



Tinker Board 2 Series

User Manual

COPYRIGHT INFORMATION

No part of this manual, including the products and software described in it, may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form or by any means, except documentation kept by the purchaser for backup purposes, without the express written permission of ASUSTeK COMPUTER INC. ("ASUS").

ASUS PROVIDES THIS MANUAL "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL ASUS, ITS DIRECTORS, OFFICERS, EMPLOYEES OR AGENTS BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING DAMAGES FOR LOSS OF PROFITS, LOSS OF BUSINESS, LOSS OF USE OR DATA, INTERRUPTION OF BUSINESS AND THE LIKE), EVEN IF ASUS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES ARISING FROM ANY DEFECT OR ERROR IN THIS MANUAL OR PRODUCT.

Products and corporate names appearing in this manual may or may not be registered trademarks or copyrights of their respective companies, and are used only for identification or explanation and to the owners' benefit, without intent to infringe.

SPECIFICATIONS AND INFORMATION CONTAINED IN THIS MANUAL ARE FURNISHED FOR INFORMATIONAL USE ONLY, AND ARE SUBJECT TO CHANGE AT ANY TIME WITHOUT NOTICE, AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY ASUS. ASUS ASSUMES NO RESPONSIBILITY OR LIABILITY FOR ANY ERRORS OR INACCURACIES THAT MAY APPEAR IN THIS MANUAL, INCLUDING THE PRODUCTS AND SOFTWARE DESCRIBED IN IT.

Copyright © 2021 ASUSTeK COMPUTER INC. All Rights Reserved.

LIMITATION OF LIABILITY

Circumstances may arise where because of a default on ASUS' part or other liability, you are entitled to recover damages from ASUS. In each such instance, regardless of the basis on which you are entitled to claim damages from ASUS, ASUS is liable for no more than damages for bodily injury (including death) and damage to real property and tangible personal property; or any other actual and direct damages resulted from omission or failure of performing legal duties under this Warranty Statement, up to the listed contract price of each product.

ASUS will only be responsible for or indemnify you for loss, damages or claims based in contract, tort or infringement under this Warranty Statement.

This limit also applies to ASUS' suppliers and its reseller. It is the maximum for which ASUS, its suppliers, and your reseller are collectively responsible.

UNDER NO CIRCUMSTANCES IS ASUS LIABLE FOR ANY OF THE FOLLOWING: (1) THIRD-PARTY CLAIMS AGAINST YOU FOR DAMAGES; (2) LOSS OF, OR DAMAGE TO, YOUR RECORDS OR DATA; OR (3) SPECIAL, INCIDENTAL, OR INDIRECT DAMAGES OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS OR SAVINGS), EVEN IF ASUS, ITS SUPPLIERS OR YOUR RESELLER IS INFORMED OF THEIR POSSIBILITY.

SERVICE AND SUPPORT

Visit our multi-language web site at <https://www.asus.com/support/>

Contents

Conventions used in this manual.....4

Typography4

Chapter 1: Specifications Summary

1.1 Introduction6

1.2 Features.....6

1.3 Package contents6

1.4 Product specification7

1.5 Dimensions (mm)8

1.6 Block diagram8

Chapter 2: Hardware Installation

2.1 Before you proceed10

2.2 Single board Computer layout11

2.3 I/O connectors18

2.3.1 Left panel18

2.3.2 Rear panel.....19

Chapter 3: Software Installation

3.1 Booting from external Micro SD card.....22

3.2 Booting from onboard eMMC (on selected models).....22

Appendix

Notices.....24

Conventions used in this manual

To highlight key information in this manual, some text are presented as follows:

IMPORTANT! This message contains vital information that must be followed to complete a task.

NOTE: This message contains additional information and tips that can help complete tasks.

WARNING! This message contains important information that must be followed to keep you safe while performing certain tasks and prevent damage to your Single Board Computer's data and components.

Typography

Bold text Indicates a menu or an item to select.

Italic This indicates sections that you can refer to in this manual.

Where to find more information

Refer to the following sources for additional information and for product and software updates.

ASUS Websites

The ASUS website (<https://www.asus.com/>) provides updated information on ASUS hardware and software products.

Optional Documentation

Your product package may include optional documentation, such as warranty flyers, that may have been added by your dealer. These documents are not part of the standard package.

1

Product Overview

1.1 Introduction

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!

1.2 Features

Tinker Board 2 Series features are listed below:

- Ultimate performance for IoT devices
 - Enhanced CPU and GPU performance
 - Rich, future-proof connectivity
- Versatile and safe
 - Expandability for Embedded Solutions
 - Comprehensive protection
- Enhanced experience
 - Easy setup tool
 - IT management software (AICC, FOTA)
 - Support Android 10

1.3 Package contents

Check your package for the following items:

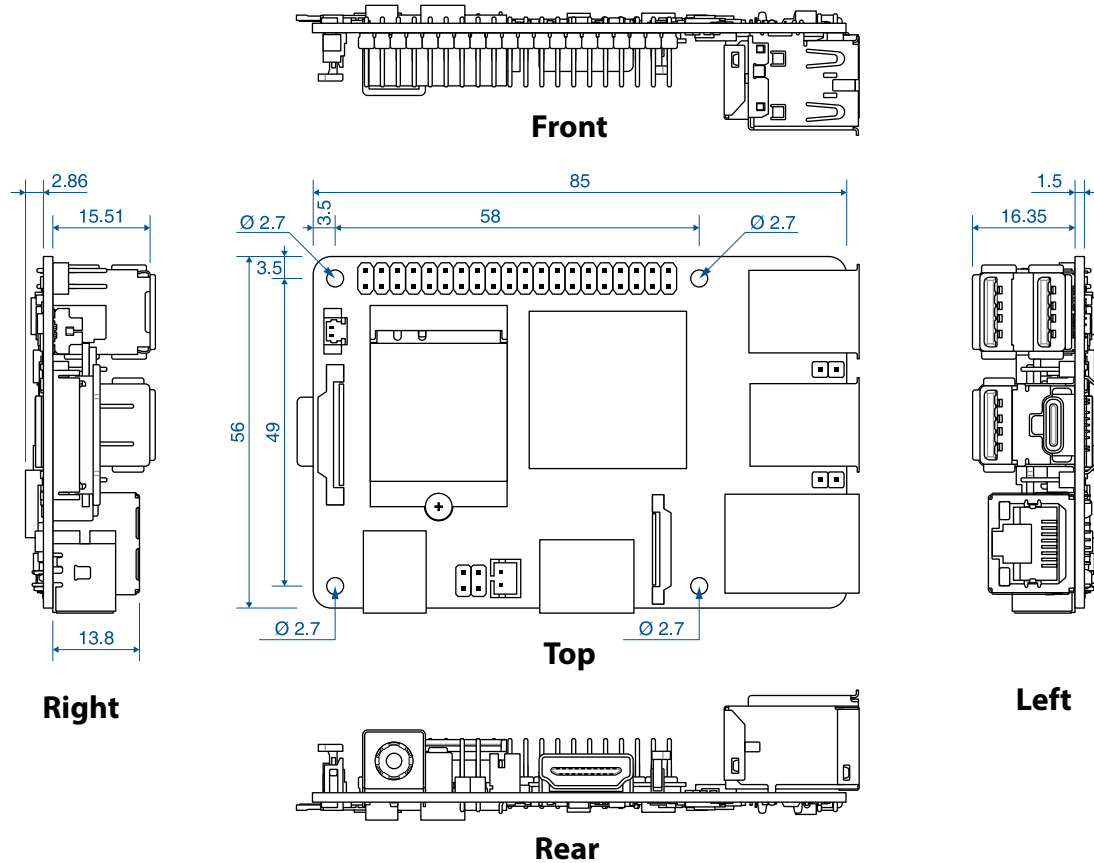
- 1 x Tinker Board 2 or Tinker Board 2S
- 1 x Heatsink*
- 2 x Wi-Fi/Bluetooth antenna cables
- 1 x Shielding bag
- 1 x Quick start guide

* Beware of high temperatures when only using the bundled heatsink.

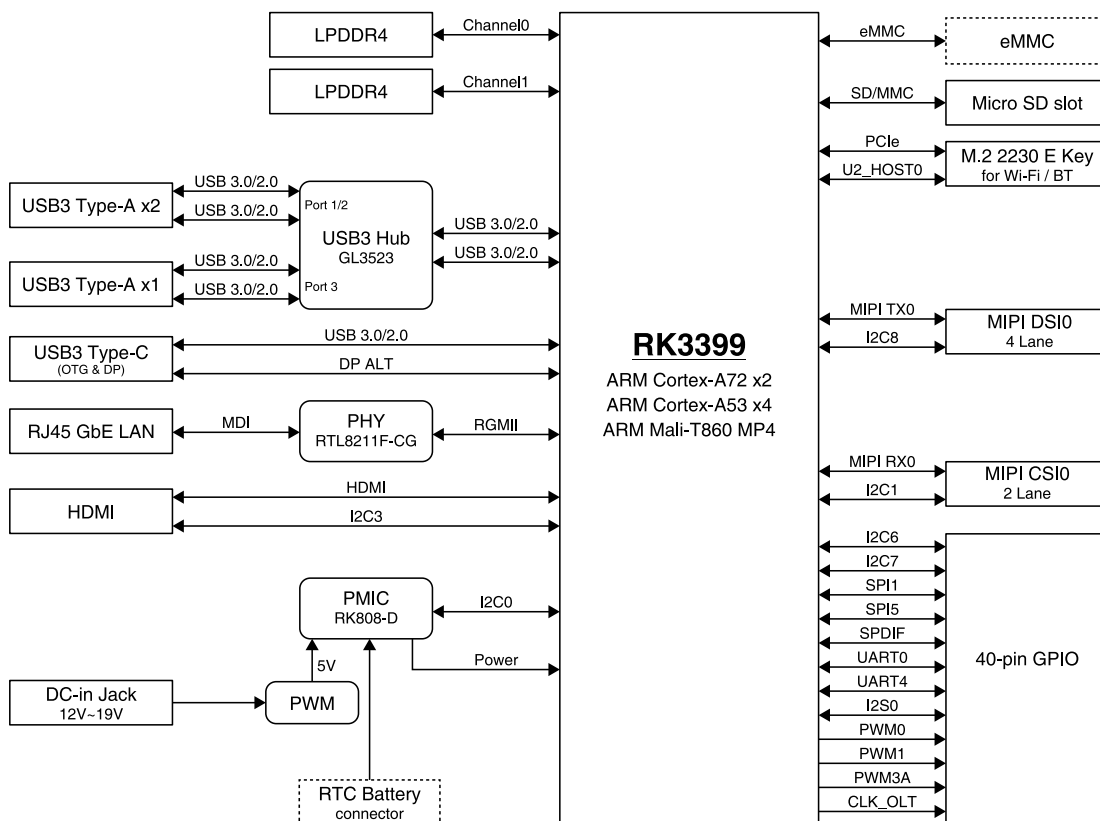
1.4 Product specification

	Tinker Board 2	Tinker Board 2S
SoC	Rockchip RK3399 (64-bit)	
CPU	Dual-core Arm® Cortex®-A72 @ 2.0 GHz Quad-core Arm® Cortex®-A53 @ 1.5 GHz	
GPU	Arm® Mali™-T860 MP4 GPU @ 800 MHz	
Display	1 x HDMI™ with CEC hardware ready 1 x USB Type-C® (DP 1.2) 1 x 22-pin MIPI DSI (4 lane) supports up to FHD	
Memory Size	Dual-CH LPDDR4 2GB or 4GB	
Storage	-	16GB eMMC
	Micro SD(TF) card slot (push/pull)	
Connectivity	RTL8211F-CG GbE LAN M.2 - 802.11 a/b/g/n/ac wireless & BT 5.0 (2T2R)	
Audio	1 x HDMI™ audio output 1 x S/PDIF TX pin (from GPIO) 1 x PCM/I2S pins (from GPIO)	
USB	3 x USB 3.2 Gen 1 Type-A ports 1 x USB 3.2 Gen 1 Type-C® OTG port	
Camera Interface	1 x 15-pin MIPI CSI-2 (2 lane)	
Internal Headers	1 x 40-pin header includes: - up to 28 x GPIO pins - up to 2 x SPI bus - up to 2 x I2C bus - up to 2 x UART - up to 3 x PWM - up to 1 x PCM/I2S - up to 1 x S/PDIF TX - 2 x 5V power pins - 2 x 3.3V power pins - 8 x ground pins 1 x 2-pin Recovery header 1 x 2-pin Power-on header 1 x 2-pin Reset header 1 x 2-pin Debug UART header 1 x 2-pin DC Fan header 1 x 2-pin RTC Battery header	
Power Connector (up to 45W)	1 x 12~19V DC Power Input Jack (5.5/2.5 mm)	
Environment	Operation Temperature: 0°C ~ 60°C Non-operation Temperature: -40°C ~ 85°C Non-operation Humidity: 0%~85% (Non-condensing)	
OS Support	Debian 9 / Android 10	
Dimension	3.37" x 2.125" (85 x 56 mm)	

1.5 Dimensions (mm)



1.6 Block diagram



2

Product Introduction

2.1 Before you proceed

Take note of the following precautions before you install your Single Board Computer components or change any single board computer settings.

NOTE: The diagrams in this chapter are for reference only. The Single Board Computer layout may vary with models.

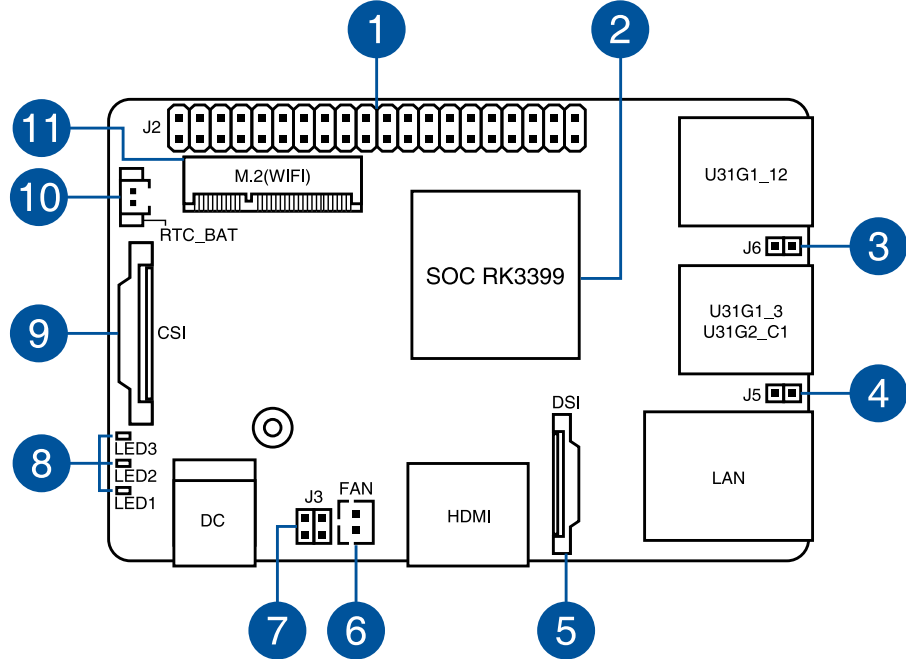
IMPORTANT! Components shown in this section may be purchased separately. Refer to **Package contents** section for more information about the contents of your Single Board Computer package.

WARNING!

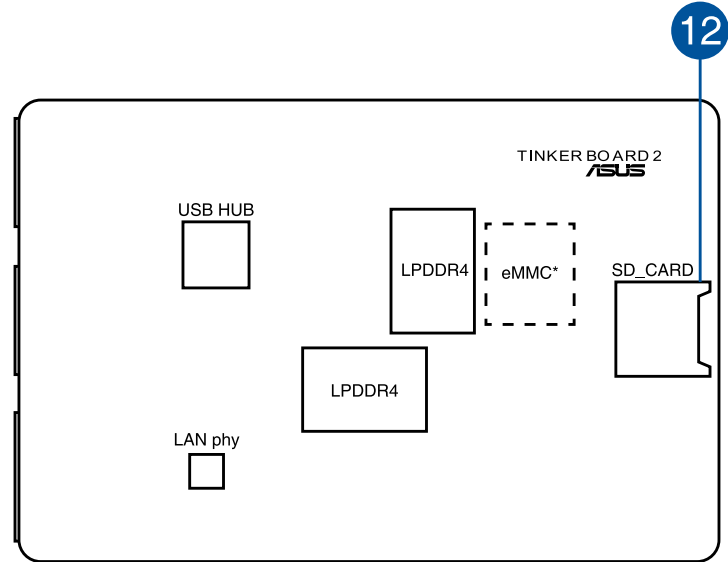
- Unplug the power cord from the wall socket before touching any component.
 - Before handling components, use a grounded wrist strap or touch a safely grounded object or a metal object, such as the power supply case, to avoid damaging them due to static electricity.
 - Hold components by the edges to avoid touching the ICs on them.
 - Whenever you uninstall any component, place it on a grounded antistatic pad or in the bag that came with the component.
 - Before you install or remove any component, ensure that the power supply is switched off or the power cord is detached from the power supply. Failure to do so may cause severe damage to the single board computer, peripherals, or components.
-

2.2 Single board Computer layout

Top view



Bottom view

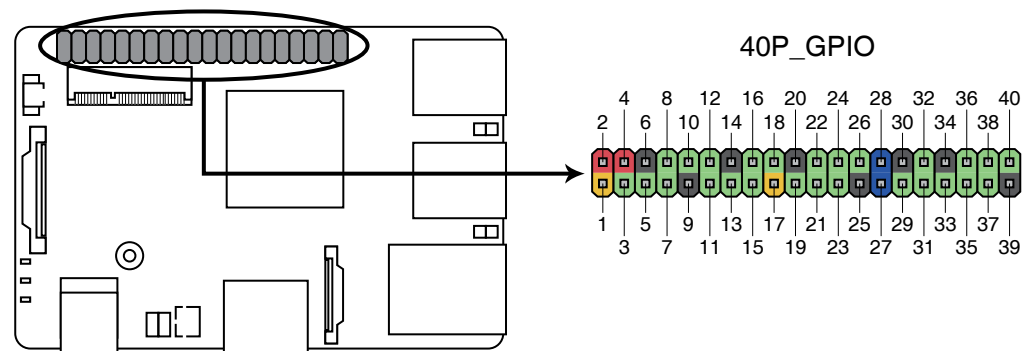


* eMMC is only available on selected models.

Layout contents	Page
1. GPIO header	12
2. SOC RK3399	13
3. Debug UART header	13
4. Reset header	13
5. MIPI DSI connector	14
6. DC Fan header	14
7. Power-on header and Maskrom jumper	15
8. Status LEDs	15
9. MIPI CSI-2 connector	16
10. RTC Battery header	16
11. M.2 Wi-Fi slot	17
12. Micro SD Card slot	17

1. GPIO header

This 40-pin GPIO (General-Purpose Input/Output) header can be designated (in software) as an input or output pin and is used for a wide range of purposes. Of the 40 pins, 28 are GPIO pins (shared with SPI/ UART/I2C pins).



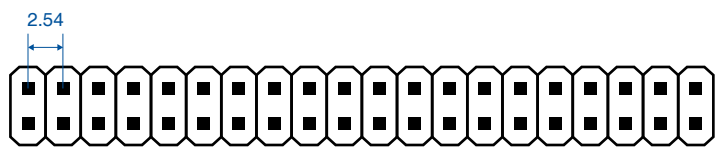
Tinker Board 2 / 2S 40-pins GPIO header

Pin definition	40P GPIO		Pin definition
VCC3.3_IO	1	2	VCC5V
GPIO2_B1/I2C6_SDA	3	4	GND
GPIO2_B2/I2C6_SCL	5	6	GPIO2_C1/UART0_TX
GPIO0_B0/CLKOUT	7	8	GPIO2_C0/UART0_RX
GND	9	10	GPIO3_D1/I2S0_SCLK
GPIO2_C3/UART0_RTSN	11	12	GND
GPIO2_C5/SPI5_TXD	13	14	GPIO2_C6/SPI5_CLK
GPIO2_C4/SPI5_RXD	15	16	GPIO2_C7/SPI5_CSN0
VCC3.3_IO	17	18	GND
GPIO1_B0/SPI1_TXD/UART4_TX	19	20	GPIO3_D4/I2S0_SDI1SDO3
GPIO1_A7/SPI1_RXD/UART4_RX	21	22	GPIO1_B2/SPI1_CSN0
GPIO1_B1/SPI1_CLK	23	24	GPIO0_A6/PWM3A_IR
GND	25	26	GPIO2_B0/I2C7_SCL
GPIO2_A7/I2C7_SDA	27	28	GND
GPIO3_D6/I2S0_SDI1SDO1	29	30	GPIO4_C2/PWM0
GPIO3_D5/I2S0_SDI1SDO2	31	32	GND
GPIO4_C6/PWM1	33	34	GPIO2_C2/UART0_CTSN
GPIO3_D1/I2S0_LRCK	35	36	GPIO3_D3/I2S0_SDI0
GPIO4_C5/SPDIF_TX	37	38	GPIO3_D7/I2S0_SDO0
GND	39	40	

WARNING!

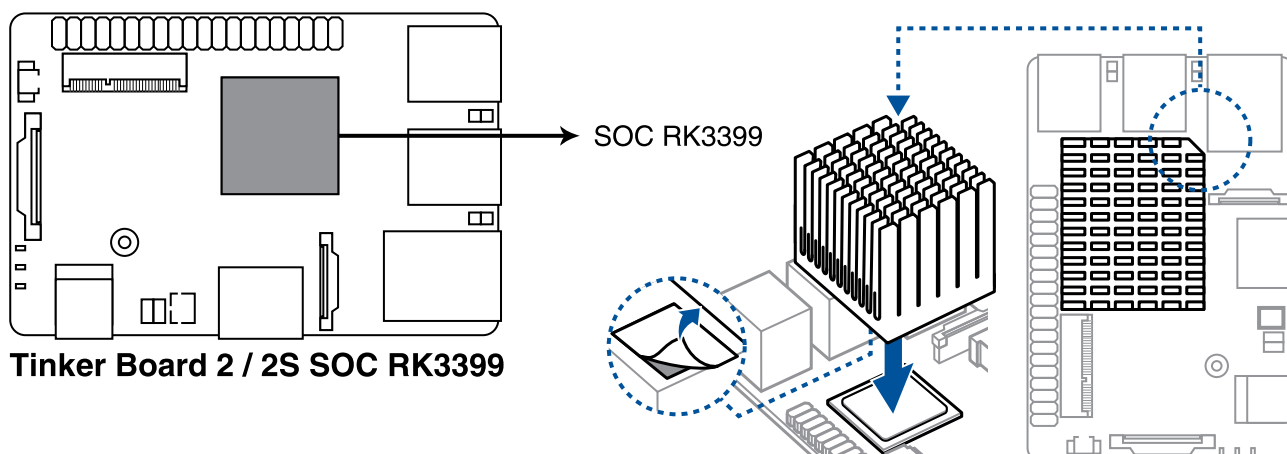
- Do not use both the system DC power-in jack and the 40-pin GPIO +5V pins (pin 2 and 4, red) for power input at the same time.
- If you wish to use the 40-pin GPIO +5V (pin 2 and 4, red) as a power input source, please make sure the power input rating for each pin complies with the standard of +5V / 3A (+/-5% deviation). A power rating value that exceeds the rating valued 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.

Dimension



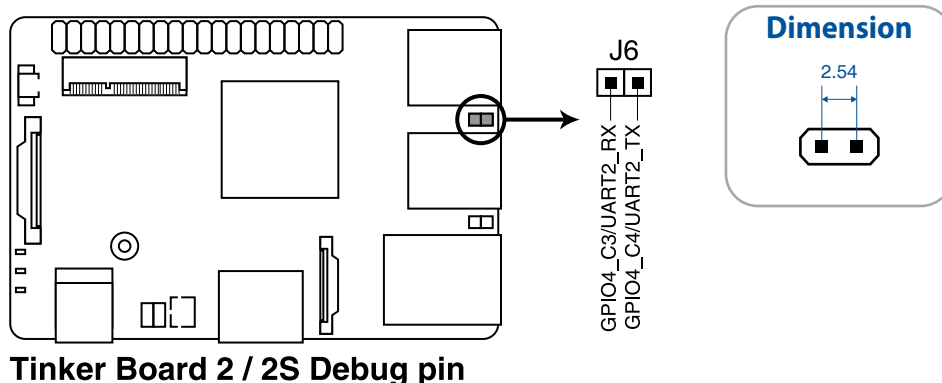
2. SOC RK3399

This ARM® system on a chip (SoC) features the new 64-bit Armv8 architecture and Arm® big.LITTLE™ technology's 6-core processor, provides improved performance and comes bundled with Arm® Mali®-T860 MP4 GPU.



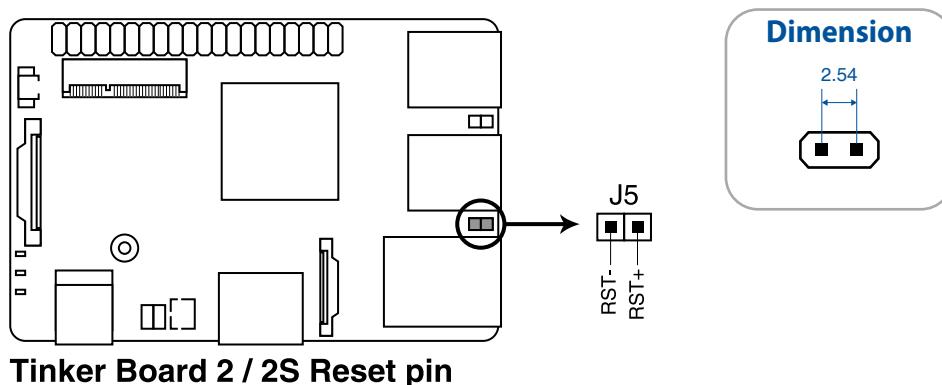
3. Debug UART header

This Debug UART header provides a separate UART port, allowing developers to use and develop with the serial console without occupying the 40-pin GPIO's UART ports.



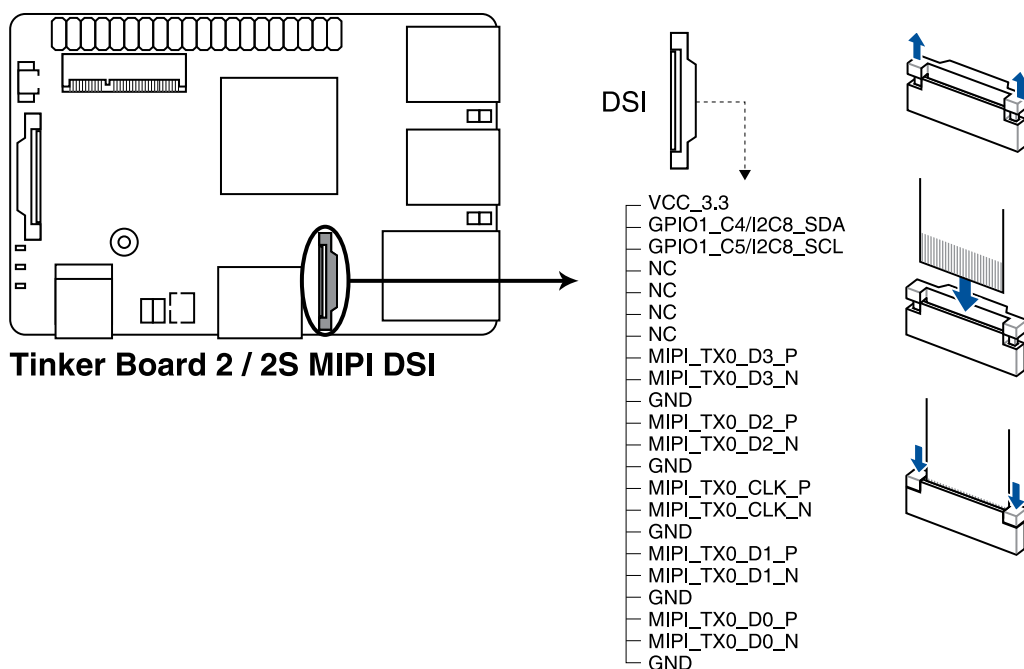
4. Reset header

The Reset header allows you to connect an external reset button.



5. MIPI DSI connector

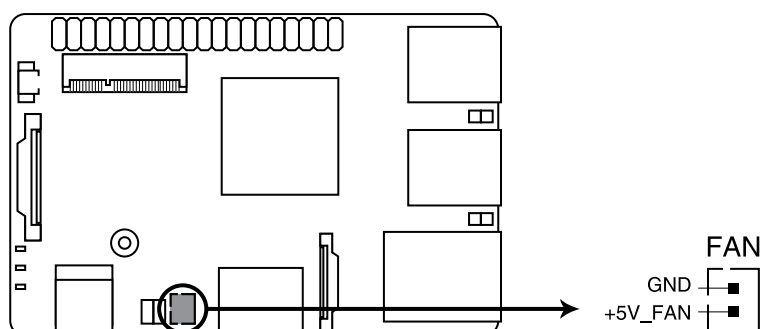
The MIPI DSI connector is used to connect a MIPI display module via a 4 lane MIPI-DSI cable. This connector supports up to 6 Gbps connection speed.



Tinker Board 2 / 2S MIPI DSI

6. DC Fan header

The DC Fan header allows you to connect a fan to actively cool the system.



Tinker Board 2 / 2S FAN connector

Connector Type	JST PH 2P 2.00mm
Reference PN:	JST, PHR-2

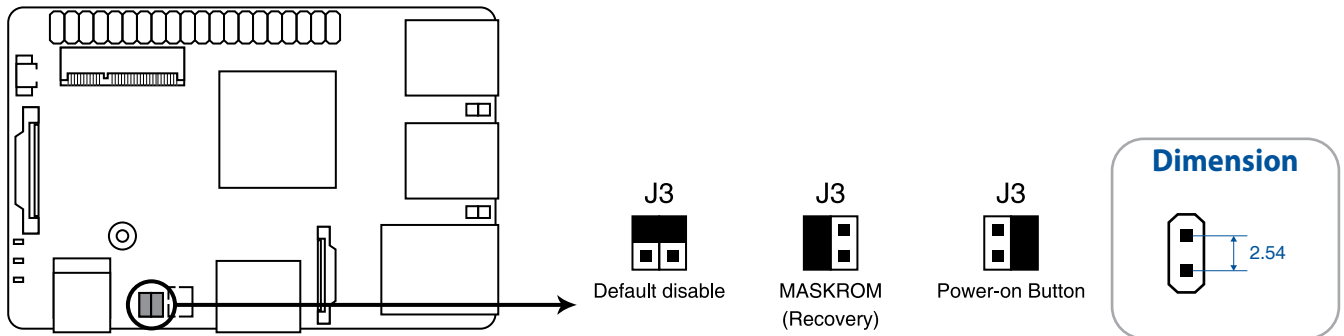
NOTE: The fan is purchased separately.

WARNING!

- These are not jumpers! Do not place jumper caps on the fan connectors.
- Ensure the cable is fully inserted into the connector.

7. Power On header

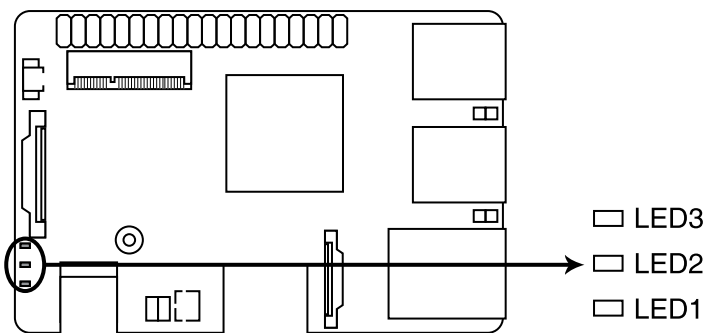
The Power On header allows you to connect an external power button. The Maskrom jumper allows you to mask the eMMC (rom) for recovery. This will allow you to enter developer mode due to the undetected storage and rewrite the eMMC.



Tinker Board 2 / 2S Power on & Maskrom

8. Status LEDs

The Status LEDs indicate the current status of the Single Board Computer.

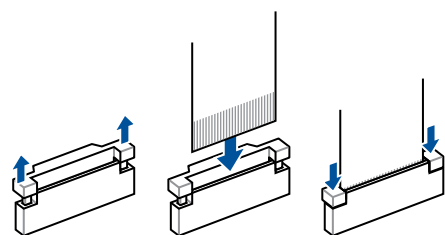
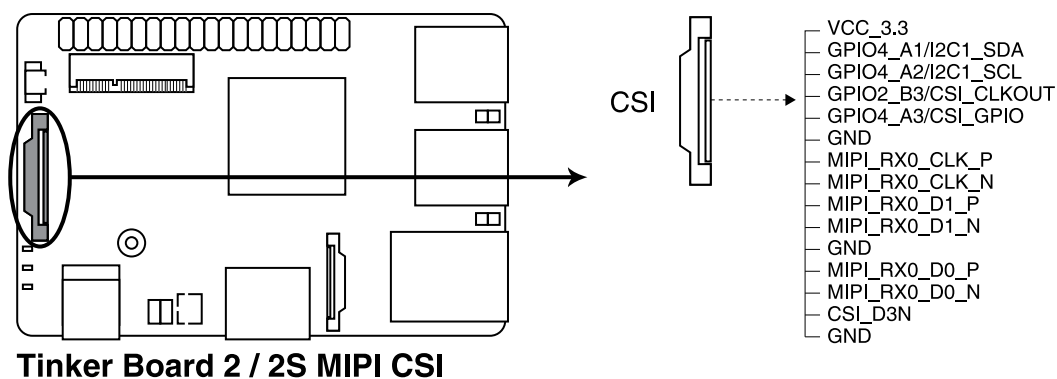


Tinker Board 2 / 2S Programmable LED

LED Indication	
LED3 (Yellow)	Reserved (Programmable)
LED2 (Green)	Disk Activity
LED1 (Red)	Power

9. MIPI CSI connector

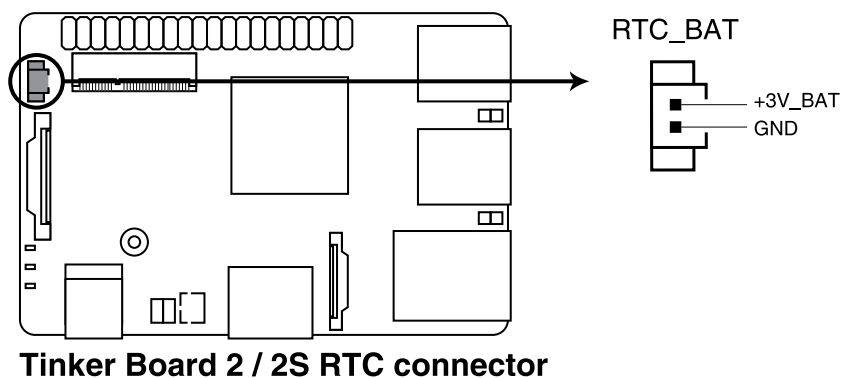
The MIPI CSI connector is used to connect a MIPI camera module via a 2 lane MIPI-CSI2 cable. This connector supports up to 3 Gbps connection speed.



WARNING! Ensure the cable for MIPI CSI is connected in the correct orientation with the gold fingers facing towards the rear of the Single Board Computer.

10. RTC Battery header

The RTC Battery header allows you to connect the lithium battery.



Connector Type

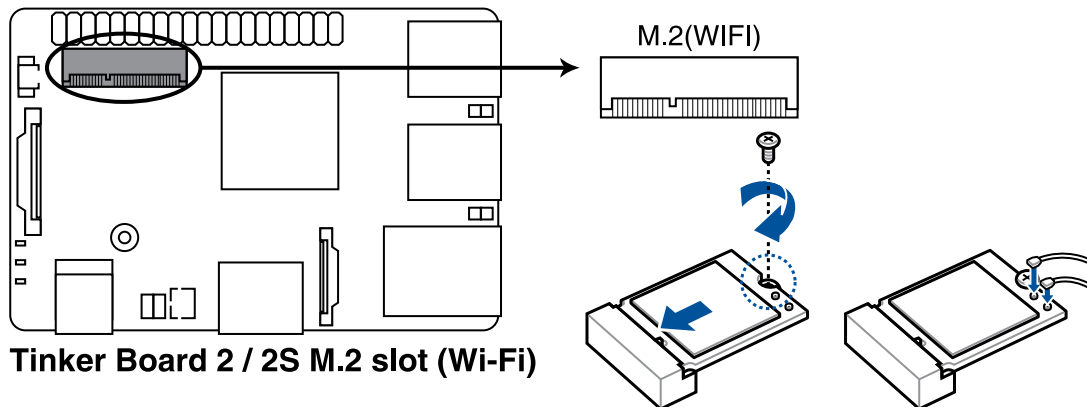
WtoB 2P 1.25mm

Reference PN

ACES, 50276-002H0H1-001

11. M.2 Wi-Fi Slot (E-Key)

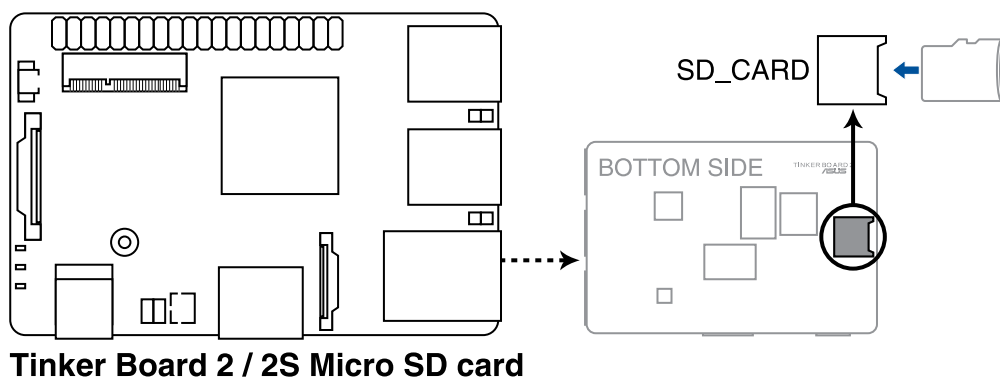
The M.2 Wi-Fi slot allows you to install an M.2 Wi-Fi module (E-key, type 2230).



NOTE: The M.2 Wi-Fi module is purchased separately on selected models.

12. Micro SD Card slot

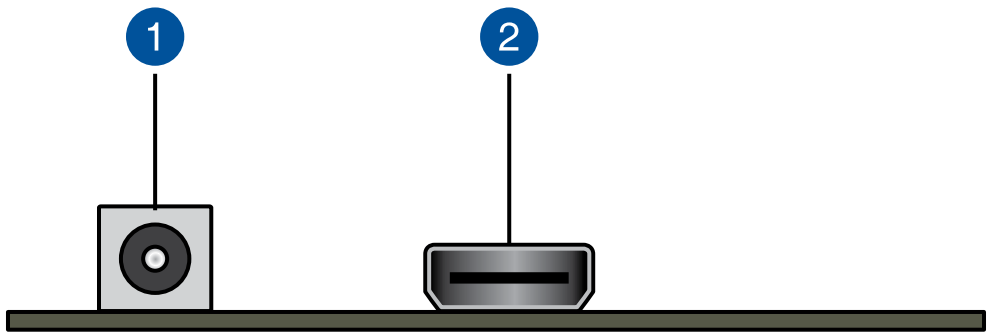
The microSD card slot allows you to install a microSD memory card v2.00 (SDHC) / v3.00 (SDXC) for storage.



WARNING! Disconnect all power (including redundant PSUs) from the existing system before you add or remove a memory card, then reboot the system to access the memory card.

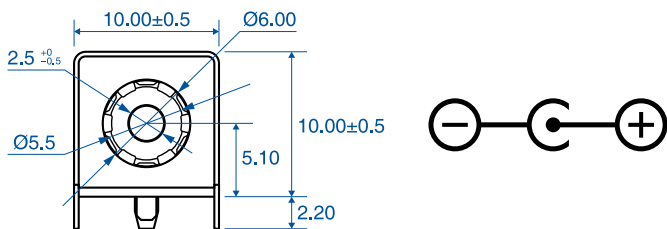
2.3 I/O connectors

2.3.1 Left panel



1. DC Power Input Jack

The supplied power adapter converts AC power to DC power for use with this jack (5.5mm/2.5mm). Power supplied through this jack supplies power to the Single Board Computer. To prevent damage to the Single Board Computer, always use the supplied power adapter. Please refer to the table below for the power consumption.

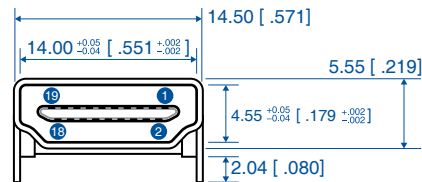


Power Consumption	
Mode	Power (W)
Suspend	0.44
Idle	3.65
Burn-in*	8.18
Max. Load**	29.18

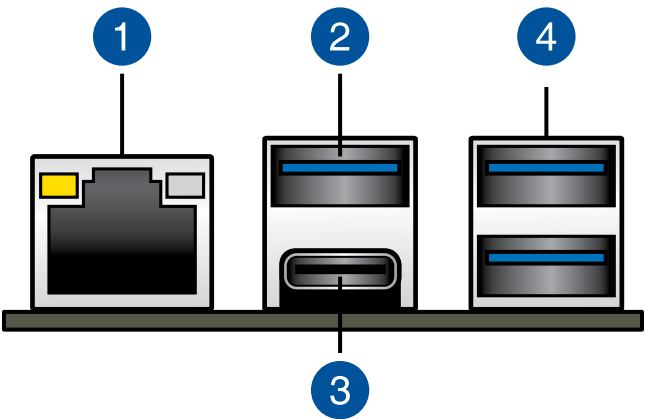
* CPU, GPU, RAM, Storage, LAN, etc. stress test.
** e.g. 3 x USB Type-A 5V/0.9A, 1 x USB Type-C® 5V/1.5A, total up to 21W.

2. HDMI™ port

This port is for the HDMI™ (High-Definition Multimedia Interface) connector.

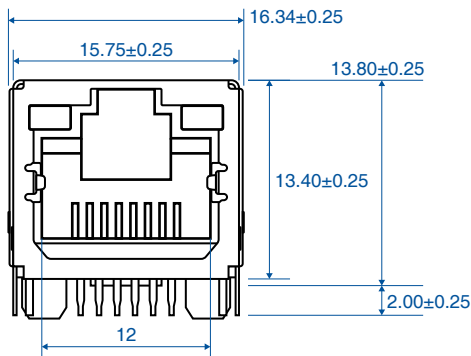


2.3.2 Rear panel

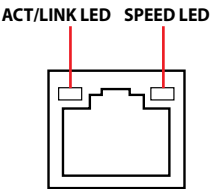


1. LAN (RJ-45) port

The 8-pin RJ-45 LAN port supports a standard Ethernet cable for connection to a local network. Please refer to the table below for the LED indications.



Activity Link LED		Speed LED	
Status	Description	Status	Description
Off	No link	Off	10 Mbps connection
Orange	Linked	Orange	100 Mbps connection
Orange (Blinking)	Data activity	Green	1 Gbps connection

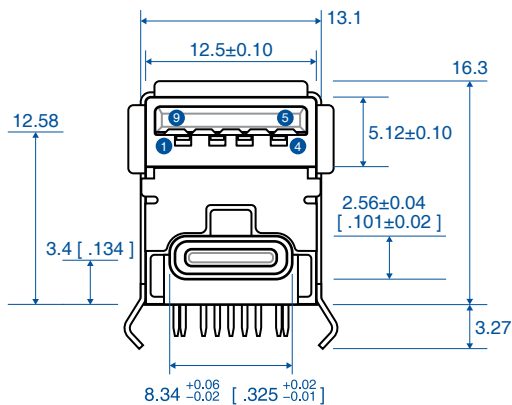


2. USB 3.2 Gen 1 Type-A port

The USB 3.2 Gen 1 (Universal Serial Bus) port provides a transfer rate up to 5 Gbit/s.

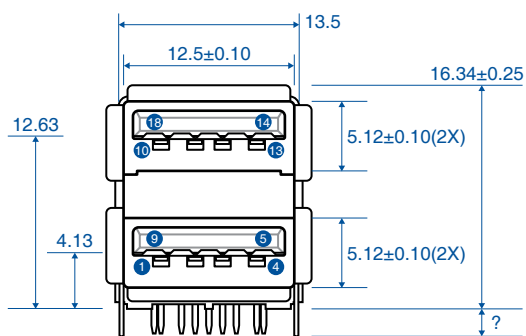
3. USB 3.2 Gen 1 Type-C® OTG port

This USB Type-C™ (Universal Serial Bus) port provides a transfer rate of up to 5 Gbit/s



4. USB 3.2 Gen 1 Type-A port

The USB 3.2 Gen 1 (Universal Serial Bus) port provides a transfer rate up to 5 Gbit/s.



3

Software Installation

3.1 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.

Setting Up:

1. Insert the micro SD card into a Windows® PC.
2. 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 *Etcher*.
3. Insert the bootable micro SD card into your Tinker Board 2 / Tinker Board 2S, then connect the power supply, keyboard, mouse, and monitor to boot up.

3.2 Booting from onboard eMMC (on selected models)

NOTE: 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

* The Power Supply is purchased separately.

Setting Up:

1. Connect the Tinker Board 2S to a PC using a USB Type-C® cable.
2. Connect the power adapter to the Tinker Board 2S.
3. 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 *Etcher*.
4. After the TinkerOS image is successfully burned, disconnect all cables from the Tinker Board 2S.
5. Connect the power supply, keyboard, mouse, and monitor to your Tinker Board 2S to boot up.

Appendix

Notices

Federal Communications Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING! Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

RF exposure warning

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following:

Contains FCC ID: TX2-RTL8822CE and Contains IC: 6317A-RTL8822CE

Mexico Notice

Contains module RCPERT18-2159

La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

Regional notice for Singapore

Complies with IMDA Standards DB103778

This ASUS product complies with IMDA Standards.

HDMI Compliance Statement

The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

Compliance Statement of Innovation, Science and Economic Development Canada (ISED)

This device complies with Innovation, Science and Economic Development Canada licence exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

CAN ICES-3(B)/NMB-3(B)

Déclaration de conformité de Innovation, Sciences et Développement économique Canada (ISED)

Le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

CAN ICES-3(B)/NMB-3(B)

Précautions d'emploi de l'appareil :

- Soyez particulièrement vigilant quant à votre sécurité lors de l'utilisation de cet appareil dans certains lieux (les avions, les aéroports, les hôpitaux, les stations-service et les garages professionnels).
- Évitez d'utiliser cet appareil à proximité de dispositifs médicaux implantés. Si vous portez un implant électronique (stimulateurs cardiaques, pompes à insuline, neurostimulateurs...), veuillez impérativement respecter une distance minimale de 15 centimètres entre cet appareil et l'implant pour réduire les risques d'interférence.
- Utilisez cet appareil dans de bonnes conditions de réception pour minimiser le niveau de rayonnement. Ce n'est pas toujours le cas dans certaines zones ou situations, notamment dans les parkings souterrains, dans les ascenseurs, en train ou en voiture ou tout simplement dans un secteur mal couvert par le réseau.
- Tenez cet appareil à distance du ventre des femmes enceintes et du bas-ventre des adolescents.

KC: Korea Warning Statement

B급 기기 (가정용 방송통신기자재)

이 기기는 가정용(B급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

Radio Frequency (RF) Exposure Information

The radiated output power of the Wireless Device is below the Industry Canada (IC) radio frequency exposure limits. The Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized.

This device has also been evaluated and shown compliant with the IC RF Exposure limits under mobile exposure conditions. (antennas are greater than 20cm from a person's body).

Informations concernant l'exposition aux fréquences radio (RF)

La puissance de sortie émise par l'appareil de sans fil est inférieure à la limite d'exposition aux fréquences radio d'Industry Canada (IC). Utilisez l'appareil de sans fil de façon à minimiser les contacts humains lors du fonctionnement normal.

Ce périphérique a également été évalué et démontré conforme aux limites d'exposition aux RF d'IC dans des conditions d'exposition à des appareils mobiles (antennes sont supérieures à 20 cm à partir du corps d'une personne).

NCC: Taiwan Wireless Statement

Contains module  NCCAI18LP2010T7

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

VCCI: Japan Compliance Statement

Contains module 201-180775

Class B ITE

この装置は、クラス B 情報技術装置です。この装置は、家庭環境で使用することを目的としています。この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。

VCCI-B

Contains module 00158-19-04076



00158-19-04076

限用物質及其化學符號：

單元	限用物質及其化學符號					
	鉛 (Pb)	汞 (Hg)	鎘 (Cd)	六價鉻 (Cr ⁺⁶)	多溴聯苯 (PBB)	多溴二苯醚 (PBDE)
印刷電路板及電子組件	—	○	○	○	○	○
其他及其配件	—	○	○	○	○	○

備考1. “○” 係指該項限用物質之百分比含量未超出百分比含量基準值。
備考2. “—” 係指該項限用物質為排除項目。

Maximum Radio-Frequency Output Table

Function	Frequency	Maximum Output Power (EIRP)
WiFi	2412 - 2472 MHz	19 dBm
	5150 - 5350 MHz	22 dBm
	5470 - 5725 MHz	22 dBm
	5725 - 5850 MHz	22 dBm
Bluetooth	2402 - 2480 MHz	8 dBm



Simplified EU Declaration of Conformity

ASUSTek Computer Inc. hereby declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. Full text of EU declaration of conformity is available at <https://www.asus.com/support/>

Déclaration simplifiée de conformité de l'UE

ASUSTek Computer Inc. déclare par la présente que cet appareil est conforme aux critères essentiels et autres clauses pertinentes de la directive 2014/53/EU. La déclaration de conformité de l'UE peut être téléchargée à partir du site internet suivant : <https://www.asus.com/support/>

Vereinfachte EU-Konformitätserklärung

ASUSTek COMPUTER INC erklärt hiermit, dass dieses Gerät mit den grundlegenden Anforderungen und anderen relevanten Bestimmungen der Richtlinie 2014/53/EU übereinstimmt. Der gesamte Text der EU-Konformitätserklärung ist verfügbar unter: <https://www.asus.com/support/>

Dichiarazione di conformità UE semplificata

ASUSTek Computer Inc. con la presente dichiara che questo dispositivo è conforme ai requisiti essenziali e alle altre disposizioni pertinenti con la direttiva 2014/53/EU. Il testo completo della dichiarazione di conformità UE è disponibile all'indirizzo: <https://www.asus.com/support/>

Упрощенное заявление о соответствии европейской директиве

ASUSTek Computer Inc. заявляет, что устройство соответствует основным требованиям и другим соответствующим условиям директивы 2014/53/EU. Полный текст декларации соответствия ЕС доступен на <https://www.asus.com/support/>

إعلان التوافق المبسط الصادر عن الاتحاد الأوروبي

تقر شركة ASUSTek Computer أن هذا الجهاز يتوافق مع المتطلبات الأساسية والأحكام الأخرى ذات الصلة الخاصة بتوجيه 2014/53/EU. يتوفر النص الكامل لإعلان التوافق الصادر عن الاتحاد الأوروبي على:

<https://www.asus.com/support/>

Опростена декларация за съответствие на ЕС

С настоящото ASUSTek Computer Inc. декларира, че това устройство е в съответствие със съществените изисквания и другите приложими постановления на свързаната Директива 2014/53/ЕС. Пълният текст на ЕС декларация за съвместимост е достъпен на адрес <https://www.asus.com/support/>

Declaração de Conformidade UE Simplificada

ASUSTek Computer Inc. declara que este dispositivo está em conformidade com os requisitos essenciais e outras disposições relevantes relacionadas às diretivas 2014/53/UE. O texto completo da declaração de conformidade CE está disponível em <https://www.asus.com/support/>

Pojednostavljena EU Izjava o sukladnosti

ASUSTek Computer Inc. ovim izjavljuje da je ovaj uređaj sukladan s bitnim zahtjevima i ostalim odgovarajućim odredbama direktive 2014/53/EU. Cijeli tekst EU izjave o sukladnosti dostupan je na <https://www.asus.com/support/>

Zjednodušené prohlášení o shodě EU

Společnost ASUSTek Computer Inc. tímto prohlašuje, že toto zařízení splňuje základní požadavky a další příslušná ustanovení směrnice 2014/53/EU. Plné znění prohlášení o shodě EU je k dispozici na adrese <https://www.asus.com/support/>

Forenklet EU-overensstemmelseserklæring

ASUSTek Computer Inc. erklærer hermed at denne enhed er i overensstemmelse med hovedkravene og øvrige relevante bestemmelser i direktivet 2014/53/EU. Hele EU-overensstemmelseserklæringen kan findes på <https://www.asus.com/support/>

Vereenvoudigd EU-conformiteitsverklaring

ASUSTek Computer Inc. verklaart hierbij dat dit apparaat voldoet aan de essentiële vereisten en andere relevante bepalingen van Richtlijn 2014/53/EU. De volledige tekst van de EU-conformiteitsverklaring is beschikbaar op <https://www.asus.com/support/>

Lihtsustatud EÜ vastavusdeklaratsioon

Käesolevaga kinnitab ASUSTek Computer Inc, et seade vastab direktiivi 2014/53/EÜ olulistele nõuetele ja teistele asjakohastele sätetele. EL vastavusdeklaratsiooni täistekst on saadaval veebisaidil <https://www.asus.com/support/>

Eurooppa - EY:n vaatimustenmukaisuusvakuutus

ASUSTek Computer Inc. ilmoittaa täten, että tämä laite on direktiivin 2014/53/EU olennaisten vaatimusten ja muiden asiaankuuluvien lisäysten mukainen. Koko EY:n vaatimustenmukaisuusvakuutuksen teksti on luettavissa osoitteessa <https://www.asus.com/support/>

ASUSTek Computer Inc در اینجا اعلام می کند که این دستگاه با نیازهای اساسی و سایر مقررات مربوط به بیانیه 2014/53/EU. مطابقت دارد. متن کامل پیروی از این بیانیه اتحادیه اروپا در این آدرس موجود است:
<https://www.asus.com/support/>

Απλοποιημένη Δήλωση Συμμόρφωσης ΕΕ

Διά του παρόντος η ASUSTek Computer Inc. δηλώνει ότι αυτή η συσκευή είναι σύμμορφη με τις βασικές προϋποθέσεις και άλλες σχετικές διατάξεις της Οδηγίας 2014/53/ΕΕ. Το πλήρες κείμενο της δήλωσης συμμόρφωσης της ΕΕ είναι διαθέσιμο στη διεύθυνση
<https://www.asus.com/support/>

הצהרת תאימות רגולטורית מקוצרת עבור האיחוד אירופי

ASUSTek Computer Inc. מצהירה בזאת כי מכשיר זה תואם לדרישות החיוניות ולשאר הסעיפים הרלוונטיים של תקנה 2014/53/EU. ניתן לקרוא את הנוסח המלא של הצהרת התאימות הרגולטורית עבור האיחוד האירופי בכתובת:
<https://www.asus.com/support/>

Egyszerűsített EU megfelelési nyilatkozat

Az ASUSTek Computer Inc. ezennel kijelenti, hogy ez az eszköz megfelel az 2014/53/EU sz. irányelv alapvető követelményeinek és egyéb vonatkozó rendelkezéseinek. Az EU megfelelési nyilatkozat teljes szövegét a következő weboldalon tekintheti meg:
<https://www.asus.com/support/>

Pernyataan Kesesuaian UE yang Disederhanakan

ASUSTek Computer Inc. dengan ini menyatakan bahwa perangkat ini memenuhi persyaratan utama dan ketentuan relevan lainnya yang terdapat pada Petunjuk 2014/53/EU. Teks lengkap pernyataan kesesuaian EU tersedia di: <https://www.asus.com/support/>

Vienkāršota ES atbilstības paziņojums

ASUSTek Computer Inc. ar šo paziņo, ka šī ierīce atbilst Direktīvas 2014/53/ES būtiskajām prasībām un citiem citiem saistošajiem nosacījumiem. Pilns ES atbilstības paziņojuma teksts pieejams šeit: <https://www.asus.com/support/>

Supaprastinta ES atitikties deklaracija

Šiame dokumente bendrovė „ASUSTek Computer Inc.“ pareiškia, kad šis prietaisas atitinka pagrindinius reikalavimus ir kitas susijusias Direktyvos 2014/53/ES nuostatas. Visas ES atitikties deklaracijos tekstas pateikiamas čia: <https://www.asus.com/support/>

Forenklet EU-samsvarserklæring

ASUSTek Computer Inc. erklærer herved at denne enheten er i samsvar med hovedsaklige krav og andre relevante forskrifter i direktivet 2014/53/EU. Fullstendig tekst for EU-samsvarserklæringen finnes på: <https://www.asus.com/support/>

Uproszczona deklaracja zgodności UE

Firma ASUSTek Computer Inc. niniejszym oświadcza, że urządzenie to jest zgodne z zasadniczymi wymogami i innymi właściwymi postanowieniami dyrektywy 2014/53/EU. Pełny tekst deklaracji zgodności UE jest dostępny pod adresem <https://www.asus.com/support/>

Declaração de Conformidade Simplificada da UE

A ASUSTek Computer Inc. declara que este dispositivo está em conformidade com os requisitos essenciais e outras disposições relevantes da Diretiva 2014/53/UE. O texto integral da declaração de conformidade da UE está disponível em <https://www.asus.com/support/>

Declarație de conformitate UE, versiune simplificată

Prin prezenta, ASUSTek Computer Inc. declară că acest dispozitiv este în conformitate cu reglementările esențiale și cu celelalte prevederi relevante ale Directivei 2014/53/UE. Textul complet al declarației de conformitate UE este disponibil la adresa <https://www.asus.com/support/>

Pojednostavljena Deklaracija o usaglašenosti EU

ASUSTek Computer Inc. ovim izjavljuje da je ovaj uređaj usaglašen sa osnovnim zahtevima i drugim relevantnim odredbama Direktive 2014/53/EU. Ceo tekst Deklaracije o usaglašenosti EU dostupan je na lokaciji <https://www.asus.com/support/>

Zjednodušené vyhlásenie o zhode platné pre EÚ

Spoločnosť ASUSTek Computer Inc. týmto vyhlasuje, že toto zariadenie je v súlade so základnými požiadavkami a ďalšími príslušnými ustanoveniami smernice č. 2014/53/EÚ. Plné znenie vyhlásenia o zhode pre EÚ je k dispozícii na lokalite <https://www.asus.com/support/>

Poenostavljena izjava EU o skladnosti

ASUSTek Computer Inc. tukaj izjavlja, da je ta naprava skladna s temeljnimi zahtevami in drugimi relevantnimi določili Direktive 2014/53/EU. Polno besedilo izjave EU o skladnosti je na voljo na <https://www.asus.com/support/>

Declaración de conformidad simplificada para la UE

Por la presente, ASUSTek Computer Inc. declara que este dispositivo cumple los requisitos básicos y otras disposiciones pertinentes de la directiva 2014/53/EU. En <https://www.asus.com/support/> está disponible el texto completo de la declaración de conformidad para la UE.

Förenklad EU-försäkran om överensstämmelse

ASUSTek Computer Inc. deklarerar härmed att denna enhet överensstämmer med de grundläggande kraven och andra relevanta bestämmelser i direktiv 2014/53/EU. Fullständig text av EU-försäkran om överensstämmelse finns på <https://www.asus.com/support/>

ประกาศเกี่ยวกับความสอดคล้องของสหภาพยุโรปแบบย่อ

ASUSTek Computer Inc. ขอประกาศในที่นี้ว่าอุปกรณ์นี้มีความสอดคล้องกับความต้องการที่จำเป็นและเงื่อนไขที่เกี่ยวข้องอื่น ๆ ของบทบัญญัติข้อกำหนด 2014/53/EU เนื้อหาที่สมบูรณ์ของประกาศความสอดคล้องกับ EU มีอยู่ที่ <https://www.asus.com/support/>

Basitleştirilmiş AB Uyumluluk Bildirimi

ASUSTek Computer Inc., bu aygıtın 2014/53/EU Yönergesinin temel gereksinimlerine ve diğer ilgili hükümlerine uygun olduğunu bildirir. AB uygunluk bildiriminin tam metni şu adreste bulunabilir: <https://www.asus.com/support/>

Спрощена декларація про відповідність нормам ЄС

ASUSTek Computer Inc. заявляє, що цей пристрій відповідає основним вимогам та іншим відповідним вимогам Директиви 2014 / 53 / EU. Повний текст декларації відповідності нормам ЄС доступний на <https://www.asus.com/support/>

AT	BE	BG	CZ	DK	EE	FR
DE	IS	IE	IT	GR	ES	CY
LV	LI	LT	LU	HU	MT	NL
NO	PL	PT	RO	SI	SK	TR
FI	SE	CH	UK	HR		

FCC COMPLIANCE INFORMATION

Per FCC Part 2 Section 2.1077



Responsible Party: **Asus Computer International**
Address: **48720 Kato Rd, Fremont, CA 94538**
Phone/Fax No: **(510)739-3777/(510)608-4555**

hereby declares that the product

Product Name : **MOTHERBOARD**
Model Number : **TINKER BOARD 2, TINKER BOARD 2S**

compliance statement:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Ver. 180125