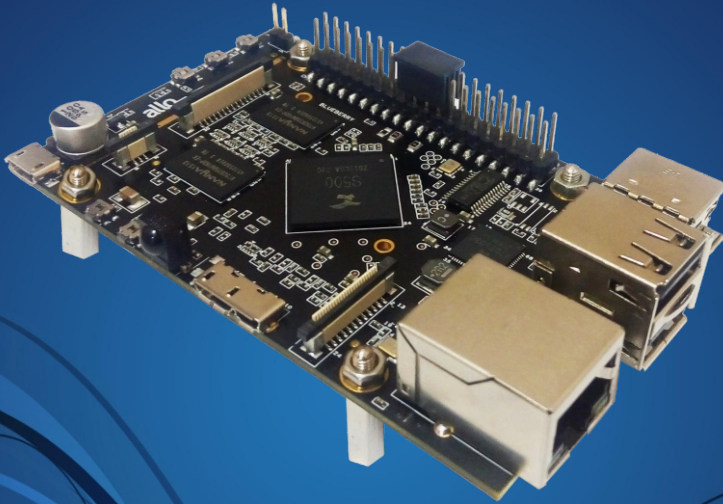


SPARKY



Quad-core Cortex-A9 ARM processor

Built for Continuous usage

1080p@60fps HD decoding capability

Offers the most physical interfaces

Expansion shields ready (LCD, Camera, DAC, AMP, eMMC...)

USB Ethernet port

Supports Linux & Android

Overview

The ALLO SPARKY is a powerful platform for a wide range of applications in areas such as: Telecom, Networking & NAS, Audio/Media, Gaming, Home Automation, Security and more...

Very affordable, yet very powerful, the ALLO SPARKY has what it takes to make your project work!

The ALLO SPARKY is also the new platform for ALLO VoIP Hardware: PBX (Asterisk™ / Freeswitch™) and Network Security products such as our: STM (SIP Threat Manager), UTM (United Threat Manager), SBC (Session Border Controller).

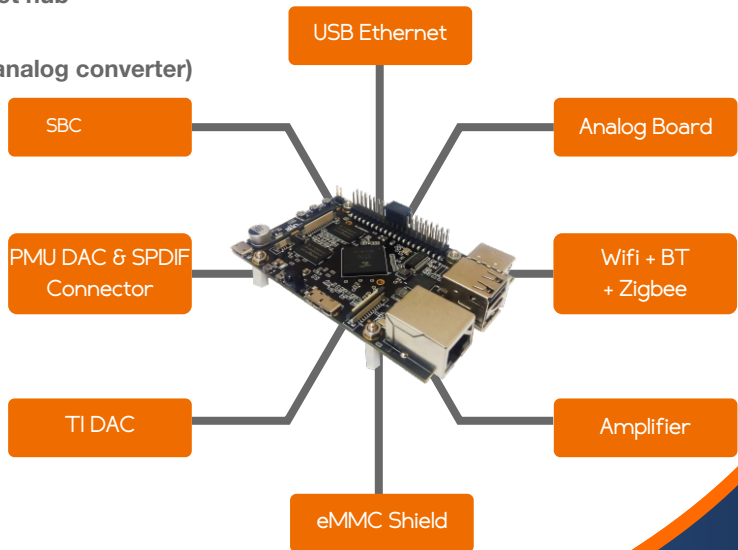
More and more Open Source Projects join forces with ALLO and offer their software solution for our platform. With over a decade of embedding experience, our team is constantly porting new and exciting software opening the door to yet more applications.

Shields

One of the main advantages of SPARKY are the add on boards also called Shields that can be connected to it and turn it into a ready to use product.

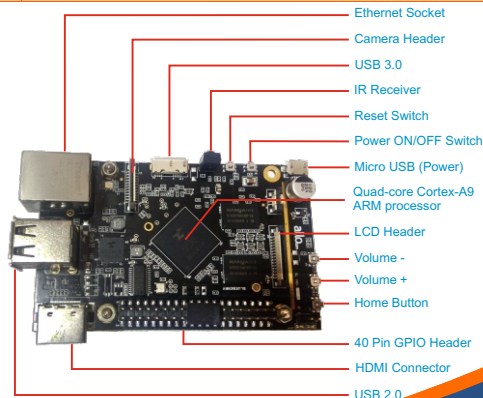
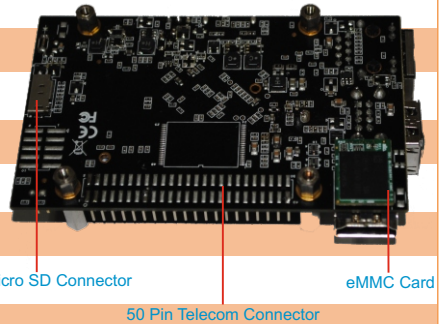
All these Shields are HAT compliant and can also be used on the Raspberry Pi™ boards.

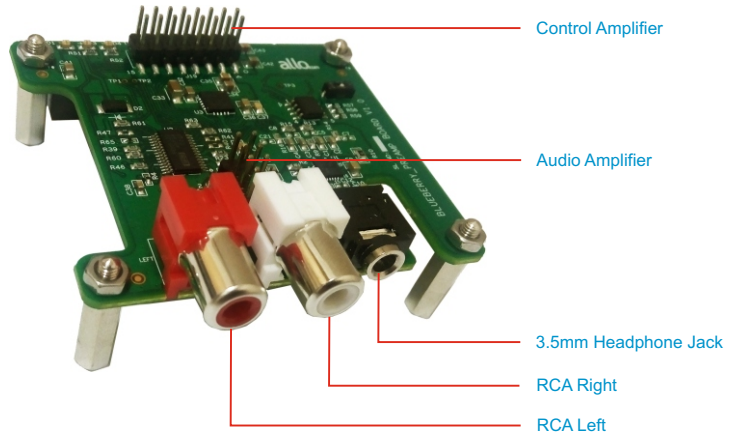
- 5 MP camera
- 8" Touch screen LCD
- USB/gigabit Ethernet hub
- Analog telecom
- Audio DAC (digital analog converter)
- Audio Amplifier
- Wifi + BT + Zigbee
- eMMC storage



Technical Configuration

CPU	Quad-Core Cortex-A9R4 processor with NEON (advanced SIMD) co-processor
Ethernet	1 port fast ethernet, 10/100 Mbits
HDMI	1 port
eMMC	Supports 8/16/32/64 Gigabyte Module (Plugable)
uSD	Supports 8/16/32 Gigabyte Module
DDR	1GB, 2GB Memory support
RPI	On board 40 Pin Raspberry PI card connector
USB 2.0	2 Port (OTG) Host
USB 3.0	1 Port USB Host
GPU	PowerVR SGX544, 500Mhz
Display resolution	1080p@60fps
Uext	Uext connector olimx board
IR	1 port infrared interface
LCD	34 Pin LCD connector
Camera	24 pin 5Mpixel Camera interface
Power	microUSB 5V 1.5A
Telecom connector	50 Pin
Dimension	95x58x16mm
Temperature	0 to 40c
NAND Flash	Optional
Weight	49 gms

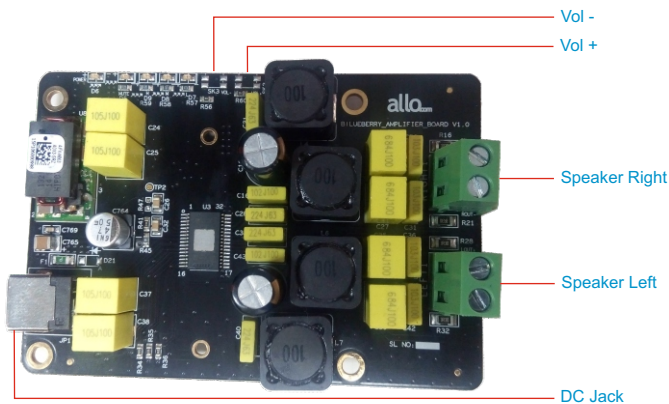
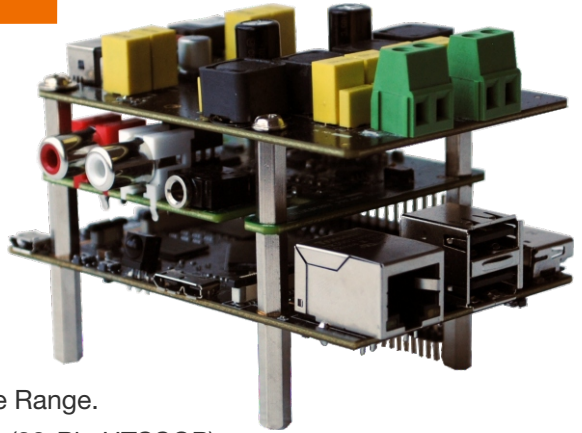




- Dedicated 384 kHz/32bit high-quality DAC PCM5122 for best sound quality.
- High-quality, highly efficient 50W Class-D Stereo amplifier TPA3116D2.
- 138mW Direct Path™ Stereo Headphone Amplifier TPA6133A2.
- THD+N @ - 1dBFS are -93dB.
- Sampling Frequency ranges from 8 kHz to 384 kHz.
- Operating Temperature Range is -25C to 85C.
- Small 28-pin TSSOP Package.
- Stereo Headphone Output Power is 138mW.
- Stereo Headphone Half Power THD + N @ 1 kHz (%) (kHz) -> 0.008.
- Stereo Headphone SNR is 93dB.
- Stereo Headphone PSRR is 109dB.
- Ultra-low-noise voltage regulator for optimal audio performance.
- Available with different output connectors: RCA, 3.5mm phone jack and 2x50W speaker
- Integrated EEPROM for automatic configuration (with write-protection).
- The PMU DAC board size: LWH = 65mm * 58mm * 16mm

Amplifier

- Supply voltage: DC 24V
- Efficiency: >= 90%
- The signal to noise ratio: 102dB
- THD+N :0.1%
- Speaker: 4Ω.
- Support for Filter-free operation.
- Support for POP free operation.
- Support for AM Avoidance.
- -40°C to 85°C Ambient Temperature Range.
- Thermally Enhanced Packages DAD (32-Pin HTSSOP)
- The amplifier board size: LWH = 85mm * 58mm * 16mm
- Output Configuration 2 × 50 W into a 4-Ω BTL Load.
- High-precision chip resistors resistor selection. Main circuit employs a precision of ± 1% THIN film resistors .Its ensure the machine a good signal to noise ratio.
- High quality Film capacitors for capacitor selection in the audio signal path. It ensures very good audio quality.
- High quality heat sink used for maintaining continuous output power of the Amplifier.
- Software Volume control using high quality Digital POT.

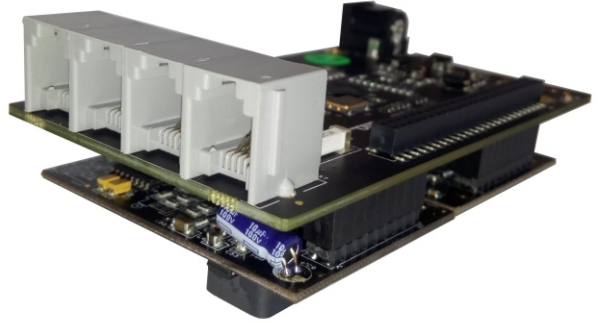


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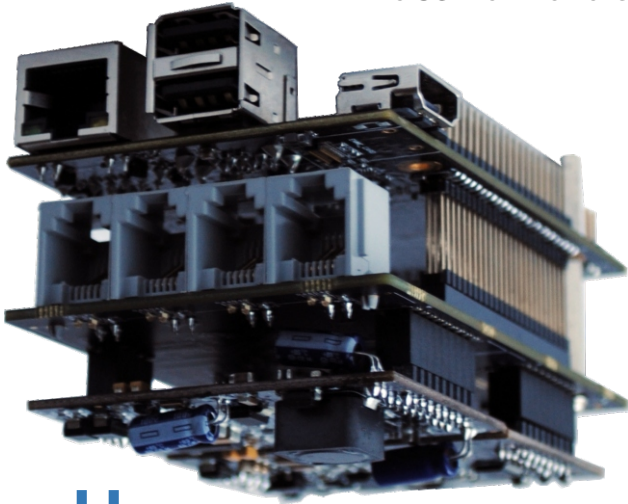
For more information please contact

Global: globalsales@allo.com
India: +91 80 67080808

Analog Board



- 12V/3A DC Input Supply
- 4-Port FXO or 4-Port FXS
- 2-port FXO and 2-Port FXS /Vice Versa
- On-Hook and Off-Hook LED Indication
- J-TAG Interface for Programming
- Total Power Consumption:3.3Watt
- Field Programming Up gradation Option Available
- FPGA : LCMXO3L-4300E-6MG121C
- FXS:SI3215(2-port configured with Daisy chain mode)
- FXO:SI3050(2-port configured with Daisy chain mode)
- The USB to Ethernet size: LWH = 95mm * 58mm * 16mm



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SPDIF

- 1 port 75 ohm Mono RCA Coaxial orange connector
- 1 port Digital 3.5mm Optical Connector

Headphone

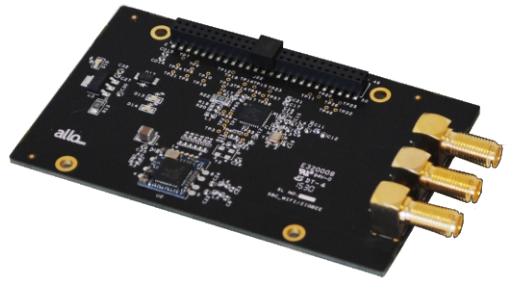
- 138mW Direct Path™ Stereo Headphone Amplifier TPA6133A2.
- Stereo Headphone Output Power is 138mW.
- Stereo Headphone Half Power THD + N @ 1 kHz (%) (kHz) -> 0.008.
- Stereo Headphone SNR is 93dB.
- Stereo Headphone PSRR is 109dB.
- Ultra-low-noise voltage regulator for optimal audio performance.
- Available with different output connectors: RCA, 3.5mm phone jack and 2x50W speaker
- The PMU DAC board size: LWH = 65mm * 58mm * 16mm

Technical Configuration

Functional Mode	Transparent Firewall with SIP Deep Packet Engine.
SIP Intrusion/Prevention	~400+ SIP Attack Signatures Support
Throughput	~10Mbps
No of concurrent calls supports	50 concurrent calls
Logging	Local Security Event Console, Remote Syslog
Device Management	Web GUI via Https & SSH CLI
Hardware	MIPS based 32bit Processor Single core, 300MHz
Primary Storage	16 MB Flash
RAM	64MB
Secondary Storage	USB Storage devices support for logging (Optional)
Network Interfaces	Two Fast Ethernet Interfaces. (10/100 Mbps)

- 3port Gigabit Ethernet port
- 4 port USB HUB
- 1 port USB3.0 Host port
- Power supply 12V and 3A Power connector

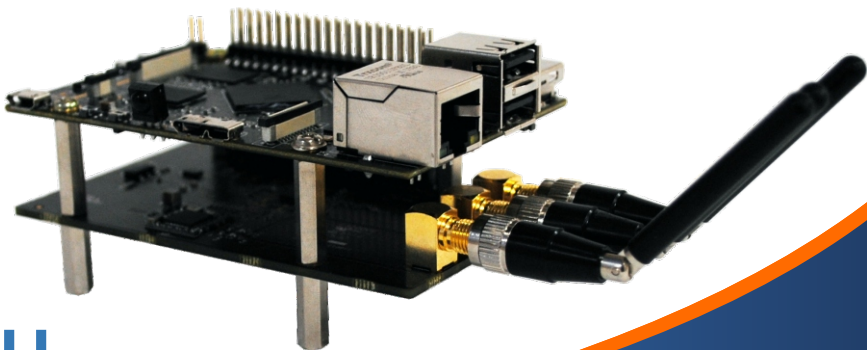
Wifi+Bluetooth + Zigbee



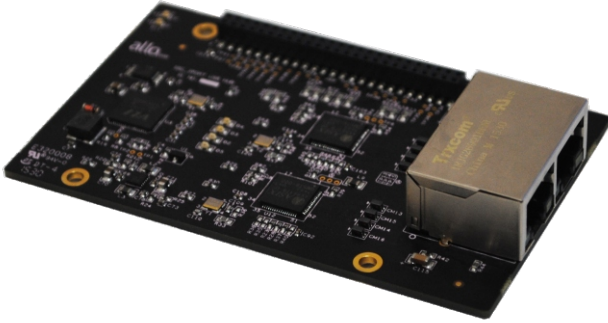
Technical Specification

WiFi +Bluetooth chip	F23BUUM13-W2
Zigbee chip	CC2530F256
WiFi throughput	150Mbps
Bluetooth standard	V2.1+EDR/BT v3.0/BT v3.0+HS/BT v4.0
Zigbee frequency band	2.4GHz
Antenna	“Stubby” Style '2.4GHz' Antenna AMC-ANT2.4S34
WiFi standards	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n, IEEE 802.11d, IEEE 802.11e, IEEE 802.11h, IEEE 802.11i
WiFi Operating Frequency	2.400~2.4835GHz
Input Voltage (from main board)	5V

The USB to Ethernet size: LWH =95mm * 58mm * 16mm



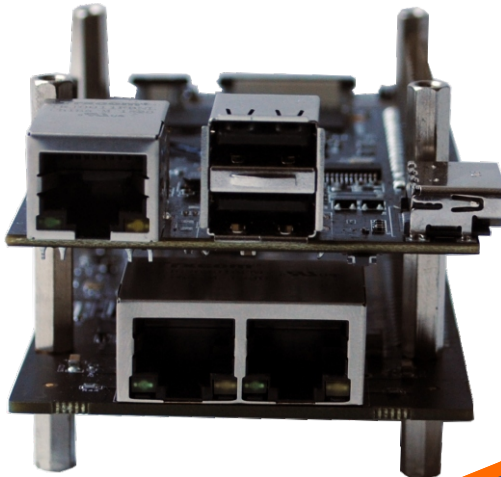
USB Ethernet



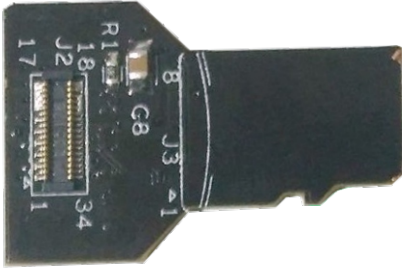
Technical Configuration

No of Ethernet ports	2
USB Standard	USB 3.0
Ethernet speed	10/100/1000Mbps
Input voltage (from main board)	5V
Chips used	Ax88179 USB to Ethernet controller VL812 -USB 3.0 Hub

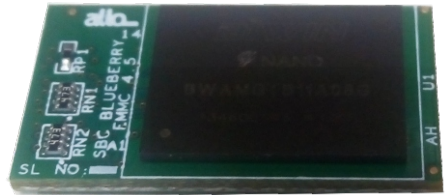
The USB to Ethernet size: LWH = 85mm * 58mm * 16mm



eMMC Shield



- eMMC Connector for 8/16/32/64 Gigabyte
- The eMMC board size: LWH = 95mm * 58mm * .6mm



I/O Shield



- It has 40 -pin Zif socket.
- I2C controlled IO expander (18 IO's) and header.
- 5 LED's with common anode.
- 26 through hole test points.
- 2 parallel- 40 pin burg stick.
- Connector header for main board.
- SOIC 20 package foot print with through hole test points.
- To acquire digital and analogical inputs and outputs from a PC in an industrial environment.
- I/O cards have their digital inputs and outputs galvanically isolated to protect from electromagnetic disturbances and ground loops, improving its reliability and quality.

LCD Shield

- Plug & Play directly to the LCD connector of our SPARKY
- 7" Display
- 1024 * 600 resolution
- Touch Pad included
- High end glass frame with stand

Camera Shield

- Plug & Play directly to the camera connector of our SPARKY
- 5MP
- Auto Focus



Operating System Support

- > **Ubuntu 14**
- > **Arch Linux ARM**
- > **OpenELEC**
- > **Fedora**
- > **Android**

Application Support

- **Rune Audio**
- **Kodi Player(XMBC)**
- **PiPlay**
- **SDL 1.2 and SDL 2.0 Support**
- **Volumino**
- **squeezebox**
- **live555**
- **media tomb**
- **Frame works**
- **node.js**
- **ruby on rails**
- **openframeworks**
- **Webiopi IoT**
- **openCV**