



## Arduino Nano Motor Carrier

Code: ABX00041 / Barcode: 7630049202245

Nano Motor Carrier provides a quick and easy way to connect and control motors in your Engineering Kit R2.

### Overview

Nano Motor Carrier is the perfect add-on for the Nano 33 IoT board as it works to extend and power up its functionality.

Designed to facilitate motor control, Nano Motor Carrier takes care of the electronics required to control motors, allowing students to focus on prototyping and building their projects. It can also be used to connect other actuators and sensors via a series of 3-pin male headers. The board features are: on board 9 axis accelerometer, gyroscope and magnetometer. It includes a battery charger for single cell Li-ion batteries and it contains 2 ports for quadrature encoder counting.

To use the carrier, simply connect it to a Nano 33 board and attach the motors you need for your project. Once connected, attach the USB cable to the Nano 33 IoT. Download Arduino Motor Carrier library from the library manager and you're all set up to start programming and controlling your motors using the motor drivers.

When working with motors, you need an external power source to feed the motor drivers and power the motors. You can do this by connecting a 1 cell Li-Ion battery to the battery connector or by using an external power source.

### Technical Specifications

<b>MICROCONTROLLER</b>	ATSAMD11 ( Arm Cortex-M0+ @48 Mhz)
<b>MOTOR DRIVERS (X4)</b>	MP6522
<b>MAX INPUT VOLTAGE (POWER TERMINALS)</b>	4V (1S Li-Ion Battery)
<b>MAX OUTPUT CURRENT PER MOTOR DRIVER</b>	500 Amp
<b>MOTOR DRIVER OUTPUT VOLTAGE</b>	12V
<b>OVER TEMPERATURE SHUTDOWN PROTECTION (FOR DC MOTOR DRIVERS)</b>	Yes
<b>BATTERY CHARGING</b>	Yes
<b>MAX BATTERY CHARGING CURRENT</b>	500mA (configurable)
<b>POWER TERMINALS (CONNECTORS)</b>	XT-30 and 2POS terminal block
<b>SERVO CONNECTOR</b>	4 terminals
<b>ENCODER INPUTS</b>	2 ports
<b>DC MOTOR CONTROL</b>	4 ports
<b>3V DIGITAL/ANALOG SENSOR INPUT/OUTPUT</b>	4 ports
<b>IMU</b>	BNO055 9axis Acc/Gyr/Mag