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Federal Communications Commission
Authorization and Evaluation Division
7435 Oakland Mills Road
Columbia, Maryland 21046

Subject: Class II Permissive Change for FCC ID: EHA-1000CP01SX1

Dear Application Examiner:

Intermec Technologies Corporation is submitting this application for the Class II Permissive Change authorization of Models 1000CP01S, 1000CP02S, 1001CP01S, under FCC ID: EHA-1000CP01SX1. The devices are handheld computers containing two radio modules: the Intermec Model RC12 and the Sierra Wireless Model MC8355. The RC12 module is an 802.11 a/b/g/n - Bluetooth radio. The MC8355 module is a UMTS - CDMA radio. Only the UMTS portion was included in the original certification. At that time, the CDMA functionality was disabled at the factory. Now, it will be enabled; so this Class II Permissive Change is being sought for the addition of CDMA functionality. No hardware changes have been made.

Please note that brand names instead of model numbers are used in the some of the exhibits. These brand names correspond to the model numbers as follows: CN70 = 1000CP01S, CN70e = 1000CP02S, CK70 = 1001CP01S. Also, the Sierra Wireless MC8355 module is electrically and mechanically identical to the Qualcomm Gobi3000™ module. All exhibits and test reports for the Gobi3000™ are representative of the MC8355.

The handheld computers can be used closer than 20 cm to the user's head or torso so a SAR evaluation was performed on all three models. The MC8355 and RC12 radio modules can transmit simultaneously. On the RC12 module, the 802.11a/b/g/n and Bluetooth radios are combined and share the same antenna, but they cannot transmit simultaneously. On the MC8355 module, the UMTS and CDMA radios are also combined and share the same antenna, but they cannot transmit simultaneously either. The closest spacing between the MC8355 and RC12 antennas is 3.7cm. Per KDB 648474, the output power of the Bluetooth radio is 7mW, so it is below P_{ref} and does not require SAR evaluation. However the output power of the UMTS, CDMA, and 802.11a/b/g/n radios are greater than $2 \cdot P_{ref}$ for all bands, so they required stand-alone SAR evaluation. The UMTS and 802.11a/b/g/n radios were evaluated for SAR as documented in the original filing. This filing contains the stand-alone SAR evaluation for the CDMA radio.

The sum of the 1-g SAR measured for the CDMA and 802.11a/b/g/n radios in each model was less than the SAR limit of 1.6 W/kg, so SAR evaluation for simultaneous transmission was not required:

Model	Phantom	Highest of Part 22/24	Part 15	Sum
		1g (W/kg)	1g (W/kg)	1g (W/kg)
1000CP01S	Head	0.463	0.058	0.521
	Body	0.883	0.369	1.252
1000CP02S	Head	0.411	0.059	0.470
	Body	0.613	0.417	1.030
1001CP01S	Head	0.405	0.140	0.545
	Body	1.00	0.504	1.504

The receiver portion of the CDMA radio has been verified to FCC 15B requirements.

The following is a summary of the reports submitted with this application:

Type	Purpose	Reports
EMC 22H 24E	Stand alone module testing of the Sierra Wireless MC8355 (Qualcomm Gobi3000™). Used to demonstrate compliance for antenna port direct connect measurements.	Qualcomm Report– 80-N2162-203 Rev C
EMC 22H 24E	System level testing of the MC8355 module in Models 1000CP01S, 1000CP02S, and 1001CP01S for spurious radiated emissions and radiated power.	NWEMC Report – ITRM0250.1
SAR 2.1093	System level SAR evaluation of the MC8355 module in Models 1000CP01S, 1000CP02S, and 1001CP01S	NWEMC Reports - ITRM0248.6 ITRM0248.7 ITRM0248.8

Your efforts in reviewing this application are greatly appreciated.

Sincerely,

Best regards,



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