

## Products

## Amlogic S905

ODROID-C2

## Exynos5 Octa

ODROID-XU4

## Amlogic S805

ODROID-C1+

ODROID-C0

## Display

ODROID-VU5

ODROID-VU7 Plus

ODROID-VU7

16x2 LCD + IO Shield

C1 3.2inch TFT+Touchsc

LED Matrix Shield

ODROID-SHOW2

3.5inch Touchscreen Sh

## Power Supply &amp; Battery

RTC Backup Battery

RTC Shield

UPS2 for C1

UPS3

5V/2A Power Supply

5V/2A Power Supply EU

5V/2A Power Supply US

5V/4A Power Supply EU

5V/4A Power Supply Rou

5V/4A Power Supply US

5V/6A Power Supply

3000mAh Battery

750mAh Battery

## Cases

ODROID-C2/C1+ Cases

ODROID-XU4 Cases

VuShell for VU7

3.5inch LCD Shield Cas

## Connectivity

IR Remote Controller

WiFi Module 0

WiFi Module 3

WiFi Module 4

WiFi Module 5

Bluetooth Module 2

Ethernet Cable CAT6

USB GPS Module

## Camera

USB-CAM 720P

## Products

Obsolete products > **ODROID-W [ODROID-W]**

Feature

Technical Detail

FAQs

## ODROID-W

ODROID-W is a miniature computing module which is fully compatible with all software available for the Raspberry-Pi.

The **W** stands for:

- Wearable device development
- Widely applicable Internet of Things (IoT) development
- Workable DIY electronics prototyping

STORE IN US : <http://ameridroid.com/>

STORE IN GERMANY : <http://www.pollin.de>

Sold Out

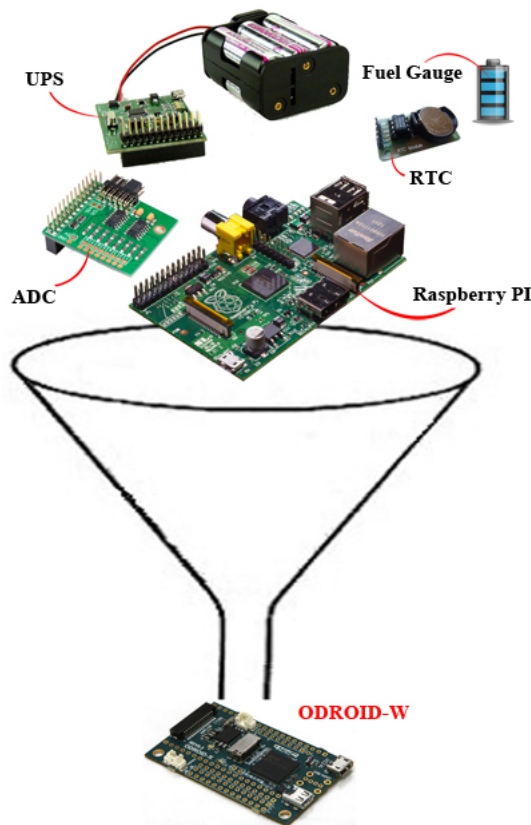
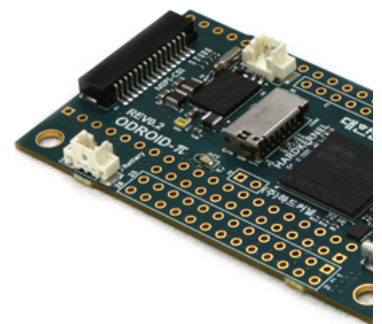
\$30.00

Worldwide shipping

판매종료

36,000원(부가세 별도)

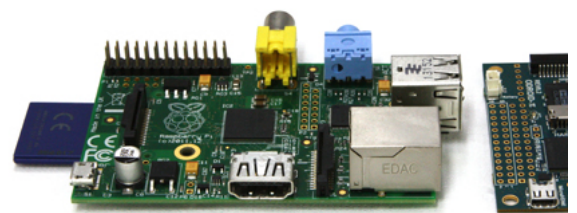
한국 배송(Korean only)



The ODROID-W measures a very small 60 x 36 x 7mm (2.4 x 1.4 x 0.3"). new fe improvements over the original Raspberry Pi:

- Li+ rechargeable battery charger and fuel gauge for portables, wearable and I
- Real Time Clock to keep accurate time without an Internet connection by just €
- 12-bit precision ADC to measure the dynamic voltage signals via two single-e
- DC/DC step-down converters for higher power efficiency
- DC/DC step-up converter for 5Volt rails (USB host and HDMI) from a Li-Polym
- USB Host port can be placed on top or bottom as preferred
- DIY friendly 0.1inch/2.54mm pitch IO connector (up to 32 GPIO ports) for hand

ODROID-W = RPI + RTC + ADC + UPS + Battery gauge with significant Minima



oCam : 5MP USB 3.0 Cam oCam-1MGN-U : Global S M12 Lens Set : 8/6/3/2 Tripod mount for oCam
<b>Development</b>
C Tinkering Kit USB-UART Module Kit Xprotolab Plain
<b>Sound</b>
HiFi Shield 2 HiFi Shield Plus USB Audio Adapter USB-SPDIF
<b>Connector</b>
Micro USB-DC Power Bri Connector Pack for ODR 30pin and 12pin Header
<b>Add-on Boards</b>
CloudShell for XU4 Expansion Board USB IO Board XU4 Shifter Shield Universal Motion Joypa USB3.0 to SATA Bridge U3 IO Shield U3 Shield Tinkering Ki
<b>Sensor</b>
myAHRs+ Weather Board 2
<b>Cooler</b>
40x40x25mm Tall Blue H C1 Heat Sink Cooling Fan U2 Cooling Fan U3 Cooling Fan X Cooling Fan XU4 Blue
<b>Cables</b>
HDMI 2.0 Cable (Type A HDMI Cable (Micro, Typ HDMI Cable (Type A-A) USB3.0 Micro-A to Stan Micro USB Cable DC Plug Cable Assembly DC Plug Cable Assembly DC Plug Cable Assembly DC Plug Cable Assembly USB-DC Plug Cable 2.5m USB2.0 OTG Cable
<b>OS Preinstalled Flash Memory</b>
eMMC Module C2 Linux B eMMC Module C2 Android MicroSD C2 Linux MicroSD C2 Android eMMC Module XU4 Linux eMMC Module XU4 Androi MicroSD XU4 Linux eMMC Module C1+/C0 Lin eMMC Module C1+/C0 And

ODROID-W

OPTIONAL ACCESSORIES

W Docking Board	W Docking Board with TFT LCD	W Connector Pack	RTC Backup Battery	8GB Micro SD Card W Linux	HDMI Cable	750mAh Battery	ODROID-VU
WiFi Module 3	USB-CAM 720P	Smart Power	ODUINO One	Bluetooth Module	5V/2A Adaptor		

DEVELOPMENT HISTORY

In early 2014, we had an important project with our partner companies to help them to prototype a few wearable & IoT devices.

At that time, we considered using the ODROID-U3 as a base platform. The ODROID-U3 is much faster than the Raspberry Pi, but the power consumption of the U3 is not suitable for wearable devices like watches or necklaces.

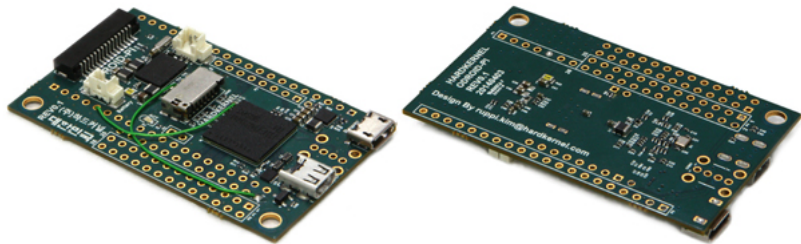
We even considered using the Raspberry Pi itself due to the lower power consumption and nice Linux BSP support, but the PCB of the RPi was huge (much bigger than the ODROID-U3).

To create the smallest wearable accessory possible, we decided to make our own (tiny) version of a Raspberry Pi, which allows full use of many widely available Pi peripherals such the Pi Camera module connector and 26-pin GPIO port.

The HDMI port and SD slot were changed to micro- sized connectors, and the MIPI DSI port was removed due to limited PCB space.

- PCB Revision 0.1

The first sample PCB (rev 0.1) was designed on April 14, 2014, and had a few jumper wires.



- PCB Revision 0.2

The second run was designed on May 19, 2014, which corrected some of the electronics designs and added an eMMC module socket for test purposes. Note th

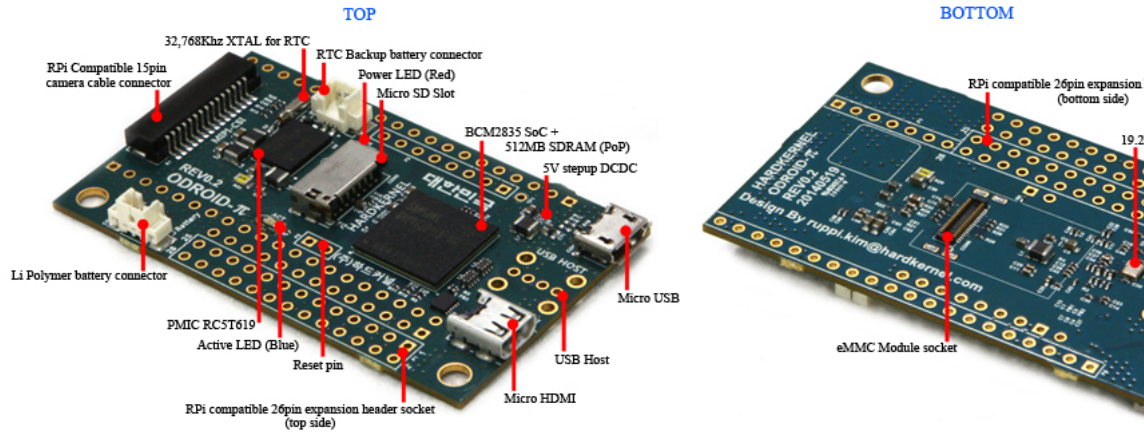


MicroSD C1+/C0 Linux  
MicroSD C1+/C0 Android  
eMMC Module Reader

Obsolete products

- ODROID
- ODROID-7 Full Package
- ODROID-A4 Full Package
- ODROID-PC Full Package
- ODROID-S
- ODROID-T
- ODROID-VU
- ODROID-A Full Package
- ODROID-U3
- ODROID-U2
- ODROID-X2
- ODROID-E7 Full Package
- ODROID-Q2
- ODROID-XU3 Lite
- ODROID-XU3
- ODROID-XU
- ODROID-X
- ODROID-XU Lite
- ODROID-C1
- ODROID-Q
- ODROID-XU+E
- Smart Power
- HiFi Shield for C2/C1+
- ODROID-Show
- ODROID-UPS
- ODUINO One
- UPS2 for U3
- Weather Board
- ODROID-W

much faster than SD card due to the slow eMMC host speed in the SoC. We could see only ~10% improvement.



- PCB Revision 0.3  
There is no big different from Revision 0.2. It is for the mass production.

Top

GPIO 7(SPI0_CE1_N)	GROUND	GROUND	GPIO 7(SPI0_CE1_N)
GPIO 8(SPI0_CE0_N)	GPIO 11(SPI0_SCLK)	GPIO 11(SPI0_SCLK)	GPIO 8(SPI0_CE0_N)
GPIO 25	GPIO 9(SPI0_MISO)	GPIO 9(SPI0_MISO)	GPIO 25
GROUND	GPIO 10(SPI0_MOSI)	GPIO 10(SPI0_MOSI)	GROUND
GPIO 24	3V3 POWER	3V3 POWER	GPIO 24
GPIO 23	GPIO 22	GPIO 22	GPIO 23
GROUND	GPIO 27	GPIO 27	GROUND
GPIO 18	GPIO 17	GPIO 17	GPIO 18
GPIO 15(UART0_RXD)	GROUND	GROUND	GPIO 15(UART0_RXD)
GPIO 14(UART0_TXD)	GPIO 4(GPCLK0)	GPIO 4(GPCLK0)	GPIO 14(UART0_TXD)
GROUND	GPIO 3(I2C1_SCL)	GPIO 3(I2C1_SCL)	GROUND
5V POWER	GPIO 2(I2C1_SDA)	GPIO 2(I2C1_SDA)	5V POWER
5V POWER	3V3 POWER	3V3 POWER	5V POWER

RPI compatible 26pin IO  
(P1 connector on top side)

Bottom

ADC 0	GPIO 7(SPI0_CE1_N)
ADC 1	GPIO 8(SPI0_CE0_N)
POWER ON/OFF	GPIO 25
GROUND	GPIO 24
1V8 POWER	GPIO 23
SYSTEM OUTPUT	GROUND
ADAPTOR INPUT	GPIO 18

RPI compatible 26pin IO  
(P1 connector on bottom side)

Bottom

GPIO 45(PWM T0)
GPIO 40(PWM T0)
GPIO 42
GPIO 41
GPIO 39
GPIO 38
GPIO 37
GPIO 6(LAN RUN)
GPIO 36
GPIO 35
GPIO 34
JTAG CLK
JTAG TMS
JTAG TDO
JTAG TDI
JTAG TRSTN
3V3 POWER
VIDEO OUTPUT
USB DP
USB DN
GROUND
BATTERY

MAKE YOUR OWN SMART WATCH

ODROID-W Smart Watch Project



HARDWARE SPECIFICATION

Processor	Broadcom BCM2835 ARM11 700Mhz
memory	Samsung 4Gbit (512MB) LPDDR2 SDRAM
PMIC	Ricoh RC5T619 includes DCDCs, LDOs, ADCs, RTC, Battery charger and Fuel gauge
DCDC	TI TPS61259 is 5Volt step-up DCDC for USB host and HDMI block
Video Output	HDMI type-D (Micro-HDMI)
USB	High-speed USB 2.0 host
GPIO connectors	RPI compatible 13x2-pin header on the top side as well as bottom side for 2-way stacking 20+6 pin header for additional GPIO/ADC/Power/USB connection Total 32 GPIOs and 2 ADCs are available.
Camera connector	15pin MIPI-CSI2 (Pi Camera module compatible)
Memory card slot	Micro-SD (T-Flash)
Power	Micro-USB socket for 5Volt input Li-Polymer battery connector (Molex 53398-0271) <a href="http://forum.odroid.com/viewtopic.php?f=104&amp;t=6547">http://forum.odroid.com/viewtopic.php?f=104&amp;t=6547</a>
RTC power	Backup battery connector (Molex 53398-0271)
Dimensions	60 x 36 mm
Weight	8 gram

Raspberry Pi or RPi is a trade mark of Raspberry Pi Foundation.

**You can discuss all the development issues in this forum.**

<http://forum.odroid.com/viewforum.php?f=102>



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