

LiFi R&D Kit

Enables prototyping of visible light communication (VLC) systems with LabVIEW-powered NI software defined radio platforms



LiFi TX/RX front-end modules

General Description

LiFi R&D Kit is a plug-and-play VLC solution compatible with National Instruments (NI) PXI and USRP Software Defined Radio Platforms. It includes custom-design transmitter and receiver VLC front-end modules. It has a wide bandwidth (20 MHz) to support even the most demanding video streaming applications. The transmitter has a powerful 5000K 186 lumen LED with an interchangeable lens mechanism. The receiver features a photodetector with a large field of view of 170° enabling a robust performance in non line-of-sight conditions.

Main Features

- Perfect solution for system engineers and graduate students who need rapid prototyping of their VLC system designs
- Compatible with NI's popular software defined radio platforms USRP and PXI
- 20 MHz electrical bandwidth
- 170° detector field-of-view
- LOS and NLOS operation capability
- Interchangeable lens mechanism

Ordering Information

There are two order options. **VLCRDK-B** is a turnkey solution while **VLCRDK** is for customers who already own their own NI baseband processing units. Both options include

- LiFi transmitter (TX) front-end module
- LiFi receiver (RX) front-end module
- Set of nine lens mounts for transmitter
- Blue band-pass filter
- DC Adaptors for transmitter and receiver
- User Manual

In addition, **VLCRDK-B** includes NI USRP 2920s and baseband RX/TX daughterboards.

