

Federal Communications Commission  
Authorization and Evaluation Division  
1435 Oakland Mills Road  
Columbia, MD 21046

Date: November 2, 2017

SUBJECT: FCC ID 2ALEPT0004564, Limited Single-Modular Transmitter Approval application

To Whom It May Concern:

The following sections detail compliance of 2ALEPT0004564 to the 8 requirements for modular approval listed in KDB 996369, § III. a):

- 1) The radio elements must have the radio frequency circuitry shielded. Physical components and tuning capacitor(s) may be located external to the shield, but must be on the module assembly – COMPLY: as shown in the product photos, the RF circuitry portion of the printed circuit board assembly is shielded on both top and bottom sides.
- 2) The module must have buffered modulation/data inputs to ensure that the device will comply with Part 15 requirements with any type of input signal – COMPLY: the input interface to the module is either Ethernet. The packets received on these interfaces are converted to analog modulation signals within the module such that, by design, the Part 15 requirements will be met for any type of input signal.
- 3) The module must contain power supply regulation on the module – COMPLY from a limited modular approval perspective: power supply regulation is contained in the specific host portion of the product.
- 4) The module must contain a permanently attached antenna, or contain a unique antenna connector, and be marketed and operated only with specific antenna(s), per §§ 15.203, 15.204(b), 15.204(c), 15.212(a), 2.929(b) – COMPLY from a limited modular approval perspective. The antenna requirements of § § 15.203 are met via the professional installation clause listed in KDB 353028 D01 Antennas Part 15 Transmitters v01 § II. A. 2)

- c). The permitted antenna types are specified in the supplied user manual. The hardware is not readily available to the average consumer since it is a custom product that will be shipped directly to the customer and not marketed to any other customer nor sold to the general public – i.e. the device is for industrial/commercial use. Professional installation is required because the product is a carrier grade industrial gateway that offers long range RF coverage; proper installation of the gateways and exact specified antennas is required to optimize the overall network coverage and performance. The end customer employs licensed, professional installers who are specially trained to install RF equipment and antennas. Since compliance to § § 15.203 via the professional installation clause excludes the possibility of a full modular approval as described in § § 15.212 a), we are applying for Limited Single-Modular Transmitter approval as described in § 15.212 b). This product is compliant to § 15.204 b) and c) since it will only be marketed as a system that includes the 2ALEPT0004564 module and the specific antennas listed in the supplied user manual. Control of the end product into which the module will be installed will be maintained via professional installation.
- 5) The module must demonstrate compliance in a stand-alone configuration – COMPLY from a limited modular approval perspective: Shielding of the non-RF portions of the module is provided by the specific host. Compliance to § § 15.209 is tested by installing the custom host metal chassis to the module chassis. Control is maintained over the final installation through a common custom mechanical design where the host portion and radio portion mate together to form the overall enclosure.
- 6) The module must be labeled with its permanently affixed FCC ID label, or use an electronic display (see KDB Publication 784748) – COMPLY: as shown in the supplied label drawing exhibit, T0004564\_Lab&Loc.pdf, the module is labelled with a permanently affixed FCC ID label.
- 7) The module must comply with all specific rules applicable to the transmitter, including all the conditions provided in the integration instructions by the grantee – COMPLY: via professional installation as per the requirements in the supplied user manual.
- 8) The module must comply with RF exposure requirements – COMPLY: as shown in the supplied RF exposure calculation exhibit.

Regards,

A handwritten signature in blue ink, appearing to read "Tom Danshin".

Tom Danshin, P.Eng

Senior System Engineer

TEKTELIC Communications Inc.