



Arduino YÚN

Overview

Arduino YÚN is the first member of a new groundbreaking line of wifi products combining the power Linux with ease of use of Arduino. The first Arduino YÚN is the combination of a classic Arduino Leonardo (based on the Atmega32U4 processor) with a Wifi system-on-a-chip running Linino (a MIPS GNU/Linux based on OpenWRT). We embedded the Linux machine directly on the PCB of the Arduino Leonardo and we connected the two so that from Arduino it's very easy to run commands on the Linux side and use it as an Ethernet and Wifi interface. Historically, interfacing Arduino with complex web services has been quite a challenge due to the limited memory available. Web services tend to use verbose text based formats like XML that require quite a lot of ram to parse. On the Arduino YÚN we have created the Bridge library which delegates all network connections and processing of HTTP transactions to the Linux machine.



Summary

Microcontroller	ATmega32u4
Operating Voltage	5V
Input Voltage	5V via microUSB or PoE 802.3af
Digital I/O Pins	14
PWM Channels	7
Analog Input Channels	6 (plus 6 multiplexed on 6 digital pins)
DC Current per I/O Pin	40 mA
DC Current for 3.3V Pin	50 mA
Flash Memory	32 KB (ATmega32u4) of which 4 KB used by bootloader
SRAM	2.5 KB (ATmega32u4)
EEPROM	1 KB (ATmega32u4)
Clock Speed	16 MHz
Processor	MIPS 24K operating at up to 400 MHz
Memory	DDR2 64MB Ram and 16 MB SPI Flash
AP or router	Complete IEEE 802.11bgn 1x1
Host/Device	USB 2.0
MicroSD	PoE compatible 802.3af card support