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LED Driver 16 Click

PID: MIKROE-5534

LED Driver 16 Click is a compact add-on board that simplifies the control of multiple LEDs. This board features the PCA9745B, an SPI-configurable sixteen-channel constant current LED driver from NXP Semiconductors. Each LED output has an 8-bit resolution (256 steps) fixed-frequency individual PWM controller that operates at 31.25kHz with an adjustable duty cycle from 0 to 100% to allow the LED to be set to a specific brightness value. Powered through a selected mikroBUS™ power rail, either 3.3V or 5V, it provides a maximum output current of 57mA per channel and multiple built-in protection functions that protect the circuit during abnormalities. This Click board™ is optimized for dimming and blinking Red/Green/Blue/Amber (RGBA) LEDs for various consumer amusement applications, LED status signalization, and many more.

LED Driver 16 Click is supported by a mikroSDK compliant library, which includes functions that simplify software development. This Click board™ comes as a fully tested product, ready to be used on a system equipped with the mikroBUS™ socket.

Specifications

Type	LED Drivers
Applications	Can be used for dimming and blinking Red/Green/Blue/Amber (RGBA) LEDs for various consumer amusement applications, LED status signalization, and more
On-board modules	PCA9745B - 16-channel constant current LED driver from NXP Semiconductors
Key Features	Programmable outputs, gradation control for all channels, output channels can sink up to 57mA, output current adjustable through onboard resistor, protection features, SPI interface, output enable feature, and more
Interface	SPI
Compatibility	mikroBUS
Click board size	M (42.9 x 25.4 mm)
Input Voltage	3.3V or 5V

Resources

mikroBUS™

mikroSDK

Click board™ Catalog

Click Boards™

Downloads

LED Driver 16 click example on Libstock

PCA9745B datasheet

LED Driver 16 click 2D and 3D files

LED Driver 16 click schematic