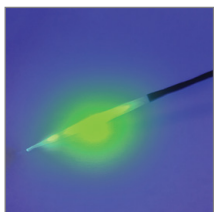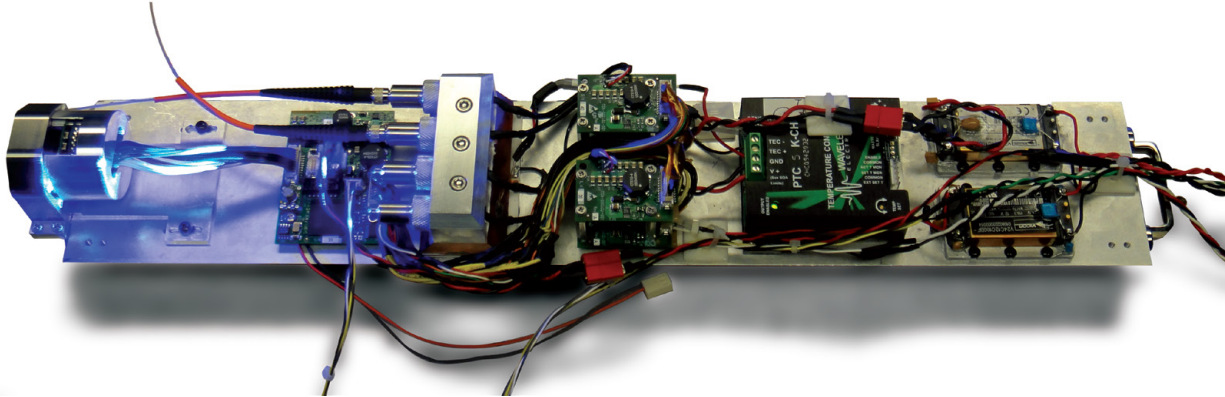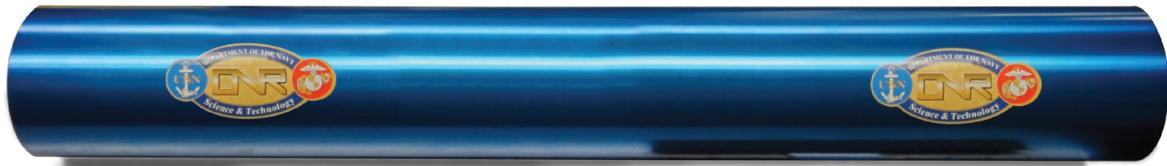# OceanLink

Fiber tip

Fiber/mask integration

Compatible with
R10 & B20

OceanLink system is the latest generation of the LightSpeed™ optical communication technology developed by Torrey Pines Logic, Inc. ONR SwampWorks have sponsored the development with the objective to design and build a 2-way non-RF communication system from a submarine to a surface, airborne or underwater platform with as wide an angle of view as possible, while avoiding conspicuous operation and detection by creating a 1-10Mbps optical channel between a submarine underway and below water surface at distances exceeding 10km. Single reinforced fiber fed from the Sail, consisting of Transmit and Receive components. Fiber tips stay 3-5 feet below surface or penetrating surface for variety of communication options.

- Most secure communication technology on the market
- Bi-directional Data, Voice, and Video
- Point-to-point LAN extension
- Long range Free Space Optical system
- Perfect for emergency and temporary communications

*Ocean*Link

Completed Phase I

- Bi-directional voice @ 32Kbps
- Communication with slant angle up to 65° off zenith
- Laser source in the water, LED source in the air
- Emitted power of 5mW provides over 100m
- Link budget provides sustained Mbps rates over 10-15km
- Operates in full Sun Glint
- Fiber can go up in the air to provide multiple frequencies and channels
- Frequency hopping and spread spectrum technologies
- Forward Error Correction chip
- Distance measurements

Next Phase II

- Full duplex operation
- Data interface with full TCP/IP Ethernet
- Long distance and tracking up to 10-15km
- Fiber sticking up from water – multiple frequencies
- Underwater to underwater
- Distance measurements
- Fiber mechanical management
- Range testing