

# TINKER BOARD 2 Series

Innovatively enjoy a whole new digital experience

享受創新的數位體驗

享受创新的数字体验

Profitez d'une toute nouvelle expérience numérique et innovante

Наслаждайтесь новыми инновационными технологиями

いまだかつてない新感覚のデジタル体験を提供します。

Sperimentate un'esperienza di interazione digitale completamente nuova!

Иновативно, наслаждавайте се на изцяло ново цифрово изживяване

Zcela nový převratný digitální zážitek

Ny en hel ny digital opplevelse

Geniet innovatief van een volledig nieuwe digitale ervaring

Naudi inovativaiselt kogu uut digitaalaset kogemust

Nauti inovatiivisesta, avian uudesta digitaalisesta kokemuksesta

Genießen Sie ein rundum neues Digitalerlebnis

Καινοτομική απόλυτη μας εξολοκλήρου νέας εμπειρίας

Vadonatúj digitális élmény

Menikmati pengalaman digital yang benar-benar baru secara inovatif

Тольгыңыз жаңа сандық тәжірибелі инновациялық түрде көл жеткізініз

완전히 새로운 디자털 세계를 획기적으로 즐겨보세요.

Güstet pilnigi jaunu digitālo baudījumu inovatīvā veidā

Mégauniké visiškai naujas skaitmeniniais potyriais

Få glede av en helt ny, innovativ digital opplevelse

Korzystaj z zupełnie nowego cyfrowego rozwiązańia

Desfrute de uma nova experiência digital de forma inovadora

Bucură-ți-ă în cel mai inovator mod de nouă experiență digitală

Inovatívne užívajte s celom, novom, digitálnom iskustvom

Inovativne si vychutnávajte úplne nový digitálny zážitok

Sea el primero en disfrutar de una nueva experiencia digital total

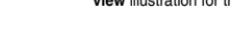
Innovativ njutning av en helt ny digital opplevelse

Tamamen yeni yaratıcı bir digital deneyim yaşayın

Tận hưởng trải nghiệm số hoàn toàn mới theo cách cài đặt

Phát triển khả năng sáng tạo với công nghệ số

اسمع تجربة رقمية جديدة تماماً وينزل مبكر



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## Thank you for purchasing ASUS Tinker Board 2 Series!

Tinker Board 2 Series is more than a dream for the DIY-obsessed: it's a gateway to new ideas and new relationships. Experienced makers will love Tinker Board's performance-to-price ratio and strong brand heritage, while novices and younger users will appreciate its accessibility and ease of use. But all will come together to create — Together We Make!

### Package contents

Check your Tinker Board 2 Series package for the following items:

- 1 x Tinker Board 2S or Tinker Board 2
- 1 x Heatsink\*
- 2 x Wi-Fi/BT antenna cables
- 1 x Shielding bag
- 1 x Quick start guide

### Safety Information

- Power supply used with the Tinker shall comply with relevant regulations and applicable standards.
- DO NOT overclock the board, as this may cause damage to the board.
- Ensure that the board is placed in a well ventilated environment.
- The board should be placed on a flat, stable, non-conductive surface.
- Avoid handling the board while powered. Handle the board by the edges to minimize risk of Electronic Static Damage (ESD).
- Do not use both the system DC power-in jack and the 40-pin GPIO +5V pins (pin 2 and 4, red) for power input at the same time. Please refer to the Top view illustration for the location of the pins.
- If you wish to use the 40-pin GPIO +5V (pin 2 and 4, red) as a power input source, please make sure the power input rating for each pin complies with the standard of +5V / 3A (+/-5% deviation). A power rating value that exceeds the rating value mentioned, or an unstable power source may result in damage to your system or hardware. Please refer to the Top view illustration for the location of the pins.

## ASUS Tinker Board 2 Series specifications summary

	Tinker Board 2S	Tinker Board 2
<b>SoC</b>	Rockchip RK3399 (64-bit)	
<b>CPU</b>	Dual-core Arm® Cortex®-A72 @ 2.0 GHz	Quad-core Arm® Cortex®-A53 @ 1.5 GHz
<b>GPU</b>	Arm® Mali™-T860 MP4 GPU @ 800 MHz	
<b>Display</b>	1 x HDMI™ with CEC hardware ready	1 x USB Type-C® (DP 1.2)
<b>Memory Size</b>	1 x 22-pin MIPI DSI (4 lane) supports up to FHD	Dual-CH LPDDR4 2GB or 4GB
<b>Storage</b>	16GB eMMC	-
<b>Connectivity</b>	Micro SD(TF) card slot (push/pull)	RTL8211F-CG GbE LAN
<b>Audio</b>	M.2 - 802.11 a/b/g/n/ac wireless & BT 5.0 (2T2R)	M.2 - 802.11 a/b/g/n/ac audio output
<b>USB</b>	1 x HDMI™ audio output	1 x S/PDIF TX pin (from GPIO)
<b>Camera Interface</b>	1 x PCM/I2S pins (from GPIO)	1 x USB 3.2 Gen 1 Type-A ports
<b>Internal Headers</b>	3 x USB 3.2 Gen 1 Type-C® OTG port	1 x USB 3.2 Gen 1 Type-C® OTG port
<b>Power Connector (up to 45W)</b>	1 x 12-19V DC Power Input Jack (5.5/2.5 mm)	1 x 12-19V DC Power Input Jack (5.5/2.5 mm)
<b>OS Support</b>	Debian 9 / Android 10	3.37" x 1.25" (85 x 56 mm)
<b>Dimension</b>		

## Getting Started

### Top view

#### Booting from external Micro SD card

##### Requirement:

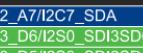
- 1 x Micro SD card with at least 8GB capacity
- 1 x 12~19V, DC 5.5/2.5 power supply\*
- 1 x Monitor with HDMI™ cable or USB Type-C® (DP) cable
- 1 x Keyboard and Mouse set
- The Power Supply is purchased separately.

- Insert the micro SD card into a Windows® PC

Download the TinkerOS image from the Tinker Board website (<https://tinker-board.asus.com/download.html>) and burn it into the micro SD card using a third-party ISO software, such as Win32DiskImager or Etcher.

- Insert the bootable micro SD card into your Tinker Board 2S / Tinker Board 2, then connect the power supply, keyboard, mouse, and monitor to boot up.

#### Booting from onboard eMMC



Booting from the onboard eMMC is only available for Tinker Board 2S models with eMMC.

##### Requirement:

- 1 x USB Type-C® cable with data transfer function
- 1 x 12~19V, DC 5.5/2.5 power supply\*
- 1 x Monitor with HDMI™ cable or USB Type-C® (DP) cable
- 1 x Keyboard and Mouse set

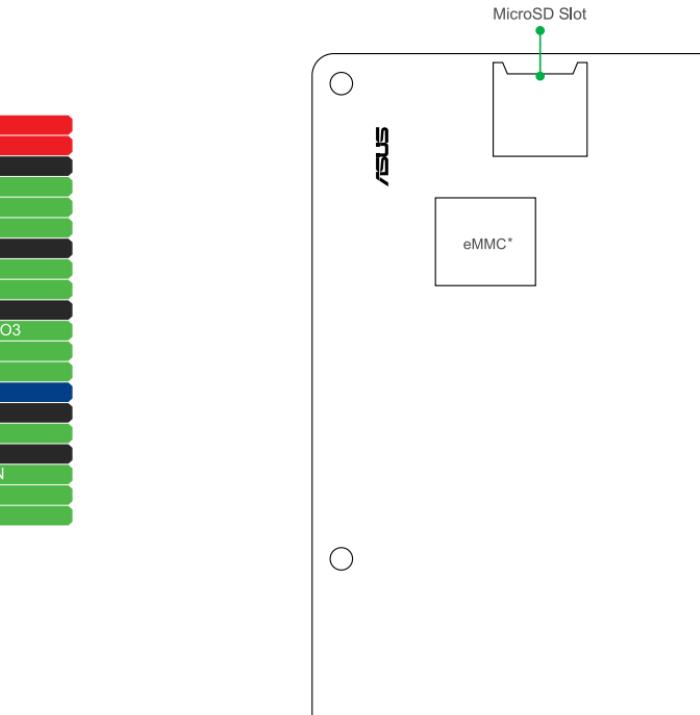
- Connect the Tinker Board 2S to a PC using a USB Type-C® cable, then wait for the PC to recognize the device.

Download the TinkerOS image from the Tinker Board website (<https://tinker-board.asus.com/download.html>) and burn it into the Tinker Board 2S using a third-party ISO software, such as Win32DiskImager or Etcher.

- Connect the power supply, keyboard, mouse, and monitor to your Tinker Board 2S to boot up.

\* Only available on selected models

### Bottom view



If the eMMC cannot be recognized, please refer to <https://tinker-board.asus.com> for more details on eMMC Recovery.

