

# LightSpeed™ R4

## Auto-Connection Free-Space Optical Communications

### Introducing the Auto-Connection FSO system Compact, high-speed Free-Space Optical (FSO) Transceiver gimbals designed for challenging non-RF environments.

The LightSpeed™ R4 free-space optical (FSO) communication system provides secure, high-reliability data links without emitting any radio frequency energy—even during acquisition and tracking. The R4 is rapidly deployable and designed for use in contested environments. Through precision optical pointing, acquisition, and tracking, the system autonomously establishes and maintains a stable optical link between transceivers.

The R4 provides high-bandwidth, resilient, covert wireless connectivity for command and control, sensor backhaul, and expeditionary networks where RF silence is mission-critical.

- **3km+ Tactical LOS Non-RF Comms:** Reliable performance in rural, industrial, or urban environments. Ideal for asset to FOB, base-to vehicle, UAV, or deployed sensor backhauls.
- **Optical (Non-RF) search and link acquisition functions:** The R4 is completely RF silent.
- **Operational Flexibility:** Works in RF-denied, GPS compromised, and spectrum-contested environments
- **Hard-to-Intercept Optical Link:** Inherent LPI/LPD— No RF emissions, virtually immune to jamming
- **Integration-Ready:** Compact form factor, modular interface, and plug-and-play interface means they're up instantly.
- **Low Power, High Performance:** Optimized for the absolute minimum power consumption possible; embedded and mobile platforms.

Whether deployed in field operations, perimeter surveillance, as smart infrastructure, or next-gen communications platforms, the LightSpeed™ R4 Transceiver



Gimbal enables secure low-power data connections in congested environments; empowering defense systems with next-gen, RF-silent, fiber-class connections minus the wire and minus the risk.

### Specifications

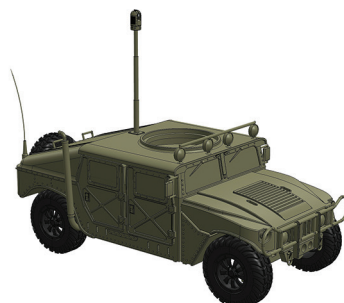
|                       |                                                                                                                       |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| Communication         | Voice, Data                                                                                                           |
| Operating Range       | 3 km+                                                                                                                 |
| Data Speed            | 1-20 Mbps                                                                                                             |
| Frequency             | Vis/NIR/SWIR or custom                                                                                                |
| Data Interface        | Ethernet RJ-45                                                                                                        |
| Power Consumption     | 24 W                                                                                                                  |
| Power Supply          | Up to 2 batteries with hot swap;<br>2590/U battery for 24+ hours of operation<br>or 2557/U for 10+ hours of operation |
| Weight                | 18 lbs                                                                                                                |
| Size                  | 7.25 x 7.25 x 14.785 in                                                                                               |
| Operating Temperature | -20 to +50 C                                                                                                          |



Interface and Remote Controls



Computer GUI



Mast configuration on Vehicle

