gain	Adjustable from 0 to 92 dB (also for TCG)	
Analog Bandwidth	0.5 to 30 MHz (-3 dB)	
Element Calibration	Relative gain for each probe element	
Angle-Corrected Gain (ACG)	Relative gain for each beam (focal law)	
Time-Corrected Gain (TCG)	Up to 16 points, per beam (focal law)	
PAUT BEAMFORMING		
Type	Standard Delay-and-Sum	
Delay Resolution	2.0 ns in TX and RX	
Scan Type	Sectorial and Linear	
Number of Beams (Focal Laws)	Up to 2048 total	
Active Elements	32	128
Total Elements	128	128
DATA ACQUISITION		
Digitizing Frequency	125 MHz	
Sampling Quantificatio	12 bits per channel /16 bits (Delay-and-sum)	
Pulse Repetition Frequency	Up to 30 kHz (depending on configuration	
Number of Data Points	Max 16, 384 per A-scan	
Real-Time Averaging	2 to 64	
Rectification	RF, Full Wave, Half Wave +, Half Wave -	
Filtering	Digital filter (fully adjustable)	
Video Filtering	Optimal Decimation	
Encoders	1-axis or 2-axis input, orthogonal trigger grid. Quadrature and pulse direction inputs	
Connectivity	Gigabit Ethernet	
ADDITIONAL INFORMATION		
Weight	4 kg	15 kg
Dimensions	25.5 cm x 15.5 cm x 15.5 cm	31 cm x 30 cm x 28 cm
Operating temperature range	5°C to 45°C (41°F to 113°F)	
Storage temperature range	-10°C to 60°C (14°F to 140°F)	
Relative humidity	95%, non-condensing	

Quality

Dolphin holds CE mark and is certified as per ISO 18563-1.The INETEC Quality Safety Environmental Management System is based on ISO 9001:2015, ISO 14001:2015.

INETEC | Dolenica 28 | HR - 10250 Zagreb
T +385 1 659 45 55 | **E** inetec@inetec.hr | www.inetec.hr