

# kinetic technologies KTS1622 Low Voltage 16-Bit I2C-Bus Input Output Expander User Guide

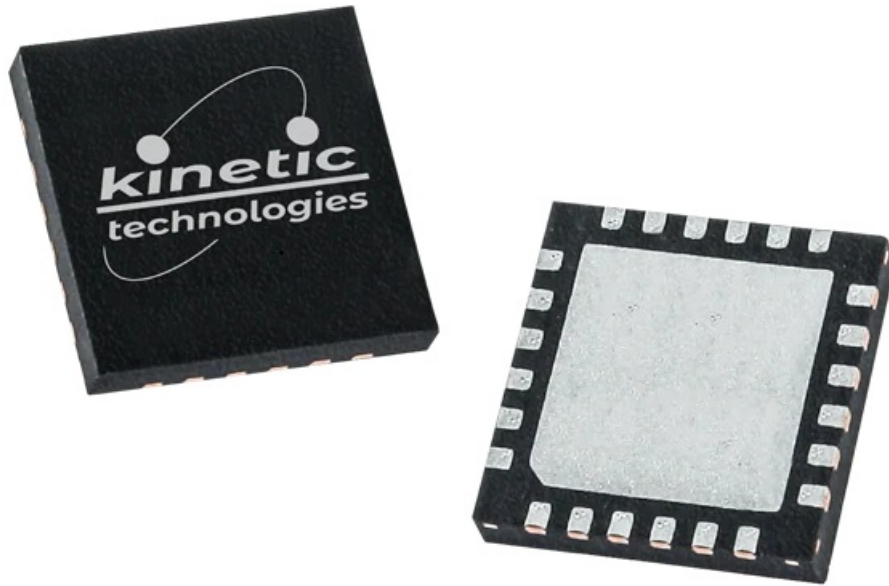
[Home](#) » [Kinetic Technologies](#) » kinetic technologies KTS1622 Low Voltage 16-Bit I2C-Bus Input Output Expander User Guide 

## Contents

- [1 kinetic technologies KTS1622 Low Voltage 16-Bit I2C-Bus Input Output Expander](#)
- [2 Product Information](#)
- [3 Product Usage Instructions](#)
- [4 EVAL Kit Physical Contents](#)
- [5 QR Links for Documents](#)
- [6 Quick Start Procedures](#)
- [7 Graphical User Interface](#)
- [8 Documents / Resources](#)
  - [8.1 References](#)



**kinetic technologies KTS1622 Low Voltage 16-Bit I2C-Bus Input Output Expander**



## Product Information

The KT1622 EVAL Kit is a fully assembled PCB designed for low voltage 16-bit I2C-bus I/O expansion. It features the MCP2221A Board, which is a general-purpose USB to GPIO ADC I2C interface board. The kit also includes a Stemma QT / Qwiic JST SH 4-pin Cable (100mm long) and comes in an anti-static bag. The kit is accompanied by a printed 1-page (A4 or US Letter) Quick Start Guide and is packaged in an EVAL Kit box.

For more information about the product, you can visit the following links:

- IC Landing Page
- EVAL Kit Landing Page

## Product Usage Instructions

1. Connect the Stemma QT 4-wire cable (GND, 3V3, SDA, SCL) to the KTS1622 evaluation board connector CN1, as shown in the Typical Test Setup Figure below.
2. Connect the other end of the Stemma QT cable to the MCP2221A USB to I2C interface board.
3. Connect the MCP2221A board to a computer via the USB type-C cable.
4. Once the evaluation board is connected to the computer via the MCP2221A interface board, check if the KTS1622 evaluation board green LED D1 is turned on. This indicates that the board is powered from the computer. The on-board VIN supply voltage should be around 3.3V. No external power supply is required.
5. Install the GUI software by following these steps:
  1. Download the GUI software from the EVAL Kit Page at <https://www.kinet-ic.com/kts1622euaa-mmeev01/>.
  2. After downloading, install the software. Once installed, the interface will appear with the status message "USB Device Attached" at the bottom left side of the window.
  3. If the displayed message is "USB Device Detached," ensure that the computer is properly connected to the board.

**Note:** Refer to the provided Quick Start Guide for any additional instructions or troubleshooting.

## EVAL Kit Physical Contents

Item #	Description	Quantity
1	KTS1622 EVAL Kit fully assembled PCB	1
2	MCP2221A Board – General Purpose USB to GPIO ADC I2C – Stemma QT / Qwiic	1
3	Stemma QT / Qwiic JST SH 4-pin Cable – 100mm Long	1
4	Anti-static bag	1
5	KTS1622 EVAL Kit Quick Start Guide — printed 1-page (A4 or US Letter)	1
6	EVAL Kit box	1

## QR Links for Documents

### IC Landing Page



<https://www.kinet-ic.com/kts1622/>

### EVAL Kit Landing Page



<https://www.kinet-ic.com/kts1622euaa-mmev01/>

## User-Supplied Equipment

1. Digital Multimeter – one or more, used to measure input/output voltages and currents.

## Quick Start Procedures



1. Connect the Stemma QT 4-wire cable (GND, 3V3, SDA, SCL) to the KTS1622 evaluation board connector CN1, as shown in the Typical Test Setup Figure below.
2. Connect the other end of the Stemma QT cable to the MCP2221A USB to I2C interface board.
3. Connect the MCP2221A board to a computer via the USB type-C cable.
4. Once the evaluation board is connected to the computer via the MCP2221A interface board, the KTS1622 evaluation board green LED D1 should be turned on indicating that the board is powered from the computer. The on-board VIN supply voltage should be around 3.3V. No external power supply is required.
5. Install GUI software.

## Graphical User Interface

1. Download and install GUI software located on EVAL Kit Page
  1. (<https://www.kinet-ic.com/kts1622euaa-mmev01/>).
2. After installing software, the interface will appear with the status message “USB Device Attached” at the bottom left side of the window.
3. If the displayed message is “USB Device Detached”, make sure the computer is properly connected to the board.

August 2023 – QSG-0019-01  
Kinetic Technologies Confidential

## Documents / Resources

	<a href="#">kinetic technologies KTS1622 Low Voltage 16-Bit I2C-Bus Input Output Expander</a> [pdf] User Guide KTS1622 Low Voltage 16-Bit I2C-Bus Input Output Expander, KTS1622, Low Voltage 16-Bit I2C-Bus Input Output Expander, 16-Bit I2C-Bus Input Output Expander, Input Output Expander, Expander
	<a href="#">kinetic technologies KTS1622 Low Voltage 16-Bit I2C-Bus Input Output Expander</a> [pdf] Instruction Manual KTS1622 Low Voltage 16-Bit I2C-Bus Input Output Expander, KTS1622, Low Voltage 16-Bit I2C-Bus Input Output Expander, 16-Bit I2C-Bus Input Output Expander, Input Output Expander, Expander

## References

- [Kinetic Technologies - Analog & Mixed-Signal Semiconductors](#)
- [KTS1622 Low Voltage 16-Bit I2C-bus I/O Expander](#)
- [KTS1622EUAA-MMEV01 - Kinetic Technologies](#)

