

Datasheet

BlueComm 200 UV – Optical Communications System



BlueComm®200 UV provides subsea wireless optical communications up to 10 Mbps at ranges up to 75 m. Enabling a range of application options including wireless telemetry from several concurrent video cameras and tether-free subsea vehicle control.

The standard BlueComm 200 is optimized for maximum ranges up to 150 m, the range is however limited by ambient light which is seen as noise. The UV based system has a lower maximum range but a much higher tolerance to ambient light, designed for high ambient light operations closer to the surface or ROV operations.

The system uses a UV band pass optical filter to achieve better performance in high ambient light conditions.

BlueComm 200 UV 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 UV 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 UV will immediately begin transferring buffered data.

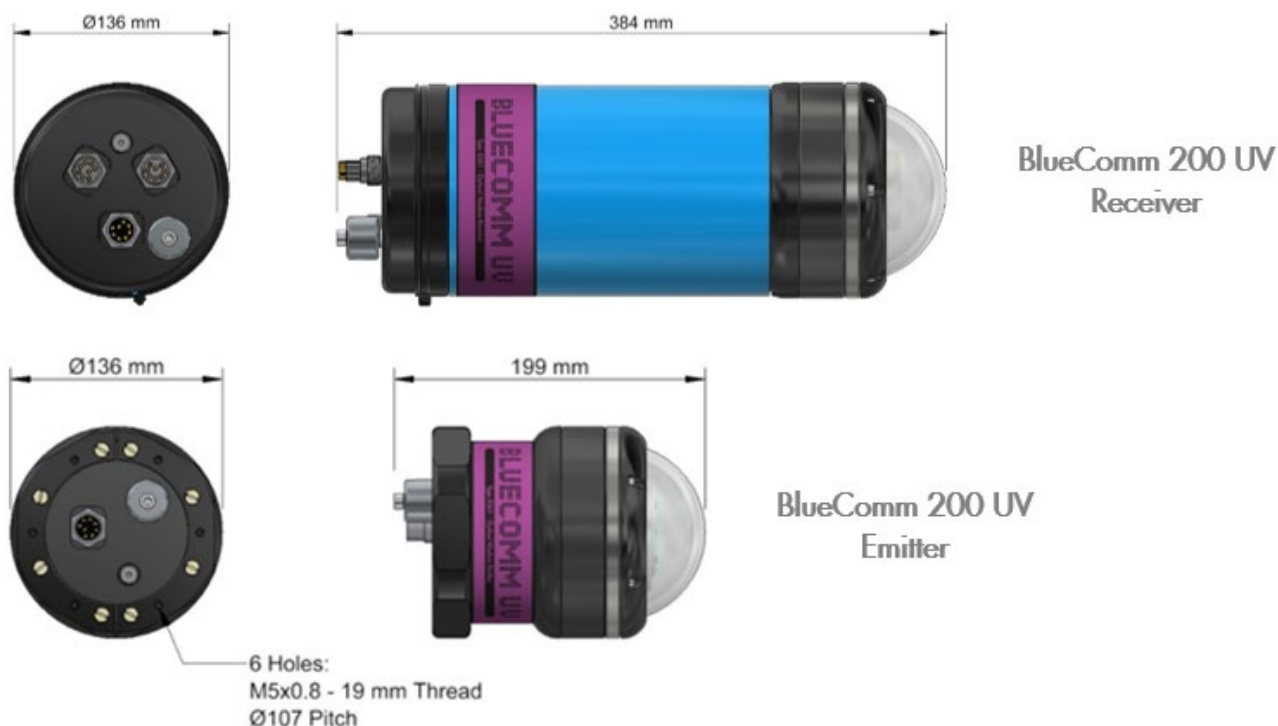
BlueComm 200 UV has a highly efficient optical data transmission, enabling more than 2 GB of data to be transferred using only the energy contained in a single lithium D sized battery cell.

Key Features

- 2.5–10 Mbps at ranges up to 75 m
- Suitable for moderate to low turbidity water and high ambient visible light conditions
- Data recovery by AUV, ROV or surface deployed dunker system
- Up to 4,000 m depth operation
- ROV/AUV Remote Control

Specifications

BlueComm 200 UV – 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 75 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	UV (band pass filter blocking 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	405 nm (ultra violet)	
Emitter Beam Shape	180°(omni-directional)	
Emitter Weight in Air/Water	3.6/2.6 kg	
Power Consumption	30 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