

 <b>BRANCHPOINT TECHNOLOGIES</b>	Title: <b>PN EC-0137 RF Module User's Manual</b>	DOC #: <b>18-0169</b>	DCR #: <b>N/A</b>	Rev: <b>Bx1</b>
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## 1. Introduction

This user's manual is for internal use at Branchpoint Technologies, Inc. and is for use by Branchpoint engineers integrating PN EC-0137, 2.4GHz RF module into Branchpoint products.

## 2. Regulatory Information

### 2.1. Federal Communications Commission (FCC)

#### 2.1.1. FCC Notices

Any changes or modifications not expressly approved by Branchpoint Technologies may void the user's authority to operate the equipment.

PN EC-0137 including the antennas, which are listed below, complies with Part 15 of the FCC Rules.

The device meets the requirements for modular transmitter approval as detailed in FCC public Notice DA00-1407. The transmitter 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.

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### 2.1.2. Approved Antenna List

Part Number	Manufacturer	Frequency Band	Type	Gain (dBi)
LDA212G3110K	Murata	2.4 GHz	Chip antenna	+0.9dBi
ANT2012	Yageo	2.4 GHz	Chip antenna	+0.9dBi

### 2.1.3. RF Exposure

To comply with FCC RF Exposure requirements, the OEM must ensure that only antennas from the Approved Antenna List are installed.

The preceding statement must be included as a CAUTION statement in manuals for products operating with the approved antennas in the previous table to alert users on FCC RF Exposure compliance.

Any notification to the end user of installation or removal instructions about the integrated radio module is not allowed.

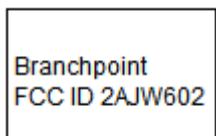
The radiated output power of PN EC-0137 with a mounted ceramic antenna (FCC ID: 2AJW602) is below the FCC radio frequency exposure limits. Nevertheless, PN EC-0137 shall be used in such a manner that the potential for human contact during normal operation is minimized.

End users may not be provided with the module installation instructions. OEM integrators and end users must be provided with transmitter operating conditions for satisfying RF exposure compliance.

The antenna used for this transmitter must be installed to provide a separation distance of at least 5mm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

## 3. Label

Each module is labeled as follows:



## 4. Technical Information

Refer to the Panasonic PAN1740 datasheet and the Dialog Semiconductors DA14580 datasheet and application notes.