Electric / Gas / Water
Information collection, analysis and application

2111 North Molter Road
Liberty Lake, Washington 99019
509.924.9900 Tel
509.891.3355 Fax
800.635.5461
www.itron.com

12 July, 2009

Federal Communications Commission
7435 Oakland Mills Road
Columbia, MD 21046

Subject: Request for Permissive Change II
FCC:EO960W

Dear Sir/Madam:

Itron herby requests a Permissive Change II certification for a Automatic Meter Reading endpoint module for a utility gas meter, FCC ID:EO960W.

The change is due to the replacement of the RF IC device. This new version of the RF_IC is from the same vendor as the original RF IC and is a direct drop in, pin for pin. It is intended to be a direct replacement. The changes the vendor did are:

1. Close-in reception (saturation)
    - Added attenuation to anti-aliasing filter (6 + 12 dB)
    - Needs to make software additions to benefit from this feature
2. Phase Noise
    - Redesign of xosc output buffer to reduce noise degrading phase noise
3. Spurious removal/reduction
    - Layout changes to charge pump to reduce mismatch, pick-ups etc.
    - Improved noise isolation to other modules in phase detector
    - Slight increase in loop filter bandwidth
4. PA Power Ramping
    - Soft ramp of PA switching regulator implemented reducing side lobes (splattering) in TX specter with OOK/ASK modulation
    - Improved regulatory issues at some customers
5. Extended frequency coverage (387 MHz)
    - Customer requirement
    - Extended frequency tuning range for both VCOs by adding capacitance
    - This is tested in production test

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6. ESD improvements
    - TI ESD experts made significant ESD improvement to the CC1100 ESD structures
    - CC1101 ESD levels: HBM: 750V ; CDM: 400V
7. Other improvements and changes
    - Yield optimization
    - Reduction of leakage currents improving battery life time
    - Changed default value LO_DIV current (200uA increase)
    - TI Latch-up experts looked at the entire design and we made improvements where they suggested it might be possible
    - Convert the lead frame from matte tin to NiPdAu.
    - Drop-in replaceable (same package, pin-out and PCB footprint)

A complete set of measurements have been taken to confirm that all endpoint device RF parameters are still the same as the original device and continue to meet compliance for all appropriate rules. There was no RF circuitry, or antenna changes.

Sincerely,

Jay R. Holcomb
R&D Program and Regulatory Manager
jay.holcomb@itron.com
Itron, Inc.

Enclosure: n/a
cc: n/a