Statement Regarding Compliance of Standard Communications Wireless Modules with Regulations for Human Exposure to Radiofrequency Emissions

In August 1996, the Federal Communications Commission (FCC) adopted a Report and Order in ET Docket 93-62 amending its rules for evaluating the environmental effects of radiofrequency (RF) electromagnetic fields. Specifically, the FCC adopted new guidelines and procedures for evaluating human exposure to RF emissions from FCC-regulated transmitters and facilities. As a part of this proceeding, new limits were adopted for human exposure to RF emissions from certain mobile and portable devices. The wireless modules offered by Standard Communications' Wireless Datacomm Division are subject to these amended rules and associated orders.

MPE calculation were made for the CRM 4200 unit, with the highest gain antenna being 2.5 dBi, which yield a 1.07 Watt ERP (12.4 cm). Per Section 2.1091 paragraph C, the CRM 4200 is exempt from routine evaluation. Please refer to the excel spreadsheet, label "MPE Caculations" showing the calculated distance and power values in ERP and EIRP.

But, based upon calculations using a standardized configuration, the models mention above is in compliance with the "Maximum Permissible Exposure" (MPE) limits as defined in the rules for "mobile" devices. Under these rules, "mobile" devices are those devices where the typical installation configuration has a spacing of at least 20 centimeters between the antenna and any nearby human(s).

The rules relating to this matter and the related performance measures are heavily influenced by the final packaging and antenna configuration of the end-product as well as the installation environment. With an OEM module such as those provided by Standard, it is impossible for Standard to accurately predict the performance of every possible application configuration and guarantee compliance with the rules.

As a convenience to Standard's customers, Standard does secure FCC Equipment Authorizations for most of its OEM wireless modules. These authorizations are secured using a typical configuration that assures compliant operation within the normal operating ranges, and transmitter input signal ranges of the device. This standardized configuration also assumes a typical antenna configuration.

Customers and end-users are cautioned that operation in configurations differing from the typical configuration may result in transmitter operation outside of the limits permitted under the rules. The pass-thru of Standard's equipment authorization is invalid if the device is operated in a configuration inconsistent with that under which it was authorized. Customers desiring to operate these devices under different configurations of antenna,

power, grounding, etc. must have their specific configurations evaluated by a competent RF engineering and certification laboratory to ensure compliance with the rules and secure additional approvals as necessary.

Ultimately, the company offering a final product to the market is responsible for full compliance with the FCC rules. All customers are strongly encouraged to have any product that they develop thoroughly tested to insure proper RF operation and compliance with all applicable rules.

As a reminder, Standard also conducts EMI measurements under Part 15 as part of the authorization and certification process. This is done to insure that the modules are in compliance with the established EMI limits. However, all final customer applications must be re-evaluated and certified for compliance under Part 15 prior to the product being commercially offered.

Reference Sources

Federal Communication Commission 47CFR sections 1.1307-1.1310, 2.1091, 2.1093

Federal Communication Commission 47CFR part 22 Subpart H

Federal Communication Commission OET Bulletin 65, and Supplement C

Federal Communications Commission primary web site:

www.fcc.gov

Federal Communications Commission Office of Engineering and Technology web site:

www.fcc.gov/oet/rfsafety