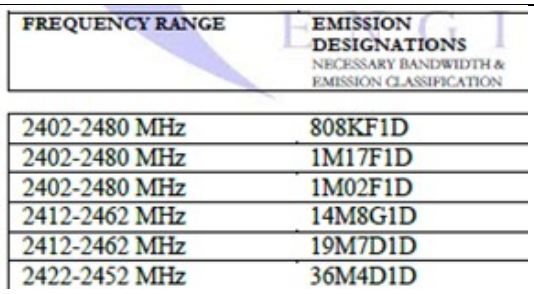
CCU Operational Description:

The Connectivity Control Unit (CCU-2) that serves as the connectivity device between controllers on the bike, a user-facing dashboard, diagnostics tools, external sensors, mobile devices/applications, and headsets for use on on-road and off-road bikes. The unit is based on ATSAMA5D27 Cortex-A5 microprocessor. Power is provided by a vehicle 12-16Vdc battery. The unit is equipped with a GPS receiver SKYTRAQ Venus828F for navigation tracking capabilities, Bluetooth link to a user phone, and Wi-Fi link to a phone or access point.

The Bluetooth and Wi-Fi transceiver is based on TI WL1831 (only 2.4GHz) pre-certified module. The GPS uses a ceramic patch antenna (WL-GPSI1818) connected via a 50 ohm coax.

Product Specifications:

Tx/Rx Operating Frequencies	1. WL1831 WiFi: 802.11b/g only - 2412 to 2483.5 MHz 2. WL1831 Bluetooth: 2402 to 2480 MHz 3. GNSS receiver: GPS L1 [1575.42MHz], Glonass L1 [1598.0625-1605.375MHz], Galileo E1[1575.42MHz], BeiDou B1[1559.05 MHz-1563.15 MHz]
Transmit Max Output Power	1. WL1831: Bluetooth (10 dBm), WiFi (10dBm) – Lower power achieved via software
Modulation	**WL1831** BLE: (1Mbps) GFSK BT EDR (1Mbps): GFSK BT EDR (2Mbps): π/4-DQPSK BT EDR (3Mbps): 8-DPSK BT FHSS (Frequency Hopping Spread Spectrum) – Follows the protocol under the Bluetooth 4.2 standard WiFi (802.11b): DSSS (DBPSK/DQPSK/CCK) - Data rates: 1, 2, 5.5 and 11 Mbps WiFi (802.11g): OFDM (BPSK/QPSK/16QAM/64QAM) - Data rates: 6, 9, 12, 18, 24, 36, 48 and 54 Mbps;
ITU Emissions Designator	**WL1831**

	
Antenna Type and gain	BT/WiFi: Johanson 2450AT18A100 SMT chip (0.5 dBi peak gain, -0.5 dBi av gain) GPS: Yetnorson YNX-GPS-IPEX-1818 (28 dB gain)
Power Supply Requirements	+14 VDC supplied from vehicle
Regulatory Standards	Inclusive for all countries discussed
HS Code	87141099
Operating Temperature	-10C to +70C

Radios:

WiFi/BT combo - WL1831	FCC ID: 2AOW7-K001
GPS – SKYTRAQ Venus82F	FCC ID: n/a (receiver only)