Product Catalog

ThingM Family

The BlinkM family of smart LEDs are networkable and programmable full-color RGB LEDs with integrated drivers. They make creating arbitrary light colors and patterns very easy and can serve as drop-in replacements for regular LEDs in many situations. Each BlinkM has an embedded microcontroller running firmware that converts simple RGB color values to appropriate RGB LED color mixtures, and onboard memory for storing complex light patterns that play when power is applied.

- Stand-alone operation--no controller required to produce color effects

- 24-bit color

- Automatic smooth fading between colors

- I2C communication

- Built-in light scripts

- Works with Arduino I/O boards

- Open Source Sequencer programming software runs on most operating systems

BlinkM   smart LED

BlinkM is a smart LED that creates sophisticated lighting effects without having to know any electronics engineering or programming. It can be an LED that fades from deep red to bright purple, flashes like a police light, "breathes" softly, or flickers like a candle.

BlinkM consists of an ultra bright wide-angle RGB LED attached to a microcontroller. Open Source sequencer software and libraries for C, Java and Processing makes it easy to create nearly any RGB color or pattern. Once programmed, the BlinkM works as a standalone light that can be reprogrammed thousands of times, or stay tethered and be controlled in real time.

- Full-color RGB LED w/ 24-bit color control
- Can plug directly into Arduino or LinkM, no wiring or other components needed!
- Specify colors using 24-bit RGB or HSB
- Fade between colors with variable timing and fade speeds
- Randomized color selection, with ranges and based on previous color
- 18 built-in light scripts (sequences)
- Create and save light scripts of up to 49 commands long
- Stand-alone operation: No microcontroller needed for light script playback
- Up to 127 BlinkM channels on a single two-wire network
- Low power consumption
- Java, C, and Processing libraries and programming examples

MinM   tiny smart LED

MinM is a tiny smart LED that's designed for wearable technologies, UAVs and handheld devices. Like BlinkM, its larger sibling, it runs ThingM firmware that creates virtually any RGB color, fades smoothly between two colors, and blinks in virtually any pattern without having to know any electronics engineering or programming.
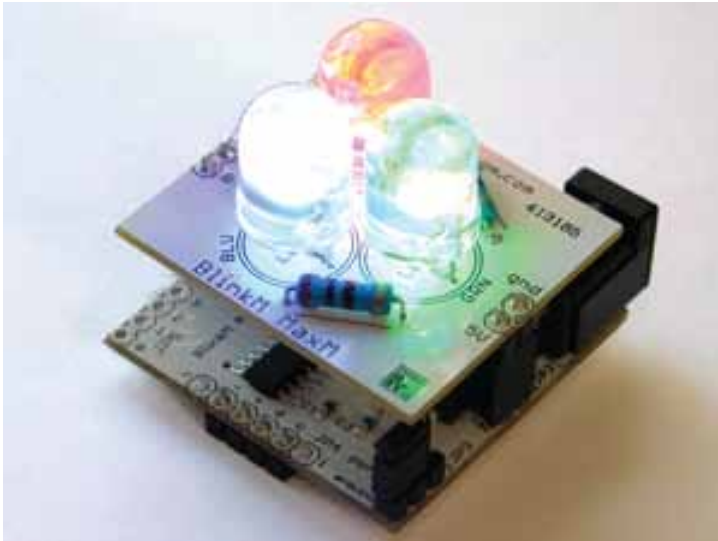
It's tiny and stealthy--0.5 cm on a side, and less than 0.25 cm high--and its open through-holes and no protruding components make it easy to sew onto garments or mount in unusual locations.

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MaxM   ultra bright smart LED

BlinkM MaxM, is an intensely-bright smart LED that comes as a package of two components, a control module (MaxM Master) and a daughter board light engine with three ultrabright LEDs (MaxM Blaster). Existing BlinkM software runs on the MaxM without any changes.

MaxM Master runs ThingM firmware and creates virtually any RGB color, fades smoothly between two colors, and blinks in virtually any pattern. Its 3A MOSFET transistors can drive power-hungry ultrabright LEDs, or large numbers of LEDs simultaneously, such as found in LED strips.

Its 5-24v power supply allows it to be run from a wide variety of common power sources, making it perfect for prototyping automotive applications and low-voltage track lighting systems. It also includes four 8-bit analog input lines, allowing for adjustment and behavior change without a controller.

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LinkM   USB smart LED controller

LinkM is a USB I2C adapter. Plug it in, plug in a BlinkM, fire up the ThingM Multitrack Sequencer, and start programming color patterns. It requires no drivers, additional software or hardware and BlinkMs, BlinkM MinMs and BlinkM MaxMs can be plugged directly into it.

It's a compact, inexpensive interface for situations that do not require a general-purpose prototyping board or where an enclosed device with no exposed wiring is needed.

For example, a real-time energy display designed for long-term installation could use a LinkM attached to a small networked computer (say a Linux-based router) to display the results of fluctuating electricity prices with an array of BlinkM MaxMs.

- Driverless. Identifies itself as a USB Human Interface (HID) class device, which nearly every operating system supports without requiring additional drivers.
- Has no exposed components. Its hard plastic case makes it appropriate for long-term installation.
- Synchronizes groups of BlinkMs with a metronome signal so that their patterns do not drift in time (this even works when the LinkM is only connected to a power supply, such as an iPod USB charger).
- Can directly power 8 BlinkMs or BlinkM MinMs or one BlinkM MaxM.

THING M

ThingM Product Sheet

BlinkM   MinM   MaxM   LinkM

Quick Start requirements

- ThingM Sequencer software for Arduino or LinkM
- No programming experience!
- No electronics experience!
- LinkM USB Programmer or Arduino I/O board

Software requirements

- OSX 10.3.9, Windows XP/7, Linux
- Java 1.5 or later (included with Windows installation)

Features

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- Randomized color selection, with ranges and based on previous color
- 18 built-in light scripts (sequences)
- Create and save light scripts of up to 49 commands long
- Stand-alone operation: No microcontroller needed for light script playback
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- Low power consumption

LinkM Specifications

- Works as a generic USB->I2C device, making it compatible with hundreds of standard I2C devices.
- Contains an I2C buffer chip for driving longer I2C bus cables.
- Open Source firmware, available from Google Code
- Open Source libraries for C, Java and Processing that work on Mac OS X, Windows XP/7 and Ubuntu Linux, also available from Google Code.
- Acts as an I2C master with built-in BlinkM metronome for synchronizing groups of BlinkMs so that their patterns do not drift with time
- Additional I/O pins on the board. AVR hackers can crack open the case to get access to digital I/O pins and use LinkM as a standalone microcontroller platform.

	BlinkM Specifications	MinM Specifications	MaxM Specifications
light intensity	8000 mcd	6,000 mcd	445,000 mcd
viewing angle	140-degrees	120-degrees	30-degrees
operating voltage	3.6-5v, 60mA max	3.6-5v, 60mA max	5v-24v, 3A max
weight	1g	0.5g	17g (Master and Blaster together), 8g (Master only)
Fade duration	1/30 second to 8.5 seconds	1/30 second to 91 hours	1/30 second to 91 hours
connector	4-pin 0.1" spacing BlinkM I2C	4-pin 0.1" spacing BlinkM I2C	4-pin 0.1" spacing BlinkM I2C
inputs	5-volt standard TTL	5-volt standard TTL	5-volt standard TTL
control	Two-wire (aka "I2C")	Two-wire (aka "I2C")	Two-wire (aka "I2C")

RoHS Compliant

THING M

Distributors

Asia

MechaRoboShop
www.mecharoboshop.com

Australia

Little Bird Electronics
www.littlebirdelectronics.com

Canada

Solarbotics
www.solarbotics.com

SpikenzieLabs
www.spikenzielabs.com

HVWTech
www.hvwtech.com

Europe

Cool Components
www.coolcomponents.co.uk

Watterott Electronic
www.watterott-electronic.com

Oomlout
www.oomlout.com

SKPang Electronics
www.skpang.co.uk

Droids / Robot Italy
www.robot-italy.com

Lextronic
www.lextronic.fr

North America

Adafruit Industries
www.adafruit.com

Surf Electronics
www.surfelectronics.com

FunGizmos
www.fungizmos.com

Sparkfun
www.sparkfun.com

NKC Electronics
www.nkcelectronics.com

Inventables
www.inventables.com

Russia

Mitracon
www.mitracon.ru

Terra Electronic
www.terraelectronica.ru