In partnership with Signify

Consolite® Technology Ltd

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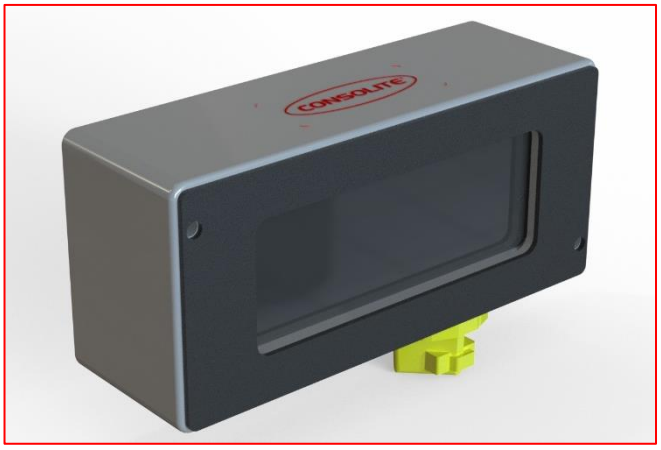
Certified to ISO9001:2015

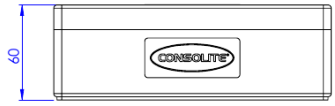
CODI - LiFi Transceiver

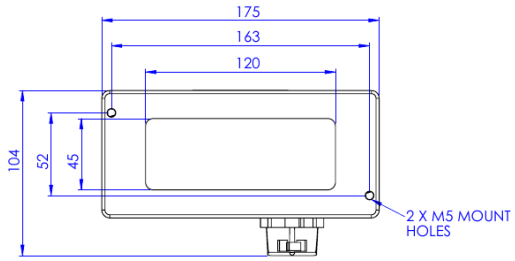
For the provision of secure LiFi communication tablets/laptops

Features

- Designed for mounting in custom cabinets
- Self contained unit, EMC protected
- IP66 protection
- 7m flying lead for connection to Access Point
- Data rate: 220Mbit/s downlink,160Mbit/s uplink

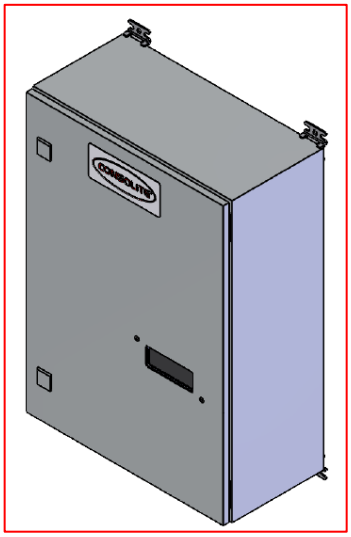






Technical Details

Part number	CTL-477-004
Voltage	24V DC provided by Consolite Access Point
System power	5W at 230V AC supplied by the Access Point
Wireless optical communication	Infrared
Average ambient temperature	25°C
Operating temperature range	+10 to +40°C
Network communication	Data link input connection RJ12 7m SFTP cable
Transmission mode	Half duplex
Encryption	End-to-End encryption based on AES-128
Weight	< 1kg



Shown here installed in customer cabinet to provide data to a maintainer's tablet

Consolite has worked with Naval Lighting for over 40 years on both Air and Ship platforms. Consolite specialises in advanced lighting design and test and has become the authority in lighting for Naval applications worldwide.

The Consolite Data via Infra-Red system (CODI) is the next generation of that expertise, taking lighting to a new level.

Consolite's partnership with the Philips Signify Team has brought combination of Signify's huge industrial investment with Consolite specialist military focus. As a Team we are providing connectivity to Naval ship operations which is revolutionising data use at sea.

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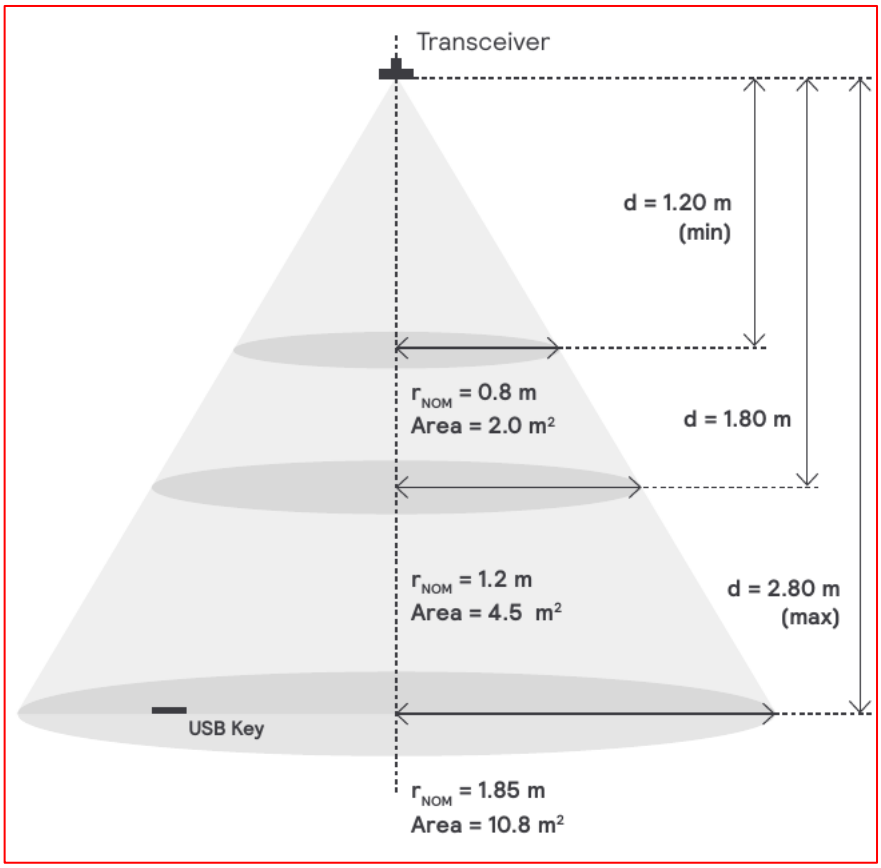
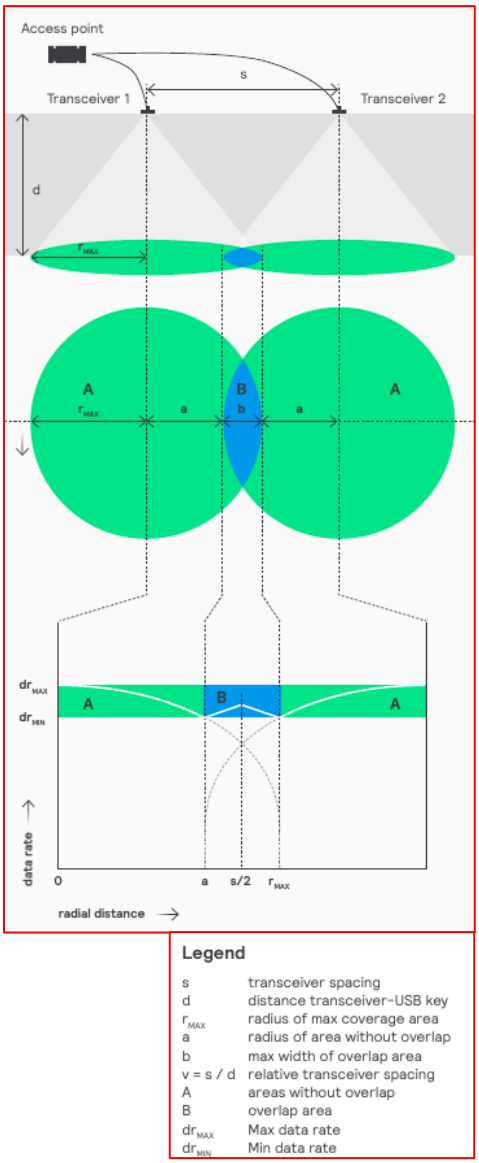
Distribution cone from the transceiver to the USB key



Overlapping USB key



Legend

s	transceiver spacing
d	distance transceiver-USB key
r_{MAX}	radius of max coverage area
a	radius of area without overlap
b	max width of overlap area
v = s / d	relative transceiver spacing
A	areas without overlap
B	overlap area
dr_{MAX}	Max data rate
dr_{MIN}	Min data rate

LiFi Technology, advantages and uses

LiFi (Light Fidelity) is a method of transferring data using light, whereas WiFi transfers data using radio frequencies.

There are many benefits of transferring data through light.

- Security: The receiver must be within the “Line of Sight” (light cone) of the transceiver.
- Speed: The data from the Access Point (AP) is only used by those beneath the AP so it is not shared amongst multiple users.
- Bandwidth: WiFi makes use of radio communications, of which the spectrum has become very crowded and is very often licensed. The LiFi spectrum is unlicensed and offers virtually unlimited bandwidth.
- RF interference: LiFi doesn’t interfere with sensitive equipment in the way that WiFi can so it can be used in highly technical areas like machinery spaces and operations rooms.

Providing fast data rates throughout a ship allows connectivity in way that hasn’t been experienced before. Crew can become connected in the same way as society does. Fast communications, video linking, geo-location, instant access to maintenance documents, on the job training through augmented reality and fast logging of maintenance activities are just some of the new realities of a connected warship.

Shipyard worker connectivity during refit can provide significant time savings – studies estimate at least 20% savings by providing data at the point of need. Imagine a 20% saving in labour during a refit period on an aircraft carrier. Designers and Project Managers could have access to maintenance documentation and e-mail whilst out of the office as well as a solid phone signal in the lower decks of the ship.