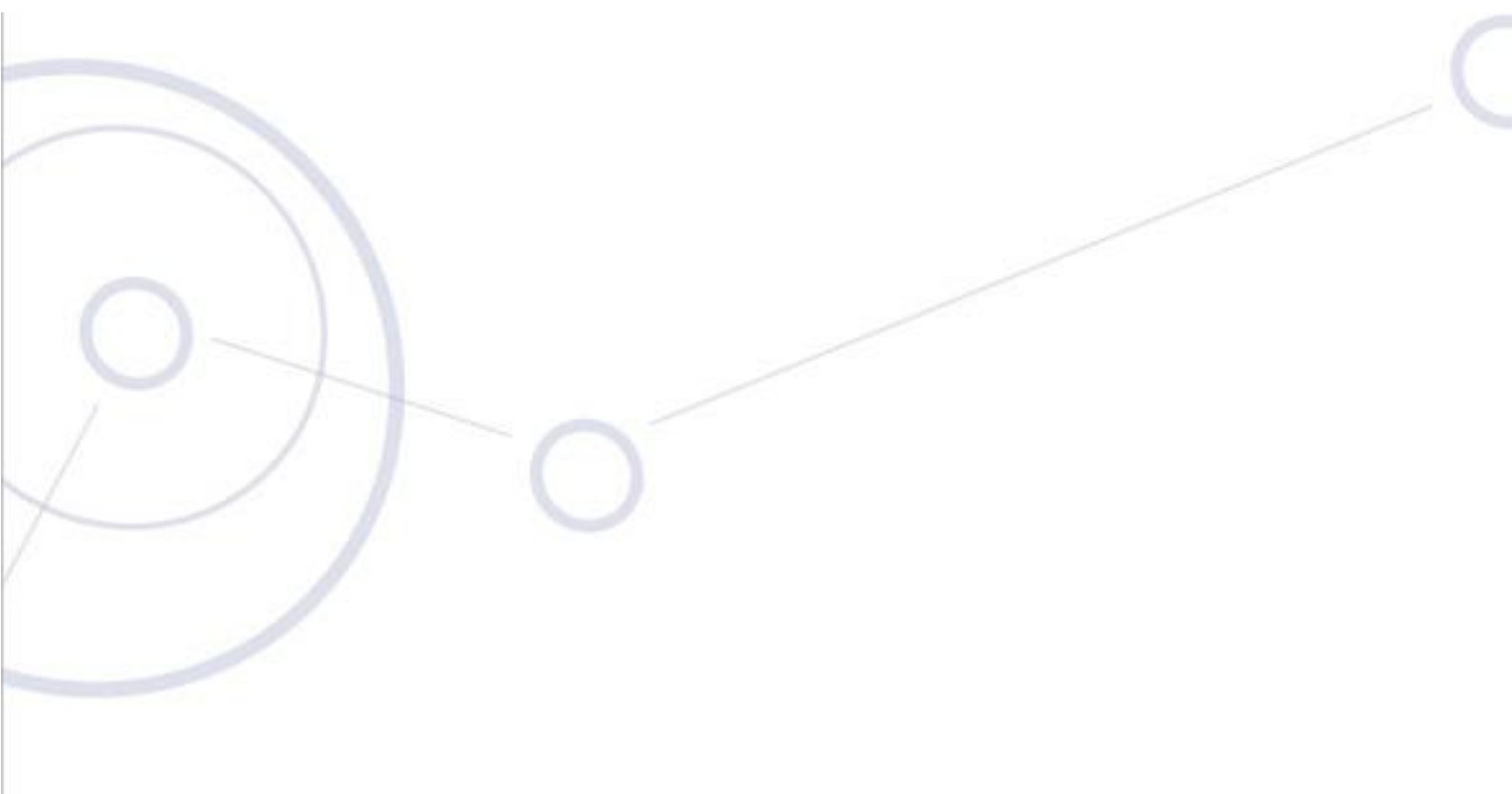


RADWIN

AP0263510, AP0263511, AP0263530,
AP0263540, AP0279700, AP0279710,
AP0279720, SUAG00

5 GHz SU/Alpha Assembly Boards

REFERENCE GUIDE



Regulatory Compliance

FCC/ISED - Compliance

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 and ISED RSS standards. 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.

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



Warning

It is the responsibility of the installer to ensure that when using the outdoor antenna kits, only those antennas certified with the product are used. The use of any antenna other than those certified with the product is expressly forbidden by FCC rules 47 CFR part 15.204 and ISED RSS standards.



Avertissement

Il est de la responsabilité de l'installateur de s'assurer que lorsque vous utilisez les kits d'antennes extérieures, seules les antennes certifiées avec le produit sont utilisés. L'utilisation d'une antenne autre que ceux qui sont certifiées avec le produit est expressément interdite par la réglementation FCC partie 47 CFR 15.204 et ISDE normes RSS.



Caution

Outdoor units and antennas should be installed ONLY by experienced installation professionals who are familiar with local building and safety codes and, wherever applicable, are licensed by the appropriate government regulatory authorities. Failure to do so may void the product warranty and may expose the end user or the service provider to legal and financial liabilities. Resellers or distributors of this equipment are not liable for injury, damage or violation of regulations associated with the installation of outdoor units or antennas. The installer should configure the output power level of antennas according to country regulations and antenna type.



Prudence

Les unités extérieures et les antennes doivent être installés que par des professionnels expérimentés d'installation qui sont familiers avec les normes locales et les codes de sécurité et, si applicable, sont agréées par les autorités gouvernementales de réglementation compétents. Ne pas le faire peut annuler la garantie du produit et peuvent exposer l'utilisateur final ou le fournisseur de services d'obligations juridiques et financiers. Revendeurs ou distributeurs de ces équipements ne sont pas responsables des blessures, des dommages ou violation des règlements liés à l'installation des unités extérieures ou des antennes. L'installateur doit configurer le niveau de puissance de sortie des antennes conformément aux réglementations nationales et le type d'antenne.



Warning

The antennas used for this transmitter must be installed to provide a separation distance of at least 80 cm from all persons



Avertissement

Les antennes utilisées pour cet émetteur doivent être installées de manière à fournir une distance de séparation d'au moins 85 cm par rapport à toutes les personnes



Warning

The module is granted to operate under FCC certification in the 4.9 / 5.2 / 5.3 / 5.4 / 5.8 GHz bands.



Avertissement

Le module est autorisé à fonctionner sous certification ISDE dans les bandes 4,9 / 5,3 / 5,4 / 5,8 GHz.

This device complies with Part 15 of the FCC rules and with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Cet appareil est conforme la norme d'Industrie Canada exempts de licence RSS (s). Son fonctionnement est soumis aux deux conditions suivantes:

1. Cet appareil ne peut pas causer d'interférences, et
2. Cet appareil doit accepter toute 3nterference, y compris les 3nterferences qui peuvent causer un mauvais fonctionnement de l'appareil.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme la norme NMB-003 du Canada

Overview

The 5 GHz SU/Alpha Board is a 5 GHz assembly board operating in the 4.9, 5.2, 5.3, 5.4 and 5.8 GHz frequency bands. It is a TDD OFDM radio supporting 10, 20, 40, 50 and 80 MHz channel bandwidths. It is a 2x2 MIMO transceiver.

The assembly board contains the power supply block, the CPU and peripheral block, the Ethernet communication interface and the radio transceiver block on a single board. It is installed in a host enclosure manufactured by RADWIN.

The 5 GHz SU/Alpha Board is certified as a limited modular approval type under the FCC ID: Q3K-5XSUALMOD. It is also certified under IC: 5100A-5XSUALMOD excluding the 5.2 GHz band.

Condition of Use

The 5 GHz SU/Alpha Board is a proprietary radio module manufactured by RADWIN. The module is not for sale to the general public or for installation in hosts not manufactured by RADWIN.

The hosts names are:

1. SU Integrated
2. Alpha Integrated
3. SU Connectorized
4. Alpha Connectorized

FCC rules and ISED Regulation Restrictions

The host firmware is factory programmed to operate under the FCC rules and ISED regulation restrictions. The firmware is locked and inaccessible by any third party. As a result of the above the user interface allows both the installer and the user to control the host only within the boundaries of the regional restrictions.

The final hosts into which the assembly boards have been installed were tested to Part 15 Subpart B.

Antennas

The 5 GHz SU/Alpha Board is certified with a wide range of antenna types covering both Point-to-Point and Multipoint systems up to 32 dBi gain.

Antennas

Following is the list of antennas supported by the 5 GHz SU/Alpha boards:

Antenna Type	Manufacturer	Model Number	Antenna Gain (dBi)
Flat Panel Dual Pole External	RADWIN	RW-9105-5159*	13
Flat Panel Dual Pole External	RADWIN	RW-9105-4958	16 (15@ 4.9GHz)
Flat Panel Dual Pole Integrated	RADWIN	MR0204670	22 (21@ 4.9GHz)
Flat Panel Dual Pole External	RADWIN	RW-9613-4960	23
Flat Panel Dual Pole Integrated	RADWIN	MT0268450*	25
Flat Panel Dual Pole External	RADWIN	RW-9622-5001	28
Dual Pole Dish	RADWIN	RW-9721-5158	28
Dual Pole Dish	RADWIN	RW-9732-4958	32

*Not valid for 4.9 GHz operation

Maximum Output Power

5725 – 5850 MHz band – FCC Part 15 Subpart E, RSS 247

The maximum output power is set as follows, under FCC and ISED regulations. The power values are for PtP systems with 13 dBi antenna gain. The highest conducted output power shall be limited on all channel bandwidths as per the table below

10 MHz: 28.0 dBm
20 MHz: 28.0 dBm
40 MHz: 29.0 dBm
80 MHz: 28.0 dBm

5150 – 5250 MHz band – FCC Part 15 Subpart E

The maximum output power is set as follows, under FCC regulations. The power values are for PtP systems with 13 dBi antenna gain

10 MHz: 26.0 dBm
20 MHz: 29.0 dBm
40 MHz: 29.0 dBm
80 MHz: 18.0 dBm

5250 – 5350 MHz band – FCC Part 15 Subpart E, RSS 247

The maximum output power is set as follows, under FCC and ISSED regulations. The power values are for systems with 13 dBi antenna gain not exceeding the 30 dBm EIRP limit

20 MHz: 17.0 dBm

40 MHz: 17.0 dBm

80 MHz: 17.0 dBm

5470 – 5725 MHz band – FCC Part 15 Subpart E, RSS 247

The maximum output power is set as follows, under FCC and ISSED regulations. The power values are for systems with 13 dBi antenna gain not exceeding the 30 dBm EIRP limit

20 MHz: 17.0 dBm

40 MHz: 17.0 dBm

80 MHz: 17.0 dBm

4940 – 4990 MHz band – FCC Part 90 Subpart Y, RSS 111

The maximum output power is set as follows, under FCC and ISSED regulations. The power values are for systems with 15 dBi antenna gain not exceeding the 85 dBm EIRP limit

10 MHz: 25.0 dBm

20 MHz: 25.0 dBm

40 MHz: 24.0 dBm - Not Applicable for Canada

Labelling Requirements

The assembly board is labeled with the identification numbers as follows:

FCC ID: Q3K-5XSUALMOD

IC: 5100A-5XSUALMOD

The host into which the board is assembled is labeled as follows:

Contains FCC ID: Q3K-5XSUALMOD

Contains IC: 5100A-5XSUALMOD

Hosts Test Mode Configuration

Integration in various hosts requires power limitations per antenna assembly gain used with the host to comply with the FCC/ISSED requirements (5.15-5.25 GHz and 4.9 GHz @ 40 MHz only for FCC)

Host	Antenna Gain (dBi)	Max Output Power per Band (dBm, GHz)				
		5.15-5.25	5.25-5.35	5.47-5.725	5.725-5.85	4.94-4.99
SU Connectorized and Alpha Connectorized	13	29.0	17.0	17.0	29.0	N/A
SU Connectorized and Alpha Connectorized	16 (15 @ 4.9 GHz)	26.0	14.0	14.0	26.0	25.0
SU Integrated and Alpha Integrated	22 (21 @ 4.9 GHz)	23.0	7.0	7.0	27.0	25.0
SU Connectorized and Alpha Connectorized	23	22.0	8.0	8.0	26.0	25.0
SU Connectorized and Alpha Connectorized	25	20.0	5.0	5.0	24.0	N/A
SU Connectorized and Alpha Connectorized	28	15.0	N/A	N/A	15.0	25.0
SU Connectorized and Alpha Connectorized	32	10.0	N/A	N/A	13.0	25.0