



Maxim Micro SDK (MaximSDK) Installation and Maintenance User Guide

Abstract

This installation user guide contains detailed information about the installation of the MaximSDK environment for Maxim® Microcontroller ICs.

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Introduction

The Maxim Micro SDK Installer provides a simple interface to install the necessary tools to develop the firmware for Maxim Integrated's Microcontroller ICs. The Maxim Micros Software Development Kit (MaximSDK) installer provides a compact software package to install the necessary tools containing Maxim® proprietary source codes, libraries, and examples dedicated to:

- Board support packages (BSPs)
- Validated Hardware Abstraction Layer (HAL) source codes
- Libraries
 - Integrated into the installer:
 - MAXUSB: CDC-ACM and HID
 - FCL: Free Crypto Library
 - FreeRTOS
 - lwIP: Lightweight TCP/IP stack
 - SDHC: SD Card Library
 - Installed separately (NDA or SLA required):
 - EMV L1 Contact-Smart Card: Install as a plugin
 - NFC: Install as a plugin
 - UCL: Install as a plugin
- Documentation
- Wide range of examples ready to run on evaluation kits (EV kits)

This installer is fully integrated with Eclipse™ and MaximSDK. It also bundles setups for all the required programs. The list of programs bundled in the setup is:

- GNU Tools for ARM Embedded Processors
- Eclipse CDT IDE for C/C++ Developers (Maxim Integrated version)
- Maxim Integrated Bitmap Converter
- Maxim Integrated Secure Tools
- Minimalist GNU for Windows (MinGW)
- Open On-Chip Debugger(OpenOCD)
- Olimex ARM-USB-TINY-H Drivers

Eclipse is a trademark of Eclipse Foundation, Inc.

MinGW is a Registered Trademark of Software in the Public Interest, Inc. in the United States. The MinGW trademark is managed by the MinGW project.

Maxim is a registered trademark of Maxim Integrated Products, Inc.

This document describes all the installation, update, and uninstallation processes for the MaximSDK environment. It also explains how to maintain and troubleshoot the tool chain. The screenshots might be different from the MaximSDK installer version, but the steps are identical.

The installer is also capable of installing firmware, software, and documentation to run with Maxim Integrated Arm Cortex products. The supported products are:

- MAX32520: ChipDNA Secure Arm Cortex M4 Microcontroller
- MAX32570: Low-Power Arm Cortex-M4 Microcontroller with Contactless Radio for Secure Applications
- MAX32670: High Reliability, Ultra-Low Power Microcontroller Powered by Arm Cortex M4 Processor with FPU for Industrial and IoT
- MAX32655: Low-Power, Arm Cortex-M4 Processor with FPU-Based Microcontroller and Bluetooth 5.2
- MAX78000: Ultra-Low-Power Arm Cortex-M4 Processor with FPU-Based Microcontroller with Convolutional Neural Network Accelerator

Arm and Cortex are registered trademarks of Arm Limited.

Installation

Prerequisites

The MaximSDK online installer can be downloaded from the Maxim Integrated website. The supported operating systems are Win10, MacOS, and Linux distros.

The Maxim Micros SDK comes with its own version of Eclipse. Uninstall the previous version of the MaximSDK before installing the new version.

The Maxim Micros SDK is updated using the Maintenance Tool integrated in the MaximSDK. Also, the Maintenance Tool can add new libraries and solutions.

Setup

1. Download **MaximMicrosSDK.exe** from the Maxim web page. This package is found in the **Design Resources** tab of the supported parts web page. Run the installer exe after downloading.

[Maxim](#) > [Products](#) > [Microcontrollers](#) > [MAX32520](#)

MAX32520

ChipDNA Secure Arm Cortex M4 Microcontroller

ChipDNA Secure Microcontroller with Secure Boot for IoT Applications

 [Download Data Sheet](#)  [Subscribe](#)  [Active in Production](#).

Please check latest availability status for a specific part variant.

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[MAX32520-KIT](#): Evaluation Kit for the MAX32520

[MAX32520FTHR](#): Evaluation Kit for the MAX32520

Quality and Environmental Data

Request Reliability Report for: [MAX32520](#)

[Lead-Free Package Tin \(Sn\) Whisker Reports](#)

Additional Resources

 [Why a Secure Micro with PUF Is a Strong IoT Hacking Defense](#)

Software

[Maxim Micros SDK](#)

CAD Symbols and Footprints

• [MAX32520-BNJ+](#)

• [MAX32520-BNS+](#)

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Figure 1. Design resource tab of the MAX32520 web page.

2. Click **Next** to proceed from the **Welcome** screen.
3. Choose the installation directory path and name. Click **Next**. Install in the **C:\MaximSDK** folder.

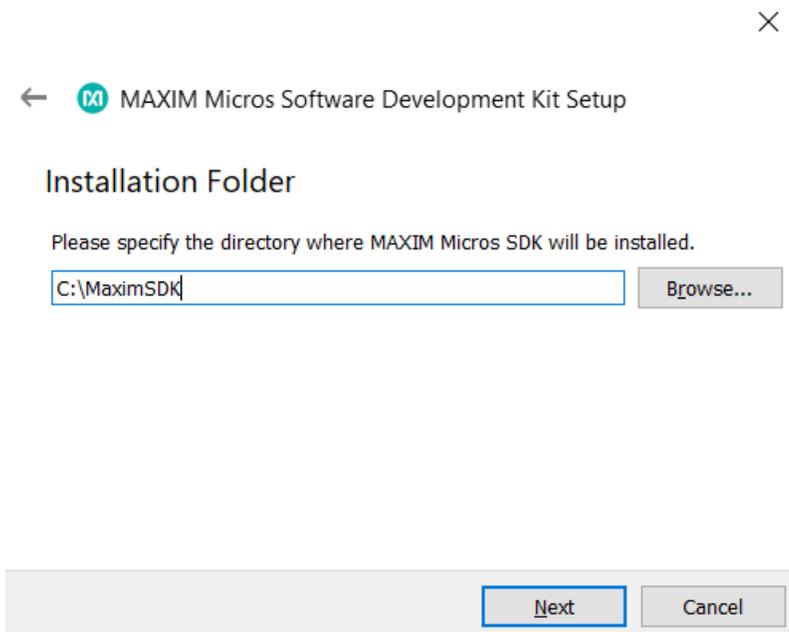


Figure 2. Selecting the installation folder.

4. Select the components to install into the environment.

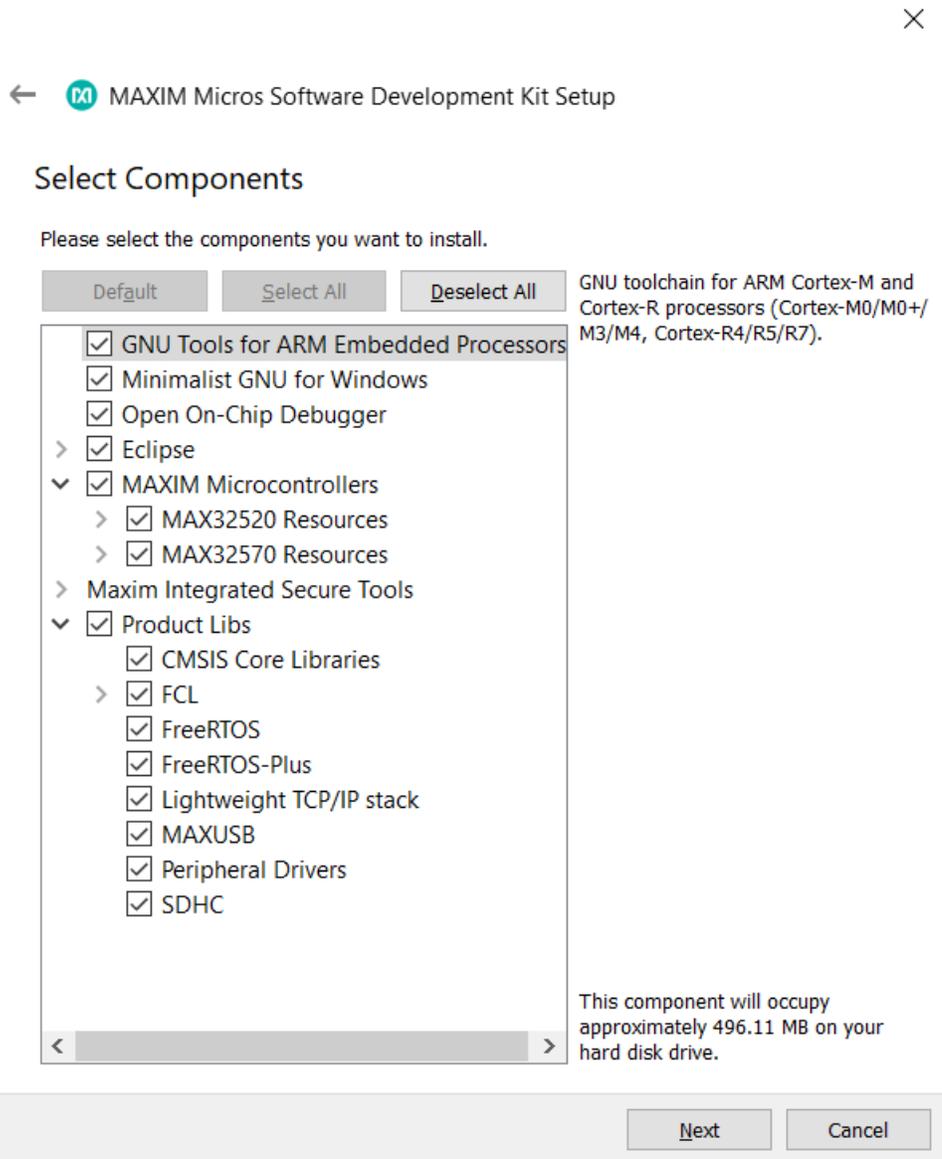


Figure 3. Selecting all the desired components.

5. Read and accept the **License Agreements**.

6. Select the **Start Menu Shortcut**. Click **Next**.

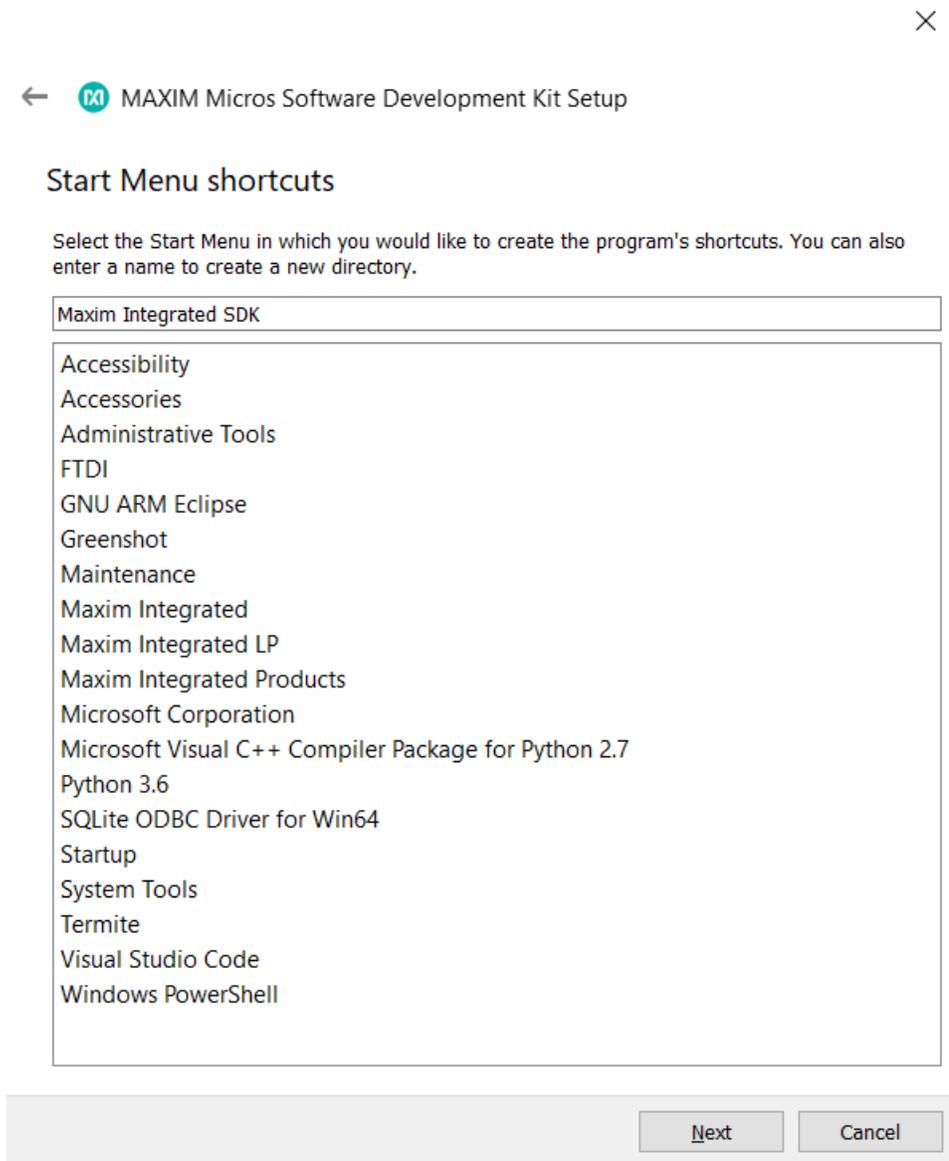


Figure 4. Selecting a **Start Menu** for the program shortcuts.

7. Check the free and required disk spaces. The required disk space is about 1.6GB.



*Figure 5. **Ready to Install** window and required disk space.*

8. Click **Install** to download and install. This installation lasts about 20 minutes depending on the selected components.

9. The **Eclipse Maxim Integrated** is available in the **Start Menu** after installation.

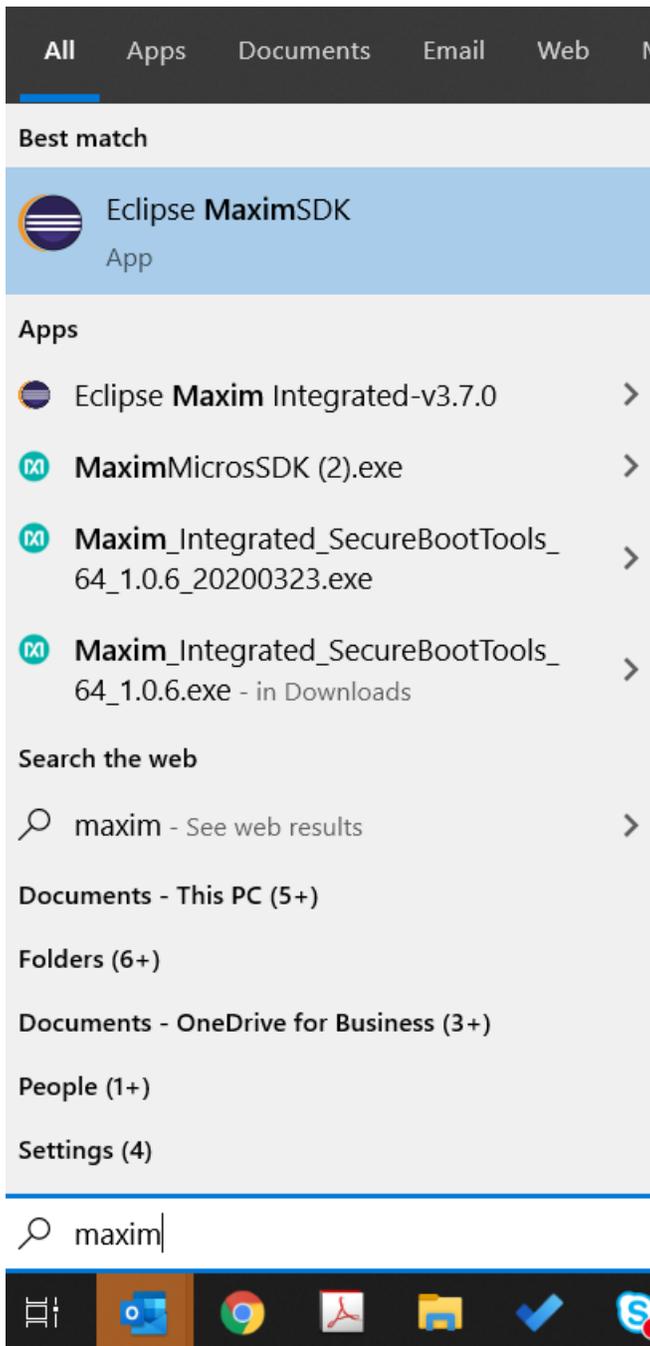


Figure 6. Run Eclipse Maxim Integrated.

Maintenance Tool

The MaintenanceTool.exe, the uninstaller and maintenance application, is found at the top of the Maxim Integrated installation directory (e.g. C:\MaximSDK). This application installs, updates, or uninstalls packages for an existing installation. Double click the application and choose from the three options: **Package manager**, **Update components**, or **Remove all components**. Click **Next**.

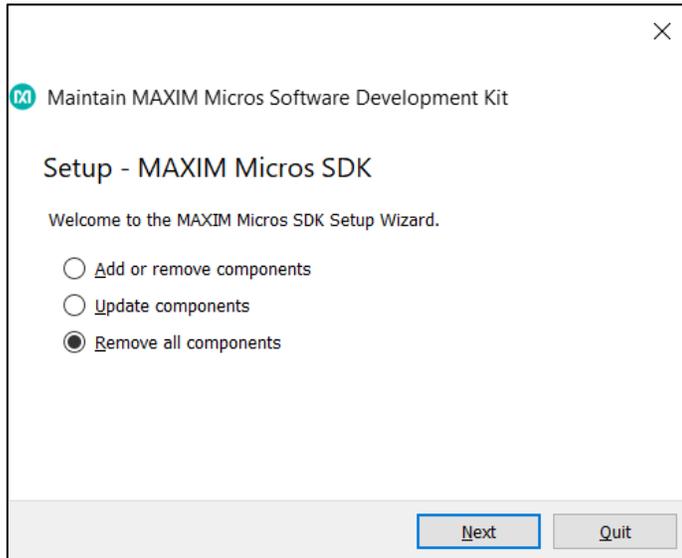


Figure 7. Maintenance tool window.

Package Manager

Selecting this component adds or removes certain packages from the installation. Check or uncheck the corresponding checkboxes to add or remove components. Click **Next**.

Close all applications before removing or adding components.

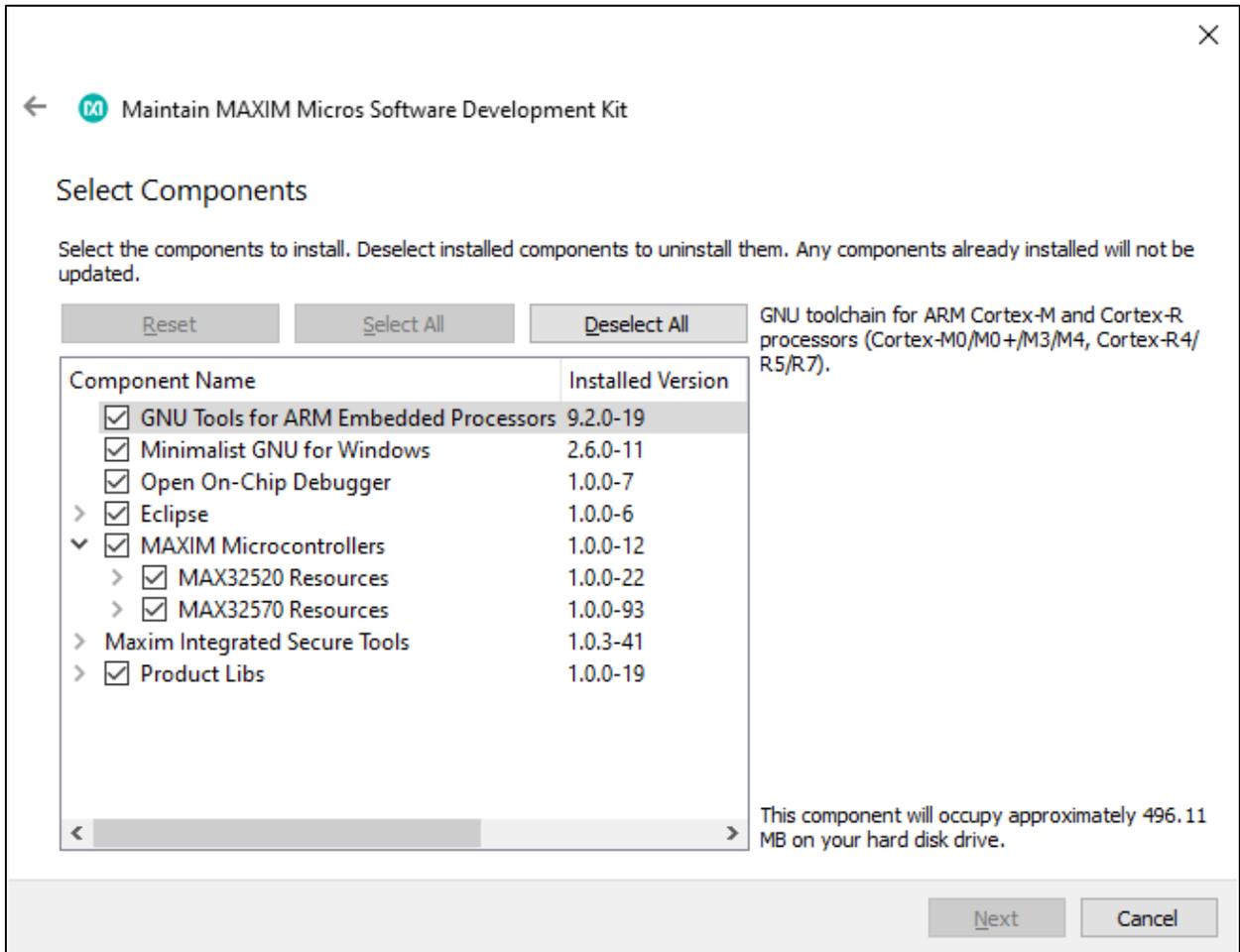


Figure 8. Maintenance tool window.

Update Components

Run the maintenance tool often to update the tool chain. Selecting this component updates certain packages for an existing installation.

Close all applications before removing or adding components.

Uninstallation

1. Close all active **Eclipse** applications before uninstallation.
2. Select **Remove all components**. Click **Next**.
3. Click **Uninstall**. The uninstallation lasts about five minutes.

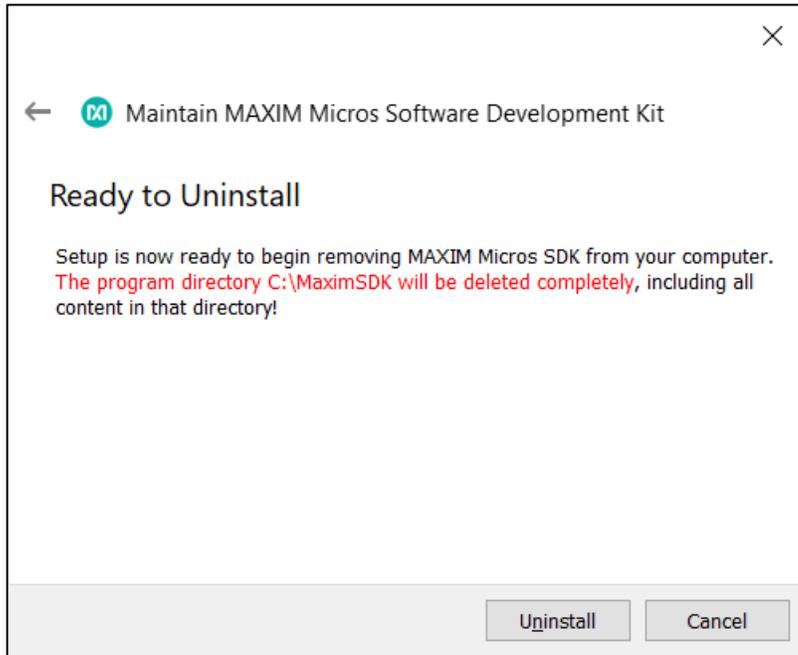


Figure 9. Uninstall warning message.

4. The MaximSDK folder is removed from the C:\ directory completely. Ensure the uninstall is complete.

Revision History

REV NUMBER	REV DATE	DESCRIPTION	PAGES CHANGED
0	4/20	Initial release	—

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