

Feature	Details
Model number	CI20
SoC	ingenic JZ4780
CPU	Dual 1.2 GHz Xburst MIPS32 little endian
Caches	32 KI + 32 KD per core, 512K shared L2
RAM	1 GB DDR3
NAND	8 GB
SD card	1x full size slot + 1x slot via secondary expansion header
USB	1x USB otg + 1x USB host
Ethernet	1x 10/100 Mbps using Davicom DM9000C controller over 8-bit interface
Wi-Fi	IW8103 Wi-Fi + BT4.0, built-in ceramic aerial
GPU	SGX540
Video	Hardware video decode up to 1080
Display	HDMI, up to 2k resolution
Camera	ITU645 dedicated connector

Feature	Details
GPIO	25 available on headers
SPI	2 ports on primary and secondary expansion header, with 4 chip selects
I2C	1 port on primary expansion header
ADC	7 inputs on secondary expansion header, including 5-wire touch and battery monitoring functions
UART	1 on dedicated UART header, 2 via primary expansion header
Audio	Audio in and out via 3.5mm 4-wire connector
JTAG	Standard 14-pin MIPS EJTAG header
Transport Stream Interface	Via secondary expansion header
Power	5V via 4 mm (shield) x 1.7 mm (pin) centre positive connector
Rating	DC input 5V 500 mA – 1000 mA
Approvals	FCC ID: X280073, IC: 8864A-0073



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Safety instructions

1. Read these instructions – All the safety and operating instructions should be read before this apparatus is operated.
2. Keep these instructions – The safety and operating instructions should be retained for future reference.
3. Heed all warnings – All warnings on the apparatus and in the operating instructions should be adhered to.
4. Follow all instructions – All operating and use instructions should be followed.
5. Do not use this apparatus near water – The apparatus should not be used near water or moisture – for example, in a wet basement or near a swimming pool and the alike.
6. WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. The apparatus shall not be exposed to dripping or splashing and objects filled with liquids, such as vases, shall not be placed on the apparatus.
7. Unplug this apparatus during lightning storms or when unused for long periods of time.
8. Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way.
9. Take care whilst handling to avoid mechanical or electrical damage to the printed circuit board and connectors.
10. Avoid handling the printed circuit board while it is powered. Only handle by the edges to minimise the risk of electrostatic discharge damage.
11. This apparatus is not designed to be powered from a USB port on other connected equipment, if this is attempted it may malfunction.
12. Shielded cables must be used with this unit to ensure compliance with the Class B FCC limits.
13. This apparatus shall only be connected to an external power supply rated at 5V DC, and a minimum current of 500–1000 mA. Any external power supply used with this apparatus shall comply with relevant regulations and standards applicable in the country of intended use.
14. This apparatus should not be over-clocked without using the governor as this may make certain components very hot.
15. This apparatus should be used in a well ventilated environment and should not be covered.
16. This apparatus should be placed on a stable, flat, non-conductive surface when in use and should not have contact with conductive items.
17. The connection of unapproved devices to the GPIO connector may affect compliance or result in damage to the apparatus and invalidate the warranty.
18. All peripherals used with the apparatus should comply with relevant standards for the country of use and be marked accordingly to ensure that safety and performance requirements are met. These articles include but are not limited to keyboards, monitors, and mice used in conjunction with the apparatus.
19. Where peripherals are connected that do not include the cable or connector, the cable or connector used must offer adequate insulation and operation in order to meet the relevant performance and safety requirements.

FCC notice to a user in the United States

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.

WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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 into 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

IC notice to a user in Canada

This device complies with Industry 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.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Notice IC pour un utilisateur au Canada

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radio électrique à l'intention des autres utilisateurs, il faut choisir

le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante. Le présent appareil est conforme aux CNR d'Industrie 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.

Important modular approval information

This device is intended only for OEM integrators under the following conditions: (For module device use) 1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and 2) The transmitter module may not be co-located with any other transmitter or antenna. 3) Module approval valid only when the module is installed in the tested host or compatible series of host

As long as 3 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

IMPORTANT NOTE: In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the Canada authorization is no longer considered valid and the IC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate Canada authorization.

Cet appareil est conçu uniquement pour les intégrateurs OEM dans les conditions suivantes: (Pour utilisation de dispositif module)

L'appareil doit être installé de telle sorte qu'une distance de 20 cm respectée entre l'antenne et les utilisateurs, et le module émetteur peut ne pas être coimplanté avec un autre émetteur ou antenne. L'approbation du module est valable uniquement lorsque le module est installé dans l'équipement testé ou dans des équipements compatibles avec. Tant que les 3 conditions ci-dessus sont remplies, des essais supplémentaires sur l'émetteur ne seront pas nécessaires. Toutefois, l'intégrateur OEM est toujours responsable de s'assurer son produit final pour toutes exigences de conformité supplémentaires requises pour ce module installé.

NOTE IMPORTANTE: Dans les cas où ces conditions ne peuvent être satisfaites (par exemple pour certaines configurations d'ordinateur portable ou de certaines co-localisation avec un autre émetteur), l'autorisation du Canada n'est plus considérée comme valide et l'ID IC ne peut pas être utilisé sur le produit final. Dans ces circonstances, l'intégrateur OEM sera chargé de réévaluer le produit final (y compris l'émetteur) et l'obtention d'une autorisation distincte au Canada.

End Product Labeling FOR MOBILE DEVICE USAGE (>20cm/low power)

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: "Contains IC: 8864A-0073, FCC ID: X280073".

Plaque signalétique du produit final

Ce module émetteur est autorisé uniquement pour une utilisation dans un dispositif où l'antenne peut être installée de telle sorte qu'une distance de 20 cm peut être maintenue entre l'antenne et les utilisateurs. Le produit final doit être étiqueté dans un endroit visible avec l'inscription suivante: "Contient des IC: 8864A-0073, FCC ID: X280073".

End Product Labeling FOR PORTABLE DEVICE USAGE (<20m from body/SAR needed)

The product can be kept as far as possible from the user body or set the device to lower output power if such function is available. The final end product must be labeled in a visible area with the following: "Contains IC: 8864A-0073, FCC ID: X280073".

Plaque signalétique du produit final

L'appareil peut être conservé aussi loin que possible du corps de l'utilisateur ou que le dispositif est réglé sur la puissance de sortie la plus faible si une telle fonction est disponible. Le produit final doit être étiqueté dans un endroit visible avec l'inscription suivante: "Contient des IC: 8864A-0073, FCC ID: X280073".

Manual Information To the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module. The end user manual shall include all required regulatory information/warning as show in this manual.

Manuel d'information à l'utilisateur final

L'intégrateur OEM doit être conscient de ne pas fournir des informations à l'utilisateur final quant à la façon d'installer ou de supprimer module RF dans le manuel de l'utilisateur du produit final qui intègre ce module. Le manuel de l'utilisateur final doit inclure toutes les informations réglementaires requises et avertissements comme indiqué dans ce manuel.

Declaration of Conformity

We Imagination Technologies Limited of Home Park Estate, Kings Langley, Hertfordshire, UK; declare under our responsibility that the product: MIPS Creator Ci20 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. The product conforms to the following standards and specifications, applying versions valid on the date this DoC is issued:

Article 3.1.a: EN 60905-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013

Article 3.1.b: EN 301 489-17 V2.2.1:2012

EN 301 489-1 V1.9.2:2011

Article 3.2: EN 300 328 V1.8.1:2012

MIPS Creator Ci20 is in compliance with the RoHS Recast Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on restriction of the use of certain hazardous substances in electrical and electronic equipment.

Declaration Reference No: MIPS Creator Ci20 EC DoC1

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