



EMINUS nanoPower

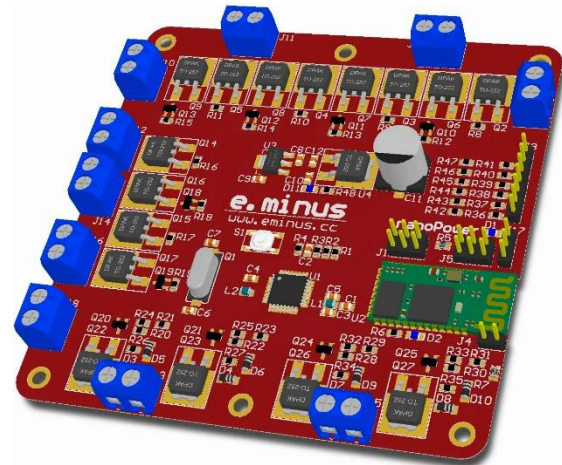
DIY Robotics controller

Applications

EMINUS nanoPower is an Arduino compatible board designed for high voltage and high current applications.

Ideal for use in:

- Robotics
- Industrial applications
- Smart Lighting
- Smart Home
- Remote control
- Arduino projects



Bluetooth

- Bluetooth with SPP enabled
- Upload code via Bluetooth direct from Arduino IDE
- Control and monitor your system from PC or Smartphone remotely
- HC-05 module is used.

High power outputs

- 6 unidirectional output ports with 5A sink/source capability.
- 4 bidirectional ports with open drain output mode and 5A sink capability.
- 4 bidirectional ports are tolerant for up to 25V input voltage.

Board Supply

- 9 – 18V input voltage
- 10A total current capability

Microcontroller

- Atmega328P is used.
- Arduino Nano bootloader
- Arduino IDE compatible

Analog Features

- A0 and A1 are 5V compatible ADC inputs.
- A2, A3, A6, A7 are 25.5V compatible ADC inputs.
- 8-bit ADC reading from 25.5V compatible will represent 0.1V per read value.

Digital Interfaces

- UART is used to connect with Bluetooth module with jumpers. Can be used as external connection.
- SPI is on standard 3x2 pin header.
- I2C is on 4 pin headers with 5V supply and ground. SDA and SCL are pulled up internally.

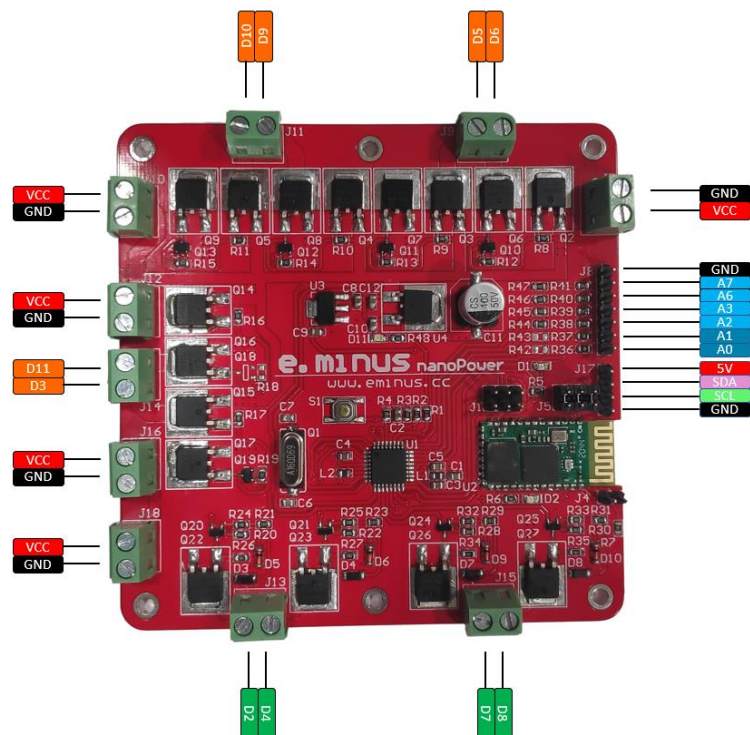


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Pinout diagram

- | | |
|---|---|
| <ul style="list-style-type: none">D0 – Input/Output - Logic High = 5V, Logic Low= GND/ UART Rx (Connected to Bluetooth) | <ul style="list-style-type: none">A1 - GPIO/ Analog Input - Up to 5V analog input, Digital IO |
| <ul style="list-style-type: none">D1 – Input/Output - Logic High = 5V, Logic Low= GND/ UART Tx (Connected to Bluetooth) | <ul style="list-style-type: none">A2 - GPIO/ Analog Input - Up to 25.5V analog input, Digital IO |
| <ul style="list-style-type: none">D2 – Input/Output - Output-Open Drain, Input- Logic Low=GND, Logic High=VCC | <ul style="list-style-type: none">A3 - GPIO/ Analog Input - Up to 25.5V analog input, Digital IO |
| <ul style="list-style-type: none">D3 - Output/PWM - Logic High = VCC, Logic Low= GND | <ul style="list-style-type: none">A4 - GPIO/ Analog Input - Up to 25.5V analog input, Digital IO, I2C SDA |
| <ul style="list-style-type: none">D4 – Input/Output - Output-Open Drain, Input- Logic Low=GND, Logic High=VCC | <ul style="list-style-type: none">A5 - GPIO/ Analog Input - Up to 25.5V analog input, Digital IO, I2C SCL |
| <ul style="list-style-type: none">D5 - Output/PWM - Logic High = VCC, Logic Low= GND | <ul style="list-style-type: none">A6 - GPIO/ Analog Input - Up to 25.5V analog input, Digital IO |
| <ul style="list-style-type: none">D6 - Output/PWM - Logic High = VCC, Logic Low= GND | <ul style="list-style-type: none">A7 - GPIO/ Analog Input - Up to 25.5V analog input, Digital IO |
| <ul style="list-style-type: none">D7 – Input/Output - Output-Open Drain, Input- Logic Low=GND, Logic High=VCC | |
| <ul style="list-style-type: none">D8 – Input/Output - Output-Open Drain, Input- Logic Low=GND, Logic High=VCC | |
| <ul style="list-style-type: none">D9 - Output/PWM - Logic High = VCC, Logic Low= GND | |
| <ul style="list-style-type: none">D10 - Output/PWM - Logic High = VCC, Logic Low= GND/SPI SS from ICSP header | |
| <ul style="list-style-type: none">D11 - Output/PWM - Logic High = VCC, Logic Low= GND SPI MOSI from ICSP header | |
| <ul style="list-style-type: none">D12 – Input/Output - Logic High = 5V, Logic Low= GND/ SPI MISO from ICSP header | |
| <ul style="list-style-type: none">D13 – Input/Output - Logic High = 5V, Logic Low= GND/ SPI MOSI from ICSP header | |
| <ul style="list-style-type: none">A0 - GPIO/ Analog Input - Up to 5V analog input¹, Digital IO | |



For more information visit www.eminus.cc