PhidgetSBC4

The Phidget SBC4 is a Single Board Computer with six integrated VINT ports. If you've ever wanted your Phidgets to be further away from your desktop computer than a USB cable can reach, an SBC is the solution. The SBC4 has it's own small computer which can make your USB Phidgets and VINT devices available over your home network. You can include the SBC4 in your network by plugging it in via ethernet cable, or by connecting a wifi adapter to one of its USB ports.

The VINT SBC exposes an easy to use interface for setting up and running custom applications on-board. This allows the VINT SBC to operate autonomously, without the need for a graphical interface or a consistent remote connection.

The SBC4 is an embedded computer that runs Debian GNU/Linux. We provide full

shell access via a built-in SSH server, access to the full Debian package repository, and all of the standard command line tools expected on a modern Linux system.

VINT Ports

With the Phidget SBC4, you can connect six devices and make them available over the network. Each VINT port can perform one of four roles: Communicating with an intelligent VINT Device, reading a 0-5V Voltage or ratiometric sensor, acting as a digital output, or reading switches as a digital input. Each port has a power and ground pin, so you can also use the ports to gain access to the SBC’s 5V supply.

Plug in one of our many VINT-enabled Phidgets that perform a wide variety of functions. Control motors and LEDs, measure temperature or motion, or build a large scale system with many inputs and outputs.

USB Ports

With its three high-speed USB ports, you can connect a variety of useful devices: USB Phidgets, webcams, keyboards, wifi adapters, and more!

MicroSD Card

The SBC4 comes equipped with a MicroSD card port and 16GB card which gives you plenty of storage space and easy access to your progams and files. The card comes pre-loaded with the operating system and Phidgets drivers.

HDMI Port

The HDMI port on the SBC4 gives it the capability to connect to a monitor to display its Linux terminal. Combined with a USB keyboard, you can type commands or provide program input directly without the need for remoting in via SSH.

Product Specifications

SBC	
CPU	Allwinner A20
Core	Dual-Core ARM Cortex-A7
CPU Speed	**Up to 960 MHz
SDRAM Size	512 MiB
Boot Time	20 s
Ethernet Cable	10/100BASE-T
Electrical Properties	
Supply Voltage Min	6 V DC
Supply Voltage Max	30 V DC
Current Consumption Max	2 A
Current Consumption Min	100 ?¼A
Available External Voltage	5 V DC
Available External Current	500 mA
USB Hub	
Number of USB Ports	3
USB Speed	High Speed
Available Current per USB Port	500 mA
Board	
Number of VINT Ports	6
Power Jack	5.5×2.1mm, Center Positive
Operating Temperature Min	0 ?°C
Operating Temperature Max	70 ?°C
Voltage Inputs	
Number of Voltage Inputs	6 (Shared)
Voltage Input Resolution	* 16 bit
Sensor Input Impedance	324 ?©
Input Voltage Min (DC)	0 V DC
Input Voltage Max (DC)	5 V DC
Voltage Input Noise	?± 630 ?¼V DC
Sampling Interval Max	60 s/sample
Sampling Interval Min	1 ms/sample
Digital Inputs	
Number of Digital Inputs	6 (Shared)

Pull-up Resistance	124 k?©
Low Voltage Max (True)	1 V DC
High Voltage Min (False)	1.8 V DC
High Voltage Trigger Length Min	3 ms
Low Voltage Trigger Length Min	3 ms
Digital Input Voltage Max	5.5 V DC
Digital Input Type	Switch (Active Low)
Digital Outputs	
Number of Digital Outputs	6 (Shared)
Series Resistance	510 ?©
Digital Output Available Current	81 mA
Digital Output Voltage Min	0 V DC
Digital Output Voltage Max	3.3 V DC
PWM Frequency Max	50 kHz
PWM Resolution	0.8 %

*Voltage measured with a 10-bit ADC, **oversampled** to 16-bits.

**This processor supports dynamic frequency scaling, which lowers the clock speed to save power depending on processing load.

Documents

- Mechanical Drawings
- Download 3D Step File
- SD Card Image

- Programming Resources

Code Samples

API	Language	OS	
DigitalInput	C	Multiple	Download
DigitalInput	C#	Windows	Download
DigitalInput	Java	Multiple	Download
DigitalInput	Java	Android	Download
DigitalInput	JavaScript	Any	Download
DigitalInput	Objective-C	macOS	Download
DigitalInput	Swift	iOS	Download
DigitalInput	Python	Multiple	Download
DigitalInput	Visual Basic .NET	Windows	Download
DigitalOutput	C	Multiple	Download
DigitalOutput	C#	Windows	Download
DigitalOutput	Java	Multiple	Download
DigitalOutput	Java	Android	Download
DigitalOutput	JavaScript	Any	Download
DigitalOutput	Objective-C	macOS	Download
DigitalOutput	Swift	iOS	Download
DigitalOutput	Python	Multiple	Download
DigitalOutput	Visual Basic .NET	Windows	Download
VoltageInput	C	Multiple	Download
VoltageInput	C#	Windows	Download