

ETII RF

OEM/Integrators Installation Manual

900 MHz RadioLink Control Board Module

The module is limited to OEM installation ONLY

Vantage Controls
2168 W Grove Parkway, Ste 300
Pleasant Grove, UT 84062
(801) 229-2800

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FCC Compliance Information

FCC ID: PII-22713

IC: 3505A-22713

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.

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.

FCC Compliance Warning:

Changes or modifications to this product not expressly approved by Vantage Controls could void the user's authority to operate this product.

*****All information on this page "FCC Compliance Information" shall be supplied to the end user of any product the ETII RF is incorporated into.***

IC Compliance Information

IC: 3505A-22713

This device complies with Industry 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.

IC Notice (Avis D'Industrie Canada)



PRUDENCE: Changements ou modifications pourraient annuler le droit de l'utilisateur à utiliser l'équipement non autorisés.

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 radioélectrique 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.

Ces limites sont conçues pour fournir une protection raisonnable contre les interférences nuisibles dans une installation résidentielle. Cet équipement génère, utilise et peut émettre une énergie de radiofréquence et, s'il n'est pas installé et utilisé conformément à ux instructions, il peut causer des interférences nuisibles aux communications radio. Cependant, il n'existe aucune garantie que des interférences ne se produiront pas dans une installation particulière. Si cet équipement provoque des interférences nuisibles à la réception radio ou télévision, ce qui peut être déterminé en mettant l'équipement hors et sous tension, l'utilisateur est encouragé à essayer de corriger l'interférence par une ou plusieurs des mesures suivantes:

- Réorienter ou déplacer l'antenne de réception.
- Augmentez la distance entre l'équipement et le récepteur.
- Connecter l'équipement à une sortie sur un circuit différent de celui sur lequel le récepteur est branché.
- Consulter le revendeur ou un technicien radio / télévision expérimenté pour de l'aide.

Introduction

The ETII RF is an RF Control Board Module that contains a microcontroller and a RF transceiver chip. It is designed to be incorporated into control devices developed by Vantage Controls. The module operates under FCC approval in the 902-928 MHz ISM frequency band.

The module is limited to OEM installations only.

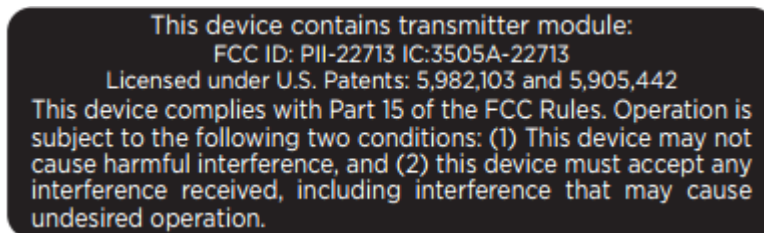
The module is limited to installation in mobile or fixed applications.

Integrating the ETII RF module into Products

The OEM is responsible that the end user has no manual or instructions to remove or install the module.

IMPORTANT: The ETII RF radio has been certified by the FCC as a module for integration into products without further certification being necessary (as per FCC section 2.1091.) The following requirements must be satisfied in order to comply with FCC regulations:

- 1) The OEM/Integrator must ensure that final produce has a label, as shown below, placed on the outside of the device.



- 2) The ETII RF module may only be used with the antenna that has been tested and certified.

IMPORTANT: Separate approval is required for all other operating configurations, including portable configurations with respect to Part 2.1093 and different antenna configurations.

IMPORTANT: Final products must be tested to comply with unintentional radiators (FCC section 15.107 & 15.109) before the OEM can declare compliance of their final product to Part 15 of the FCC Rules. Testing for compliance must be performed with the module installed in the end-product.

We hereby acknowledge our responsibility to provide guidance to the host manufacturer in the event that they require assistance for ensuring compliance with the Part 15 Subpart B requirements.

FCC RF Exposure requirement

In order to comply with the FCC RF exposure requirements, the ETII RF may be used only with the antenna that has been tested and certified. The certified antenna is located on the module and has a permanent connection to the ET II RF Module:

Manufacturer	Model #	Type	Gain(dBi)	Minimum Cable Length
Ethertronics	M620720	Chip	2.6	N/A

A minimum separation distance of 20 cm must be maintained from the antenna to any nearby persons.

Interface Pins:

Pin #	Description
1	DIO to Microcontroller
2	Power
3	DIO to Microcontroller
4	Ground
5	DIO to Microcontroller
6	DIO to Microcontroller
7	DIO to Microcontroller
8	DIO to Microcontroller
9	DIO to Microcontroller
10	DIO to Microcontroller
11	DIO to Microcontroller
12	DIO to Microcontroller

Connections marked “DIO to Microcontroller” are used for control of external circuits. This allows the RF control board module to be combined with various lighting control circuits on an external PCB such as Triac Dimmers, FET Dimmers and Relays. The external PCB is independent from the RF Module and has no direct impact on the radio communication.

RF Exposure / Final Configuration

In order to comply with Part 15.212(a)(vii), “The modular transmitter must comply with any applicable RF exposure requirements in its final configuration”. The ET II RF Module will only be used in products that Vantage Controls has designed and tested to ensure that they meet the RF exposure requirements.

Specifications

Model #:..... ETII RF
Frequency Range 902-928 MHz ISM Band
Power Supply 5-9 VDC
Current required while transmitting 150mA
Current required while receiving 70mA
Antenna Gain..... ~2.6dBi

Transmit Power32mW (15dBm)
RF Communications Technology.....Frequency Hopping Spread Spectrum
Number of Hop Channels25
RF Data Rate..... 19,200 bps
Interface Data Rates.....9600-54600 bps

Size 1.375" x 2.5"
Operating Temperature Range..... -40-70°C