

Datasheet

BlueComm 200 – Optical Communications System



BlueComm®200 provides subsea wireless optical communications up to 10 Mbps at ranges up to 150 m.

The system is most effective in low ambient light conditions such as deep water or shallow water night-time operations. It is capable of data transmission rates from 2.5–10 Mbps, enabling a range of application options including wireless telemetry from several concurrent video cameras and tether-free subsea vehicle control.

BlueComm 200 uses an array of high power light emitting diodes (LEDs) that are rapidly modulated to transmit data. Highly sensitive receivers detect the extremely small light signals in order to decode this data and to present it to the user via an Ethernet link.

BlueComm 200 uses Time Division Multiple Access (TDMA) methods to providing a bi-directional high speed low latency link that supports TCP/IP based network protocols. Allocation of bandwidth ratios in each direction is user selectable and fully flexible.

The allocation of bandwidths is ideal for applications where high-speed data transfer is mostly required in only one direction such as for extraction of large data volumes from seafloor instrumentation or sensors.

Optional integrated acoustic positioning and communications provide methods for locating the device, waking it up and managing the optical link. Once a connection is established, BlueComm 200 will immediately begin transferring buffered data.

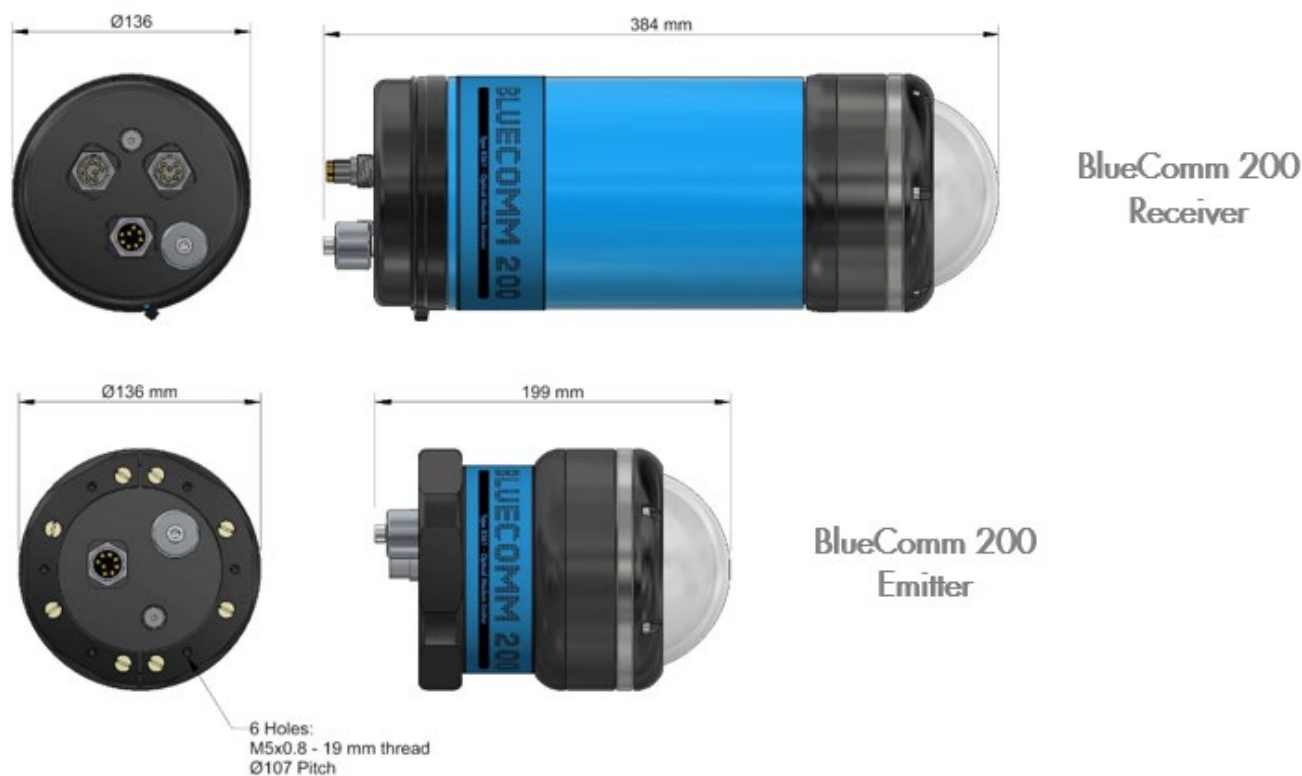
Optical data transmission is highly efficient, enabling more than 9 GB of data to be transferred using only the energy contained in a single lithium D sized battery cell.

Key Features

- 2.5–10 Mbps at ranges up to 150 m
- Suitable for moderate to low turbidity dark water, (>200 m depth or night-time) applications
- Highly energy efficient communications provide long battery life
- Data recovery by AUV, ROV or surface deployed dunker system
- Up to 4,000 m depth operation
- Additional white light emitter available for video illumination
- ROV/AUV Remote Control

Specifications

BlueComm 200 – Optical Communications System



Feature		Type 8361
Depth Rating		Up to 4,000 m operation
Data Rate		2.5–10 Mbps
Optical Communication Range		Up to 150 m
Mechanical Construction		Anodized aluminium or titanium
Supply Voltage		24–36 V dc
Communications Interface		10/100 Base-T Ethernet (static IP address)
Command Interface		Graphical user interface or Ethernet UDP command set
Receiver Unit		
Receive Wavelength		Broadband visible light
Receive Angle		180° (omni-directional)
Receiver Weight in Air/Water*		7.3/3.1 kg
Power Consumption		10 W
Emitter Unit		
Optical Transmit Power		6 W (radiated light)
Optical Wavelength Options		450 nm (royal blue), 400–800 nm (white)
Emitter Beam Shape		180° (omni-directional)
Emitter Weight in Air/Water*		3.6/2.6 kg
Power Consumption		15 W (bandwidth allocation dependant)
Environmental and Dimensions		
Operating Temperature		-5 to 40°C
Storage Temperature		-20 to 55°C
Dimensions (Length x Diameter)	Receiver	384 x 136 mm
	Emitter	199 x 136 mm