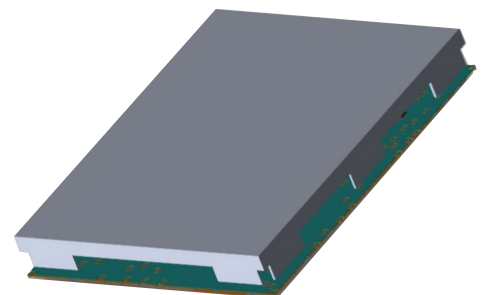
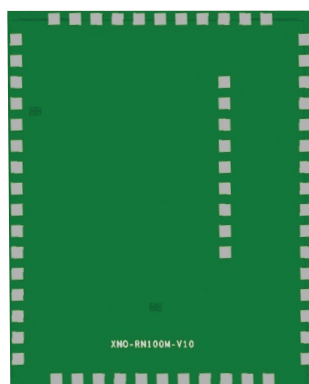


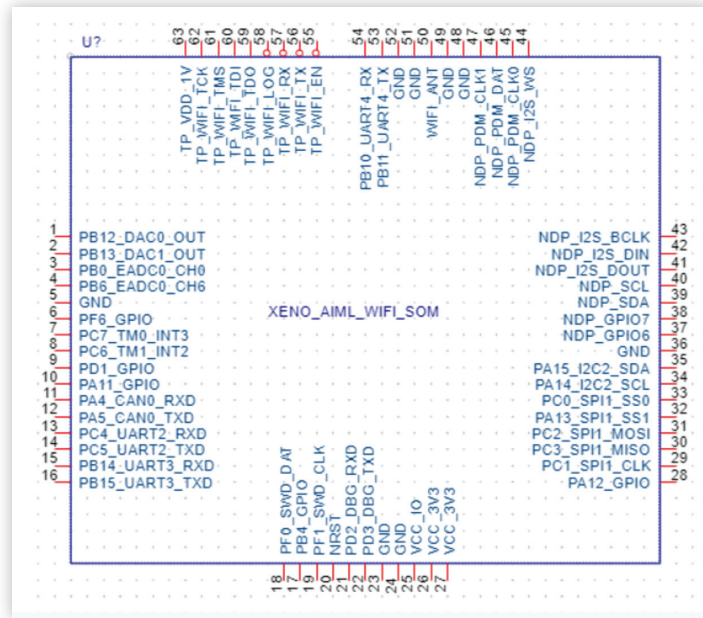
- Solderable XENO+ WiFi+BLE SOM (System-On-Module) is a solderable module can be used as core CPU module for building new Battery operated AIML/IOT devices by Customers.
- Has InnophaseIoT's WiFi+BLE modem and supports WiFi 2.4G b/g/n and BLE5.0 with 2Mbps, LE Coded and Extended advertising.
- Has Syntiant NDP120 Neural Decision Processor for AIML processing of both audio and time-series sensor data.
- Has ARM Cortex-M23 @ 96MHz, 1MB Flash, 256KB RAM.
- Consumes very less standby mode and thus increases Battery life.
- This module comes with standalone Bootloader application with firmware downloading of following firmwares over-the-air (FOTA):
 - Host MCU firmware
 - NDP processor ML models and DSP firmware
 - WiFi+BLE modem firmware
- The XENO Flashing tool can also be used to flash above all firmwares via debug UART port from user's PC/Laptop.

Key Benefits

- The Customers can save up to 40% of HW and SW development time
- The user can directly use Eclipse DE/ KEIL IDE via JTAG dongle connected to SWD port for developing their main embedded SW applications
- The Application Development Libs (APL) offered along with XENO+ ML SOM modules helps the Customers in Embedded SW development time
- The NDP120 can run multiple Deep Neural Networks (DNN) on a variety of architectures, such as CNNs, RNNs and fully connected networks up to 256 layers
- The Customers can leverage FOTA and PKCE based Device authentication features offered with XENO+ ML SOM modules
- For XENO+ ML modules, the customers can build carrier board to attach sensors on I2C/SPI/CAN/UART/ADC/DAC/PWM/GPIO interfaces for their Battery-operated Edge AIML/IoT devices design.

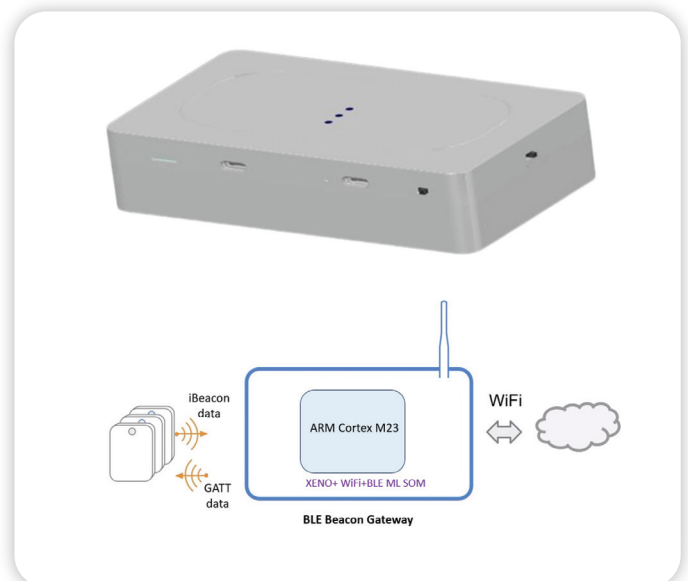


Pin mapping of XENO+ WiFi+BLE ML SOM Module



CASE STUDY: BLE Beacon Gateway Device

- This BLE Beacon Gateway is designed based on XENO+ WiFi+BLE ML SOM module.
- This Gateway device scans all BLE beacon devices (up to 100 iBeacons) within 30meters range.
- This Gateway also connects with any Beacon device via custom GATT profile to configure and control the devices wirelessly.
- Supports 2200mAH LiFePO4 Battery and associated USB charging circuits.
- The collected beacon data is uploaded to server via WiFi 2.4G b/g/n interface to Cloud Dashboard Application.
- The WiFi connectivity uses TCP, HTTP and MQTT based data protocols.



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