



LinkIt Smart 7688 Duo

SKU 102110017

The LinkIt Smart 7688 development platform offers two development boards:

- **LinkIt Smart 7688:** MPU only. Powered by Media Tek MT7688.
- **LinkIt Smart 7688 Duo:** MPU and MCU. Powered by Media Tek MT7688 and ATmega 32U4.

What is LinkIt Smart 7688 Duo

LinkIt Smart 7688 Duo is an open development board compatible with Arduino Yún sketches, based on the **OpenWrt** Linux distribution, MT7688 and ATmega32u4. The board is designed especially to enable the prototyping of Rich IoT Application for smart house or office. Since it is compatible with Arduino, this allows you to use different features from Arduino Yún and LinkIt Smart 7688 Duo, which will help you build rich applications based on various, robust and compiled Arduino Yún sketches. The board offers you the memory and packet storage to enable robust video processing. The platform also offers options to create device applications in Python, Node.js and C programming language.

LinkIt Smart 7688 duo is a co-design product by Seeed Studio and MediaTek. It brings together the parties' knowledge in open hardware and industry leading reference designs for IoT devices to create this powerful development board.

LinkIt Smart 7688 duo is fully supported on the MediaTek Labs site: check out the LinkIt section and register here to download the SDK, participate in the Forums, and more.

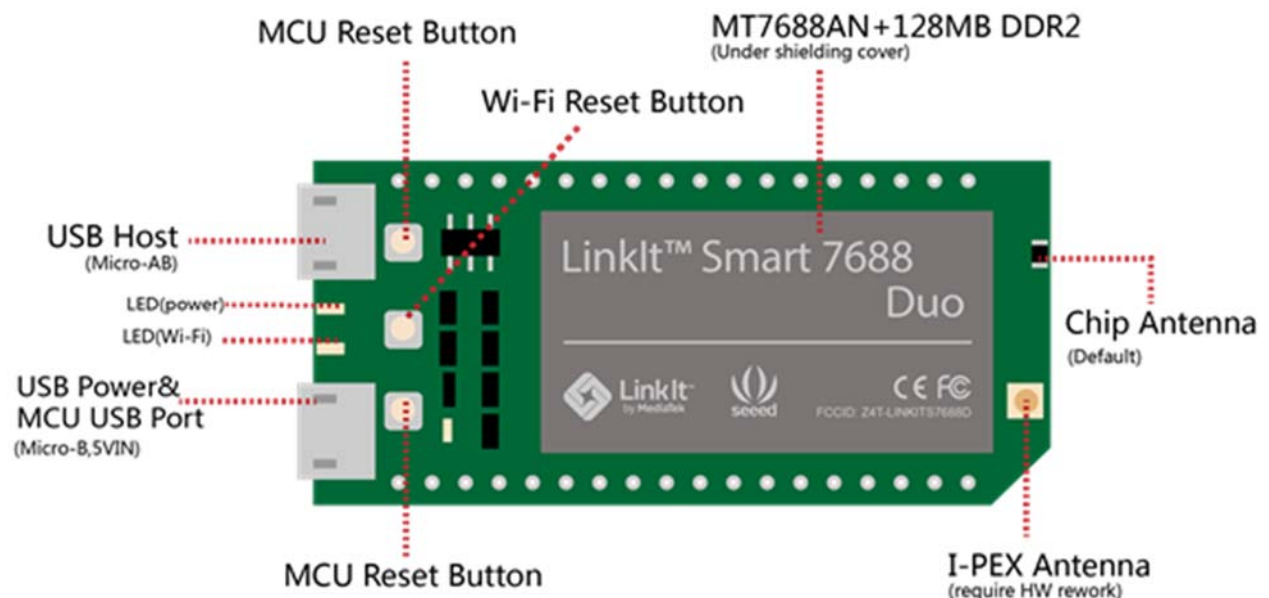
Note (important)

In order to protect the product from improper operation, please pay attention to below notes.

- Choose more reliable power adapter with stable output.
- Recommended conditions of power input source for 7688:
 1. Overshoot voltage of power input should not over 5.5.
 2. Voltage wave should be within $\pm 100\text{mV}$ of rated voltage.

Features

- 580 MHz MIPS CPU
- Single input single output(1T1R) Wi-Fi 802.11 b/g/n (2.4G)
- Pin-out for GPIO, I2C, SPI, SPIS, UART, PWM and Ethernet Port
- 32MB Flash and 128MB DDR2 RAM
- USB host
- Micro SD slot
- Support for Arduino (ATmega32U4)



Specifications

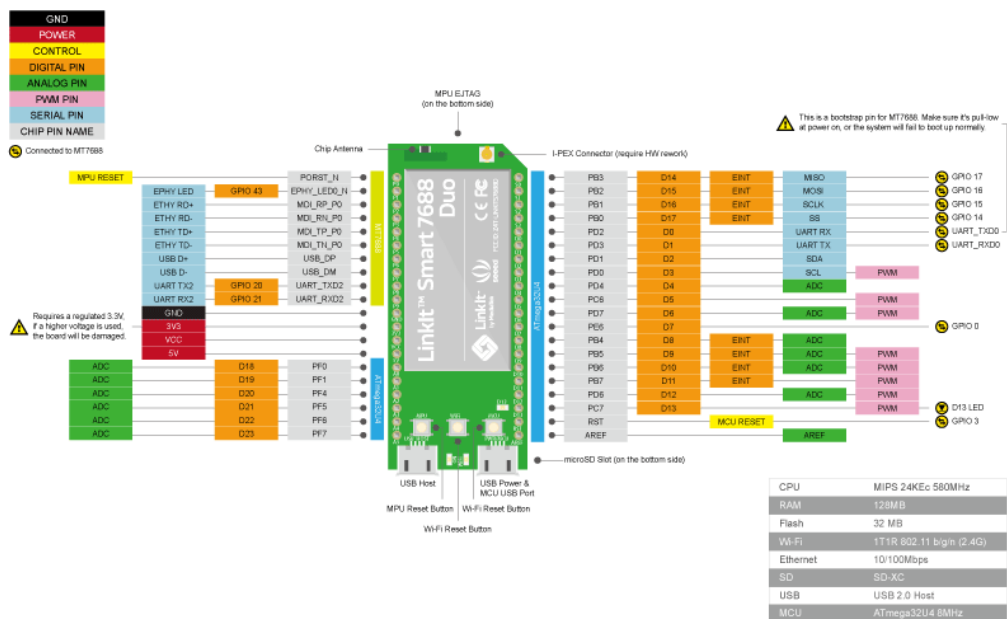
Category	Feature	Specification
MPU	Chipset	MT7688AN
	Core	MIPS24KEc
	Clock speed	580MHz
	Working voltage	3.3V
MCU	Chipset	ATmega32U4
	Core	Atmel AVR
	Clock speed	8MHz
	Working voltage	3.3V
PCB Size	Dimensions	60.8 x 26 mm
Memory	Flash	32MB
	RAM	128MB DDR2
Power Source	USB Power	5V (USB micro-B)
	VCC	3.3V (Pin Breakout)
GPIO	Pin Count	3 (MT7688AN) 24 (ATmega32U4)
	Voltage	3.3v
PWM	Pin Count	8 (ATmega32U4)
	Voltage	3.3v

	Max. Resolution	16 bits (customizable)
	Maximum Frequency@Resolution	31.25kHz@8-bit, Timer 0 (4 sets)
		2MHz@2-bit,122Hz@16-bit, Timer 1 & 3 (4 sets)
		187.5kHz@8-bit, 46.875kHz@10-bit, Timer 4 (6 sets)
ADC	Pin Count	12 (ATmega32U4)
	Voltage	3.3v
External Interrupts	Pin Count	8 (ATmega32U4)
SPI/SPIS	Set count	1 (ATmega32U4)
	Pin numbers	S0, S1, S2, S3
	Max. Speed	4 MHz
I2C	Set count	1
	Pin numbers	D2, D3
	Speed	400K
UART Lite	Set count	1 (ATmega32U4)
		1 (MT7688AN)
	Pin numbers	P8, P9 (MT7688AN)
		D0, D1 (ATmega32U4)

	Max. Speed	0.5 Mbps (MT7688AN)
		0.5 Mbps (ATmega32U4)
USB Host	Set count	1 (MT7688AN)
	Pin numbers	P6, P7
	Connector type	Micro-AB
Communication	Wi-Fi	1T1R 802.11 b/g/n (2.4G)
	Ethernet	1-port 10/100 FE PHY
	Pin numbers	P2, P3, P4, P5
User Storage	SD Card	Micro SDXC SD

Schematic Diagram

LinkIt™ Smart 7688 Duo



Technical Details

Dimensions	56mm x 26mm x 18mm
Weight	G.W 14g
Battery	Exclude

Part List

LinkIt Smart 7688 Duo	1
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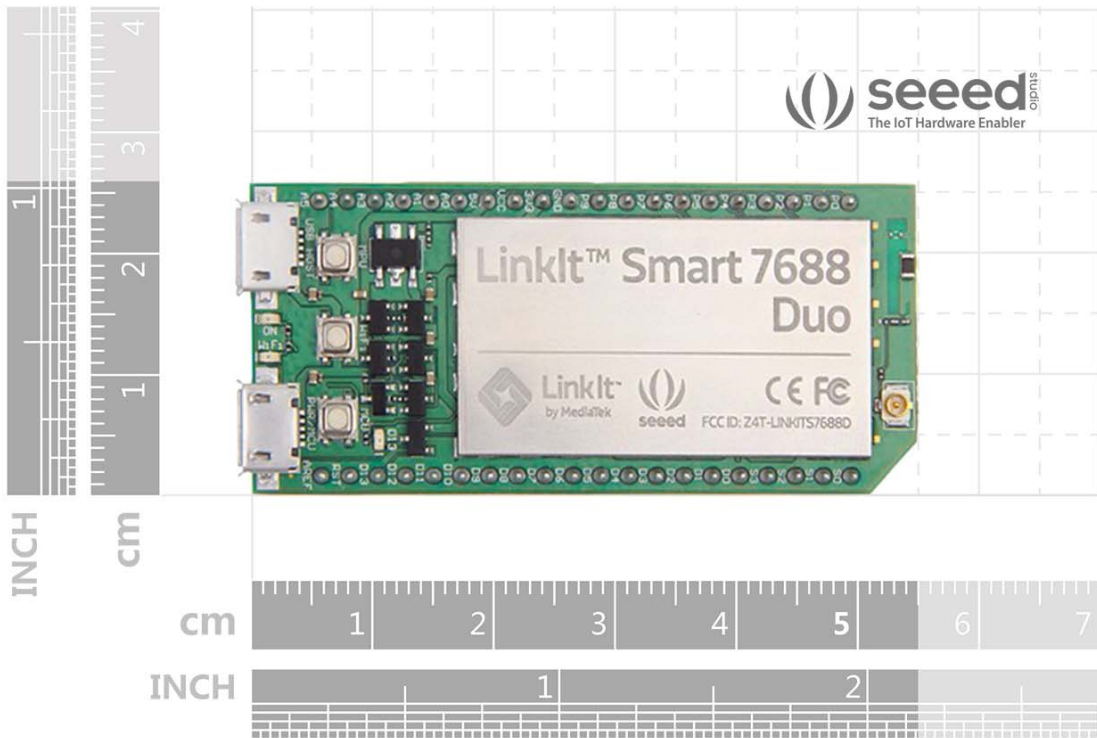
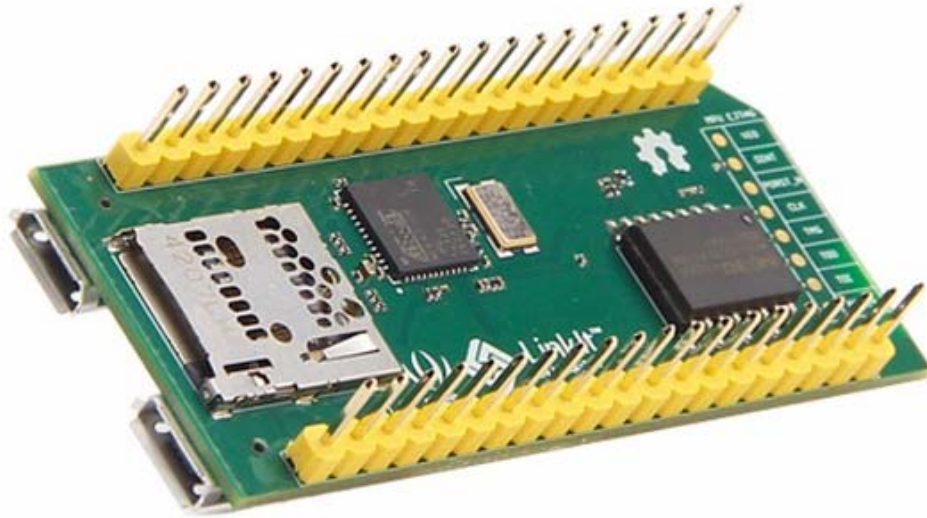
ECCN/HTS

ECCN	5A002.a.1
HSCODE	8543909000

Certification

Certification	FCC,CE
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<https://www.seeedstudio.com/LinkIt-Smart-7688-Duo-p-2574.html/12-10-18>