



UltraTech

Engineering Labs Inc.

CORRESPONDENCE

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DATE: 02/23/00

TO: FCC
ATTN: Mr. Joe Dichoso
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SUBJECT: FCCID: GM3WLPC24H, CORRESPONDENCE # 12282
731 CONFIRMATION NO.: EA96159

Dear Mr. Dichoso,

- (1) This is not an application for a modular approval. However, this radio will be used with multiple Teklogix Host Systems and Mobile/Portable Terminals. Therefore, the radiated emissions need to be performed with all host systems to ensure that the radio will comply with all different packaging. Please note that even though we do not apply for modular approval the radio module has its own power input regulating circuit and enclosure; the enclosure is not used when it is installed inside the Handheld Terminal 7035. The radio module will not be sold by itself, it is only sold with Teklogix Host Systems.
- (2) The applicant will include the RF Exposure Warning in the User's Manual. Please see the "RF Exposure Warning" in the FCC OET RF Exposure Info folder.
- (3) The revised internal photos' have been re-uploaded into the FCC OET Internal Photo Folder. Please review.
- (4) The confidential letter from Lucent (manufacturer of the radio) will be uploaded to FCC OET Cover Letter folder by Lucent.
- (5) Attached in the FCC OET Attestation Statement folder please find the revised letter for more detailed clarification of antenna installation requirements for the antennas specified to be used with base station including Cushcraft Antenna.
- (6) This equipment is only provided for use at 11 Mbps data rate, and the Process Gain Measurement Data were measured by Lucent and attached in the FCC OET Test Report Folder. The Lucent Process Gain measurements did show their test data for 1, 2, 5.5 and 11 Mb/s.
- (7) The final conducted rf power at the antenna port is 38.6 dB mili-watts peak max (a mistake was made by adding 9.8 dB off set on the power meter when there was no attenuator used). This power is the same for all Teklogix host systems since identical radio is used for all Teklogix Systems.
- (8) We have checked our eirp measurements carefully by using the Signal Generator and 2 x Calibrated Horn Antennas and found our method of measurements agreed with the theory ($EIRP = TP + G$). We have checked our results again and find the results as follows:

EUT Tested	E-Field in 1 MHz BW @3m (dBuV/m)/MHz	99% BW (MHz)	E-Field in 99% BW @3m (dBuV/m)/99%BW	Tx Antenna Gain [G] (dBi)	Calculated total EIRP = TP+G (dBm/99% BW)	Measured EIRP @ 1MHz BW (dBm)	Measured Peak EIRP @ 99% BW (dBm)	RF Safety Distance (cm)	Note
Test Jig @2412 MHz	106.3	10.6	126.8	0.0	15.6	2.2	12.5	3.9	(1), (2)
Teklogix 8255 @ 2437 MHz	106.6	10.6	127.1	0.0	15.6	3.8	14.1	1.4	(1)
Teklogix 8260 @ 2437 MHz	106.8	10.6	127.3	0.0	15.6	4.3	14.6	1.5	(1)
Teklogix 7035 @ 2437 MHz	114.4	10.6	134.9	2.0	17.6	7.1	17.4	6.8	(2)
Teklogix 9150 @ 2462 MHz	114.7	10.6	135.2	7.5	23.4	13.2	23.5	13.7	(2)

Note (1): The result was found to be more than 1 dB lower than the calculated value due to cable loss of the mobile antenna mounting unit.

Note (2): The original test data was incorrect. It was added by a factor of $10 \times \log(10.6 \text{ MHz})$ twice for conversion of power in 1 MHz to power in 99% BW. This is due to the communication problems between the technician and the report writer when the test data was calculated to compare with the theoretical value based on 99% OBW.

Regards,

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