

# oribokit™

## Origami & Robotics kit

**VERSION 1.0**  
**COLLECTORS EDITION**

**STM32F103C8**

### EXPOSED PINS & FUNCTIONS

<b>A6</b>	PWM (3V), ADC/ANALOG
<b>A7</b>	PWM (3V), ADC/ANALOG
<b>B0</b>	PWM (3V), ADC/ANALOG
<b>B1</b>	PWM (3V), ADC/ANALOG
<b>B3</b>	DIGITAL (5V)
<b>B6</b>	PWM (5V), DIGITAL
<b>B7</b>	PWM (5V), DIGITAL
<b>B8</b>	PWM (5V), DIGITAL
<b>B9</b>	PWM (5V), DIGITAL

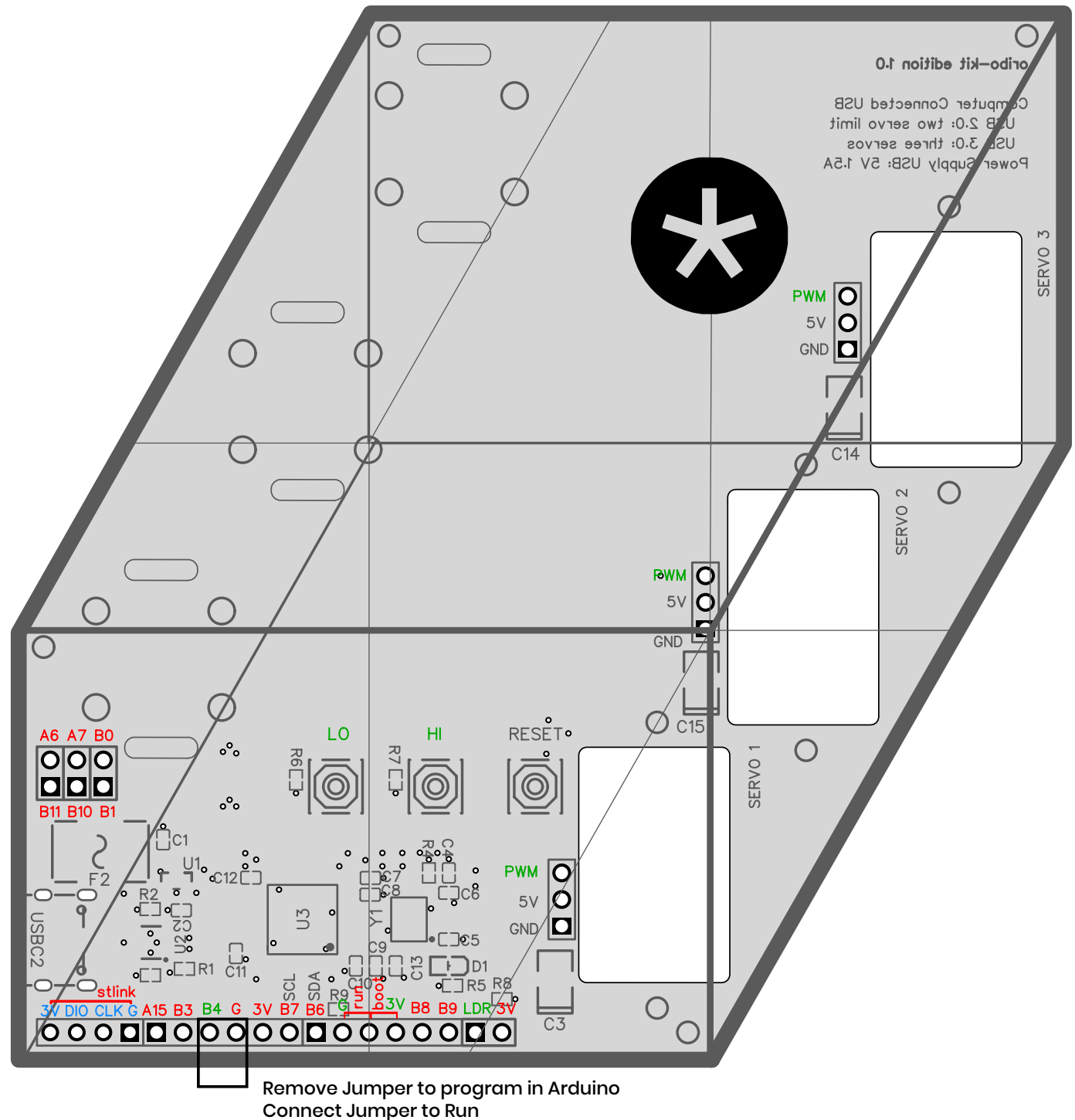
### USED PINS

<b>B4</b>	> RUN MODE (SEE JUMPER NOTE)
<b>HI</b>	> B10 (5V DIGITAL)
<b>LO</b>	> B11 (5V DIGITAL)
<b>SERVO1</b>	> A10 (5V PWM & DIGITAL)
<b>SERVO2</b>	> A9 (5V PWM & DIGITAL)
<b>SERVO3</b>	> A8 (5V PWM & DIGITAL)
<b>LDR</b>	> A5 (3V ADC ANALOG)

### STLINK

<b>SWDIO</b>	> A13
<b>CLK</b>	> A14
<b>3V</b>	
<b>GND</b>	

**FUSE RATED AT 1.5 A**



# oribokit™

## Origami & Robotics kit

**VERSION 1.1**  
**ARS ELECTRONICA EDITION**

**STM32F103C8**

### EXPOSED PINS & FUNCTIONS

<b>B1</b>	PWM (3V), ADC/ANALOG
<b>B0</b>	PWM (3V), ADC/ANALOG
<b>A7</b>	PWM (3V), ADC/ANALOG
<b>A6</b>	PWM (3V), ADC/ANALOG
<b>B8</b>	PWM (5V), DIGITAL
<b>B7</b>	PWM (5V), DIGITAL
<b>B6</b>	PWM (5V), DIGITAL
<b>B4</b>	DIGITAL (5V)
<b>B3</b>	DIGITAL (5V)

### USED PINS

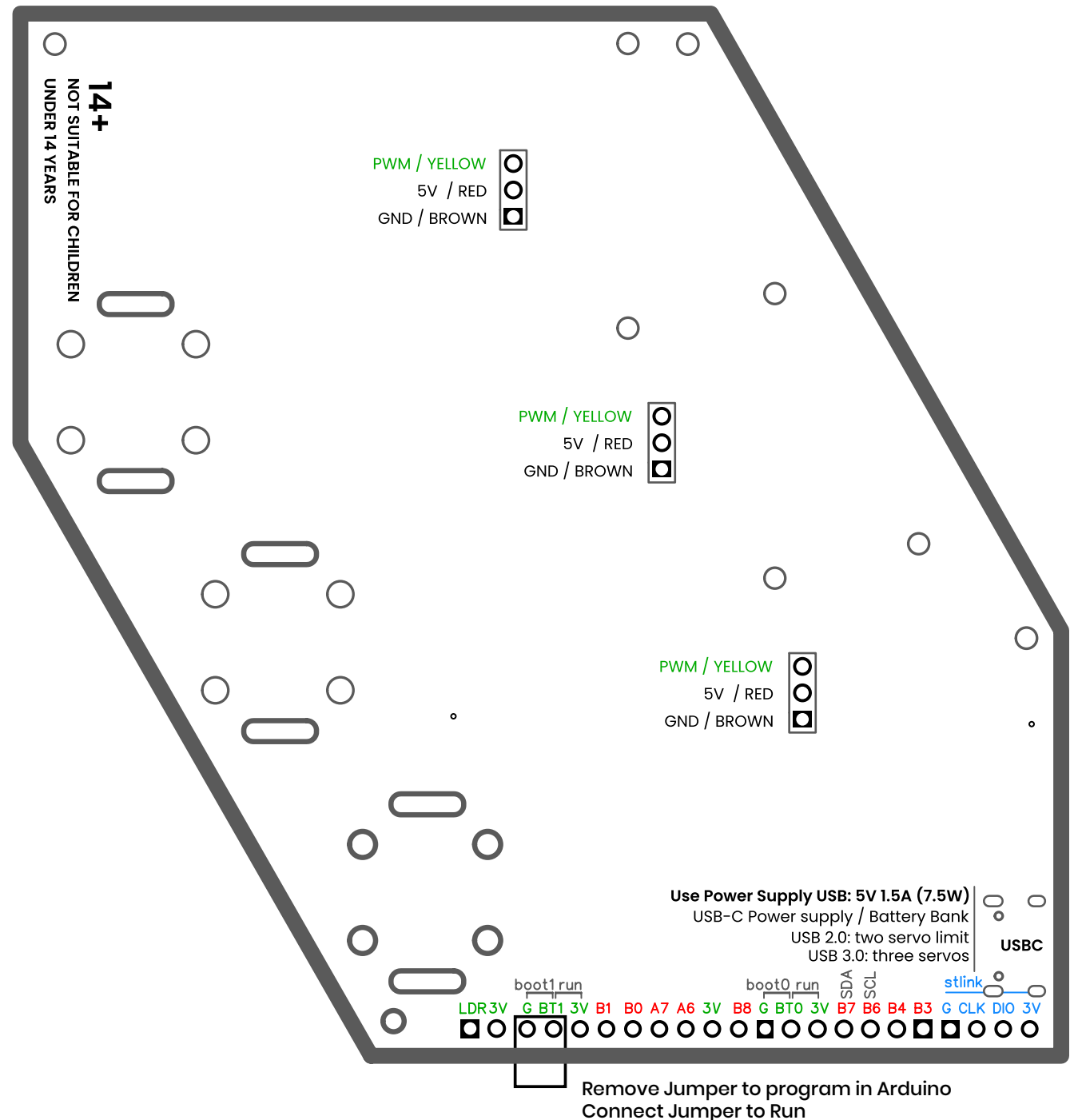
<b>BOOT1</b>	> RUN MODE (SEE JUMPER NOTE)
<b>HI</b>	> B10 (5V DIGITAL)
<b>LO</b>	> B11 (5V DIGITAL)
<b>SERVO1</b>	> A10 (5V PWM & DIGITAL)
<b>SERVO2</b>	> A9 (5V PWM & DIGITAL)
<b>SERVO3</b>	> A8 (5V PWM & DIGITAL)
<b>LDR</b>	> A5 (3V ADC ANALOG)

### STLINK

<b>SWDIO</b>	> A13
<b>CLK</b>	> A14
<b>3V</b>	
<b>GND</b>	

**FUSE RATED AT 1.5 A**

**BOTTOM OF BOARD**



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## ORIGAMI & ROBOTICS KIT

### VERSION 1.4

#### RGB FLOWER

#### ATMEGA32U4

#### EXP1

2.54mm 6 pin header

TX TX Serial  
RX RX Serial  
5V 5V  
G Ground  
SDA I2C Serial Data  
SCL I2C Serial Clock

#### EXP2

2.54mm 6 pin header

INT Interrupt  
A5 Analog Pin 5  
A4 Analog Pin 4  
A3 Analog Pin 3  
A2 Analog Pin 2  
A1 Analog Pin 1

#### RGB [1-3]

2.54mm 3 pin header

GND Ground  
5V 5V DIGITAL  
DATA RGB1, RGB2, RGB3  
RGB1 PWM PB6 Pin 10  
RGB2 PWM PC6 Pin 5  
RGB3 PWM PC7 Pin 13

#### SERVO [1-3]

2.54mm 3 pin header

GND Ground  
5V 5V DIGITAL  
SERVO1 PWM PB5 Pin 9  
SERVO2 PWM PD7 Pin 6  
SERVO3 PWM PD6 Pin 12

#### FUSE RATED AT 1.5 A

#### REVISION NOTES:

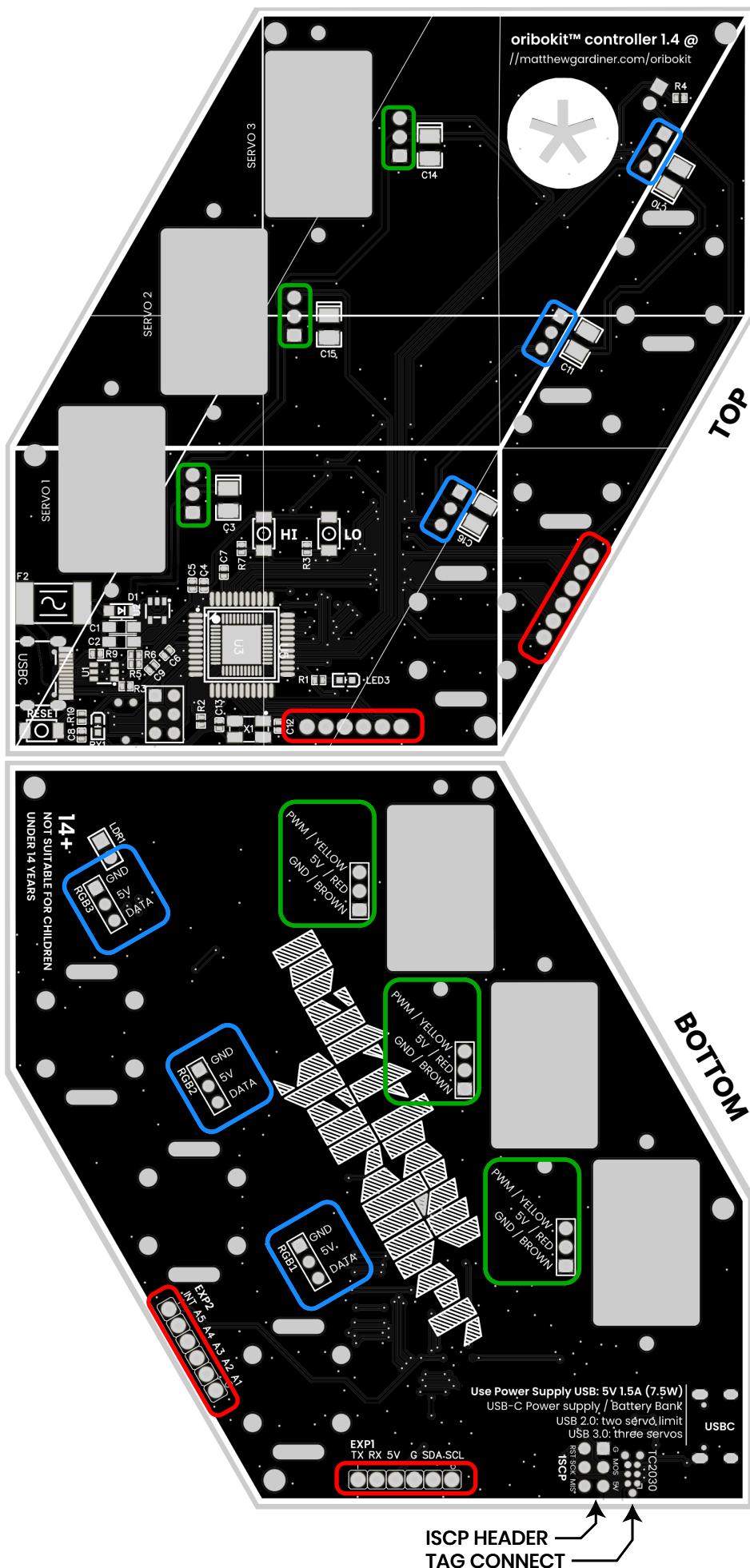
ATMEGA32u4

Native USB

Added EXP1 for Serial and I2C

Added EXP2 for Analogue Sensors

Added RGB 1-3 for PWM RGB LEDs



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## ORIGAMI & ROBOTICS KIT

### VERSION 1.5

### RGB FLOWER 2

### ATMEGA32U4

#### EXP1

2.54mm 6 pin header

**TX** TX Serial  
**RX** RX Serial  
**5V** 5V  
**G** Ground  
**SDA** I2C Serial Data  
**SCL** I2C Serial Clock

#### EXP2

2.54mm 6 pin header

**INT** Interrupt  
**A5** Analog Pin 5  
**A4** Analog Pin 4  
**A3** Analog Pin 3  
**A2** Analog Pin 2  
**A1** Analog Pin 1

#### RGB [1-3]

2.54mm 3 pin header

**GND** Ground  
**5V** 5V DIGITAL  
**DATA** RGB1, RGB2, RGB3  
**RGB1** PWM PB6 Pin 10  
**RGB2** PWM PC6 Pin 5  
**RGB3** PWM PC7 Pin 13

#### SERVO [1-3]

2.54mm 3 pin header

**GND** Ground  
**5V** 5V DIGITAL  
**SERVO1** PWM PB5 Pin 9  
**SERVO2** PWM PD7 Pin 6  
**SERVO3** PWM PD6 Pin 12

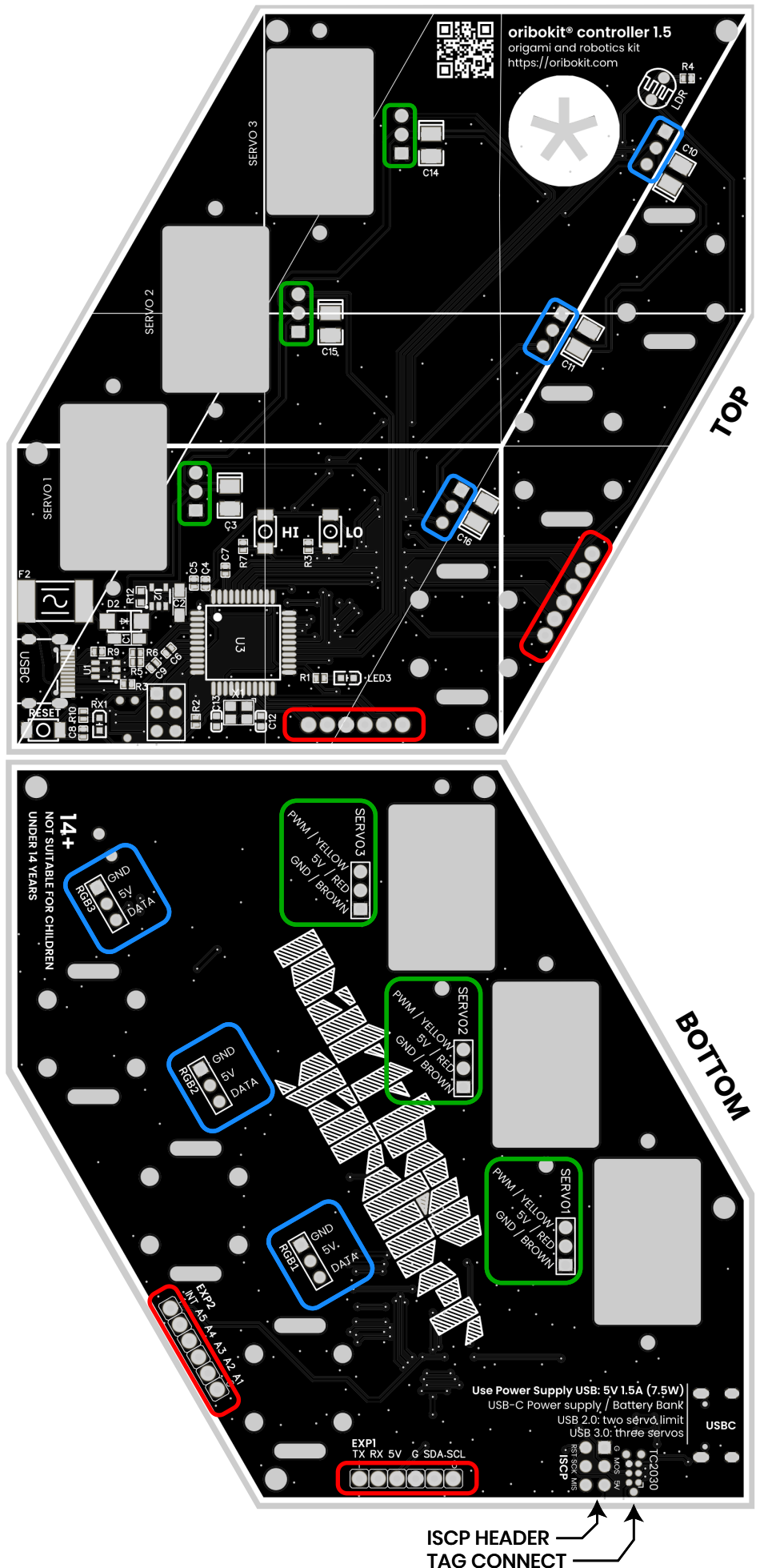
#### FUSE RATED AT 1.5 A

#### REVISION NOTES:

ATMEGA32u4  
 Added QR-CODE to oribokit.com

#### Chipageon necessitated updates

Updated 16MHz crystal  
 Updated Power Diode D2



## VERSION 1.6

### FLAT FLEX

### ATMEGA32U4

#### EXP1

2.54mm 6 pin header

**TX** TX Serial  
**RX** RX Serial  
**5V** 5V  
**G** Ground  
**SDA** I2C Serial Data  
**SCL** I2C Serial Clock

#### EXP2

2.54mm 6 pin header

**INT** Interrupt  
**A5** Analog Pin 5  
**A4** Analog Pin 4  
**A3** Analog Pin 3  
**A2** Analog Pin 2  
**A1** Analog Pin 1

#### RGB [1-3]

2.54mm 3 pin header

**GND** Ground  
**5V** 5V DIGITAL  
**DATA** RGB1, RGB2, RGB3  
**RGB1** PWM PB6 Pin 10  
**RGB2** PWM PC6 Pin 5  
**RGB3** PWM PC7 Pin 13

#### SERVO [1-3]

2.54mm 3 pin header

**GND** Ground  
**5V** 5V DIGITAL  
**SERVO1** PWM PB5 Pin 9  
**SERVO2** PWM PD7 Pin 6  
**SERVO3** PWM PD6 Pin 12

#### FPC [1-3]

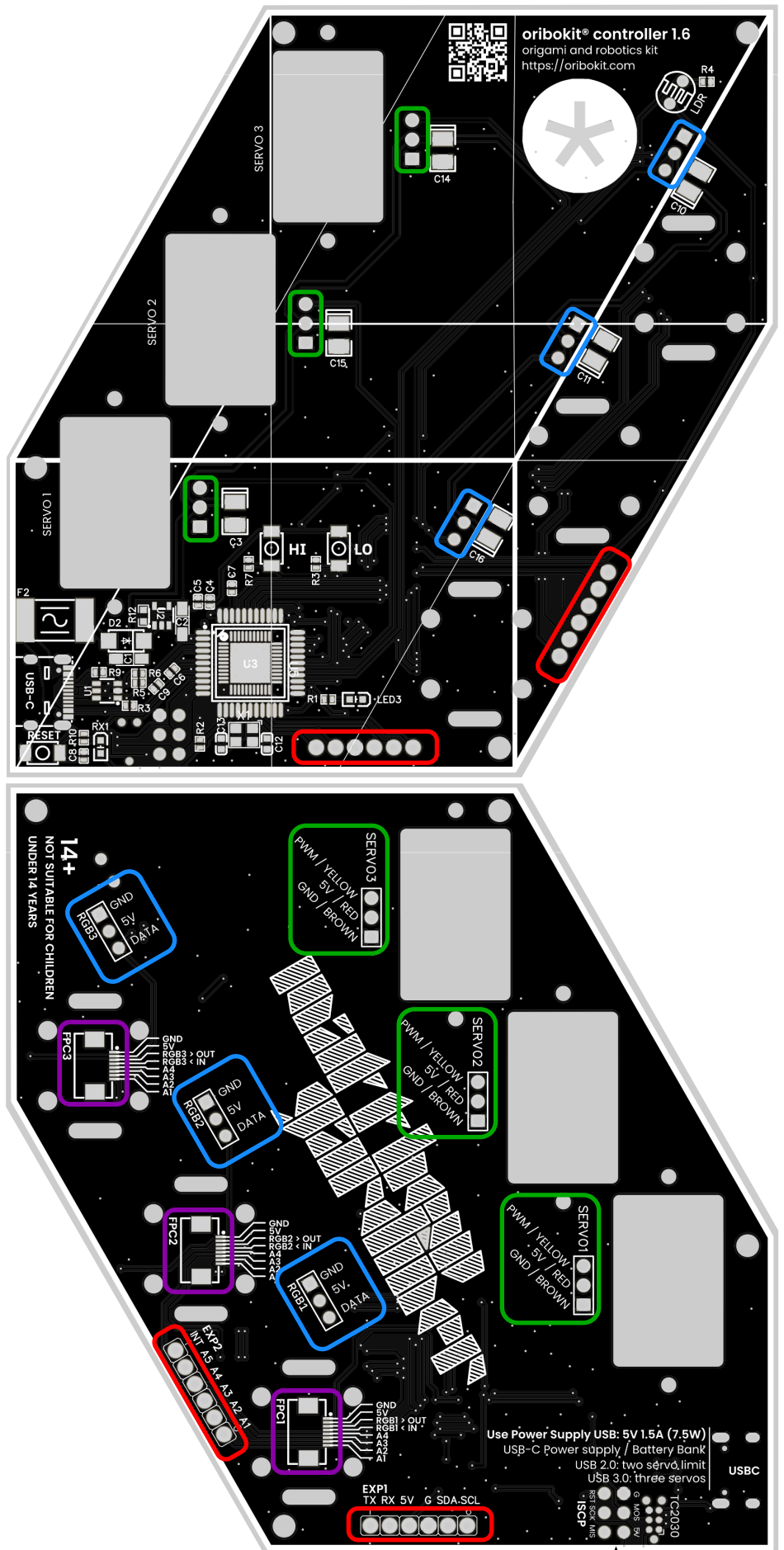
0.5mm Flat Flex Cable

**GND** Ground  
**5V** 5V DIGITAL  
**RGB OUT** Not connected  
**RGB IN** RGB1 RGB2 RGB3  
**A4** Analog Pin 4  
**A3** Analog Pin 3  
**A2** Analog Pin 2  
**A1** Analog Pin 1

**FUSE RATED AT 1.5 A**

#### REVISION NOTES:

ATMEGA32u4  
 Added Flat Flex connectors  
 Updated USB-C connector



ISCP HEADER  
 TAG CONNECT