

Build an Easy PC to EZServo1

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In this article you will use the Athena Carrier 3 with the EZServo1 chip to create a very easy PC to Servo interface.

If you need to control a couple of servos with your PC this is a perfect platform. We will use the Athena Carrier 3 board because it has an onboard voltage regulator and 2.1 coax connector for an AC adapter. It also has an RS232 driver for a direct connection to your PC Com port.

You will need the following for this project.

[Athena Carrier 3](#) [\[Add 1 to Cart\]](#)

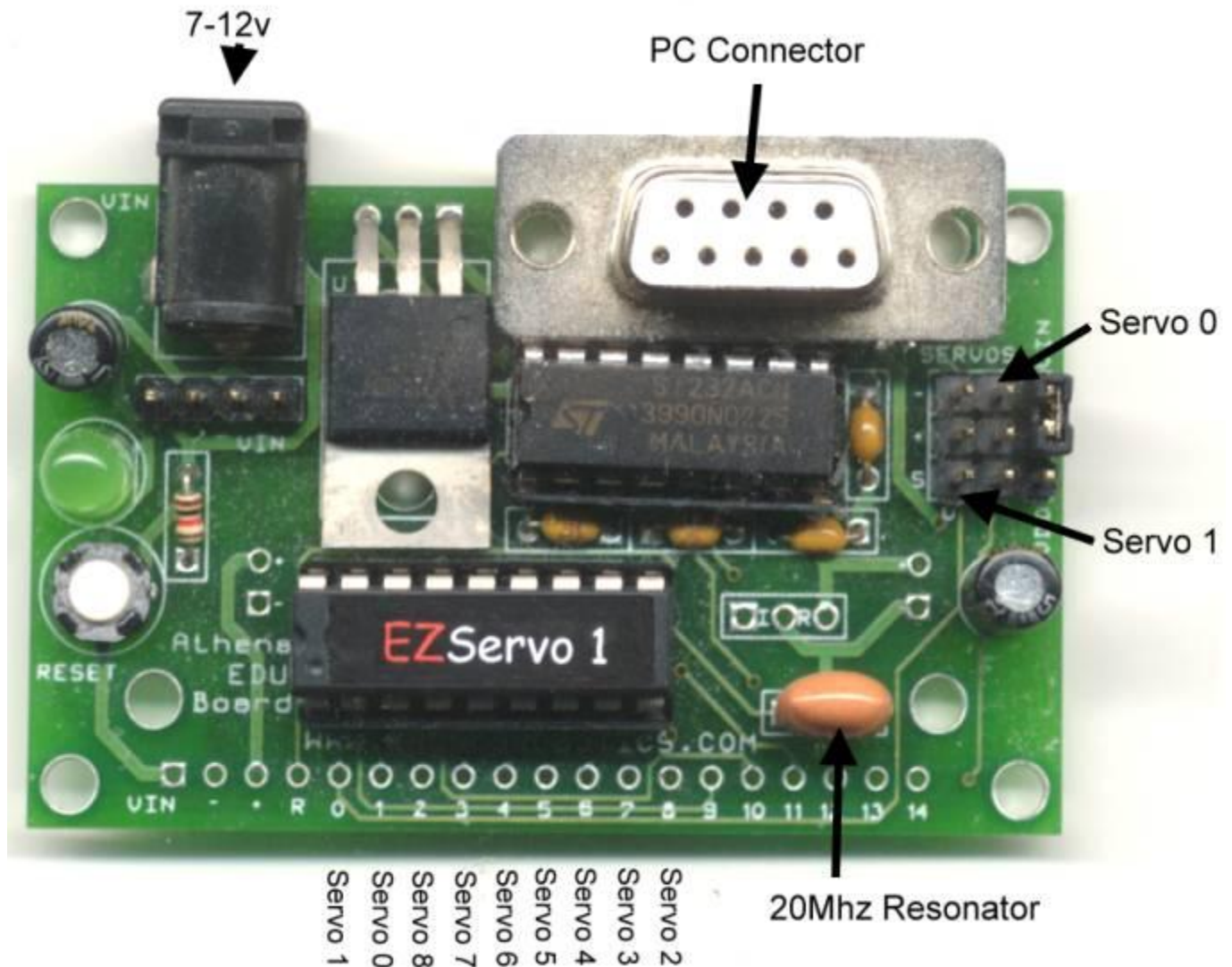
[EZServo Chip](#) [\[Add 1 to Cart\]](#)

You may also need the following:

[6' PC Serial Cable](#) [\[Add 1 to Cart\]](#)

[7.V Switching Power Supply](#) [\[Add 1 to Cart\]](#)

The carrier board has two servo connectors located on the right. Note the actual servo numbers in the following image.



Note that the above picture shows a 20Mhz Resonator. This is no longer needed.

If you want to use the remaining 7 servos you will need to make your own connectors as only the signal lead is present on the board. This lead is connected to the servo signal lead (white). Connect servo power to the center lead on the servo and Gnd to the last (black).

You can supply power from the Vin or through the regulator. If you are using more than 7.5v you will most likely need to use the regulated (vcc jumper).

You can get a copy of the EZServo1 chip's datasheet [here](#).

for the highest servo resolution the 16 bit method is recommended. Most servos will take settings between 1000us and 2000us. However there are some that are outside this range.

The EZServo1 chip are in .2us unit so just divide the setting you want by .2. You will then have to split this into 2 bytes. Just divide the setting by 256 and take the integer value for the first byte then multiply that number by 256 and subtract from your original number to get the next byte.

For instance say you want to se the servo to 1000us.

Step 1

Divide 1000 by .2 = 5000

Step 2

Divide 5000 by 256 = 19

high byte = 19

Step 3

Multiply 19 with 256 = 4864

Step 4

Subtract 4864 from 5000 = 136

low byte = 136

Normally you will do those steps with your PC program that's controlling the servos. The actual byte sequence will be Servo,High,Low

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