

Application Note

Linix RF Module Identification guide

Linix radio modules are available with a variety of options and frequencies and each module's label contains an intelligent identification code. Table 1 provides the identification codes associated with each module series.

Table 1. Module Identification Codes

Label Code	Module Series	Label Code	Module Function	Label Code	Operating Frequency
K	KH3	R	Receiver	3	315 MHz
T	LT	T	Transmitter	1	418 MHz
R	LR	X	Transceiver	4	433 MHz
C	LC	U	USB		
Q	QS				

Figure 1 shows an example identification code for the 433 MHz LR series transmitter module, TXM-433-LR, which displays the module's Series, Function, Operating Frequency, and its Manufacturing Lot Number.

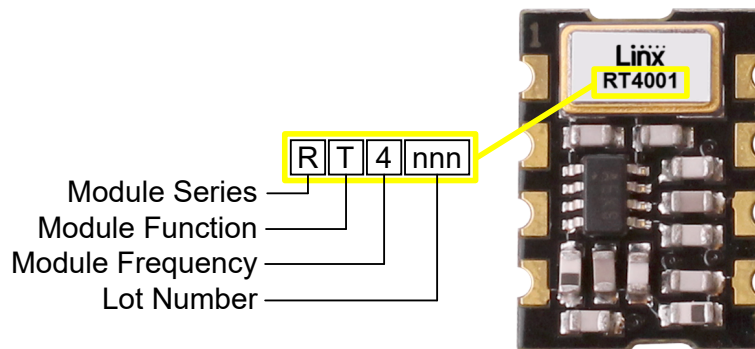
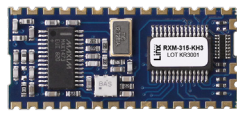


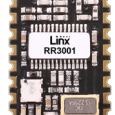



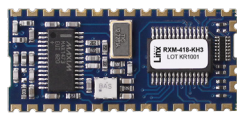
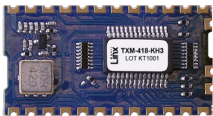












Figure 1. Module Identification Code Structure

Low Band RF Modules

Table 2 shows Linix RF modules by series and transmitter/receiver (if applicable) to support identification.

Table 2. Low Band RF Modules (315 MHz, 418 MHz and 433 MHz)

	KH3 Series		LT Series	LR Series		LC Series	QS
	RF receiver	RF transmitter	RF transceiver	RF receiver	RF transmitter	RF transmitter	USB interface
315 MHz	 RXM-315-KH3	 TXM-315-KH3	 TRM-315-LT	 RXM-315-LR	 TXM-315-LR	 TXM-315-LC	 SDM-USB-QS
418 MHz	 RXM-418-KH3	 TXM-418-KH3	 TRM-418-LT	 RXM-418-LR	 TXM-418-LR	 TXM-418-LC	
433 MHz	 RXM-433-KH3	 TXM-433-KH3	 TRM-433-LT	 RXM-433-LR	 TXM-433-LR	 TXM-433-LC	

Hummingbird Modules

The Hummingbird (HUM) family of modules share physical module designs, while offering a variety of features based on firmware programming. For this reason HUM modules will look similar in overall appearance, but have different labels.

HumPRO Series Labeling

The HumPRO series modules include the Amplified HumPRO, HumPRO and HumPRC modules, each offered in 915 MHz and 868 MHz, and in versions that are pre-certified to regional requirements or uncertified. The 868 MHz modules cannot be pre-certified due to EU regulations. End products go through system level testing and have a Declaration of Conformance.

HumPRO series modules use a common code base, where encrypted remote control and user-data applications will work together under the same wireless communication platform. The difference in firmware between the HumPRO and HumPRC is the digital pins and pin logic algorithm. For this reason, the 900 MHz pre-certified HumPRO and HumPRC modules share the same FCC/IC identification under a common model number, which is printed on the label as required for regulatory purposes as shown in Figure 2. The only difference between the labels is that the HUM-900-PRO-CAS and HUM-900-PRC-UFL modules are identified by the “PRC” marking under the Hummingbird logo.

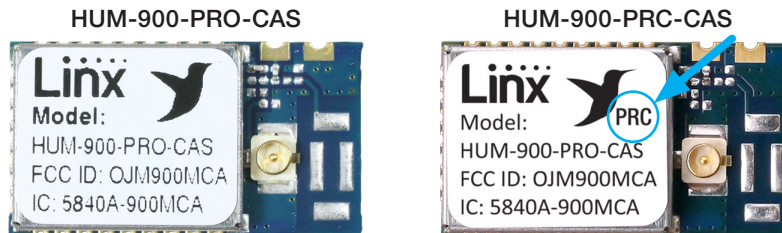


Figure 2. HumPRO and HumPRC Labeling Difference on Pre-certified Modules

The HUM-900-PRO and HUM-900-PRC uncertified modules each have the identifier next to the Hummingbird logo as shown in Figure 3, denoted as “PRO” and “PRC” respectively.

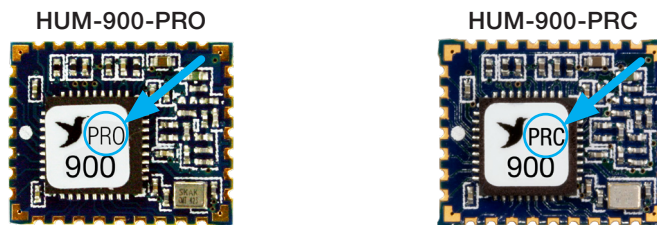


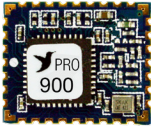

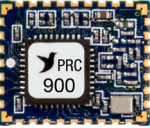





Figure 3. HumPRO and HumPRC Labeling Difference on Uncertified Modules

900 MHz HumPRO Series Modules

The 900 MHz HumPRO series, shown in Table 3, includes remote control and data communications under the same code base and platform in a single application.







Table 3. 900 MHz HumPRO Series

Amplified HumPRO™ <ul style="list-style-type: none"> FCC/IC pre-certified Long range FHSS RF transceiver Data module 	HumPRO™ <ul style="list-style-type: none"> FCC/IC pre-certified FHSS RF transceiver Data module 	HumPRO™ <ul style="list-style-type: none"> Non-certified FHSS RF transceiver Data module 	HumPRC™ <ul style="list-style-type: none"> FCC/IC pre-certified FHSS RF transceiver Remote control module 	HumPRC™ <ul style="list-style-type: none"> Non-certified FHSS RF transceiver Remote control module
 <p>Model: HUM-A-900-PRO-CAS FCC ID: QJM-HUM-A-900 IC: 5840A-HUM-A-900</p> <p>HUM-A-900-PRO-CAS</p>	 <p>Model: HUM-900-PRO-CAS FCC ID: QJM900MCA IC: 5840A-900MCA</p> <p>HUM-900-PRO-CAS</p>	 <p>Model: PRO 900</p> <p>HUM-900-PRO</p>	 <p>Model: PRC HUM-900-PRO-CAS FCC ID: QJM900MCA IC: 5840A-900MCA</p> <p>HUM-900-PRC-CAS</p>	 <p>Model: PRC 900</p> <p>HUM-900-PRC</p>
 <p>Model: HUM-A-900-PRO-UFL FCC ID: QJM-HUM-A-900 IC: 5840A-HUM-A-900</p> <p>HUM-A-900-PRO-UFL</p>	 <p>Model: HUM-900-PRO-UFL FCC ID: QJM900MCA IC: 5840A-900MCA</p> <p>HUM-900-PRO-UFL</p>		 <p>Model: PRC HUM-900-PRO-UFL FCC ID: QJM900MCA IC: 5840A-900MCA</p> <p>HUM-900-PRC-UFL</p>	

868 MHz HumPRO Series Modules

The 868 MHz HumPRO series, shown in Table 4, includes remote control and data communications under the same code base and platform in a single application. The 868 MHz HumPRO and HumPRC series modules do not require an EU identification number, and therefore do not share a common model number.


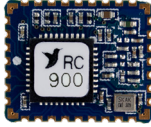


Table 4. 800 MHz HumPRO Series

HumPRO™ <ul style="list-style-type: none"> CE approved LBT + AFA RF transceiver Data module 	HumPRO™ <ul style="list-style-type: none"> LBT + AFA RF transceiver Data module 	HumPRC™ <ul style="list-style-type: none"> CE approved LBT + AFA RF transceiver Remote control module 	HumPRC™ <ul style="list-style-type: none"> LBT + AFA RF transceiver Remote control module
 <p>Model: HUM-868-PRO-CAS</p> <p>HUM-868-PRO-CAS</p>	 <p>Model: PRO 868</p> <p>HUM-868-PRO</p>	 <p>Model: HUM-868-PRC-CAS</p> <p>HUM-868-PRC-CAS</p>	 <p>Model: PRC 868</p> <p>HUM-868-PRC</p>
 <p>Model: HUM-868-PRO-UFL</p> <p>HUM-868-PRO-UFL</p>		 <p>Model: HUM-868-PRC-UFL</p> <p>HUM-868-PRC-UFL</p>	

HumRC Series Modules

Labeling for the HumRC series modules is shown in Table 5.

Table 5. 900 MHz and 2.4 GHz RC Series

<p>HumRC™</p> <ul style="list-style-type: none"> • FCC/IC Pre-certified • FHSS RF transceiver • Remote control module 	<p>HumRC™</p> <ul style="list-style-type: none"> • Non-certified • FHSS RF transceiver • Remote control module 	<p>HumRC™</p> <ul style="list-style-type: none"> • Non-certified • FHSS RF transceiver • Remote control module
 <p>HUM-900-RC-CAS</p>	 <p>HUM-900-RC</p>	 <p>HUM-2.4-RC</p>
 <p>HUM-900-RC-UFL</p>		

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