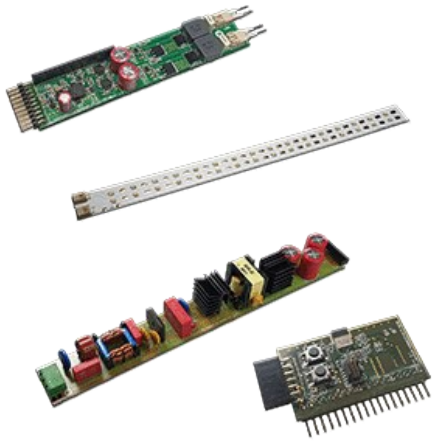
LIGHTING-1-GEVK: Connected Lighting Platform for LED Control



The Connected Lighting Platform is a modular development kit for prototyping cost-effective, industrial LED lighting solutions. The platform is extremely energy efficient and features wireless control (on/off, dimming, etc.) and two independently controlled LED channels that provide a maximum brightness of 7000 lumens.

The base platform comprises of four components:

- An LED module, supporting 2 strings (warm white and cool white) of 16 LEDs
- A Bluetooth(R) Low Energy connectivity board featuring RSL10 SIP
- An AC/DC power board (Vin AC: 90 - 270V, Vout DC: 55V, Pout electrical: 70W, Power Factor > 0.99 at full load)
- An LED driver board featuring FL7760 (Dimming down to 0.6%, Telemetry data, 12-bit PWM)

The platform provides several LED control functionalities using the RSL10 Sense and Control mobile app (IoS, Google Play) or web client. The platform is supported by a comprehensive development environment, including a CMSIS-Pack featuring customizable firmware, Free RTOS, and various use cases.

The PoE Power Module is available separately for Power Over Ethernet (PoE) connectivity up to 90 Watts.

Features and Applications

Features

- High-power lighting features
  - Up to 2 Strings of 16 LEDs (7000 Lumen)
  - Dual independent LED Channel
  - White balance control (12-bit Dimmer from 0 to Max)
- Multiple connectivity options
  - Bluetooth® Low Energy
  - Power Over Ethernet (PoE)
- Compliant with multiple industry standards
- High efficiency power conversion (>90% at full load)

Evaluation/Development Tool Information

Product	Status	Compliance	Short Description	Parts Used	Action
LIGHTING-1-GEVK	Active	Pb-free	Connected Lighting Platform for LED Control	ES1JFL, ES3D, FCPF400N80Z, FDC3535, FDD10N20LZTM, FL7740MX, FL7760BM6X, GBU6K, MM3Z18VT1G, MMSZ22T1G, MMSZ4V3T1G, NCH-RSL10-101S51-ACG, NCP10671BD100R2G, NCP161ASN330T1G, NSBC114EPDXV6T1G, RURP1560-F085, US1MFA	Contact Local Sales Office Inventory

Technical Documents

Type	Document Title	Document ID/Size	Rev
Software	ON Semiconductor IDE Installer	ON Semiconductor IDE Installer - 482129 KB	2
Software	RSL10 Software Package	RSL10 Software Package - 38228 KB	3
Software	ARM.CMSIS-FreeRTOS.10.3.0	ARM.CMSIS-FreeRTOS.10.3.0 - 46526 KB	0
Software	ARM.CMSIS.5.6.0	ARM.CMSIS.5.6.0 - 101097 KB	0
Eval Board: Schematic	LIGHTING-1-GEVK 3D Schematic	LIGHTING-1-GEVK_3D_SCHEMATIC - 6463 KB	0
Eval Board: BOM	LIGHTING-1-GEVK Bill of Materials (ROHS Compliant)	LIGHTING-1-GEVK_BOM_ROHS - 2207 KB	0
Eval Board: Gerber	LIGHTING-1-GEVK Gerber Layout Files (Zip Format)	LIGHTING-1-GEVK_GERBER - 6242 KB	0
Eval Board: Schematic	LIGHTING-1-GEVK Schematic	LIGHTING-1-GEVK_SCHEMATIC - 837 KB	0
Software	Connected Lighting Platform FOTA Firmware	LIGHTING-KIT_FOTA_IMAGES - 753 KB	1
Software	Connected Lighting Platform Getting Started Guide	Connected Lighting Platform Getting Started Guide - 1476 KB	1
Video	Connected Lighting Platform for LED Control	WVD17382/D	
Video	Bruno Damien Interview with EETimes: Innovation in Smart Homes and	WVD17385/D	

Eval Board: Manual	Connected Lighting Platform User Manual (LIGHTING-1-GEVK)	EVBUM2705/D - 1775 KB	0
Software	Bluetooth IoT Development Kit CMSIS Pack	ONSemiconductor.BDK.1.14.1 - 26694 KB	0