

Document history

rev	Created on / by:	Description:
00	03.03.2023 / T. Schock	First issue
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		
11		
12		
13		
14		
15		



Copying of this document, and giving it to others and the use or communication of the contents thereof, are forbidden without express authority. Offenders are liable to the payment of damages. All rights are reserved in the event of the grant of patent or the registration of a utility model or design.

Weitergabe sowie Vervielfältigung dieser Unterlage, Verwertung und Mitteilung ihres Inhalts sind nicht gestattet, soweit nicht ausdrücklich zugestanden. Zuwiderhandlungen verpflichten zu Schadensersatz. Alle Rechte für den Fall der Patentierung oder GM-Eintragung vorbehalten.

File Name:	15_CDES_TC190_Integration instructions_rev0.pdf		
Drawing Title:	User manual integration instructions for installation of transceiver module TC190 in a host device.	Status: Released	Scale: None
Drawing No.:	15_CDES_TC190_Integration instructions	Revision: 0	Page 1 of 7



Certification Document	TC190 User manual integration instructions	HBC
-------------------------------	---	------------

Table of contents

Document history	1
Table of contents	2
1. Generally	3
2. FCC notes.....	3
2.1. Section 15.19	3
2.2. Section 15.21 Statement.....	3
2.3. Section 15.105 (a) Statement	3
3. ISED notes	3
3.1. RSS-GEN – User Manual Statements (English/French)	3
4. RF exposure statement	4
5. Integration instructions for host product manufacturers according to KDB 996369 D03 OEM Manual v01	5
5.1. List of applicable FCC / ISED rules.....	5
5.2. Specific operational use conditions.....	5
5.3. Limited module procedures.....	5
5.4. Trace antenna designs.....	5
5.5. RF exposure considerations	5
5.6. Antennas	6
5.7. Label and compliance information	6
5.8. Information on test modes and additional testing requirements	6
5.9. Additional testing, Part 15 Subpart B disclaimer.....	6
5.10. Statements for host manual	7



Certification Document	TC190 User manual integration instructions	HBC
-------------------------------	---	------------

1. Generally

The module (PMN: TC190) is not sold separately and is exclusively used for systems of HBC-radiomatic. The module is only used in professional industrial radio applications.

For integration in host device this integration instructions define requirements for installation, safety instructions written in host manual and the labeling requirements.

Changes or modifications made to this module not expressly approved by the party responsible for compliance may void the authorization to operate this equipment.

The module is exclusively approved for the integration into host devices by the Grantee or his authorized OEM integrator (hereinafter called "integrator").

2. FCC notes

2.1. Section 15.19

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.

2.2. Section 15.21 Statement

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

2.3. Section 15.105 (a) Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

3. ISED notes

3.1. RSS-GEN – User Manual Statements (English/French)

This device complies with Innovation, Science and Economic Development Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

This device may not cause interference; and

This device must accept any interference, including interference that may cause undesired operation of the device.



Certification Document	TC190 User manual integration instructions	HBC
-------------------------------	---	------------

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:

L’appareil ne doit pas produire de brouillage; et

L’appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d’en compromettre le fonctionnement.

4. RF exposure statement

This RF module will be integrated with internal and external antennas in different host devices. For each final host device the RF exposure conditions to comply with FCC / ISED requirements will be individually defined and the user instructions of the host device will have appropriate installation or usage instructions. In general, the final host device will be used in such a manner that the potential for human contact including by-standers during normal operation is minimized.



Certification Document	TC190 User manual integration instructions	HBC
-------------------------------	---	------------

5. Integration instructions for host product manufacturers according to KDB 996369 D03 OEM Manual v01

5.1. List of applicable FCC / ISED rules

FCC:	ISED:
47CFR Part 15C	RSS-247

5.2. Specific operational use conditions

Depending on the used antenna type (internal / external) the RF Module can be either integrated in portable or mobile/fixed categorized host devices.

The maximum allowed antenna gain is 3,4 dBi.

RF Exposure considerations must be done for each individual host type/antenna combination.

The module is a class A device in terms of §15.3 (h).

5.3. Limited module procedures

This RF module is exclusively approved for the integration into host devices by the Grantee or his authorized OEM integrator.

5.4. Trace antenna designs

TC190 has an onboard antenna. This onboard antenna cannot be changed by any other parties. The module is not be sold separately, statement thereto see chapter 1.

5.5. RF exposure considerations

For all final host devices the RF exposure are observed in integration process. A distinction is drawn between portable device and mobile/fixed device.

For portable device:

For any application the necessary separation distance between the radiating part (antenna) and the human body incl. bystander will be calculated based on the module output power in combination with the antenna gain of the used antenna and position with respect to FCC KDB447498 and ISED RSS-102.

For mobile/fixed device:

The device is categorized as mobile/fixed where a minimum separation distance of >20 cm between the antenna and any human body is assured during normal operating conditions.

For RF exposure the following RF Exposure Warning will be included:

“To comply with FCC RF exposure compliance requirements, the antenna 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”.

Drawing No.: 15_CDES_TC190_Integration instructions	Revision: 0	Page 5 of 7
---	-------------	-------------



Certification Document	TC190 User manual integration instructions	HBC
-------------------------------	---	------------

5.6. Antennas

The antenna that is used in connection with TC190 depends on host device (e.g. portable, mobile fixed device).

All usable antennas for TC190 modules are listed in the document “17_CDES_TC190_Antenna Specification”.

5.7. Label and compliance information

The TC190 is marked in accordance with applicable rules, see document “06-07_CDES_TC190_Label”.

The host device will be labelled as follows:

The host must be labeled as applicable with:

Contains FCC ID NO9TC190

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.

Contains IC: 2977A-TC190



Figure 1: Example type plate of a host device

5.8. Information on test modes and additional testing requirements

This RF module is exclusively approved for the integration into host devices by the Grantee or his authorized OEM integrator. The integrator is responsible for the compliance of the final product that incorporates with this transmitter module.

In case if special test modes are necessary it will be done within the individual integration process depending on the features of the host.

5.9. Additional testing, Part 15 Subpart B disclaimer

The RF module itself is not a subpart B device. The host device in which the module will be installed has to be observed under applicable requirements of §15.101 - §15.123.



Certification Document	TC190 User manual integration instructions	HBC
-------------------------------	---	------------

5.10. Statements for host manual

Statement FCC §15.21 for host manual

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.

Statement FCC §15.105 for host manual

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Statement ISED for host manual

This device complies with Innovation, Science and Economic Development Canada's license-exempt RSSs. 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.

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'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.