# Welcome to EVN!

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**EVN** is a Robotics System that we view as the natural evolution of LEGO® MINDSTORMS®.

It is built around the EVN Alpha - a Technic-compatible robot controller with 26 ports for I2C, UART, Servos, EV3 and NXT Motors, etc.

On this page, you will find user guides for EVN Alpha, hardware information and documentation for the EVN Arduino library, which uses the Arduino-Pico core by Earle Philhower for RP2040-based boards

To find out more about purchasing, visit our product website.



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## Library Reference

### Board

**EVNAlpha** 

### **Actuators**

**EVNMotor** 

**EVNDrivebase** 

**EVNServo** 

**EVNContinuousServo** 

### Sensors

**EVNColourSensor** 

**EVNDistanceSensor** 

**EVNCompassSensor** 

**EVNIMUSensor** 

**EVNGestureSensor** 

**EVNEnvSensor** 

**EVNTouchArray** 

### **Displays**

**EVNDisplay** 

**EVNMatrixLED** 

**EVNSevenSegmentLED** 

**EVNRGBLED** 

#### Others

**EVNBluetooth** 

**EVNADC** 

### Guides

DIY Guide for EVN Alpha V1.4

**Compass Calibration** 

Connecting 3rd-Party I2C Devices

Programming with PlatformIO on VSCode

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# **Community Projects**

• <u>Lua-EVN</u> is a port of the Lua scripting language to EVN, with support for the EVN library classes and functionalities. As outlined in the repository's README, Lua has many interesting benefits over C++. Check it out!

# Licenses

The EVN libraries are licensed under GPL.

In addition, it contains code from additional open source projects:

- Arduino-Pico is licensed under the LGPL license.
- The Arduino IDE and ArduinoCore-API are developed and maintained by the Arduino team. The IDE is licensed under GPL.
- The RP2040 GCC-based toolchain is licensed under under the GPL.
- The Pico-SDK and Pico-Extras are by Raspberry Pi (Trading) Ltd. and licensed under the BSD 3-Clause license.
- The U8g2 Arduino library by olikraus is licensed under the BSD 2-Clause license.
- The U8g2 font used is part of The Ultimate Oldschool PC Font Pack, which is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.
- Pololu's VL53L0X Arduino library is largely based on STMicroelectronics' VL53L0X API (licensed under the BSD 3-Clause license). The rest is licensed under the MIT license.

# **Acknowledgements**

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ch-Jepsen
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Without them (and many more unnamed backers), EVN would not exist today.

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