

**Attention:** Application Examiner / Review Engineer

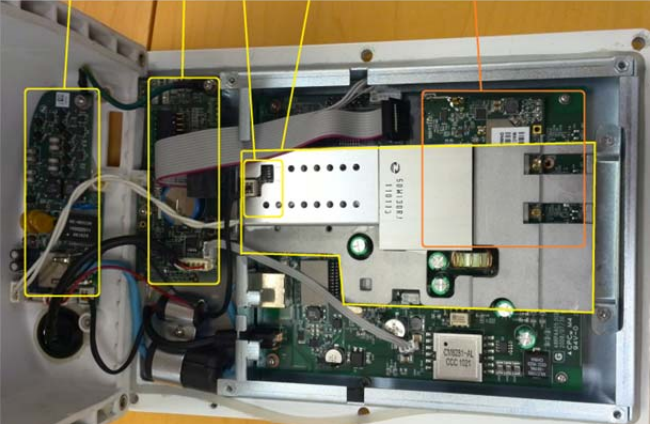
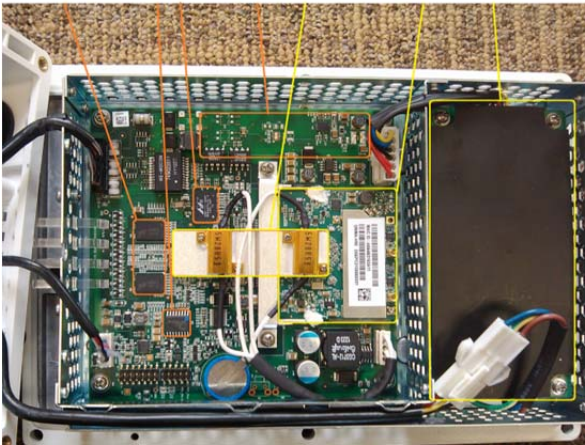
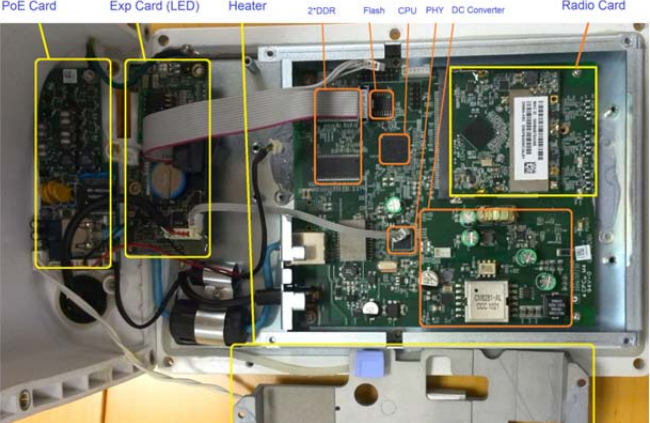



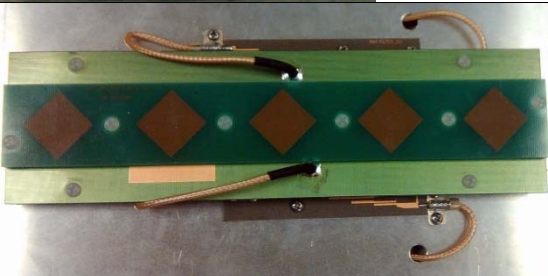
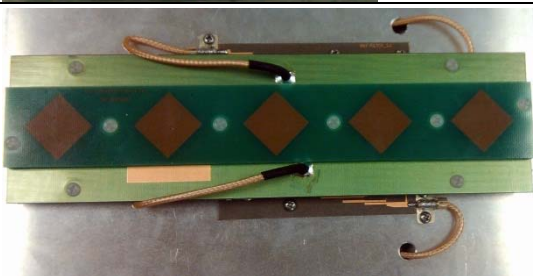
**Reference:** Class II permissive change for FCC ID: Q9DMST200

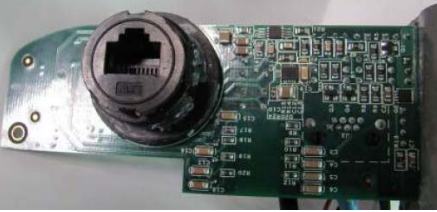




Dear Examiner

This is to request for Class II permissive change for FCC ID: Q9DMST200 originally granted on 5/30/2012.

The commonality and difference between MST2H13N0 (POE version) and MST2H13N1 (AC version):

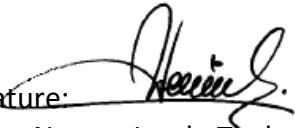
- Comparing to MST200 PoE, MST200 AC remains same RF performance (same radio card and internal antenna), same external enclosure form factor, just introduces AC power module.
- **The Radio card deployed in these two models is the same, which includes all radio related circuits (baseband, transmitter, receiver and filter, etc.) and the connection between radio card and main board is also exactly same.**
- **The Central Processing Unit (CPU) deployed in these two models is not changed;**
- A few substitutions on peripheral/supporting circuits are introduced, but the impacts are very limited and reconfirmed by EMC testing –
  - Two DDR chips are substituted, but keep exactly the same function/interface/size/speed;
  - Ethernet PHY chip is substituted, but keep exactly the same function/interface/speed;
  - Input power circuits are substituted from PoE to AC power source;
  - Merge Ethernet protection circuits, LED, Battery and Heater from discrete boards to the main board.
  - Internal sheet metal was modified to fit main board, and verified in EMC test.

MST2H13N0 ( POE version)	MST2H13N1 ( AC version)	Note
 <p>PoE Card    Exp Card (LED)    Temp Sensor    Heater    Radio Card</p>	 <p>2*DDR    Flash    PHY    PoE module    Heater    Radio Card    AC Power Module</p>	<p>Merged most cards into one main board.</p> <p>MST2H13N1 is powered by AC Power module.</p>
 <p>PoE Card    Exp Card (LED)    Heater    2*DDR    Flash    CPU    PHY    DC Converter    Radio Card</p>	 <p>LED    Temp Sensor    CPU    PCI Slot    Radio Card</p>	<p>Upper photo is heater mounted;</p> <p>While lower photo is heater removed.</p>
		<p>Same radio card.</p>
		<p>Same antenna</p>

	<p>Merged into main board</p>	<p>PoE card consisted of RJ45 Connector and PD controller etc.</p>
	<p>Merged into main board</p>	<p>Exp card consisted of I2C expander (as LED driver), Watch dog timer, RTC etc.</p>
	<p>Merged into main board</p>	<p>Temperature sensor card (with heater control)</p>
		<p>Same external enclosure form factor, except for adding an AC connector.</p>



There are not any changes on RF circuit between the new device and the original one.

Signature: 

Name: Ivaylo Tankov

Title: Compliance Manager

Date: February 20<sup>th</sup>, 2013