Contents [hide]

NXP NAFE13388-UIM Universal Analog Sensing Module

Software-configurable analog input solution with versatile sensor support, real-time diagnostics and reliable wired connectivity enabling high-precision sensing and edge

intelligence

Specifications

- Product Name: Universal Analog Sensing Module
- Functionality: Software-configurable analog input solution with versatile sensor support
- Connectivity: Reliable wired connectivity
- Features: Real-time diagnostics, high-precision sensing, edge intelligence

About the Universal Analogue Sensing Module

NXP's universal sensing module is a universal, software-configurable analog input solution designed for high-precision sensing and edge intelligence. It supports versatile sensor inputs (voltage, current, temperature, resistance, pressure, and weight) and ensures reliable wired connectivity via CAN FD, Ethernet, and USB. With an advanced NAFE13388 analog front end and an MCX N947 MCU, this module delivers high-accuracy, high-precision data, in addition to real-time diagnostics, anomaly detection, and predictive maintenance for industrial automation, lab instrumentation and smart manufacturing. Its modular, expandable platform enables seamless integration with AI/ML applications, making it the ideal choice for future-proof industrial sensing.

Step-by-step instructions

1. Order your boards
   This solution includes two NXP boards, the orderable part numbers are: NAFE13388-UIM FRDM-MCXN947
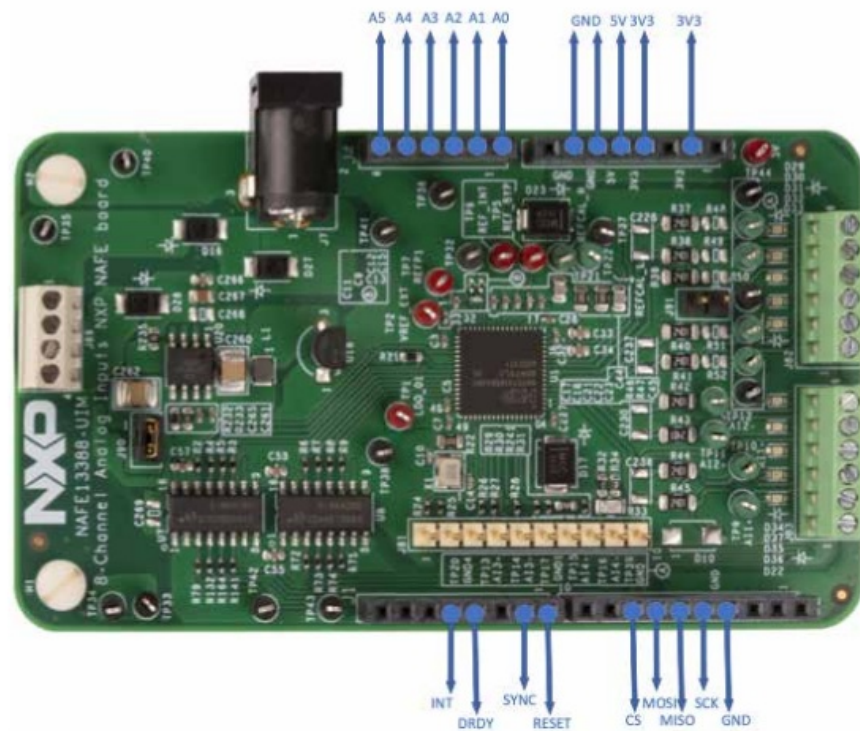
2. Connecting the boards

   Connect the NAFE13388-UIM shield board to the FRDM-MCXN947 development board as shown in the image.

Evaluating the solution

1. Connect the 15 V power adapter (SMI6B-15-K-P5-ND) to the J7 DC power jack on the NAFE13388-UIM board.
2. Connect the provided USB cable to the FRDM-MCXN947 (MCU-Link USB) kit.
3. Open the "NAFE13388 universal analogue sensing module" firmware repository in Application Code Hub. Select USB connectivity and follow steps 3.1 to 3.7.1 in the GUI guide to configure the AFE and open the web server application.
4. Apply DC voltage on the AI1+ test point on the NAFE13388-UIM board.
5. Click the "Start" button to stream real-time samples on the FreeMaster oscilloscope

window.
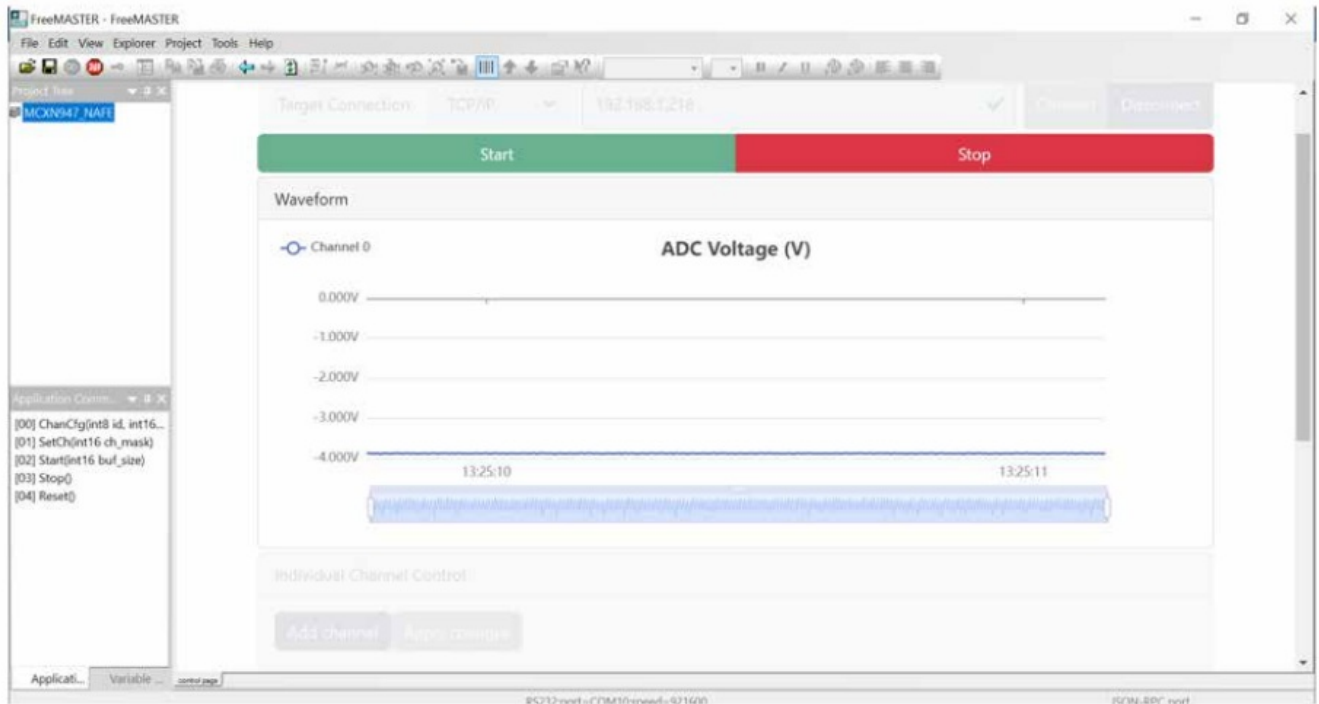
Analog Front End

- NAFE13388 analog front end
- NAFE13388-UIM board

MCX N947 MCU

- MCX N947 MCUs
- FRDM-MCXN947 development board

Get started

Download installation software and documentation under "Jump Start Your Design" at nxp.com/USM

Support

Visit nxp.com/support for a list of phone numbers within your region.

Warranty

Visit nxp.com/warranty for complete warranty information.

FAQ

- **Q: Where can I find additional sensor support information?**
  - A: For additional sensor support information, please refer to the documentation available at nxp.com/USM or contact our support team at nxp.com/support.
- **Q: What is the recommended power supply for the Universal Analogue Sensing Module?**
  - A: The recommended power supply for the module is a 15 V power adapter (SMI6B-15-K-P5-ND) connected to the J7 DC power jack on the NAFE13388-UIM board.

Documents / Resources

	[NXP NAFE13388-UIM Universal Analog Sensing Module](#) [[pdf](#)] User Guide NAFE13388-UIM, FRDM-MCXN947, NAFE13388-UIM Universal Analog Sensing Module, NAFE13388-UIM, Universal Analog Sensing Module, Analog Sensing Module, Sensing Module, Module

References

- [User Manual](#)

📁 NXP

🏷 Analog Sensing Module, FRDM-MCXN947, Module, NAFE13388-UIM, NAFE13388-UIM Universal Analog Sensing Module, NXP, Sensing Module, Universal Analog Sensing Module

---

Leave a comment

Your email address will not be published. Required fields are marked *

Comment *

Name

Email

Website

☐ Save my name, email, and website in this browser for the next time I comment.

Post Comment

Search:

e.g. whirlpool wrf535swhz   **Search**