To:
Federal Communications Commission
7435 Oakland Mills Road
Columbia, MD 21046-1609

Curtis-Straus LLC TCB
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Littleton, MA 02702

December 14th , 2016

Gentlemen:

This letter is a request to apply for a Class II Permissive Change for the SMARTWARE USN3D RFID modular approval family, FCC ID: RPM-USN3D201.

The changes filed under this application are the introduction of the MX3se-3I3P, USN3se, USN2se and USN1se versions:

The MX3se-3I3P and USN3se are new hardware versions based on MX3e-3I3P and USN3e versions previously certified in 2014. These previous versions were made of 3 independent electronic modules called US-NANO V1R03 and one carrier board called USN-3D V1R02.
New USN3se and MX3se-3I3P are now made of made of 3 independent electronic modules still called US-NANO but updated to **V1R04**, and one unchanged carrier board called USN-3D V1R02 (no evolution).

The difference between new US-NANO **V1R04** and US-NANO V1R03 are:

- Processor interface:

  Add a 32.768 kHz oscillator to enable the processor internal RTC (Real Time Clock) function.

- Contact smart card interface:

  Add a differential receiver connected to the FPGA, to manage USB low/full speed communication.
  On the previous US-NANO V1R03, USB communication was managed by a dedicated component (ISP1761) which is now obsolete.
  Improve the SNR (signal-to-noise ratio) of the input stage for SWP (Single Wire Protocol) communication.

- Contactless smart card interface:

  Add an analog to digital converter (ADC) to digitize the RF signal in reception, to be able to demodulate received frames by our FPGA.
  On previous US-NANO V1R03, only a dedicated component (PN512) could demodulate the frames in reception. (cf. contactless interfaces working synoptic charts).

USN2se and **USN1se** are depopulated versions compared to USN3se. They only contain respectively 2 and 1 US-NANO V1R04 module(s).

All modifications described above does not affect radio characteristics and radio parameters of the equipment.

Sincerely,

Jérôme SOTTAS
Certification Engineer