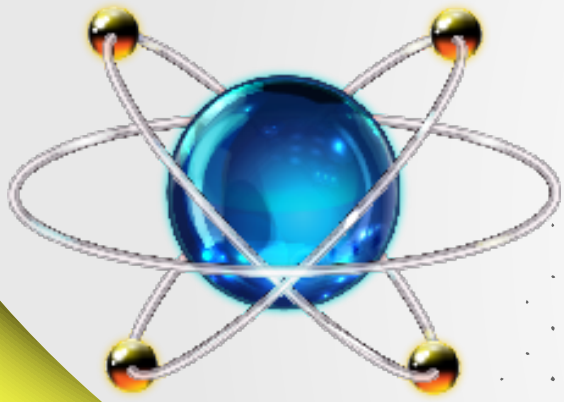
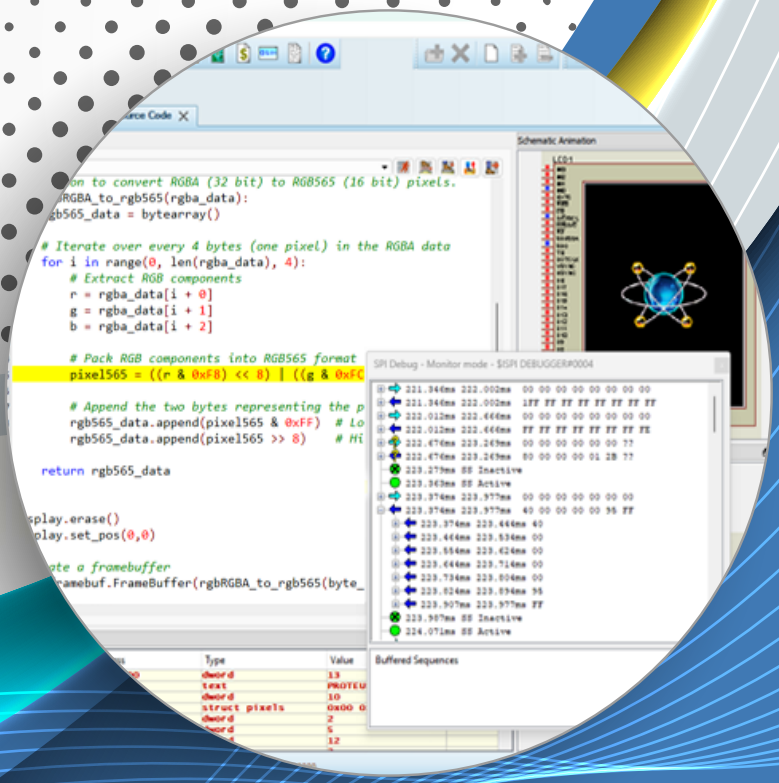
PROTEUS VSM

FOR MICROPYTHON

Complete Embedded Design



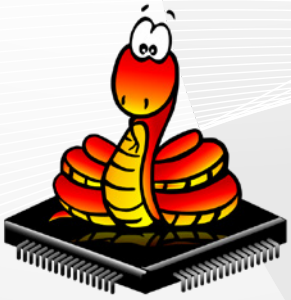


MicroPython Circuit Simulation

We are pleased to introduce microPython programming to the Proteus VSM simulation environment with initial support for ESP32S, Pyboard V1.1, Raspberry Pi Pico and PicoW boards. Build your circuit on the schematic using pre-supplied breakout boards or by picking and wiring devices from the supplied libraries. Write your MicroPython code directly in Proteus and then test, analyse and debug your complete embedded system using the world class Proteus VSM simulation environment. Bridge your simulation to a physical board using FT232H I2C/SPI interconnect and real hardware at a mouse click when you're finished testing.

The Simulation Workflow

Proteus VSM for MicroPython



Circuit Design

When you create a MicroPython project you specify the target board and this will be autoplaced on the schematic for you. Then, you add the rest of the analog and digital circuitry for your project either by selecting from our pre-supplied blocks or by placing and wiring up individual schematic parts as needed.

System Simulation

When you press play Proteus VSM will execute your MicroPython firmware and simulate the behaviour of the target device along with all the analog and digital electronics connected to it. You can see the effects of your program instantly on the schematic and interact with the simulation using buttons, switches, pots and sensor models.

Measure & Analyze

Place and wire instruments and protocol analyzers onto the schematic and then monitor all the signal traffic during a simulation or debug session. Record detailed measurements or perform other analysis types such as frequency response using graphs.

Firmware Design

The VSM Studio IDE will be configured for your MicroPython project, ready for you to start typing code. You can import libraries from the internet simply by adding the files to your project and a built in syntax check takes place before a simulation run to catch all the usual mistypes and language errors.

Source level Debugging

When something isn't working as expected, set a breakpoint or two in your source code and then run the simulation again. Proteus supports full single step debug with variables display and other debug windows and when you step your code you can observe the effect on the entire design - including all the electronics external to the microcontroller.

Upload and Program

When your project has been designed and tested in Proteus you can deploy the firmware to the target board directly from the VSM Studio IDE. Connect your hardware, press the upload button and program your real hardware with a mouse click.

Watch the MicroPython Demo Movie

Watch the FT232H Demo Movie