

## TGF-A Operational Description

Wavetrend Active RFID Hardware uses a half duplex 433.92 ASK communication protocol.

The Wavetrend readers are receive only and listen for the transmission of the Wavetrend Active Duo tags. When a reader receives a tag packet over the air interface protocol it decodes the information and stores it in its internal tag buffer, this data is then either polled manually from a local host PC or if the reader is in auto poll pushed to the host.

Wavetrend tags are transmit only they cannot receive, they are configured to have two modes of transmission , the primary is the tags beacon rate which can be set at either 15 or 30 seconds. A tag configured with a setting of 15 seconds will wake up automatically every 15 seconds and transmit a single 7ms packet of data, it will then return to sleep mode.

All Wavetrend FCC tags accept the TGF have a motion sensor fitted which provides the tag with an external input that is used to drive the secondary beacon rate. In the case of the TGF the secondary beacon is driven by pressing the key fob button.

The secondary beacons can only be transmitted if the tag is in motion , these have the following interval settings 0.4,0.8,1.5 seconds.

On motion the tag will transmit a group of 4 secondary beacons which contain the same 7ms tag packet that is transmitted in a primary beacon.

As soon as the tag stops detecting motion , it switches out of the secondary beacon mode and back into the primary beacon mode.

The beaconing rates can be selected by Wavetrend or by the end user via the use of a Tag programmer.

It should be noted that the firmware in both the FCC tag and in the Tag programmers does not allow the FCC products to be set to primary beacon rates outside of the permeable range, IE the ETSI rates of 0.4, 0.8 or 1.5 seconds.

For the absent of doubt , it is not possible to configure an FCC tag to beacon at any other than the FCC beacons schemes , even if programmed with an ETSI programmer.

The FCC product is designated Wavetrend Active DUO

This method of operation was reviewed and passed by the FCC in January 2012 on the following grant condition

This device is for commercial use only and intended for use in a confined area with an appropriate system receiver as indicated in the Certification filing.

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