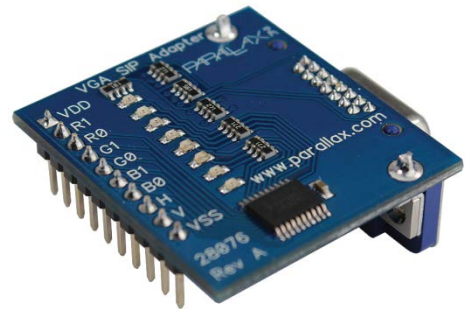


VGA SIP Adapter Board (#28076)

The multicore Propeller P8X32A microcontroller can generate VGA signals, adding a powerful visual dimension to your applications. This handy board makes it easy to add a VGA socket to your Propeller development platform. Designed with our breadboard-based Propeller educational platforms in mind, the connected module sits on the same level as the board, keeping your project tidy and placing no strain on the pin connections.

Features

- VGA DE-15 female socket accepts standard VGA cables.
- Color-matched LEDs give visual verification of signal activity on each line.
- Indicator LEDs are optional; only a ground connection is required for the VGA signal, permitting lower-power operation.



Specifications

- Power Requirements: 3.3 VDC @ 95 mA with optional LEDs
- Communication Interface: VGA
- Operating temperature: -40 to +257 °F (-40 to +125 °C)
- Dimensions: 1.4 x 1.5 x 0.6 in (3.6 x 3.7 x 1.6 cm)

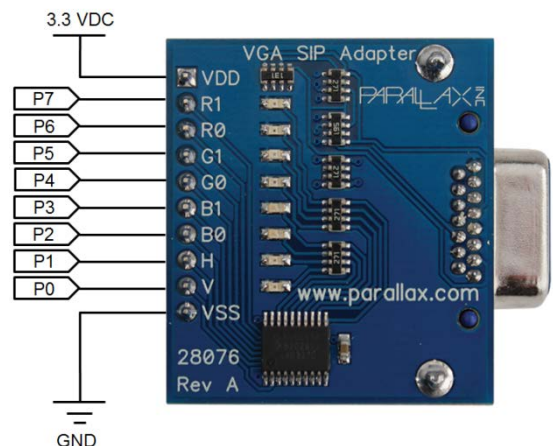
Application Ideas

- Display graphical sensor data output
- Combine with human input devices to make a stand-alone terminal application
- Add VGA graphics to an interactive art installation

Example Circuit

Important: the GND connection is always required. But, the 3.3 VDC connection is not needed to send VGA signals through the adapter. The 3.3 V connection powers to the onboard LED buffer chip, so the LEDs can give a visual indication when VGA signals pass through. If you do not wish to use the LEDs, the 3.3 V connection is not necessary. The VGA signaling alone draws 63 mA via the I/O pins.

Important: I/O Pin Grouping Matters. The eight VGA signal pins must be connected to one of the following groups of eight contiguous Propeller I/O pins: P0..P7, P8..P15, P16..P23, or P24..P31. See the Video Configuration Register section in the Propeller Manual or Datasheet for details.



Pin Definitions and Ratings

Pin	Name	Type	Function
1	VDD	P	3.3 V supply, optional for using the indicator LEDs
2	R1	I	Red, most significant bit
3	R0	I	Red, least significant bit
4	G1	I	Green, most significant bit
5	G0	I	Green, least significant bit
6	B1	I	Blue, most significant bit
7	B0	I	Blue, least significant bit
8	H	I	Horizontal synch
9	V	I	Vertical synch
10	VSS	G	Ground (0 volt) connection, always required

Pin Type: P = Power, G = Ground, I = Input, O = Output

Propeller C Library

The library `vgatext.h` is included in the Learn/Simple Tools folder. This folder is distributed with the free SimpleIDE programming software, and folder updates are also released separately as new libraries and example code are added. See <http://learn.parallax.com/propeller-c-set-simpleide>.

Propeller P8X32A Spin/Assembly Objects

A number of VGA demos and drivers are included with the Propeller Tool software for Windows, a free download from <http://www.parallax.com/propellertool>. Additional VGA drivers are available for free download from the Propeller Object Exchange. Go to <http://obex.parallax.com> and search "VGA."

Example Programs and Tutorials

For links to tutorials and demo programs see the Additional Resources links on the VGA SIP Adapter product page. Go to www.parallax.com and search "28076."

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