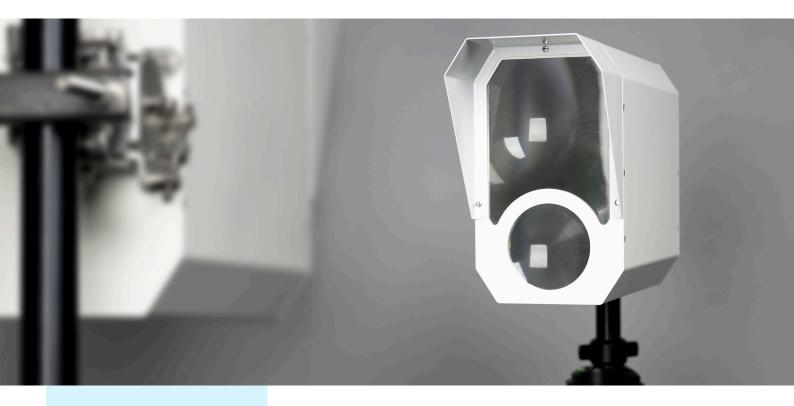
# Outdoor LiFi Point-to-Point Link





# AT A GLANCE

LED based Optical Wireless Communication (OWC) links, a low-cost alternative to wired connections, offer high robustness and throughput, as well as easy alignment.

Fraunhofer HHI provides high speed OWC links with proven uninterrupted availability in challenging outdoor conditions.

#### **Specifications**

- Infrared LED based
- Data rates:
  - · 1000 Mbit/s over 100 m
  - · 500 Mbit/s over 200 m
- > 99.99% availability in bad weather
- Bidirectional data exchange
- Dynamic rate adaption
- Low latency (< 2 ms)</li>
- Power-over-Ethernet (PoE)

#### Background

Future applications like smart cities, autonomous driving and the networked broadband society demand for flexible solutions regarding communication. Decisive approaches to meet the challenging requirements are connected streetlights, vehicle-to-vehicle communication and the wireless last hop to the customer, also denoted as wireless to the home. For these purposes, economic point-to-point solutions are needed. Optical wireless links can provide robust communication at low-cost with high data rates, offloading traffic from commonly used directed radio technologies, e.g., millimeter wave, and thereby relieving the radio spectrum.





Optical Wireless link for short-range fixed access applications.

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## **Applications**

- Connected streetlights
- Vehicle-to-X communication
- Wireless-to-the-home
- Mobile backhaul

## **Benefits**

- Low cost optical wireless link based on infrared LEDs
- Improved link robustness due to rate adaption
- Easy alignment
- Afterwards, no tracking is needed
- Relieve radio wave spectrum for mobile access