THERMAL HAT

SKU:U062

MLX90640
32x24P
-40°C~300°C

G26
I2C-SCL

G0
I2C-SDA

I2C
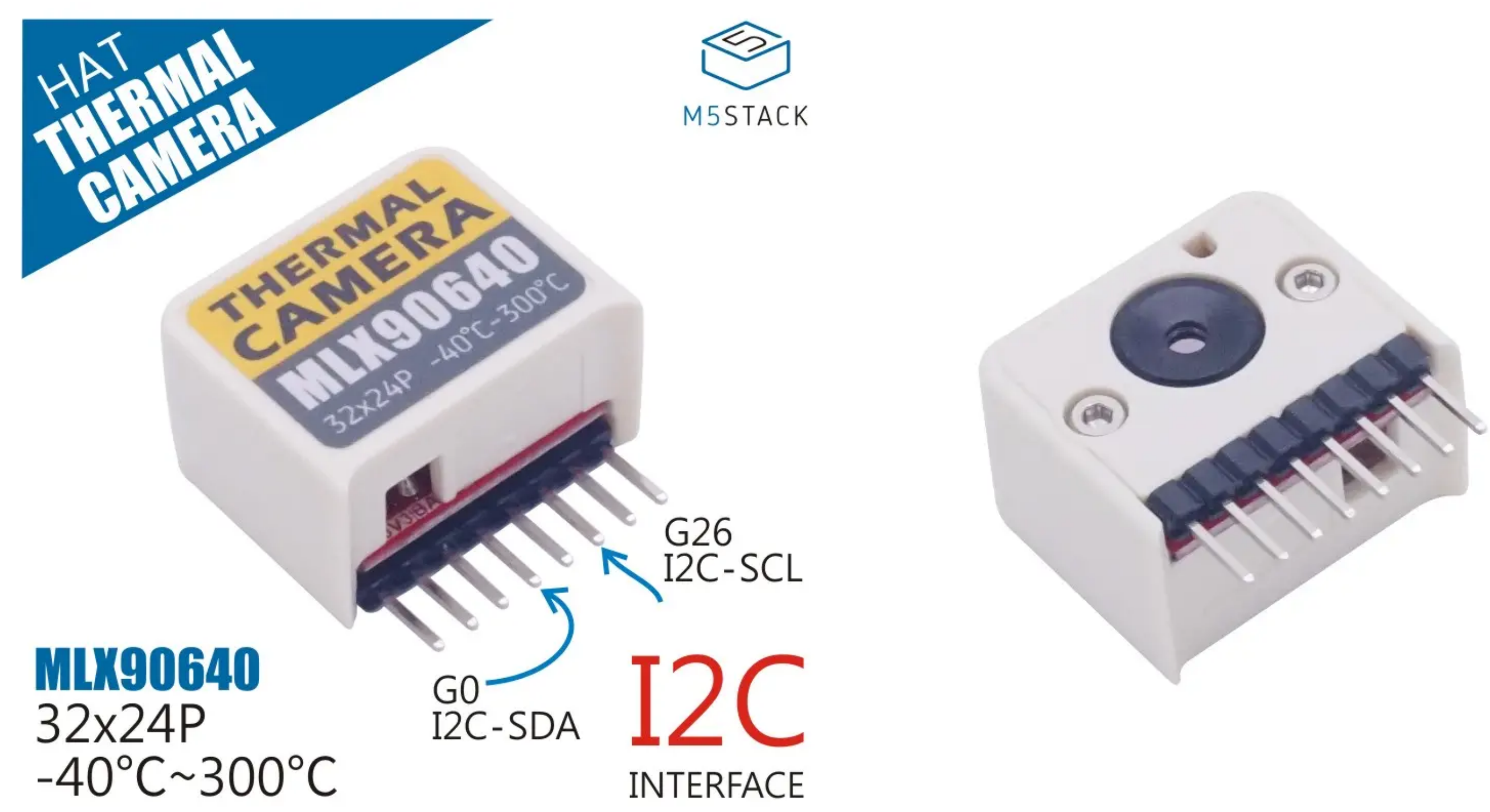INTERFACE

Description

THERMAL HAT is an M5StickC-compatible human infrared thermal imaging. Built-in **MLX90640** thermopile sensor that measures the surface temperature of an object and generates a thermal image through a temperature gradient formed by the surface temperature. Resolution is **32 x 24**)

MLX90640 Infrared (IR) sensor arrays offer high resolution and the ability to work reliably in harsh environments. Compared to expensive high-end thermal imaging cameras, Hat-Thermal is a cost-effective alternative. Relatively general Micro-bolometer, the advantage of this sensor is that it does not require frequent re-calibration, thus ensuring continuity of detection and reducing system maintenance costs. The field of view provides a wide-angle version (110 ° × 75 °).

The I2C address is **0x33**. (GOIO 0/26)
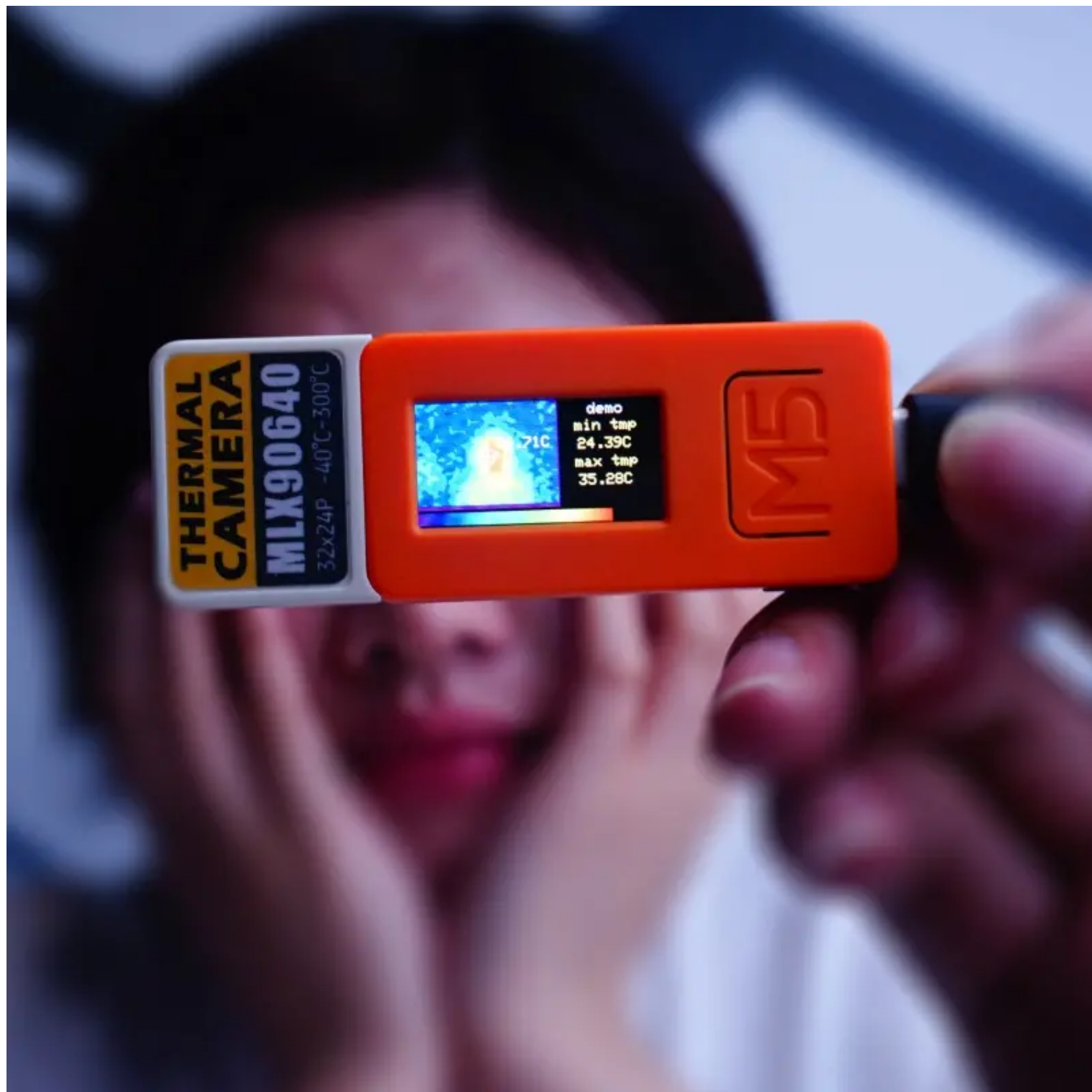
Product Features

◦ Operating Voltage: 3V ~ 3.6V

◦ Current Consumption: 23mA

◦ Field of View: 110°x75°

◦ Measurement Range: -40°C ~ 300°C

◦ Resolution: ±1.5°C

◦ Refresh Rate: 0.5Hz-64Hz

○ Operating temperature: -40℃ ~ 85℃

Include

○ 1x THERMAL CAMERA HAT

Applications

○ High precision non-contact temperature measurements
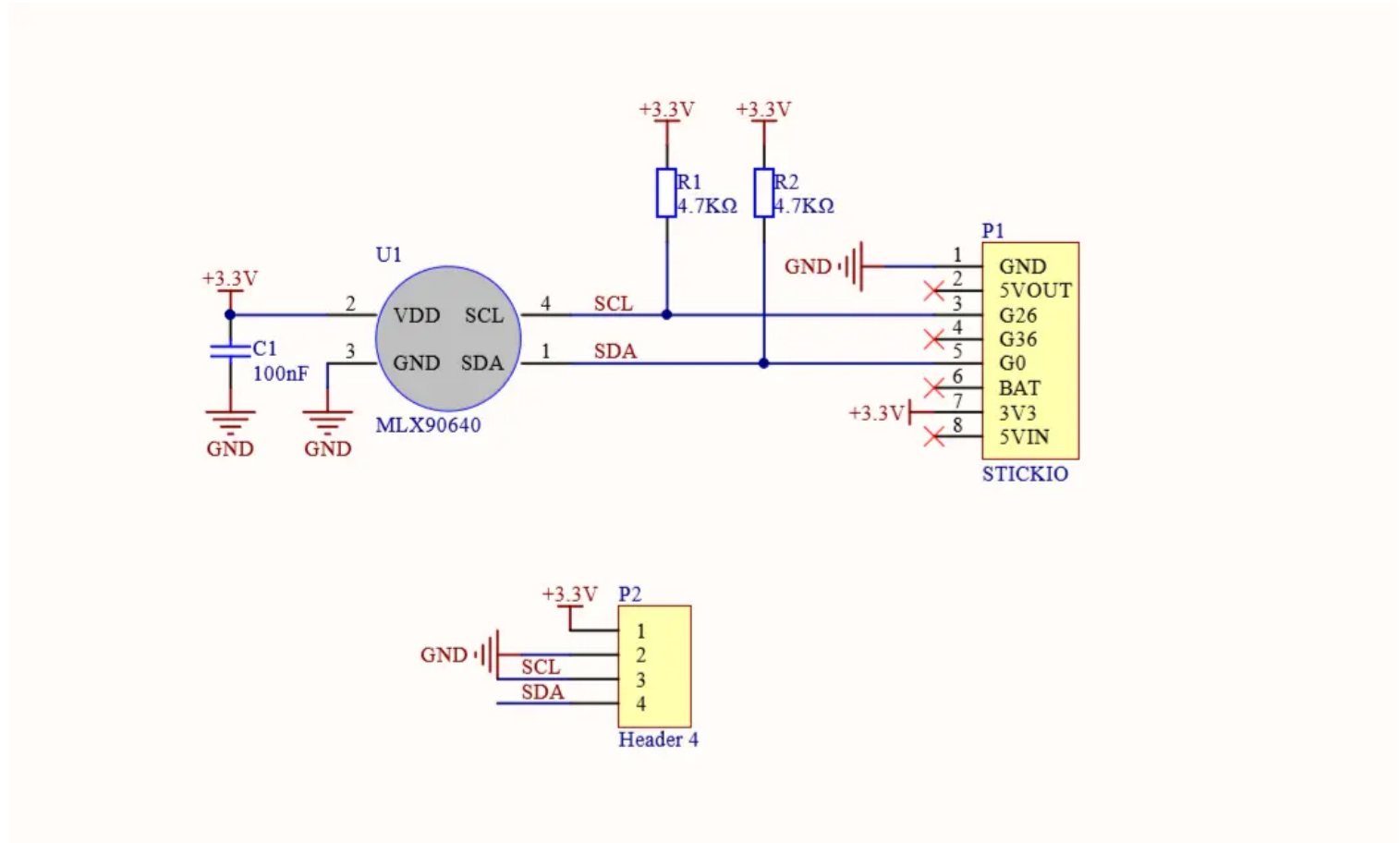○ Intrusion / Movement detection
○ Visual IR thermometers

Specification

Resources	Parameter
Communication protocol	I2C：0x33
Net weight	8g
Gross weight	13g
Product Size	25*24*14m
Product Size	40*42*30mm

Pin Map

M5StickC	GPIO0	GPIO26	5V	GND
HAT THERMAL	SDA	SCL	5V	GND

Schematic

Related Link

○ **MLX90640 Datasheet**

EasyLoader

download EasyLoader

1.EasyLoader is a simple and fast program burner. Every product page in EasyLoader provides a product-related case program. It can be burned to the master through simple steps, and a series of function verification can be performed.

○ After downloading the software, double-click to run the application, connect the M5 device to the computer through the data cable, select the port parameters, click **"Burn"** to start burning. (**For M5StickC burning, please Set the baud rate to 750000 or 115200**)
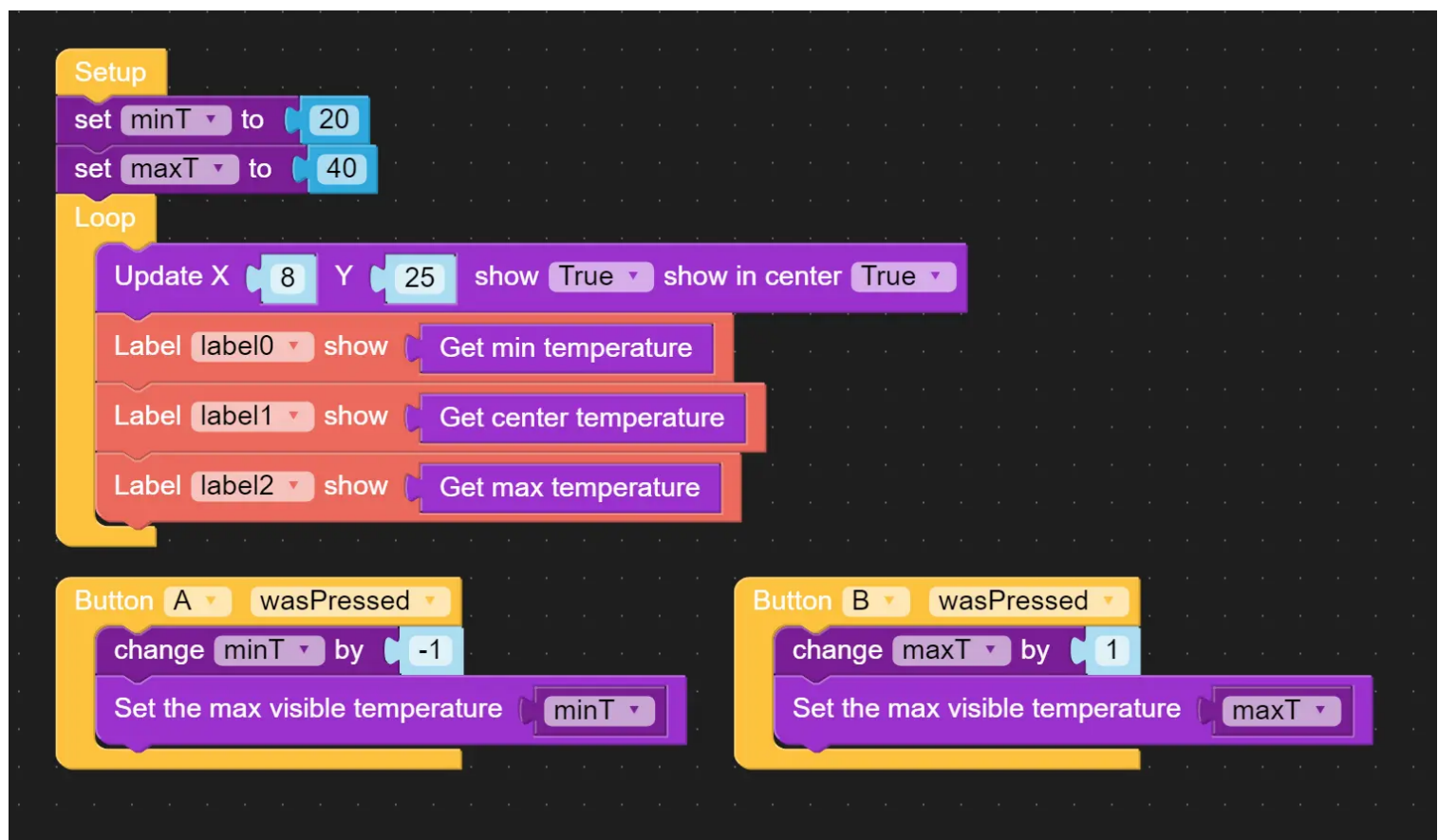
Example

1. Arduino

Click here to download Arduino code

2. UIFlow

○ Click here to download the UIFlow example

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