



ScoreScape

Bridge Pro

Regulatory & FCC Compliance Information

HW Rev 1

About This Document

This document contains the regulatory and compliance information for the Bridge Pro (HW Rev 1). It covers United States Federal Communications Commission (FCC) requirements under 47 CFR Part 15 and Canadian requirements from Innovation, Science and Economic Development Canada (ISED).

Bridge Pro is built on a host platform that integrates a pre-certified Wi-Fi 6 / Bluetooth LE radio module. The radio module holds its own FCC and ISED certification; the complete Bridge Pro product is authorized as a Class B digital device under the FCC Supplier's Declaration of Conformity (SDoC) procedure and ICES-003.

Product Identification

Product name	Bridge Pro
Hardware Revision	HW Rev 1
Manufacturer	ScoreScrape
Model / part number	SS-Bridge-Pro
Host platform	Waveshare ESP32-P4-WIFI6-POE-ETH (ESP32-P4 application processor with ESP32-C6 wireless co-processor)
Integrated radio module	Espressif ESP32-C6-MINI-1U-H8 (2.4 GHz Wi-Fi 6, Bluetooth 5 LE, IEEE 802.15.4)
Module FCC ID	2AC7Z-ESPC6MINIU
Module ISED certification	IC: 21098-ESPC6MINIU
Antenna	External 2.4 GHz antenna connected to the module via IPEX (MHF) connector
Wired interfaces	10/100 Mbps Ethernet (RJ45) with Power over Ethernet, USB 2.0 Type-A (OTG), USB Type-C
Power input	Power over Ethernet via the RJ45 port, or 5 V DC via USB Type-C
Digital device class	FCC Part 15 Class B · ICES-003 Class B

Radio Specifications

The following values are taken from the FCC grant of the integrated module (FCC ID 2AC7Z-ESPC6MINIU). Output power is maximum conducted power as listed on the grant.

Radio technology	Frequency range	Max. output (conducted)	FCC rule part
Wi-Fi 802.11b/g/n/ax (20 MHz and 40 MHz bandwidths)	2412 - 2462 MHz	0.317 W	Part 15, Subpart C
Bluetooth 5 Low Energy	2402 - 2480 MHz	0.010 W	Part 15, Subpart C
IEEE 802.15.4 (Thread / Zigbee)	2405 - 2480 MHz	0.0106 W	Part 15, Subpart C

In the United States and Canada, Wi-Fi operation is limited to channels 1 through 11 (2412 - 2462 MHz).

The ESP32-P4 application processor contains no radio transmitter; the ESP32-C6 module is the only intentional radiator in the product

FCC Compliance Statement

FCC Caution

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.

Any changes or modifications 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.

RF Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Contains FCC ID: 2AC7Z-ESPC6MINIU

Integrated Transmitter Module

Bridge Pro uses a pre-certified radio module authorized under a Single Modular Approval. The module is installed at the factory and is not user-serviceable. Do not open the enclosure, remove the module or alter the antenna connection.

Module	Espressif ESP32-C6-MINI-1U (variant H8 used in Bridge Pro)
FCC ID	2AC7Z-ESPC6MINIU
Grantee	Espressif Systems (Shanghai) Co., Ltd.
Equipment class	Digital Transmission System (2.4 GHz Wi-Fi & Bluetooth IoT module)
Approval type	Single Modular Approval, 47 CFR Part 15 Subpart C
Date of grant	March 6, 2024
Certifying Body	Sporton International (USA) Inc. (TCB)
ISED certification	IC: 21098-ESPC6MINIU

Host product compliance

The module's grant covers its intentional-radiator (transmitter) emissions only. The finished Bridge Pro product, including the ESP32-P4 processor, Ethernet/PoE circuitry, USB interfaces and all other digital circuitry, is evaluated separately as an unintentional radiator under 47 CFR Part 15 Subpart B (Class B) and is covered by the Supplier's Declaration of Conformity in this document.

Bridge Pro contains a single transmitter module and no other simultaneously transmitting radios. Wi-Fi, Bluetooth LE and IEEE 802.15.4 share the module's single antenna through the module's internal coexistence mechanism.

Antenna Information

In accordance with 47 CFR §15.203, Bridge Pro uses an external 2.4 GHz antenna connected to the radio module through an IPEX (MHF) connector located inside the product enclosure. The antenna connection is not accessible to the user.

Antenna type	Peak gain	Connector	Part number
FPC	5.6 dBi	IPEX (MHF)	OA-FW4006

Use only the antenna supplied with Bridge Pro. A replacement antenna must be of the same type with equal or lower gain than an antenna authorized under the module's FCC and ISSED certifications. Use of any other antenna may void the user's authority to operate the equipment.

Installation and Operating Requirements

To keep Bridge Pro operating within the conditions under which it was authorized:

- Install and operate the device so that a minimum distance of 20 cm is maintained between the antenna and the body of any person.
- Use only the antenna supplied with the device. Do not modify, extend or relocate the antenna or its cable.
- Do not open the enclosure or remove, replace or modify the internal radio module. The device contains no user-serviceable parts.
- Do not install the device next to, or operate it together with, any other antenna or transmitter.
- Power the device only from a standards-compliant Power over Ethernet switch or injector, or from the included 5v USB Type-C power supply.
- Use standard Ethernet cabling (Category 5e or better) for network and PoE connections.
- Do not power the device using passive PoE.
- The device is intended for indoor use.

Innovation, Science and Economic Development Canada

IC Warning / Avertissement IC

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans 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;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

IC Radiation Exposure Statement / Déclaration d'exposition aux rayonnements

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et votre corps.

Antenna Statement / Déclaration relative à l'antenne

This radio transmitter (IC: 21098-ESPC6MINIU) has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed in the Antenna Information section of this document, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Le présent émetteur radio (IC : 21098-ESPC6MINIU) a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés dans la section « Antenna Information » du présent document et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué pour tout type figurant sur la liste, sont strictement interdits pour l'exploitation de l'émetteur.

Contains IC: 21098- / Contient IC: 21098-ESPC6MINIU

Class B Digital Device Label

This Class B digital apparatus complies with Canadian ICES-003. / Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

CAN ICES-003(B) / NMB-003(B)

Product Labeling

The following information appears on a permanent label affixed to the exterior of the Bridge Pro enclosure, positioned so it is visible without tools. Where the enclosure is too small for the full compliance statement, the statement is provided in this document and the user manual instead (47 CFR §15.19(a)(5)).

Reference Documents

Document	Reference
FCC grant of equipment authorization, ESP32-C6-MINI-1U	FCC ID 2AC7Z-ESPC6MINIU, granted March 6, 2024
ESP32-C6-MINI-1 & MINI-1U datasheet	Espressif Systems
ESP32-P4-WIFI6-POE-ETH product documentation	Waveshare, SKU 32832
Radio frequency devices	47 CFR Part 15 (Subparts A, B and C)
Supplier’s Declaration of Conformity	47 CFR §2.906 and §2.1071 – §2.1077
Modular transmitter integration guidance	FCC KDB 996369
Information technology equipment (Canada)	ICES-003
General requirements for radio apparatus (Canada)	RSS-Gen
RF exposure compliance (Canada)	RSS-102

Revision History

Revision	Date	Description
A	October 2026	Initial release for Bridge Pro HW Rev 1.