# Retül Vantage System / RF Control

This Retül equipment utilizes the Freescale MC13224VR2 RF chip based on the IEEE 802.15.4 compliant wireless specification to communicate between the host computer (typically a Windows PC) and the Vantage System. The Vantage System is comprised of a CCD camera system, USB Dongle and one or more handheld devices for the purpose of capturing 3D positional data, either static or in motion, and reporting it to the host computer running proprietary software that displays it in human readable format. The CCD camera system uses two RF PCBAs, the USB Dongle and each handheld device uses one RF PCBA. Each RF PCBA utilize one MC13224VR2 chip for RF communication between the various equipment used. All of the devices have a green (power) LED indicator as well as a blue (RF activity) LED indicator that is visible to the end user.

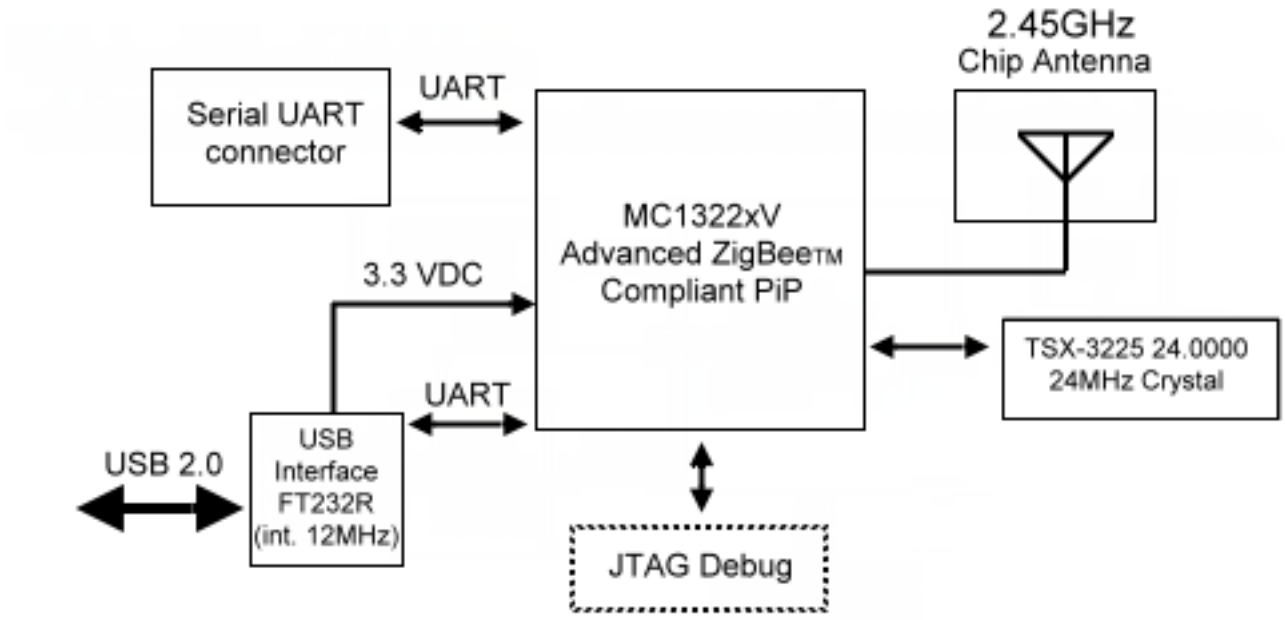
The radio frequency transmission incorporates 16 channels from 2.405GHz to 2.480GHz in the 2.450GHz frequency band to facilitate RF communication. The end user cannot control the transmission intensity (transmission power) or duration as this is set in the device firmware at the factory. All equipment is set and tested at the factory to optimal settings for typical communication environments encountered by the system in the field.

There is no RF tuning to be done with this equipment as the antenna and function are static within the set program and firmware in which they operate. Degradation of signal is handled by setting a different channel in software (0 – 15), turning off other RF devices (such as another Vantage System nearby) that need not be active, or changing the location of devices to avoid interference.

The harness and ZIN/probe devices are battery powered and will slowly consume the battery charge as the system is operating. When not in use the system software should be exited and the Vantage System turned off, especially the battery operated devices. The batteries are not user replaceable, but they are rechargeable with the charger provided by Retül with the system. No other charger/charging system should be used for the Vantage System other than the one specifically supplied with the system at time of purchase or otherwise approved by Retül. There is no standby, hibernation, sleep or low power mode for this equipment, it is either ON or OFF depending on the software command(s) or the physical power switches or USB port.

# SYSTEM BLOCK DIAGRAM

The following is the Vantage RF Module USB Dongle system level block diagram.

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