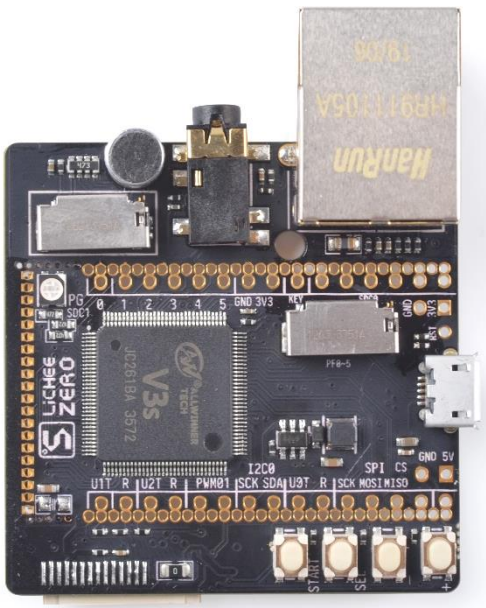
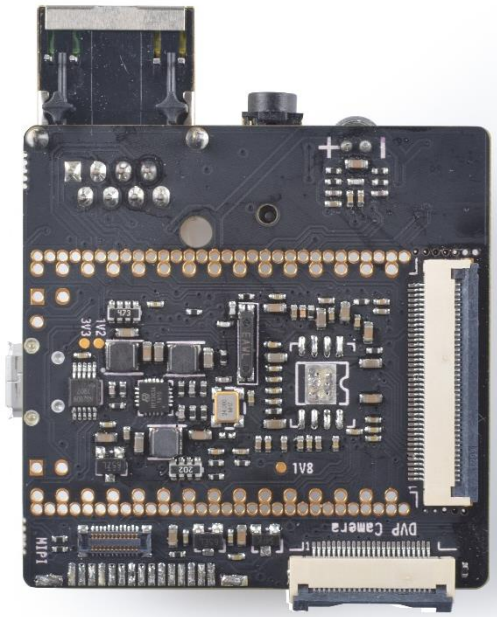
Sipeed Lichee Zero-Dock Datasheet_EN

V1.0





Main features:

- CPU : Allwinner V3S ; ARM Cortex-A7 architecture ; Basic frequence 1.2Ghz
- RAM : SIP 64MB DDR2
- Memory: On-board TFcard slot / Flash SOP8 pads (Dual system boot way)
- Display: General 40P RGB LCD FPC 0.5mm Connector ; Support resolution of 272x480 , 480x800 , 1024x600 , etc.
- Interfaces: SDIO , UART , SPI , I²C , OTG USB , PWM , CSI , MIPI , etc.
- Peripherals: RJ45 connector , 3.5mm Headphone jack , Electret microphone , Second TF card slot , Camera connector , 4 buttons , MIPI connector and RGB LED

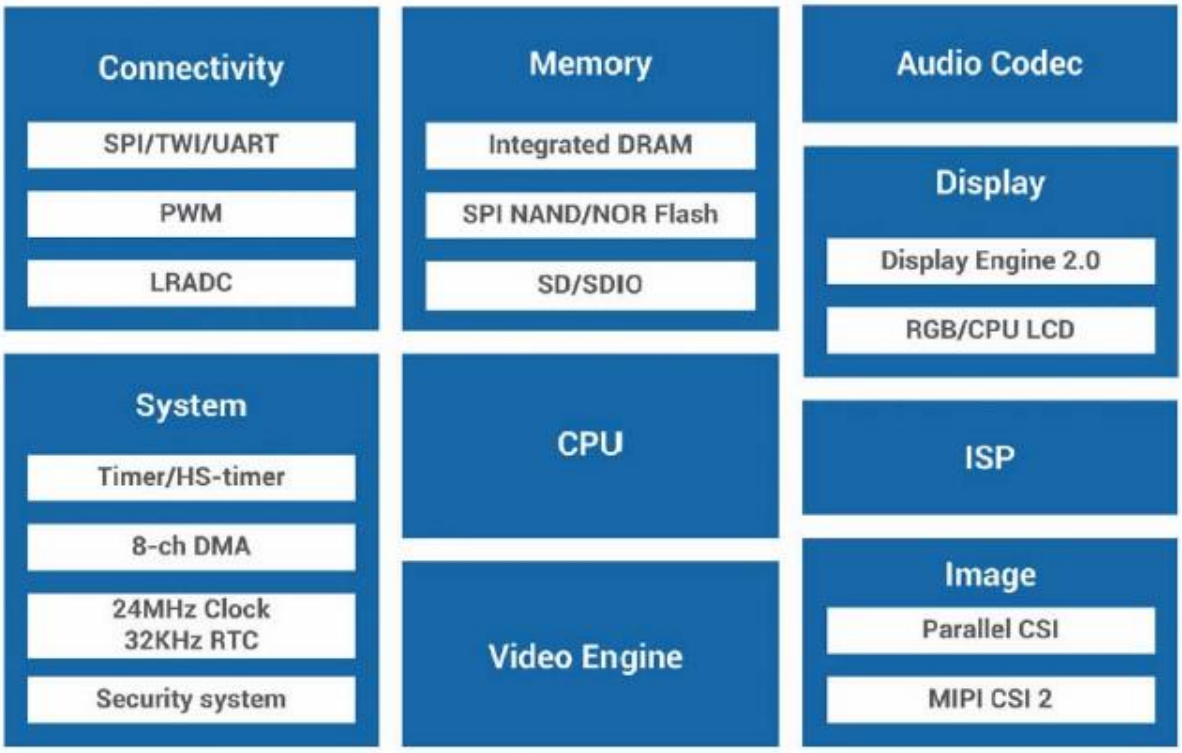
UPDATE	
V1.0	Edited on April 23, 2020 ; Original document

SPECIFICATION	
CPU	Allwinner V3S ; ARM Cortex-A7 architecture ; Basic frequence 1.2Ghz
RAM and Memory	SIP 64MB DDR2 On-board SOP8 pads (Support system boot from Flash) On-board TFcard slot(Support system boot from TFcard)
Display	General 40P RGB LCD FPC 0.5mm Connector Common 40P 4.3/5/7-inch screencan be used directly(On-board LCD backlight driver circuit) Support resolution of 272x480 , 480x800 , 1024x600 , etc On board resistive touch screen chip
Video processing capacity	Support video decoder for H.264 and JPEG/MJPEG Support H.264 BP/MP/HP up to 1080p@30fps Support H.264 output formats : NV21,NV12,YU12,YV12 Support JPEG/MJPEG up to 1080p@30fps
On-board peripherals	RJ45 connector , 3.5mm Headphone jack , Electret microphone , Second TF card slot , Camera connector , 4 buttons , MIPI connector and RGB LED
Communication interfaces	SDIO x2 (SDIO WiFi + Bt module is on sale) SPI x1 TWI x2 UART x3 100M Ether x1(Contains EPHY) OTG USB x1 MIPI CSI x1
Other interfaces	PWM x2 LRADC x1 Speakerx2 + Mic x1

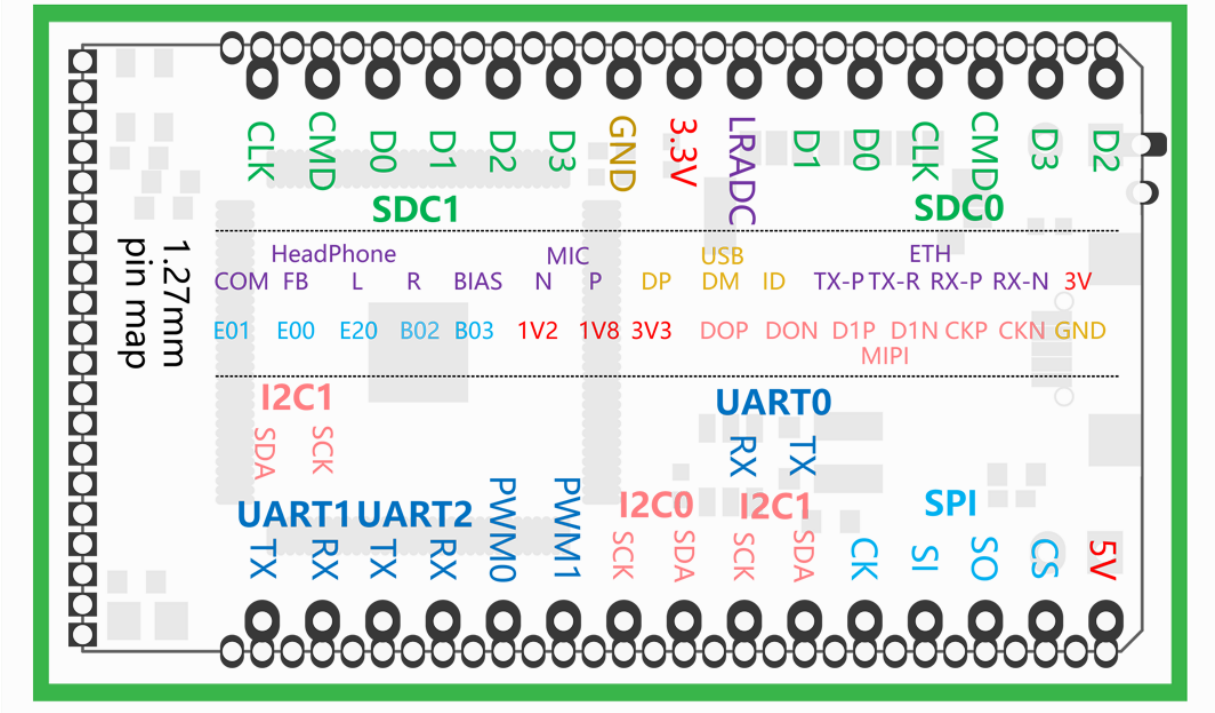
SOFTWARE FEATURES	
Linux	Support Linux 3.4 BSP kernel Support Linux 4.16 Main-line kernel
Linux applications	Support QT, Python and other common Linux applications

HARDWARE FEATURES	
External supply voltage requirement	Micro USB：5.0V ±0.2V 2.54mm dip pads：3.7-5.0V ±0.1V 1.25mm smt pads：3.7-5.0V ±0.1V
External supply current requirement	> 300mA @ 5V
Measured current under various working conditions	1GHz linux no load running current：100mA±10mA 1GHz linux full load running current：180mA±10mA；
Temperature rise	<30K
Range of working temperature	-30℃ ~ 85℃

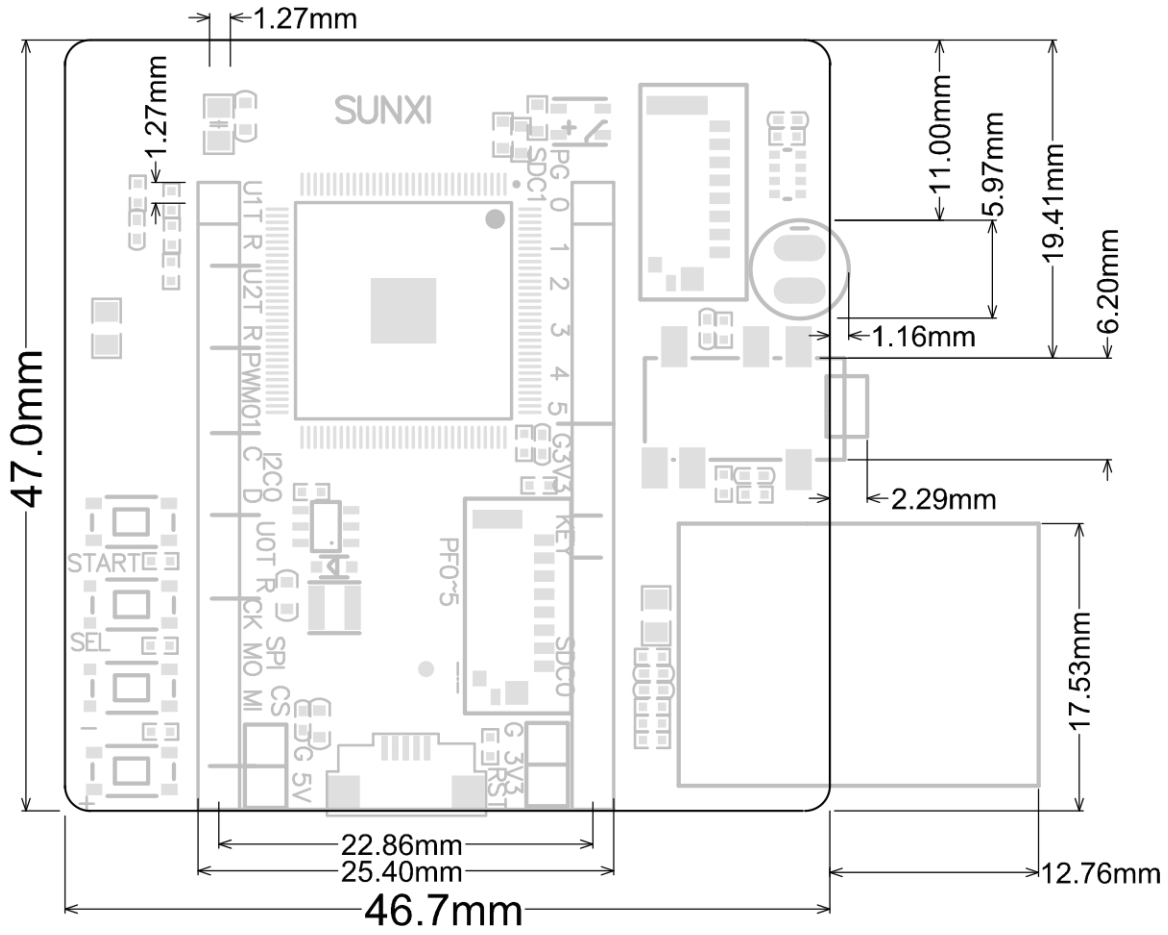
V3s block diagram



Lichee Zero pin map



Size and weight information	
长	47.0mm
宽	46.7mm
高	17.0 mm
重量	14.8±0.1g



Matters needing attention	
ESD measures	When using in a dry environment, please release static electricity on your body before touching the board
Screen	Before plugging in the screen, please make sure that the pin definition sequence of the 40p seat corresponds to the pin definition sequence of the screen to avoid burning the backlight of the screen
Start-up	Nano can boot from Tfcard or Flash. If you only connect the USB cable, nano will not start
System debugging serial port	UART0 (Refer to Lichee Nano pin map for specific location)

Target application scenario
IOT applications using complex communication interfaces and protocols
The application of human-computer interface which needs more beautiful and complex logic
Application scenarios requiring more computation (relative to common MCU)
Scenarios requiring rapid development using open source software under Linux
Geek players who want to balance volume, performance and ease of use
Entry level players and software engineers who want to do hardware DIY in a familiar language

RESOURCES	
Official Website	www.sipeed.com
Github	https://github.com/sipeed
BBS	https://bbs.sipeed.com/
Wiki	https://wiki.sipeed.com/
SDK and HDK	China users https://cn.dl.sipeed.com/LICHEE/Nano Global users https://dl.sipeed.com/LICHEE/Nano
E-mail(Technical Support)	support@sipeed.com
telgram link	https://t.me/sipeed
QQ Group	878189804

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