

# MILOS UNDERWATER LIDAR IMAGING SYSTEM



## MILOS

MILOS is an innovative LIDAR system that can image underwater objects from airborne and underwater platforms, even in turbid coastal water where traditional LIDAR systems have limitations.

***SA Photonics***

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# MILOS Underwater LIDAR Imaging System

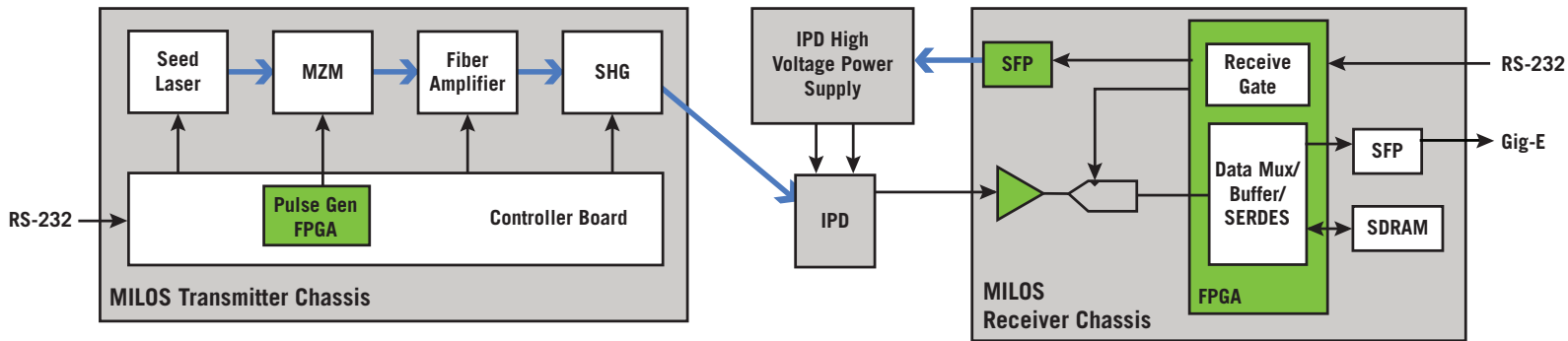
MILOS is an underwater LIDAR imaging system for airborne and underwater platforms developed by SA Photonics. MILOS is operable in deep water and turbid coastal water where SONAR has limitations.

Unlike traditional underwater LIDAR systems, which suffer from low frequency backscatter that hide actual return signals, MILOS uses an RF modulated laser source to provide significant backscatter rejection, resulting in better target imagery. In addition, MILOS can precisely measure target textures.

MILOS consists of five primary sub-systems: a flexible, modulated light source supporting peak

powers in excess of 5 kW; an RF coherent receiver with direct digital capture to provide highly accurate phase measurements; a wide bandwidth, high sensitivity intensified photo diode; an 8 kV, 500 kHz switching high voltage power supply; and an integrated graphical user interface to control all functionality.

SA Photonics is a pioneer in the development and deployment of innovative photonics solutions for commercial and defense applications.



SPECIFICATION CHART			
Parameter	MILOS Value	Parameter	MILOS Value
<b>PULSE GENERATOR</b>		<b>OPTICAL</b>	
Pulse Carrier Frequency	0.5 - 2 GHz	Wavelength	532 nm
Pulse Width	10 - 120 nsec	Peak Power	15 kW
Coded Waveform Support	Yes (arbitrary waveform)	Average Power	> 5 W
Pulse Repetition Frequency (PRF)	50 - 500 kHz	Amplitude Stability	5%
<b>RECEIVER</b>		Timing Stability	20 psec pulse-to-pulse
Amplitude Accuracy	< 0.2 dB	Average Power Stability	< 2%
Phase Accuracy	< 0.5 degrees	Pulse Droop	< 10%
Time-of-Flight Accuracy	< 200 psec	Output Beam Diameter	< 3 mm
Memory Depth	512 MB		
Maximum number of Rx gates	1,048,576		