WashSense

WashSense Inc.
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MeshSense X1 Series Module for 2.4 GHz Communication

The MeshSense X1 enables communication between a host and other MeshSense24X-enabled devices at distances of up to dozens of meters while consuming very little power.

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1. Features

- Nordic nRF52832
- On-board antenna
- Solderless connection to host
- 512 kB persistent storage
- 64 kB random access memory
- Low-power
- FCC ID: 2AJ87-SENSEX1

2. Applications

- Sensor data communication

- Environmental event communication
- Wireless communication with other compatible devices

3. Ordering Information

- MeshSense X1 cannot be ordered individually but may be integrated into products through partnership. We are excited to hear from you!

4. Specifications

Absolute Maximum Ratings

Parameter	Min	Max	Unit
VDD	0.3	3.9	V
VSS		0	V
I/O (VDD <= 3.6 V)	-0.3	VDD + 0.3	V
I/O (VDD > 3.6 V)	-0.3	3.9	V

Operating Conditions

Parameter	Min	Nominal	Max	Units
VDD	1.7	3.0	3.6	V
Supply Rise Time			60	ms
Operating Temperature	-40	25	85	Celsius

Input/Output, Programming, and Debug

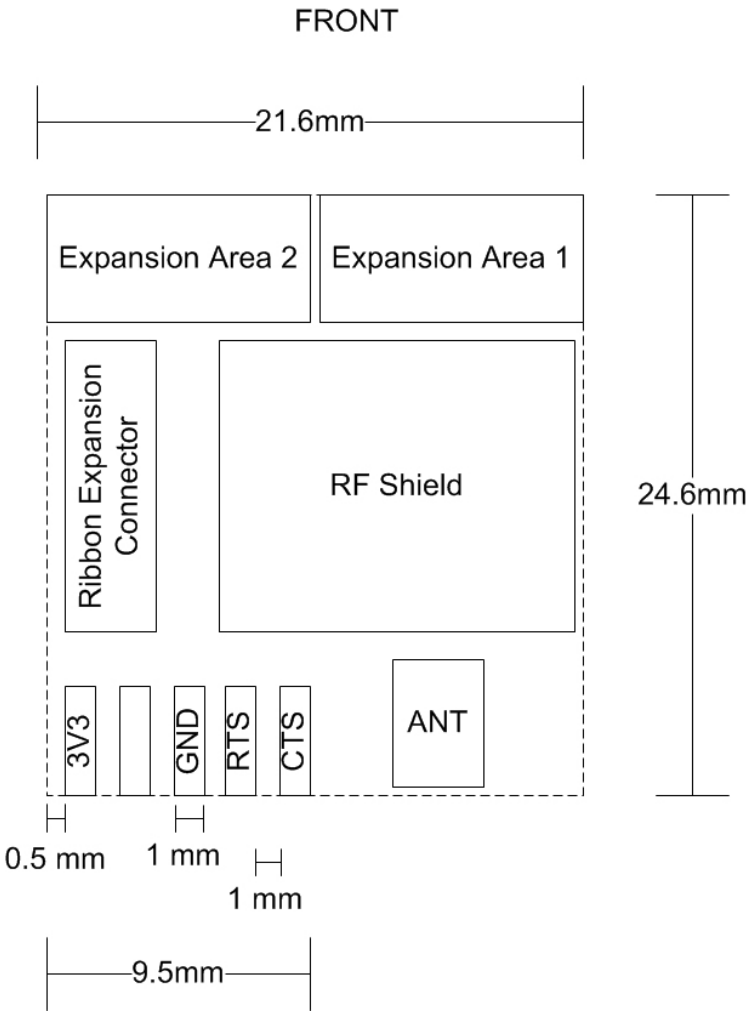
See Nordic documentation NRF52832 Objective Product Specification. Only channels 2-80 may be used.

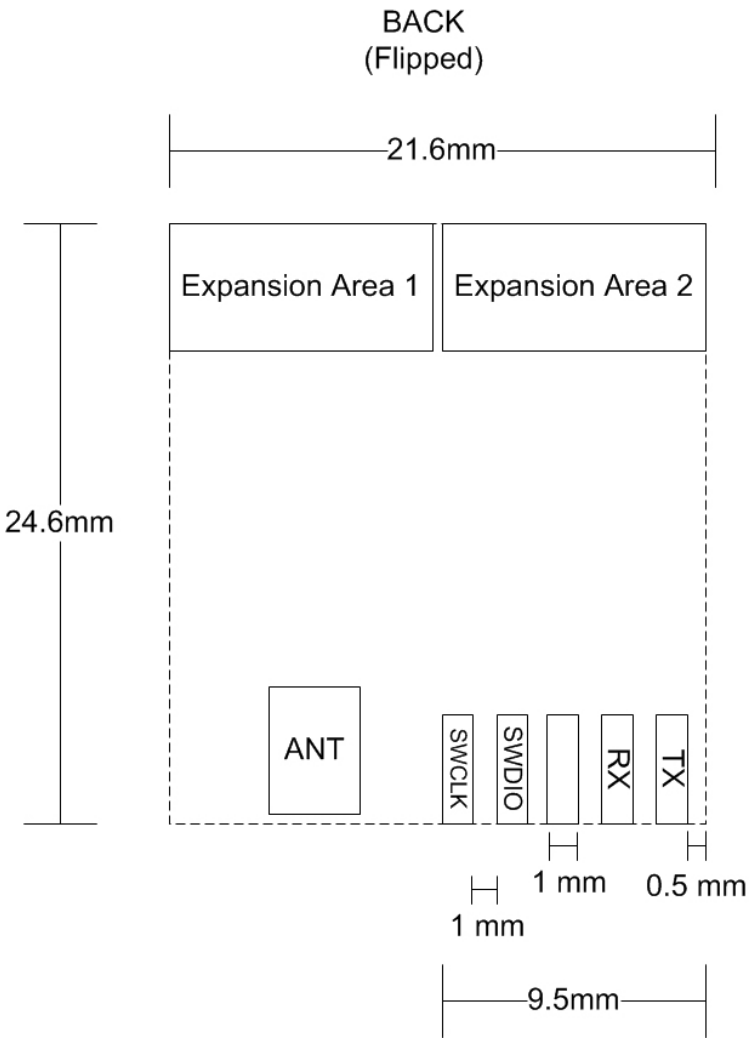
5. Firmware

Our firmware is shipped allowing a virtual serial port connection between modules (alternatives may be available, depending upon the request). This includes buffering. During

partnership, if you would prefer alternatives to the default pins, please request which pin you would like to use as the receiving pin, which pin you would like to use as the transmit pin, which pin you would like to use as the clear-to-send pin, and which pin you would like to use as the request-to-send pin. All transmissions are fully buffered. Please allow for latency of several milliseconds. Default baud rate is 9600, please request if an alternative is desired.

6. Connection Pad and Mechanical Data





7. Labeling Requirements

The end product must be labeled in a visible area with the following: “Contains FCC ID: 2AJ87-SENSEX1” or with words of this same meaning. The following statement should also be included on this label unless this is not possible, in which case the User Manul of the host device should include it:

“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. (2) This device must accept any interference received, including interference that may cause undesired operation.”

8. Important Statements

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by ***WashSense Inc*** *may void the user's authority to operate the equipment.*

The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.