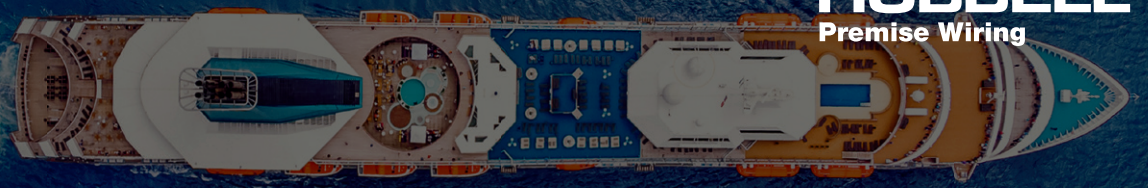
HUBBELL® Premise Wiring



Passive Optical Networks: A Better Way to Build and Operate Ship Networks

Designing, installing and maintaining ship networks presents challenges compared to traditional land-based connectivity. Harsh conditions, limited space, constant motion, isolation, tight security, fire concerns, and ship services demands make implementation and operation on a ship problematic. All these conditions have a negative impact on the IT and network staff tasked with providing the highest degree of passenger safety, security and entertainment while traveling the world on the open sea.

Within these settings, the best ship network design prioritizes fiber optic cabling and limits the reliance on copper cabling. This can be accomplished by taking advantage of Passive Optical Networking (PON) technology. It speeds IT staff productivity through simplification, reduces the number of network vulnerability points, and offers flexibility with higher capacity and greater density – all from a smaller footprint that reaches greater distances. These are the reasons why Tellabs® Optical LAN is the better way to build and operate modern ship networks.

Partnering with the best

Hubbell, Tellabs and Waveguide work seamlessly together to design, build and operate premiere shipboard networks. Put their expertise to work for you.

HUBBELL® Premise Wiring

Hubbell is a global leader of fiber-based infrastructure for ship networks

tellabs®

Tellabs is the premier manufacturer of enterprise grade Passive Optical Networking equipment

4240 International Pkwy, Suite 105, Carrollton TX 75007
(972) 588-7000
tellabs.com

WGC WAVEGUIDE COMMUNICATIONS

Waveguide is the expert in marine-centric network integration gained from over 40 mega-ship new-build IT systems deployments.

3775 NW 124th Avenue, Coral Springs, FL 33065
(954) 782-9898
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Best for ship network design to emphasize fiber optic cabling

An Optical LAN promotes fiber optic cabling over copper cabling in shipboard networks. Leaning on fiber has advantages when considering the unique complications presented by the maritime environment. Stated, single-mode fiber cabling is smaller, lighter, stronger, has better bend radius, fewer plastics, and PVCs, higher bandwidth, longer reach, not susceptible to interference, faster to install, longer life, non-corrosive, more secure, and less expensive.

Improve Your Shipboard Network

- Stronger Security
- Immunity to Interference
- Resistance to Corrosion
- Reduced Human Touch
- Less Weight and Smaller
- Scales with Longer Reach
- More Density and Capacity
- Far Greater Sustainability
- Future-Proof Architecture

Passive Optical Network is the ideal answer for ship challenges

Tellabs Optical LAN emerges as the ideal architecture for interconnecting guest cabins (e.g. IT) and ship (e.g. OT) services for a cruise liner network. A PON system is characterized by its use of unpowered, unmaintained, and highly reliable fiber optic splitters to distribute signals to multiple endpoints over fiber. The PON design offers the bandwidth crucial to meet the modern connectivity demands of onboard retail, restaurants, entertainment, and 24/7 online passenger activities. PON infrastructure is corrosion-resistant, immune to electromagnetic interference, and highly reliable in these extreme conditions.

Cruise Ship Quantifiable Benefits

A recent use case by an international cruise line identified savings in capital and operational costs by implementing a Passive Optical Network. The savings are attributed to a 50% reduction in telecommunication rooms (e.g. TRs or RDPs) across the ship with the extended reach of a fiber-based network. There are year-over-year operational savings gained by eliminating the power and cooling required by these TR/RDPs.

Scan the QR code to learn how we can elevate your connectivity, or reach out to a sales representative with questions:

Wil Boyd

Global Manager -
Cruise Line Industry

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It is more secure as it eliminates management access interfaces, has only one IP Address to protect, and is ideal for Zero Trust Architecture initiatives. It reduces embodied and operational carbon impact by consuming less material, plastics, PVCs, energy, and air conditioning. For the IT staff, the PON system requires 6:1 less human touch with its centralized management using software-defined global profiles to allocate network resources dynamically based on real-time demands. Most significantly, PON's ability to transmit data over longer distances over fiber complements the large-scale network infrastructure of a cruise ship. It reduces the number of telecommunications rooms (e.g. TRs or RDPs) and allows real estate to be returned to revenue generation.

Operational Savings

APPROXIMATELY

$120,000

PER YEAR

- Reduction in weight (minus 35 tons of cabling) = $35,000 of fuel savings per year
- Reduction in power per TR/RDP = $4,400 in savings per year
- Reduction in power for 20 TR/RDP eliminated = $88,800 in savings per year

Capital Savings

APPROXIMATELY

$800,000

OVER 5 YEARS

- Cost savings from eliminating switches from 20 RDPs = $597,495
- Cost savings from replacing switches with PON OLT/ONTs = $200,000

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