



## **MB/4111-CDMA/Simultaneous TX**

EMEA Division

23<sup>rd</sup> December 2003

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### **Attestation: Simultaneous Transmit**

#### **CDMA / RLAN**

This is to confirm that the Software drivers for the WWAN (CDMA) and WLAN (RLAN 802.11b) prevent both transmitters from being active at the same time, an attempt to turn either on while the other is already on will fail.

The UPS 4111-CDMA terminal has been programmed will transition between WAN and LAN when External power is detected.

**This system prevents the CDMA and RLAN signals transmitting simultaneously.**

#### **Bluetooth / RLAN**

Both 802.11b and Bluetooth operate in the same 2.4 GHz unlicensed frequency band. Therefore, there is a mutual interference between the two wireless systems that may result in severe performance degradation. Coexistence is a method that allows the two radio systems to share the same RF spectrum without interfering with each other.

The Symbol-defined coexistence mechanism between Bluetooth and 802.11b is Alternating Wireless Medium Access (AWMA). In this mechanism there is synchronization between the Bluetooth and 802.11b radio systems, which is provided by a handshaking signal called Media Free (MF). MF is generated by the 802.11b radio and synchronous to the 802.11b AP beacon (AP output over radio waves). The MF signal produces a Bluetooth quantum (time interval that Bluetooth can be on-the-air) once every beacon period. The remainder of the period is for 802.11b use.

The RF output from the BT module is routed to an RF mux/switch. This provides for a shared antenna between the S24 radio and the Snapper module. Whenever the module is not in use, the mux simply connects the S24 signal to the antenna. During brief periods of reception and transmission, the module flips the switch for BT communication. The MF signal is used to synchronize the BT and S24 shared use of the antenna.

**This coexistence system prevents the RLAN and BT signals transmitting simultaneously.**

Yours sincerely,

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Symbol Regulatory Compliance