2.4 GHz FHSS RF Module – User Manual and Installation
Model Number 100250

This product is a frequency hopping RF transceiver module for the 2400 to 2483.5 GHz ISM band, designed to meet FCC 15.247, and is used in industrial control and monitoring applications. It has the following certifications to operate as transceiver module in the USA and in Canada.

FCC: OV7100250
IC: 1614A-100250

Installation Instructions

This module is factory installed by Control Microsystems Inc. Operating as Schneider Electric into its own line of wireless products. There are two classes of products that use this module:

1) Products with integrated antenna – These products are 100% assembled at the factory and no assembly is required by the end user.

2) Products with field-installed antenna – These products are shipped with a separate antenna kit consisting of one of the high gain antennas and a coax cable.

Co-axial cables intended for Accutech field units will have an RPTNC connector at one end and N-type connector at the other end. The RPTNC connector is accessible on the exterior of the Accutech field unit housing. (i.e. connection is non-intrusive and does not require opening the product) Connect the other end of the coax cable with an N-type connector to the antenna.

Co-axial cables intended for Accutech base radios will have an RPSMA connector at one end and N-type connector at the other end. Connect the coax cable with the RPSMA connector end to the mating connector located at the center of the RF module. (i.e. connection is non-intrusive and does not require opening the product) Connect the other end of the coax cable with an N-type connector to the antenna.

Connectors

Note: This module will only be integrated into products designed and manufactured by Control Microsystems Inc. Operating as Schneider Electric. As such there is no user manual specific to this module other than the information contained in this document. The module has no user settable options related to the wireless operation of the unit.

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The module can be powered from an on-board 3.6V D-cell battery or from a DC regulated supply (3.3 to 5V). This configuration is also determined by Control Microsystems Inc. Operating as Schneider Electric.

The module has a number of connectors. Most of these are used for internal testing and integration of the module with other boards.

The connections are:

J1	3-pin connection for membrane switch
J203	Antenna connection
J204	External Antenna connection. Only applies to Accutech Field Units
J206	Digital connection to optional sensor or RS485 communication board
J4	Battery connection (if external power supply not used)
J6	Disable Watchdog
J7	3-pin serial connection for PC (for factory configuration and testing)
J9	JTAG connection (for factory programming)
J205	Currently not used. Digital connection to future sensor cards
J202	Currently not used. J202 was used as test header for radio development

2.4 GHz Antennas

This module is to be used with one of the following antennas or antennas of the same type and lesser gain only:
- Control Microsystems Inc. Operating as Schneider Electric 307691AR 3.7 dBi omni-directional antenna
- Nearson Inc. S131CL-6-PX-2450 2dBi 1/2Wave omni-directional antenna
- PCTel MFB24010 10dBi omni-directional antenna
- PCTel MYP24010PTNF 10 dBi Yagi antenna
- PCTel MYP24015PTNF 15 dBi Yagi antenna

The module is used in products designed and manufactured by Control Microsystems Inc. Operating as Schneider Electric only. The product will be professionally installed as per the user manual and installations will use the certified antennas.

Important Information to User

1. Changes or modifications not expressly approved by Control Microsystems Inc. Operating as Schneider Electric could void the user's authority to operate the equipment.

2. 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.

3. This device is for mobile and fixed use only (not portable or bodyworn). A separation distance of 20cm must be maintained at all times between the antenna and the body of the user and bodies of nearby persons.

IC regulatory warning statement

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.

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.

Labels

A label displaying the FCC ID and the Industry Canada Certification Number is placed on the top of the RF shield.

The housing of the product that uses this module also has the label referring to the enclosed module as well as displaying the FCC part 15 compliance statement.