eVIVE

learn | build | debug


# Technical Specifications

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# Technical Specifications

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|---|---|
| Physical | **Dimensions:** 116mm x 140mm x 32mm<br>**Weight:** 295g |
| Microcontroller | Arduino MEGA 2560 R3 |
| Internal Battery | Li-ion battery: 3.7V, 2400mAh, 18650 type<br>Battery Life: upto 4.5 hours |
| External Power Input | **USB type B:** upto 1M Baud Rate<br>**DC Jack:** 5V-30V input with reverse polarity, overcurrent & overvoltage protection<br>**Male Headers:** shorted with DC Jack |
| Power Output | **Stabilized $V_{in}$:** stabilized output equal to input voltage<br>**Variable Out:** 1.25V to $V_{in}$-1V, up to 3A potentiometer controlled<br>**5V Out:** up to 3A<br>**3.3V Out:** up to 800mA |
| Power Switch | Internal Battery Powered - OFF - Externally Powered |
| Power Panel | Power LED<br>Charging LED<br>RESET Button |
| Hardware Interaction | **Slide Switches:** two SPST three position slide switches<br>**Potentiometers:** two B103 potentiometers<br>**Tactile Switches:** two push buttons<br>**Joystick:** 5-way navigation key |
| Display | 1.8" SPI TFT, 160x128, 18-bit colour |
| Buzzer | 2kHz to 10kHz beeps, tones, alerts and melodies |
| Storage | **SD Card Slot:** 2GB to 32GB micro SD card |

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| Communication | **Wi-Fi Adapter:** | ESP-12E (ESP8266) compatible |
| | **Bluetooth Adapter:** | HC05 compatible |
| | **XBee Adapter:** | S1, S2, PRO etc. compatible |
| Plug & Play Interface | **M1-M2:** | two motor channels<br>1A per channel with thermal shutdown capability for motors, relays, pneumatics, steppers etc. |
| | **S1-S2:** | two servo motor channels |
| | **MD1-MD2:** | two motor driver channels |
| Sensing Channels | **Probe I/V:** | I sensing: up to 3A, 2mA accuracy, up to 75kHz<br>V sensing: -5V to +5V, 3mV accuracy, up to 75kHz |
| | **Probe V:** | -30V to +30V, 10mV accuracy, up to 75kHz |
| | **ADCs:** | two 24 bit analog to digital converters (ADE7912) |
| Data Acquisition Channels | two male headers, each connected to sensing channel | |
| Magic Lid | **Mini Breadboard:** | 170 pin solderless |
| | **Shield Stack Space:** | UNO Pinout Compatible |
| | **Arduino GPIO:** | 14+6 Digital I/O Pins, 12+3 PWM Output Pins, 6+4 Analog Input Pins, 6 Interrupt, 4 Serial, IIC, SPI |
| Status Indicators | **Rx0-Tx0:** | bi-directional LED |
| | **Pin 13:** | unidirectional LED |
| | **Actuator Directions:** | two bi-directional LEDs for M1-M2 etc. |
| Jumpers | **Sensing Selector:** | toggle between V or I sensing on Probe I/V |
| | **Motor Power Selector:** | toggle between $V_{in}$ or $V_{var}$ for plug & play devices |
| Timer | 16 Bit | |
| DAC | 12 Bit IIC controlled digital to analog converter, 0-5V | |
| I/O 3.3V | two 5V-3.3V bi-directional digital logic level shifters | |
| Others | **Vents:** | heat dissipation vents |
| | **Breadboard Mounting Holes:** | two holes to connect breadboards |
| | **Mounting Holes:** | two 4mm holes to mount evive on robots |