



Technical Specifications

Physical	<p>Dimensions: 116mm x 140mm x 32mm</p> <p>Weight: 320g</p>
Microcontroller	Arduino MEGA 2560 R3
Internal Battery	<p>Li-ion battery: 3.7V, 2600mAh, 18650 type</p> <p>Battery Life: Upto 4.5 hours on single charge</p>
External Power Input	<p>USB type B: Upto 1M Baud Rate</p> <p>DC Jack: 5V-30V input with reverse polarity, overcurrent & overvoltage protection</p> <p>Male Headers: Same as DC Jack</p>
Power Output	<p>Stabilized V_{in}: Stabilized output equal to input voltage</p> <p>Variable Out: 1.25V to $V_{in}-1V$, up to 3A Potentiometer controlled</p> <p>5V Out: Up to 3A</p> <p>3.3V Out: Up to 800mA</p>
Power Switch	Internal Battery Powered - OFF - Externally Powered

Power Panel	<p>Power LED</p> <p>Charging LED</p> <p>RESET Button</p>
Hardware Interaction	<p>Slide Switches: Two SPST three position slide switches</p> <p>Potentiometers: Two B103 potentiometers</p> <p>Tactile Switches: Two push buttons</p> <p>Joystick: 5-way navigation key</p>
Display	1.8" SPI based TFT, 160X128px, 18-bit colour
Buzzer	2kHz to 10kHz beeps, tones, alerts and melodies
Storage	SD Card Slot: 2GB to 32GB micro SD card
Communication	<p>Wi-Fi Adapter: ESP-12E (ESP8266) compatible</p> <p>Bluetooth Adapter: HC05 compatible</p> <p>XBee Adapter: S1, S2, PRO etc. compatible</p>
Plug & Play Interface	<p>M1-M2: Two motor channels via inbuilt motor driver 1A per channel with thermal shutdown capability for motors, relays, pneumatics, steppers etc.</p> <p>S1-S2: Two servo motor channels</p> <p>MD1-MD2: Two motor driver channels</p>
Sensing Channels	<p>Probe I/V: I sensing: up to 3A, 3mA accuracy, upto 75kHz V sensing: -5V to +5V, 3mV accuracy, upto 75kHz</p> <p>Probe V: -30V to +30V, 10mV accuracy, up to 75kHz</p> <p>ADCs: Two 24 bit analog to digital converters (ADE7912)</p>
Data Acquisition Channels	Two male headers, each connected to Sensing Channel
Magic Lid	<p>Mini Breadboard: 170 pin solderless</p> <p>Shield Stack Space: Arduino UNO Pinout Compatible</p>

	<p>Arduino GPIO: 14+14 Digital I/O Pins, 12+3 PWM Output Pins, 6+4 Analog Input Pins, 6 Interrupt, 4 Serial, IIC, SPI</p>
Status Indicators	<p>Rx0-Tx0: Bi-directional LED</p> <p>Pin 13: Unidirectional LED</p> <p>Actuator Directions: Two bi-directional LEDs for M1-M2 etc.</p>
Jumpers	<p>Sensing Selector: Toggle between V or I sensing on Probe I/V</p> <p>Motor Power Selector: Toggle between V_{in} or V_{var} for plug & play devices</p>
DAC	<p>Function Generator: Sine, Square, Sawtooth, Triangular Waves</p> <p>12 Bit IIC controlled digital to analog converter, 0-5V</p>
Real Time Clock	<p>I²C interface, Calendar function: YYMMDD, Day, hh:mm:ss, Alarm</p>
I/O 3.3V	<p>Two 5V-3.3V bi-directional digital logic level shifters</p>
Others	<p>Vents: Heat dissipation vents</p> <p>Breadboard Mounting Holes: Two holes to connect breadboards</p> <p>Mounting Holes: Two 4mm holes to mount evive on robots</p>