



GEOFORCE 4K DEEP-SEA DROP CAMERA SYSTEM

Geoforce Group Limited introduces the ultimate digital stills drop/drift camera system optimized for cost-effective seafloor ground-truthing during deep-sea surveys. Geoforce acquired a licence to commercialize the system from the Geological Survey of Canada – Atlantic (GSCA) at the Bedford Institute of Oceanography in Dartmouth, Nova Scotia.

FEATURES AND CAPABILITIES:

- Engineered for reliability and to achieve best data capture under challenging operating conditions, the camera system consists of high-quality commercial-off-the-shelf components that are packaged in sturdy pressure cases and a compact deployment frame.
- The camera and dual flash units are powered by a high-capacity lead-acid battery, permitting continuous data collection for 12 hours and longer.
- The image capture device is a Canon DSLR that can be exchanged with newer models as they become available.
- A high-quality Canon wide-angle lens, a dome port for in-water correction and dual flashes for even illumination yield thousands of seafloor images on one battery charge.
- The versatile DSLR with exceptional sensor resolution, large range of light sensitivity and the lens' optical properties form an outstanding workhorse tool for environmental baseline studies, geomorphological seafloor documentation and much more.

SPECIFICATIONS

Camera	Canon EOS Rebel SL 1 (18.0 Megapixel CMOS – APS-C Sensor) ISO Range – 100-12800; Canon DIGIC 5 Image Processor
Flash	Two Canon 430EX E-TTL Speedlites with rapid recycling
Battery	DeepSea Power and Light SB-12/80; c/w quick smart charger. The 80 Amp/h rating permits up to 5000 images in one deployment
Trigger	Benthos-type contact closure with trigger weight, scale and compass
Size	-60cm (W) x -60cm (H) x -120cm (L)
Weight	-90kg (-200lbs); up to 4 x 40 lbs lead plates can be added
Depth Rating	Pressure tested and rated for 4000m

SAMPLE SEAFLOOR IMAGES

Images are courtesy of NRCan Pacific Geoscience Centre



Water depth: 992m - Western Haida Gwaii Margin (BC, Canada)

Cold seep biological communities typical near methane vents at continental margin. Thick carbonate crust on cobble rich substrate. Deep sea corals, white encrusting sponges, red *Shortspine Thornyhead*, and bacterial mat of *Beggiatoa* sp.



Water depth: 1001m - Western Haida Gwaii Margin (BC, Canada)

Side of mud volcano; moderately sorted angular cobble and boulder lag. Encrusting anemones on sandy seabed with small shrimp. Gravel lag indicates very low sedimentation rate in area of deeper continental slope.