



# FRDM Expansion Boards

**Flexible, Rapid Development with  
MCUXpresso**

Business Line Advanced Analog | September 2024, V1

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# Agenda

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1. [Advanced Analog Portfolio Summary](#)
2. [FRDM Expansion Boards Index](#)
3. [Technical support and Product Longevity](#)
4. [Summary Released FRDM Expansion Boards](#)

# Advanced Analog Portfolio Summary

Energy Network – Precision Analog – Data Network



Automotive



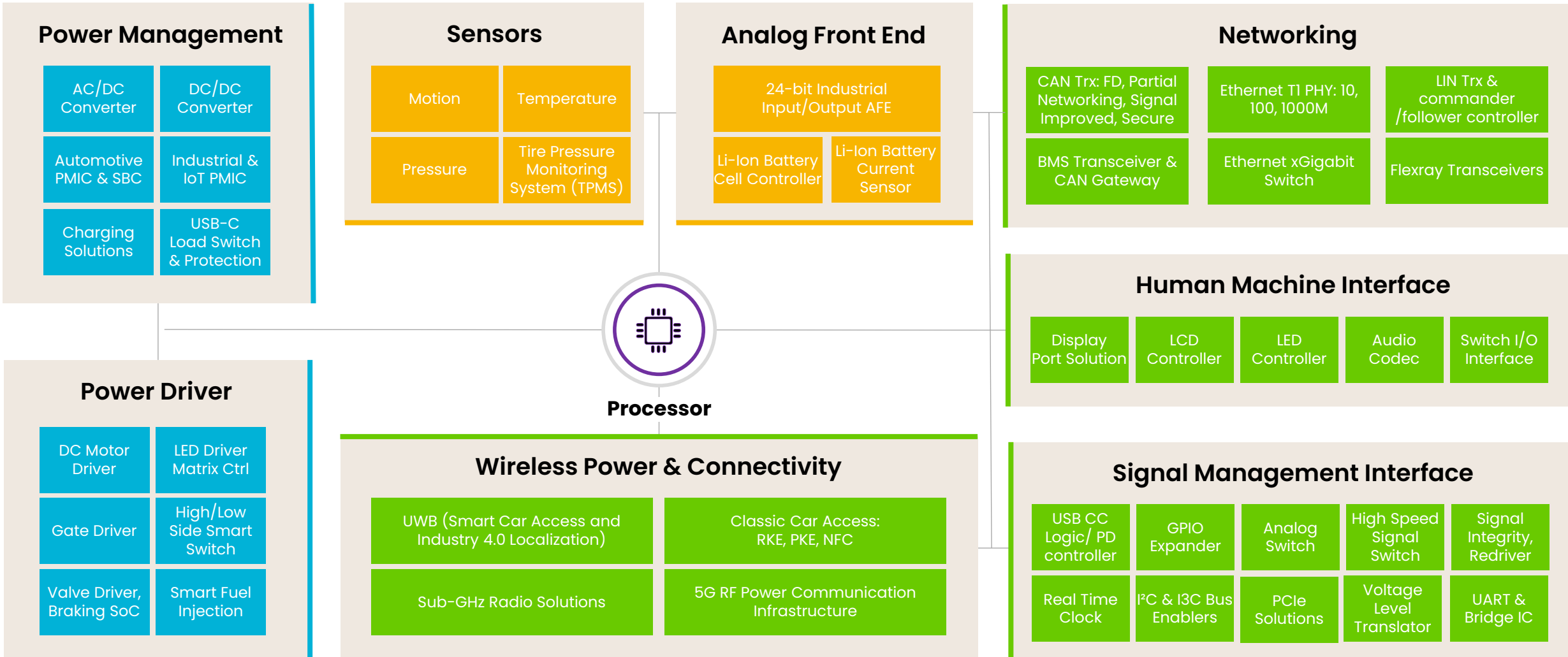
Industrial & IoT



Mobile



Comm. Infra



# FRDM Expansion Boards Index

- Automotive & Transportation
- Factory Automation
- Healthcare
- Power & Energy
- Home & Building Controls
- Communication & Computing

Segment	Sub-segment	Device	Board	Link to the slide	Target Application
Power Network	Motor Driver	<a href="#">HB2002</a> SPI-Programmable H-Bridge Brushed DC Motor Driver	FRDM-HB2002ESEVM	<a href="#">Link</a>	<span style="color: #00AEEF;">●</span> <span style="color: #4CAF50;">●</span> <span style="color: #2196F3;">●</span>
	Motor Driver	<a href="#">MC33926</a> H-Bridge, Brushed DC Motor Driver	FRDM33926PNBEVM	<a href="#">Link</a>	<span style="color: #00AEEF;">●</span> <span style="color: #4CAF50;">●</span> <span style="color: #2196F3;">●</span>
Data Network	GPIO Expander	<a href="#">PCAL6416A</a> Low-Voltage Translating 16-Bit I <sup>2</sup> C-Bus/SMBus I/O Expander	PCAL6416AEV-ARD	<a href="#">Link</a>	<span style="color: #FFC000;">●</span> <span style="color: #4CAF50;">●</span>
	GPIO Expander	<a href="#">PCAL9722</a> 22-Bit SPI I/O Expander with Agile I/O Features	PCAL9722HN-ARD	<a href="#">Link</a>	<span style="color: #FFC000;">●</span> <span style="color: #545454;">●</span>
	I <sup>2</sup> C-Bus Switch	<a href="#">PCA9846</a> Four-Channel Ultra-Low Voltage, Fm+ I <sup>2</sup> C-Bus Switch with Reset	PCA9846PW-ARD	<a href="#">Link</a>	<span style="color: #FFC000;">●</span> <span style="color: #4CAF50;">●</span>
	I <sup>3</sup> C-Bus Switch & VLT	<a href="#">P3S0210BQ</a> Dual Bidirectional I <sup>3</sup> C 1:2 Switch and VLT	P3S0210BQ-ARD	<a href="#">Link</a>	<span style="color: #FFC000;">●</span> <span style="color: #4CAF50;">●</span> <span style="color: #2196F3;">●</span> <span style="color: #545454;">●</span>
	LIN Transceiver	<a href="#">SJA1124</a> Quad LIN Commander Transceiver with LIN Commander Controller	SJA1124EVB	<a href="#">Link</a>	<span style="color: #00AEEF;">●</span> <span style="color: #4CAF50;">●</span> <span style="color: #FFC000;">●</span>
	LED Controller	<a href="#">PCA9957</a> 24-Channel SPI Serial Bus 32 mA/5.5 V Constant-Current LED Driver	PCA9957HN-ARD	<a href="#">Link</a>	<span style="color: #FFC000;">●</span> <span style="color: #4CAF50;">●</span> <span style="color: #2196F3;">●</span> <span style="color: #FF7F0E;">●</span> <span style="color: #545454;">●</span>
	LED Controller	<a href="#">PCA9959</a> 24-Channel SPI Serial Bus 63 mA/5.5 V Constant Current LED Driver	PCA9959HN-ARD	<a href="#">Link</a>	<span style="color: #FFC000;">●</span> <span style="color: #4CAF50;">●</span> <span style="color: #2196F3;">●</span> <span style="color: #FF7F0E;">●</span> <span style="color: #545454;">●</span>
	Real Time Clock	<a href="#">PCF2131</a> Accurate RTC with Integrated TCXO for Industrial Applications <a href="#">PCA2131</a> Accurate RTC with Integrated TCXO for Automotive Applications	PCF2131-ARD	<a href="#">Link</a>	<span style="color: #00AEEF;">●</span> <span style="color: #4CAF50;">●</span> <span style="color: #FFC000;">●</span> <span style="color: #2196F3;">●</span> <span style="color: #FF7F0E;">●</span> <span style="color: #545454;">●</span>
	Real Time Clock	<a href="#">PCF85063A</a> Tiny Real-Time Clock/Calendar with Alarm Function and I <sup>2</sup> C-Bus	PCF85063AT-ARD	<a href="#">Link</a>	<span style="color: #00AEEF;">●</span> <span style="color: #4CAF50;">●</span> <span style="color: #FFC000;">●</span> <span style="color: #2196F3;">●</span> <span style="color: #FF7F0E;">●</span> <span style="color: #545454;">●</span>
Precision Analog	Magnetic Sensor	<a href="#">NMH1000</a> Ultra-Low Power and Low-Voltage Magnetic Switch	FRDMSTBI-NMH1000	<a href="#">Link</a>	<span style="color: #FFC000;">●</span> <span style="color: #4CAF50;">●</span> <span style="color: #2196F3;">●</span> <span style="color: #FF7F0E;">●</span>
	Motion Sensor	<a href="#">FXLS8974CF</a> ±2g/±4g/±8g/±16g, Low-Power 12-Bit Digital IoT Accelerometer	FRDM-STBI-A8974	<a href="#">Link</a>	<span style="color: #FFC000;">●</span> <span style="color: #4CAF50;">●</span> <span style="color: #2196F3;">●</span> <span style="color: #FF7F0E;">●</span>
	Motion Sensor	<a href="#">FXLS8971CF</a> ±2g/±4g/±8g/±16g, Low Power 12-Bit Digital Accelerometer	FRDM-STBI-A8971	<a href="#">Link</a>	<span style="color: #FFC000;">●</span> <span style="color: #4CAF50;">●</span> <span style="color: #2196F3;">●</span> <span style="color: #FF7F0E;">●</span>
	Pressure Sensor	<a href="#">MPL3115</a> Absolute Digital Pressure Sensor (20 to 110 kPa)	FRDMSTBC-P3115	<a href="#">Link</a>	<span style="color: #FFC000;">●</span> <span style="color: #4CAF50;">●</span> <span style="color: #2196F3;">●</span> <span style="color: #FF7F0E;">●</span>
	Temperature Sensor	<a href="#">P3T1085UK</a> I <sup>3</sup> C/I <sup>2</sup> C-Bus ±0.5 °C Accurate Digital Temperature Sensor <a href="#">P3T1084UK</a> I <sup>3</sup> C/I <sup>2</sup> C-Bus ±0.4 °C Accurate Digital Temperature Sensor	P3T1085UK-ARD	<a href="#">Link</a>	<span style="color: #FFC000;">●</span> <span style="color: #4CAF50;">●</span> <span style="color: #2196F3;">●</span> <span style="color: #FF7F0E;">●</span> <span style="color: #545454;">●</span>

1

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2

## About Product Longevity

- HERO+ are available for minimum of 10 years or 15 years since product launched date
- Extended periods may be available under certain circumstances
- About each product information, please check [Product Longevity](#) in NXP.com



Product **Longevity**

# FRDM33926PNBEVM FRDM Kit for MC33926

## H-Bridge Motor Driver

Enabling System Solutions with FRDM Platform

### FRDM33926PNBEVM Highlights

#### Supported Device

[MC33926 H-bridge DC Motor Driver](#)

#### Target Applications

- Electronic throttle control (ETC)
- Exhaust gas recirculation (EGR)
- Turbo flap control
- Industrial and medical pumps and motor control

#### Key Features

- Test points to allow signal probing
- Built-in reverse battery protection
- Built-in voltage regulator to supply logic level circuitry
- LEDs to indicate the supply status and direction of motor
- Transient voltage suppressor to handle system level transients

Available Now



2.5" x 3.25" (6.35 cm x 8.25 cm)

Device	Compatible Processor Boards	SDK	ACH (Example Project)
<a href="#">MC33926</a>	<a href="#">FRDM-MCXA153</a> <a href="#">FRDM-MCXN947</a>	Available in Q3 2024	Available in Q3 2024

#### Documents:

[FRDM33926PNBEVM User Guide](#)

For pricing and availability, see the [FRDM33926PNBEVM](#) FRDM Expansion Board page.

# FRDM-HB2002ESEVM FRDM Kit for HB2002, Programmable Brushed DC Motor Control

Enabling System Solutions with FRDM Platform

## FRDM-HB2002ESEVM Highlights

### Supported Device

[HB2002 H-Bridge DC Motor Driver](#)

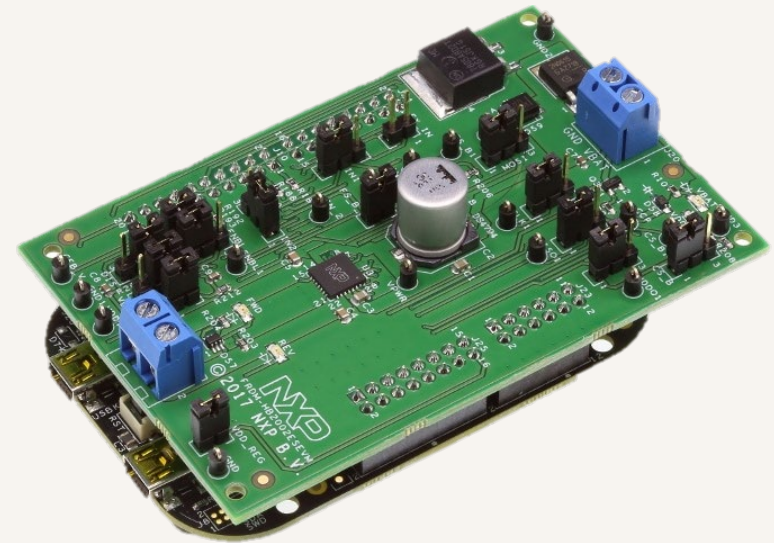
### Target Applications

- Electronic throttle control
- Exhaust gas recirculation control (EGR)
- Turbo, swirl and whirl and waste flap control
- Electric pumps, motor control and auxiliaries

### Key Features

- Current feedback network for real-time load current monitoring by MCU ADC
- LEDs to indicate the supply status and the direction of the motor
- Low ESR capacitor to reduce ripple in the power supply
- TVS protection diode to handle system level transients

**Available Now**



2.5" x 3.2" (6.35 x 8.12 cm)

Device	Compatible Processor Boards	SDK	ACH (Example Project)
<a href="#">HB2002</a>	<a href="#">FRDM-MCXA153</a> <a href="#">FRDM-MCXN947</a>	Available in Q3 2024	Available in Q3 2024

### Documents:

[UM11144 FRDM-HB2002ESEVM evaluation board - User Guide](#)

For pricing and availability, see the [FRDM-HB2002ESEVM Development Board](#) page.

# PCAL6416AEV-ARD Arduino® Shield Evaluation Board for PCAL6416A 16-bit GPIO

Enabling System Solutions with FRDM Platform

## PCAL6416AEV-ARD Highlights

### Supported Device

[PCAL6416A Low-Voltage I<sup>2</sup>C-Bus/SMBus I/O Expander](#)

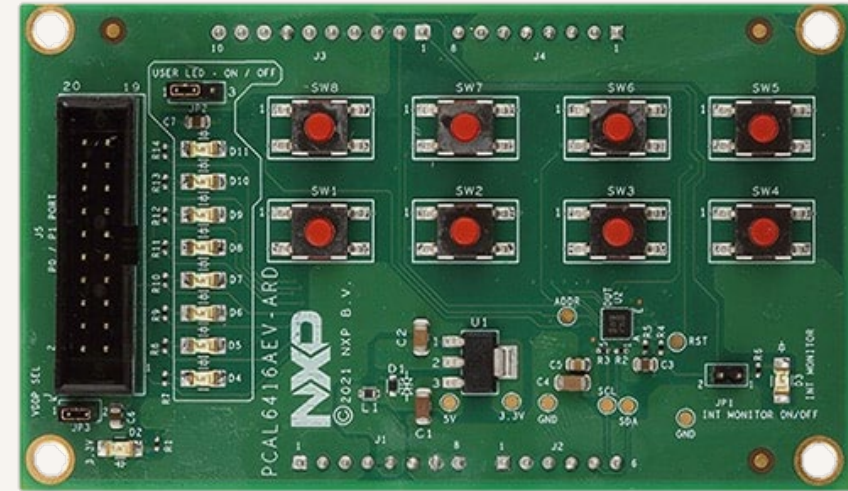
### Target Applications

- I/O Voltage Translating
- Keypad
- Push Buttons
- Home Sensor

### Key Features

- I/O connector for external access to IC input-output pins
- 8 user switches connected to I/O pins of the IC
- 8 user LEDs connected to I/O pins of the IC
- Equipped with Arduino Uno R3 port for direct connection with Arduino devices
- Fully compliant with IMXRT1050, LPCXpresso55S69 and i.MX Mini LPDDR4 EVK boards, including GUI (Windows 10)

Available Now



3.7" x 2.16" (9.39 x 5.48 cm)

Device	Compatible Processor Boards	SDK	ACH (Example Project)
<a href="#">PCAL6416A</a>	<a href="#">FRDM-MCXA153</a> <a href="#">FRDM-MCXN947</a>	<a href="#">Available in Q1 2025</a>	<a href="#">Available in Q1 2025</a>

### Documents:

- [UM11704, PCAL6416AEV-ARD Evaluation Board - User Manual](#)
- [UM11581 - Arduino Shields GUI and Firmware Installation - User Guide](#)

For pricing and availability, see the [PCAL6416AEV-ARD Development Board](#) page.



# PCAL9722HN-ARD PCAL9722 Ultra Low-Voltage Translating 22-Bit SPI I/O Evaluation Board

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Available Now

## PCAL9722HN-ARD Highlights

### Supported Device

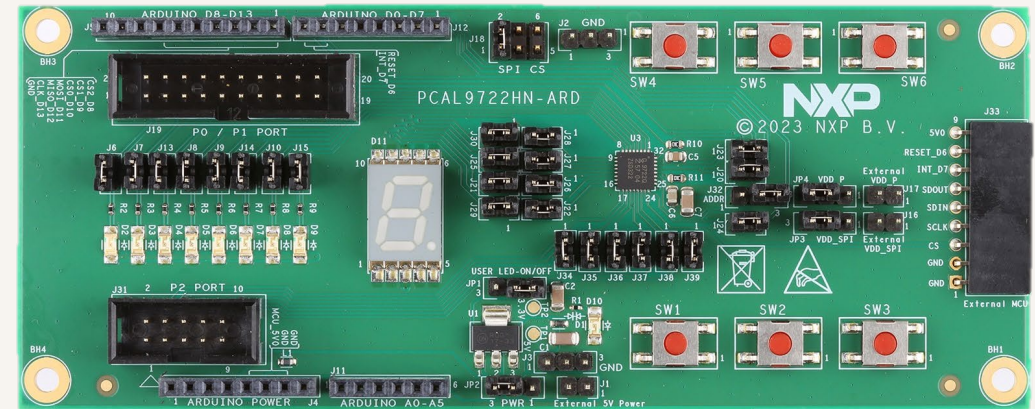
[PCAL9722 Ultra low-voltage 22-Bit SPI I/O Expander](#)

### Target Applications

- Battery-Powered Mobile
- Keypad

### Key Features

- A complete evaluation platform for the PCAL9722HN with Agile I/O features, interrupt output and reset
- Convenient test points for easy scope measurements and signal access
- Easy to use GUI based software demonstrates the capabilities of the PCAL9722HN
- On-board LEDs, 7 segment display and key switches for PCAL9722HN general purpose I/O evaluation.



5.75" x 2.25" (14.6 x 5.7 cm)

Device	Compatible Processor Boards	SDK	ACH (Example Project)
<a href="#">PCAL9722</a>	<a href="#">FRDM-MCXA153</a> <a href="#">FRDM-MCXN947</a>	<a href="#">Available in Q1 2025</a>	<a href="#">Available in Q1 2025</a>

### Documents:

[UM12075, PCAL9722HN-ARD Evaluation Board User Manual](#)

For pricing and availability, see the [PCAL9722HN-ARD](#) Development Board page.

# PCA9957HN-ARD FRDM Expansion Board (Arduino® Shield) for PCA9957 LED Driver

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## PCA9957HN-ARD Highlights

### Supported Device

[PCA9957 24-Channel SPI Serial Bus LED Driver](#)

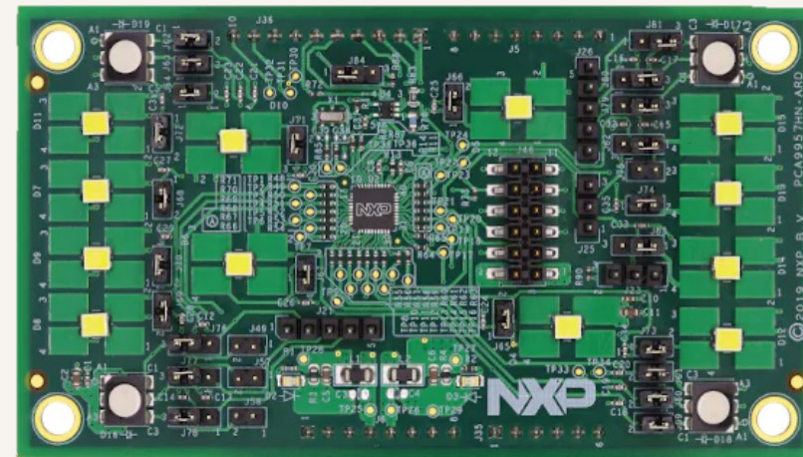
### Target Applications

- LED displays / LED status information / LCD backlights
- RGB or RGBA LED drivers
- Keyboard or keypad backlights
- Smart Assistance Response LED lighting
- Fade-in and fade-out for breathlight control

### Key Features

- Use Arduino connector for data and power
- Multiple board connection in stack architecture
- On-board connectors for external LEDs
- Fully compliant with IMXRT1050 EVK board, including GUI (Windows 10)

Available Now



4.0" x 2.4" (10.16 x 6.09 cm)

Device	Compatible Processor Boards	SDK	ACH (Example Project)
<a href="#">PCA9957</a>	<a href="#">FRDM-MCXA153</a> <a href="#">FRDM-MCXN947</a>	<a href="#">PCA9957HN-ARD Driver</a>	<a href="#">PCA9957HN-ARD Driver</a>

### Documents:

[UM11579, PCA9957HN-ARD User Manual](#)  
[UM11581, GUI User Manual](#)

For pricing and availability, see the [PCA9957HN-ARD](#) FRDM Expansion Board page.

# PCA9959HN-ARD Arduino® Shield Evaluation Board for PCA9959 LED Driver

Enabling System Solutions with FRDM Platform

Available Now

## PCA9959HN-ARD Highlights

### Supported Device

[PCA9959 24-Channel SPI Serial Bus LED Driver](#)

### Target Applications

- Keypad backlights
- LED displays
- RGB or RGBA LED drivers
- Smart Assistance Response LED lighting

### Key Features

- Combined Arduino port/Fuji connector for data and power
- Onboard LEDs for all 24 outputs of the DUT IC
- Onboard jumpers for LED connection, and short tests
- Onboard connectors for external LEDs
- Compliant with IMXRT1050 , LPCXpresso55S69 , 8MMINILPD4-EVK boards, including GUI for Windows 10



3.2" x 2.3" (8.12 x 5.84 cm)

Device	Compatible Processor Boards	SDK	ACH (Example Project)
<a href="#">PCA9959</a>	<a href="#">FRDM-MCXA153</a> <a href="#">FRDM-MCXN947</a>	<a href="#">PCA9959HN-ARD SDK</a>	<a href="#">PCA9959HN-ARD ACH</a>

### Documents:

[UM11623, PCA9959HN-ARD evaluation board - User manual](#)  
[UM11581 - Arduino Shields GUI and Firmware Installation - User Guide](#)

For pricing and availability, see the [PCA9959HN-ARD Development Board](#) page.

# PCA9846PW-ARD Arduino® Shield board for PCA9846 Ultra-low voltage, I<sup>2</sup>C-Bus Switch

Enabling System Solutions with FRDM Platform

## PCA9846PW-ARD Highlights

### Supported Device

[PCA9846 Four-Channel Ultra-Low Voltage I<sup>2</sup>C-Bus Switch](#)

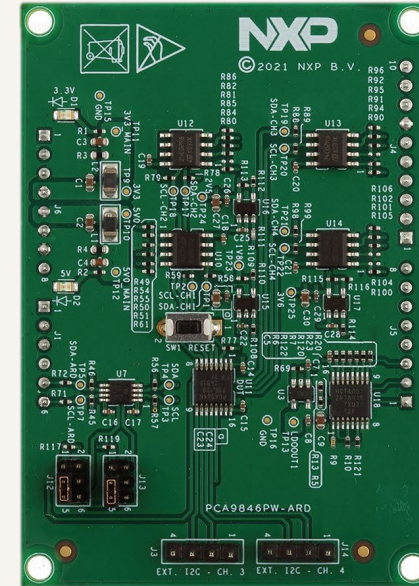
### Target Applications

- I<sup>2</sup>C Bus Multiplexer
- I<sup>2</sup>C Bus Voltage Level Translator

### Key Features

- Onboard I2C-bus external connector (channel 3 and 4)
- Equipped with four I2C EEPROMs for rapid test and measurements
- Equipped with programmable power supply for logic level combination
- Equipped with Arduino Uno R3 port for direct connection with Arduino devices
- Compliant with IMXRT1050, LPCXpresso55S69 and i.MX Mini LPDDR4 boards, including GUI (Windows 10)

Available Now



3.3" x 2.3" (8.38 x 5.84 cm)

Device	Compatible Processor Boards	SDK	ACH (Example Project)
<a href="#">PCA9846</a>	<a href="#">FRDM-MCXA153</a> <a href="#">FRDM-MCXN947</a>	<a href="#">Available in Q2 2025</a>	<a href="#">Available in Q2 2025</a>

### Documents:

[UM11759, PCA9846PW-ARD Evaluation Board User Manual](#)

For pricing and availability, see the [PCA9846PW-ARD Development Board](#) page.

# P3S0210BQ-ARD Dual Bidirectional I3C Switch and Voltage Level Translator Evaluation Board

Enabling System Solutions with FRDM Platform

Available Now

## P3S0210BQ-ARD Highlights

### Supported Device

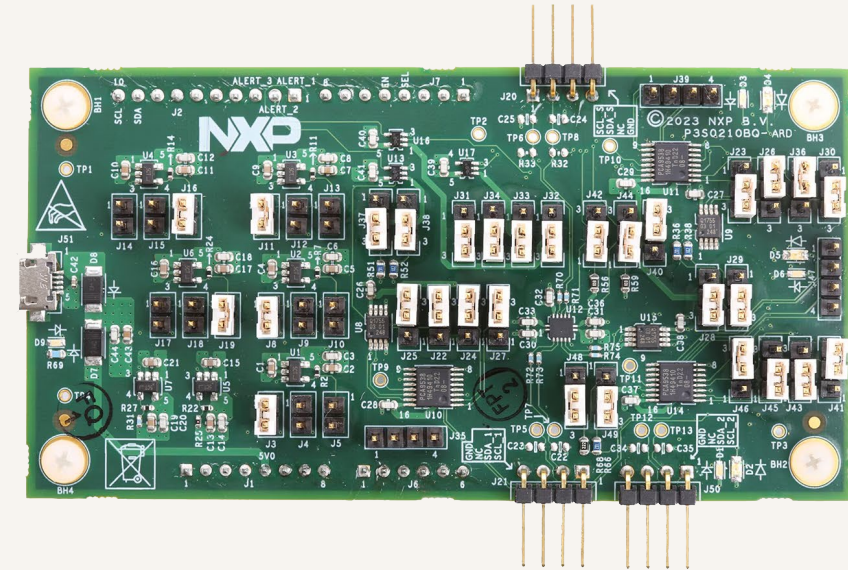
[P3S0210BQ Dual Bidirectional I3C 1:2 Switch and VLT](#)

### Target Applications

- Smart Phone and Mobile Devices
- Networking, server and data center
- Desktop and Laptop Computers

### Key Features

- Evaluation board is USB powered so external power supply is not required.
- Evaluation board can be connected to a standard NXP microcontroller board via Arduino interface headers.
- Off the board I<sup>2</sup>C and I3C target devices can be conveniently connected to the P3S0210 via on-board headers.



4.2" x 2.2" (10.6 x 5.58 cm)

Device	Compatible Processor Boards	SDK	ACH (Example Project)
<a href="#">P3S0210BQ</a>	<a href="#">FRDM-MCXA153</a> <a href="#">FRDM-MCXN947</a>	<a href="#">Available in Q2 2025</a>	<a href="#">Available in Q2 2025</a>

### Documents:

[UM11144 FRDM-HB2002ESEVM evaluation board - User Guide](#)

For pricing and availability, see the [P3S0210BQ-ARD Development Board](#) page.

# PCF2131-ARD FRDM Expansion Board (Arduino® Shield) for PCF2131/PCA2131 Real Time Clock

Enabling System Solutions with FRDM Platform

## PCF2131-ARD Highlights

### Supported Devices

[PCF2131 Accurate RTC for Industrial Applications](#)

[PCA2131 Accurate RTC for Automotive Applications](#)

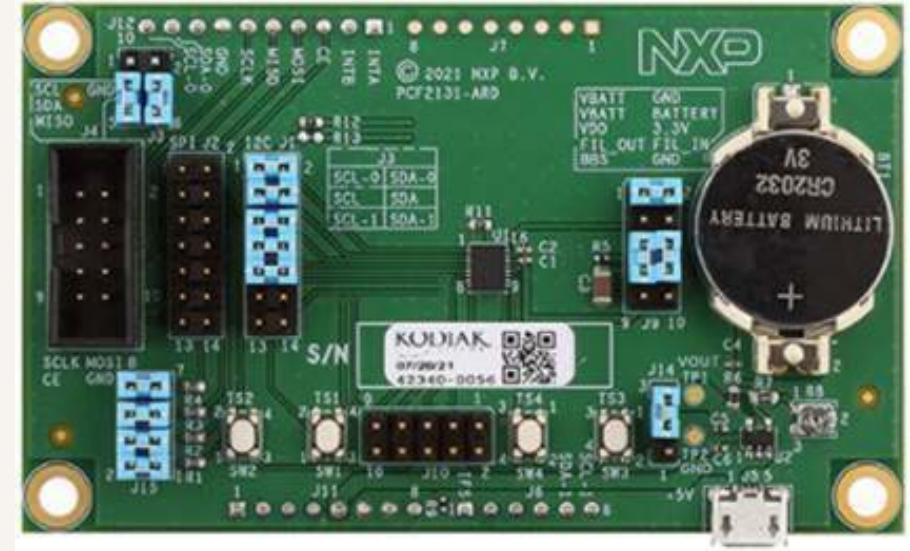
### Target Applications

- Electronic metering for electricity, water, and gas
- GPS equipment
- POS terminal
- Major home appliances

### Key Features

- On-board header for direct connection to Aardvark I<sup>2</sup>C/SPI Host Adapter
- Adjustable power supply for complex tests and verification
- On-board battery holder for battery switch-over circuit test
- On-board jumpers for I<sup>2</sup>C-bus or SPI-bus selection
- On-board connector and switches for timestamp function tests
- Fully compliant with IMXRT1050, LPCXpresso55S69 and i.MX Mini LPDDR4 EVK boards including GUI (Windows 10)

Available Now



3.5" x 2.0" (8.89 x 5.08 cm)

Device	Compatible Processor Boards	SDK	ACH (Example Project)
<a href="#">PCF2131</a> <a href="#">PCA2131</a>	<a href="#">FRDM-MCXA153</a> <a href="#">FRDM-MCXN947</a>	<a href="#">PCF2131 Driver</a>	<a href="#">PCF2131 Driver</a>

### Documents:

[UM11597, PCF2131-ARD User Manual](#)

[UM11581, Arduino Shields GUI and firmware installation](#)

For pricing and availability, see the [PCF2131-ARD FRDM Expansion Board](#) page.

# PCF85063AT-ARD Arduino® Shield board for PCF85063A Tiny Real-Time Clock

Enabling System Solutions with FRDM Platform

## PCF85063AT-ARD Highlights

### Supported Device

[PCF85063A Tiny Real-Time Clock/Calendar](#)

### Target Applications

- Digital still camera and video camera
- Printers and copy machines
- Mobile equipment
- Battery powered devices

### Key Features

- Connector for external access to I<sup>2</sup>C-bus
- Onboard user switch for oscillator stop test
- Onboard LED for interrupt pin monitoring
- Equipped with Arduino Uno R3 port for direct connection with Arduino devices
- Fully compliant with [MIMXRT1050-EVK](#), [LPC55S69-EVK](#) and [8MMINILPD4-EVK](#), including GUI software control (Windows 10)

Available Now



2.15" x 2.17" (5.46 x 5.51 cm)

Device	Compatible Processor Boards	SDK	ACH (Example Project)
<a href="#">PCF85063A</a>	<a href="#">FRDM-MCXA153</a> <a href="#">FRDM-MCXN947</a>	<a href="#">PCF85063A Driver</a>	<a href="#">PCF85063A Driver</a>

### Documents:

- [UM11578, PCF85063AT-ARD evaluation board - User guide](#)
- [UM11581 - Arduino Shields GUI and Firmware Installation - User Guide](#)

For pricing and availability, see the [PCF85063AT-ARD](#) FRDM Expansion Board page.

# SJA1124EVB FRDM Expansion Board (Arduino® Shield) for Quad LIN commander SJA1124

Enabling System Solutions with FRDM Platform

## SJA1124EVB Highlights

### Supported Device

[SJA1124 Quad LIN Commander Transceiver](#)

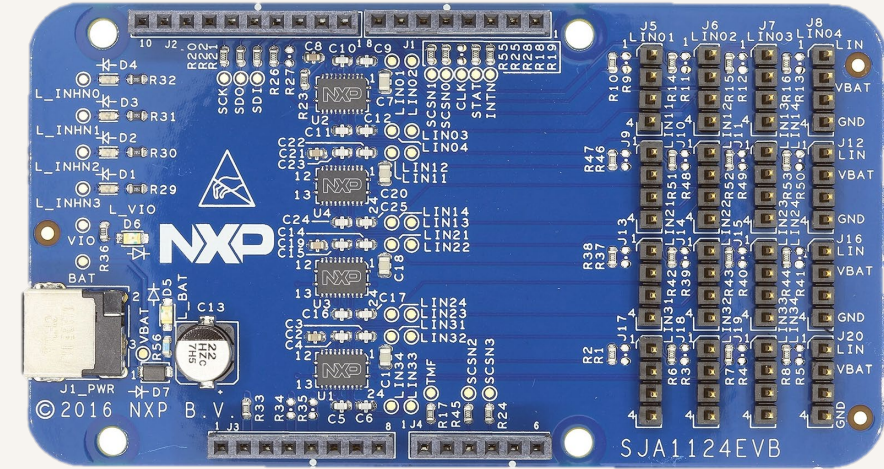
### Target Applications

- Body control
- HVAC
- Ambient mood lighting
- Park assist

### Key Features

- SJA1124 is a quad LIN commander IC that supports highly integrated multi-LIN communication.
- For easy LIN channel extension to the available microcontroller, this board features 16 LIN leader channels.
- The EVB is a hardware plug-in board (shield) with standards-based form factor compatible with Arduino® UNO pin layout.
- Power LED indicator, VIO LED indicator, INHN LED indicators

Available Now



3.90" x 2.10" (9.9 x 5.3 cm)

Device	Compatible Processor Boards	SDK	ACH (Example Project)
<a href="#">SJA1124</a>	<a href="#">FRDM-MCXA153</a> <a href="#">FRDM-MCXN947</a>	Available in Q3 2024	Available in Q3 2024

#### Documents:

- [SJA1124EVB User Guide](#)
- [SJA1124EVB Schematics](#)

For pricing and availability, see the [SJA1124EVB](#) FRDM Expansion Board page.



# FRDMSTBC-P3115 Freedom Shield Evaluation Board for MPL3115 Pressure Sensor

Enabling System Solutions with FRDM Platform

## FRDMSTBC-P3115 Highlights

### Supported Device

[MPL3115 Absolute Digital Pressure Sensor \(20 to 110 kPa\)](#)

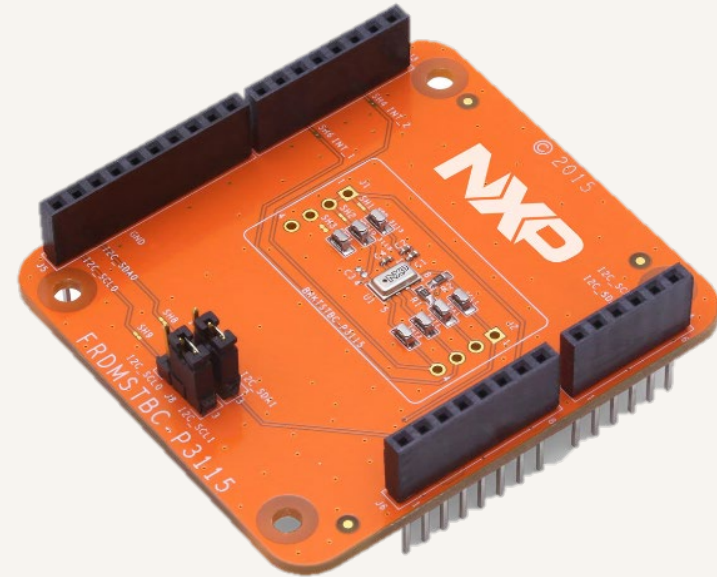
### Target Applications

- High-accuracy altimetry and barometry
- Smartphones, tablets, and wearable devices
- GPS applications
- Weather station equipment

### Key Features

- Compatible with Arduino® and most NXP® Freedom development boards
- Enables detailed sensor evaluation and development using the Sensor Toolbox – CE software
- Allows Register level analysis, computation of key sensor parameters like Current Consumption, debugging communication protocols like I<sup>2</sup>C and SPI, data logging etc.

Available Now



2.1" x 2.3" (5.3 x 5.84 cm)

Device	Compatible Processor Boards	SDK	ACH (Example Project)
<a href="#">MPL3115</a>	<a href="#">FRDM-KL27Z</a> <a href="#">FRDM-MCXA153</a> <a href="#">FRDM-MCXN947</a>	<a href="#">MPL3115 Driver</a>	<a href="#">MPL3115 Driver</a>

### Documents:

[FRDMSTBC-P3115 Quick Start Guide](#)

For pricing and availability, see the [FRDMSTBC-P3115 Sensor Toolbox Development Platform](#) page.

# FRDM-STBI-A8974 Freedom Shield Evaluation Board for FXLS8974 Digital IoT Accelerometer

Enabling System Solutions with FRDM Platform

## FRDM-STBI-A8974 Highlights

### Supported Device

[FXLS8974CF Low-Power 12-Bit Digital IoT Accelerometer](#)

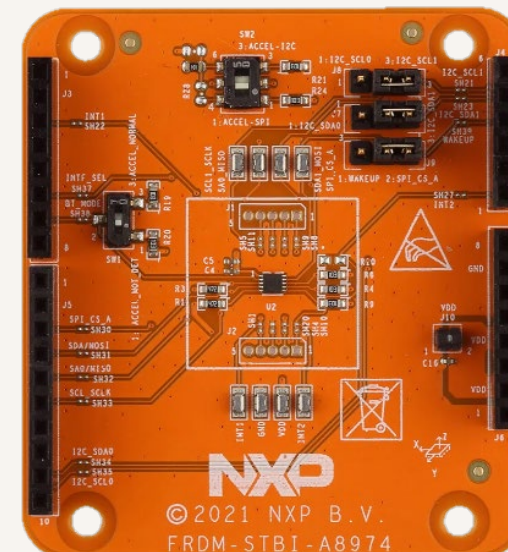
### Target Applications

- Asset tracking and equipment monitoring
- Smart metering / tamper detection
- Patient activity monitors and other medical appliances
- Smart home and mobile consumer devices

### Key Features

- Compatible with Arduino® and most NXP Freedom development boards
- Supports I<sup>2</sup>C and SPI communication interface with host MCU
- Supports hardware configurability to switch accelerometer mode and I<sup>2</sup>C/SPI interface mode

Available Now



2.1" x 2.3" (5.3 x 5.84 cm)

Device	Compatible Processor Boards	SDK	ACH (Example Project)
<a href="#">FXLS8974CF</a>	<a href="#">FRDM-MCXA153</a> <a href="#">FRDM-MCXN947</a> <a href="#">FRDM-K22F</a>	<a href="#">FRDM-K22F-A8974</a> <a href="#">LPCXpresso55S16-A8974</a>	<a href="#">FXLS897xCF ACH Project</a>

### Documents:

[UM11736, FRDM-STBI-A8974 User Manual](#)

For pricing and availability, see the [FRDM-STBI-A8974](#) Sensor Toolbox Development Platform page.

# FRDMSTBI-NMH1000 Freedom Shield Evaluation Board for NMH1000 Magnetic Switch

Enabling System Solutions with FRDM Platform

## FRDMSTBI-NMH1000 Highlights

### Supported Device

[NMH1000 Ultra-Low Power and Low-Voltage Magnetic Switch](#)

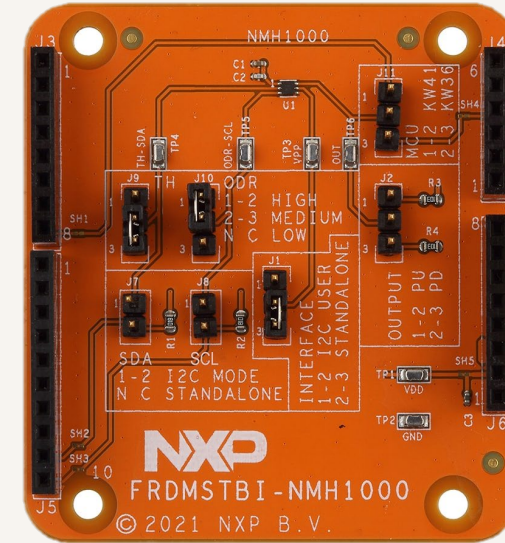
### Target Applications

- Electronic system wake-up
- Tamper detection
- Laptop lid open / closed
- Door or window open / closed

### Key Features

- Compatible with Arduino® and most NXP® Freedom development boards
- The FRDMSTBI-NMH1000 can be paired with NXP MCU boards of your choice

Available Now



2.1" x 2.3" (5.3 x 5.84 cm)

Device	Compatible Processor Boards	SDK	ACH (Example Project)
<a href="#">NMH1000</a>	<a href="#">FRDM-KE15Z</a> <a href="#">FRDM-MCXA153</a> <a href="#">FRDM-MCXN947</a>	<a href="#">FRDMKE15-NMH1000</a>	<a href="#">NMH1000 ACH Project</a>

### Documents:

[UM11835, FRDMSTBI-NMH1000 User Manual](#)

For pricing and availability, see the [FRDMSTBI-NMH1000](#) Freedom Shield Evaluation Board page.

# FRDM-STBI-A8971 Freedom Shield Evaluation Board for FXLS8971 Digital Accelerometer

Enabling System Solutions with FRDM Platform

## FRDM-STBI-A8971 Highlights

### Supported Device

[FXLS8971CF Low Power 12-Bit Digital Accelerometer](#)

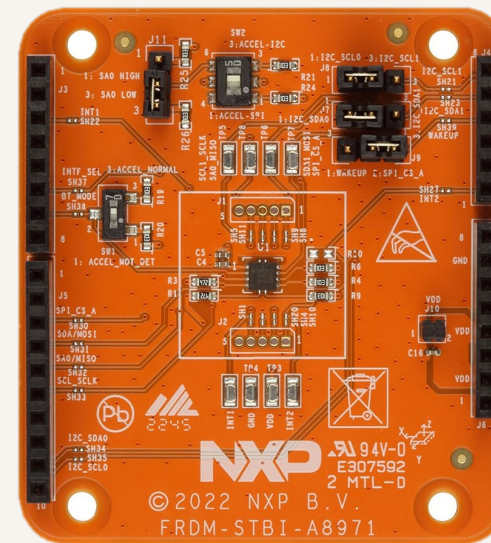
### Target Applications

- Precision Inclinometer, Tilt Sensing
- Camera Stabilization
- Remote Patient Monitoring
- Equipment Monitoring and Asset Tracking

### Key Features

- Compatible with Arduino® and most NXP Freedom development boards
- Supports I<sup>2</sup>C and SPI communication interface with host MCU
- Supports hardware configurability to switch accelerometer mode and I<sup>2</sup>C/SPI interface mode
- Support multiple test points on the board

Available Now



2.1" x 2.3" (5.3 x 5.84 cm)

Device	Compatible Processor Boards	SDK	ACH (Example Project)
<a href="#">FXLS8971CF</a>	<a href="#">FRDM-MCXA153</a> <a href="#">FRDM-MCXN947</a>	<a href="#">LPCXPRESSO55S16-A8971</a>	<a href="#">FXLS897xCF ACH Project</a>

### Documents:

[UM11910, FRDM-STBI-A8971 User Manual](#)

# P3T1085UK-ARD FRDM Expansion Board (Arduino® Shield) for P3T1085/P3T1084 Temperature Sensor

Enabling System Solutions with FRDM Platform

## P3T1085UK-ARD Highlights

### Supported Devices

- [P3T1085UK I3C/I<sup>2</sup>C-Bus Accurate Digital Temperature Sensor](#)
- [P3T1084UK I3C/I<sup>2</sup>C-Bus Accurate Digital Temperature Sensor](#)

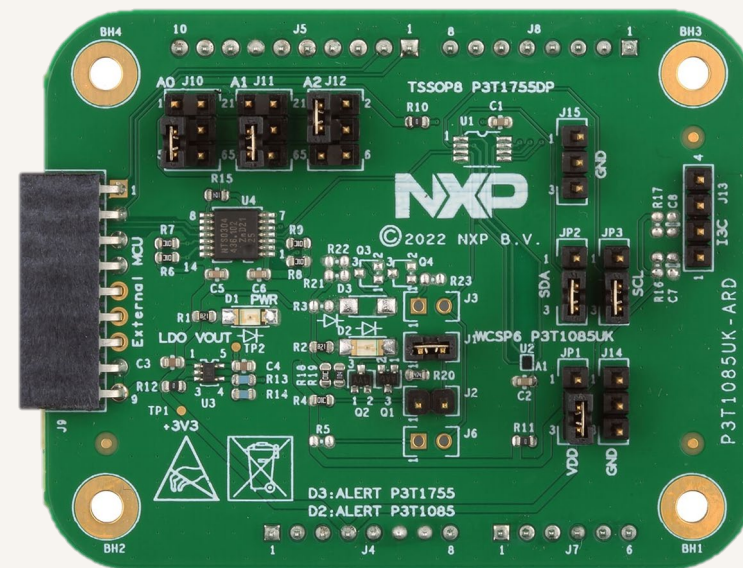
### Target Applications

- Portable devices
- System thermal management
- Industrial controllers
- PC/Notebook/Servers/SSD

### Key Features

- Use Arduino connector for data and power
- Easy to use GUI based software demonstrates the capabilities of the P3T1085UK/P3T1084UK
- On-board temperature sensor for system thermal management experiments
- Convenient test points for easy scope measurements and signal access

Available Now



3.0" x 2.4" (7.62 x 6.0 cm)

Device	Compatible Processor Boards	SDK	ACH (Example Project)
<a href="#">P3T1085UK</a> <a href="#">P3T1084UK</a>	<a href="#">FRDM-MCXA153</a> <a href="#">FRDM-MCXN947</a>	<a href="#">P3T1085 Driver</a>	<a href="#">P3T1085 ACH</a>

### Documents:

[UM11766, P3T1085UK-ARD User Manual](#)

For pricing and availability, see the [P3T1085UK-ARD FRDM Expansion Board](#) page.

# Completed and Available Drivers

## Summary Released FRDM Expansion Boards



Segment	Device	Board(s)	Driver	ACH (Example Project)	Target Application
Real Time Clock	<a href="#">PCF2131</a> Accurate RTC with Integrated TCXO for Industrial Applications <a href="#">PCA2131</a> Accurate RTC with Integrated TCXO for Automotive Applications	<a href="#">PCF2131-ARD</a>	FRDM-MCXA153   MCXN947 <a href="#">PCF2131 Driver</a>	<a href="#">PCF2131 Driver</a>	
	<a href="#">PCF85063A</a> Real Time Clock	<a href="#">PCF85063AT-ARD</a>	FRDM-MCXA153   MCXN947 <a href="#">PCF85063A Driver</a>	<a href="#">PCF85063A Driver</a>	
Temperature Sensor	<a href="#">P3TI085</a> I3C/I <sup>2</sup> C-Bus Temperature Sensor with ±0.5 °C Accuracy	<a href="#">P3TI085UK-ARD</a>	FRDM-MCXA153   MCXN947 <a href="#">P3TI085 Driver</a>	<a href="#">P3TI085 Driver</a>	
LED Controller	<a href="#">PCA9957</a> 24-CH SPI LED Controller with 32 mA Constant Current Driver	<a href="#">PCA9957HN-ARD</a> <a href="#">LED Driver 8 Click</a>	FRDM-MCXA153   MCXN947 <a href="#">PCA9957 Driver</a>	<a href="#">PCA9957 Driver</a>	
	<a href="#">PCA9959</a> 24-CH SPI LED Controller with 63 mA Constant Current Driver	<a href="#">PCA9959HN-ARD</a>	FRDM-MCXA153   MCXN947 <a href="#">PCA9959 Driver</a>	<a href="#">PCA9959 Driver</a>	
Motion Sensor	<a href="#">FXLS8974CF</a> 3-Axis Low-g Accelerometer	<a href="#">FRDM-STBI-A8974</a> <a href="#">Accel 4 Click</a>	FRDM-K22F   FRDM-MCXA153   MCXN947 FRDM-MCXA153   MCXN947 <a href="#">FRDM-K22F-A8974</a> <a href="#">LPCXpresso55S16-A8974</a>	<a href="#">FXLS897xCF ACH Project</a>	
	<a href="#">FXLS8971CF</a> 3-Axis Low-g Accelerometer with Improved TCO Performance	<a href="#">FRDM-STBI-A8971</a>	FRDM-MCXA153   MCXN947 <a href="#">LPCXPRESSO55S16-A8971</a>		
Pressure Sensor	<a href="#">MPL3115</a> Precision Pressure Sensor with Altimetry	<a href="#">FRDMSTBC-P3115</a> <a href="#">Altitude Click</a>	FRDM-KL27Z   FRDM-MCXA153   MCXN947 FRDM-MCXA153   MCXN947 <a href="#">FRDMKL27-P3115</a>	<a href="#">MPL3115 ACH Project</a>	
		<a href="#">FRDMSTBI-NMH1000</a> <a href="#">Hall Switch 3 click</a>	FRDM-MCXA153   MCXN947 FRDM-MCXA153   MCXN947 <a href="#">FRDMKEI5-NMH1000</a>		
Magnetic Sensor	<a href="#">NMH1000</a> Magnetic Switch	<a href="#">FRDMSTBI-NMH1000</a> <a href="#">Hall Switch 3 click</a>	FRDM-MCXA153   MCXN947 FRDM-MCXA153   MCXN947 <a href="#">FRDMKEI5-NMH1000</a>	<a href="#">NMH1000 ACH Project</a>	
		<a href="#">MC33926</a> H-Bridge Driver	<a href="#">FRDM33926PNBEVM</a>		
Motor Driver	<a href="#">HB2002</a> Brushed DC Motor Driver	<a href="#">FRDM-HB2002ESEVM</a>	FRDM-MCXA153   MCXN947 In Development	In Development	
	<a href="#">SJA1124</a> SPI-to-Quad LIN Bridge	<a href="#">SJA1124EVB</a>	FRDM-MCXA153   MCXN947 In Development	In Development	



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