

LoRa Module specifications

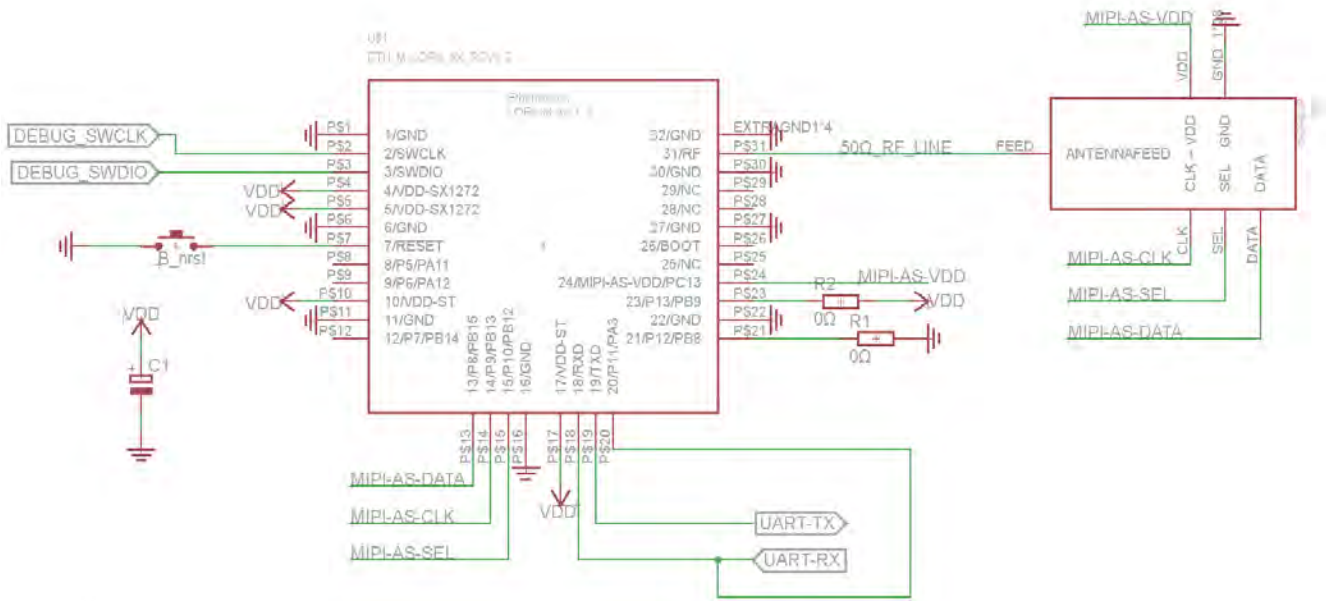
KYOCERA AVX produces a wide variety of standard and custom antennas to meet user needs

Programming Interface

ETH-LORA-M-AX-01 is already pre-programmed with latest firmware available on the production date. Nonetheless, this module supports an In Application Programming (IAP) to perform a Firmware Upgrade. If in the future, the firmware is updated, user can download the firmware on the website and update the module using UART interface.

Please refer to application note about upgrading the module Firmware for more details [6].

Integration guide (UART Interface Application)



Schematic Part Name	Manufacturer	Manufacturer Part Number	Description
U\$1	KYOCERA AVX	LORA-M-AX-01	Lora Module V1.2
U\$3	KYOCERA AVX	B2	Active Steering Antenna (MIPI Interface)
B_nrst	Rafi	1.14002.1010000	SWITCH PUSH SPST-NO 0.1A 35V
R1	Panasonic	ERJ-S020R00X	Thick Film Resistors - SMD 0402 Zero ohm Jumper 0.05ohm AEC-Q200
R2	Panasonic	ERJ-S020R00X	Thick Film Resistors - SMD 0402 Zero ohm Jumper 0.05ohm AEC-Q200

This is a typical UART interface application schematic for ETH-LORA-M-AX-01. UART-RX signal is also connected to P11 in order to wake up the module when using the stop mode in low power mode. Please refer to document about the integration guideline for more details [2].

*All dimensions provided in this document are for informational purposes only

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Ordering Information

Ordering Part Number	Description	Contact
ETH-LORA-M-AX-01-EU	KYOCERA AVX SMD LoRa Module for 868 MHz	eth.europesales@kyocera-avx.com
ETH-LORA-M-AX-01-US	KYOCERA AVX SMD LoRa Module for 915 MHz	eth.usasales@kyocera-avx.com

Note

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

NOTE: The grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user’s authority to operate the equipment.

Reference

- [1] Semtech Sx1272 Data Sheet from www.semtech.com
- [2] LoRa_Module_General Module Integration Guideline from www.kyocera-avx.com/products/modules/lora-module
- [3] LoRa_Module_AT Command Reference Guide from www.kyocera-avx.com/products/modules/lora-module
- [4] LoRa_Module_Application_Note_1-Passive Evaluation Board from www.kyocera-avx.com/products/modules/lora-module
- [5] LoRa_Module_Application_Note_4-Active Steering Evaluation Board from www.kyocera-avx.com/products/modules/lora-module
- [6] LoRa_Module_Application_Note_2-Firmware Upgrade from www.kyocera-avx.com/products/modules/lora-module