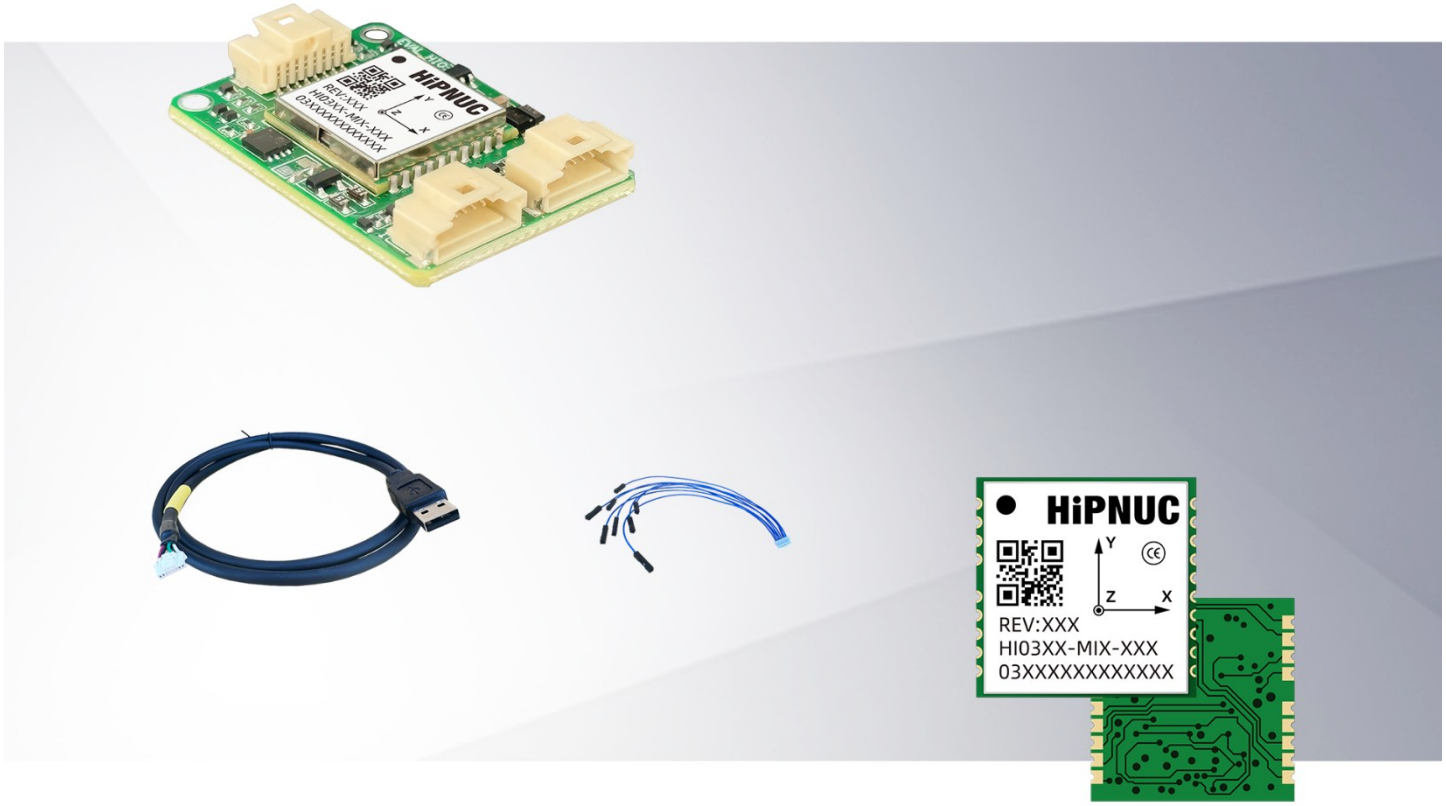


Document Information

Version	Date	Author	Description
1.0	March 2, 2025	Hipnuc	Initial release

Contents

1 Overview

The EVAL HI03 is an evaluation board designed for the HI03 series modules, enabling rapid evaluation of their features and performance.

The EVAL HI03 is equipped with three Molex connectors, J1, J2, and J3, and can communicate with a host system through an optional USB-to-Molex cable assembly or flying lead cable assembly.

During operation, the EVAL HI03 shall be rigidly mounted to the user's equipment or test fixture.

2 Ordering Information

2.1 Model Information

This section provides the available evaluation board models and contact details.

Table 1: Model Information

Part Number	Name	Description
EVAL HI03R2-MI0	HI03R2-MI0 Evaluation Board	Evaluation board for HI03R2-MI0
EVAL HI03R2-MI1	HI03R2-MI1 Evaluation Board	Evaluation board for HI03R2-MI1
EVAL HI03R3-MI1	HI03R3-MI1 Evaluation Board	Evaluation board for HI03R3-MI1

2.2 Contact Information

Email: overseas1@hipnuc.com

Website: www.hipnuc.com

3 Related Documents

1. HI03 Data Sheet
2. Command and Programming Manual
3. STEP File
4. GUI Software and Reference Examples

4 Specifications

4.1 Absolute Maximum Ratings

Below are the key electrical and mechanical specifications of the EVAL HI03.

Table 2: Absolute Maximum Ratings

Parameter	Limit	Description
Mechanical Shock	2000 g	Duration < 1 ms
Storage Temperature	-40 °C to 85 °C	
ESD (HBM)	15 kV	JEDEC/ESDA JS-001
Input Voltage (VDD)	6.0 V	
I/O Pin Voltage to GND	-0.3 V to 3.3 V	
CAN H or CAN L Voltage to GND	±36 V	

4.2 Mechanical Dimensions and Pin Definitions

All dimensions are in mm unless otherwise specified.

4.2.1 EVAL HI03 Dimensions

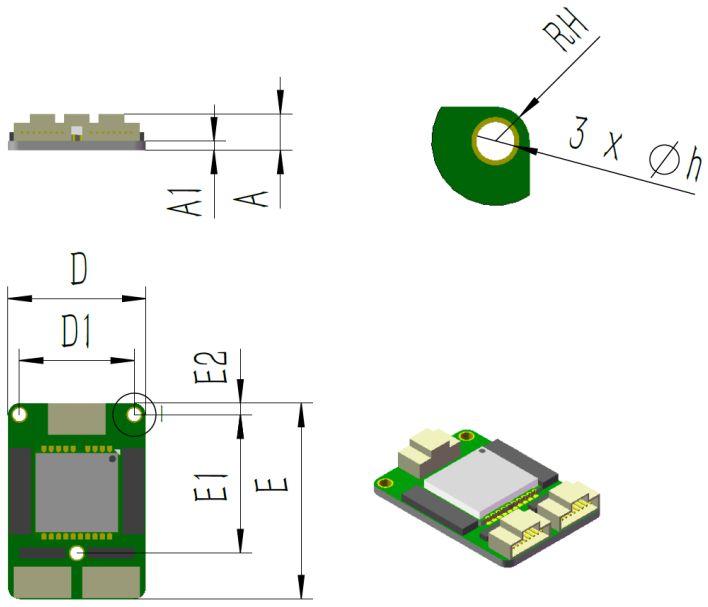
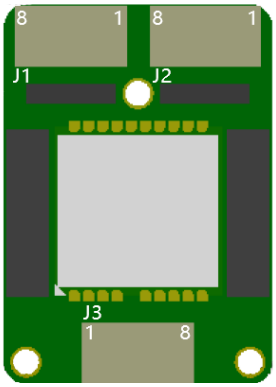


Figure 1: HI03 Evaluation Board Dimensions

Table 3: HI03 Evaluation Board Dimensions

Symbol	Min (mm)	Typ (mm)	Max (mm)
D	23.7	24	24.3
D1	19.9	20	20.1
E	33.7	34	34.3
E1	23.9	24	24.1
E2	1.8	2	2.2
A	6.1	6.3	6.5
A1	1.5	1.6	1.7
H	Φ1.9	Φ2	Φ2.1

4.2.2 EVAL HI03 Pin Definitions



Below are the connector pin definitions for **J1**, **J2**, and **J3**.

Table 4: J1 Pin Description

Pin Number	Pin Name	Description
1	UART1_TX	UART1 transmit
2	UART1_RX	UART1 receive
3	GND	Power ground
4	NRST	Reset pin. Driving this pin low resets the module. Connection to a host GPIO is recommended; it may be left floating if unused.
5	IO1/SYNC_IN/PPS	Synchronization input. Can accept an external trigger signal, such as a GNSS PPS signal.
6	IO2/SYNC_OUT	Synchronization output. Can be used as a Data Ready signal.
7	GND	Power ground
8	VDD	Power input, 3.3 V to 5.0 V

Table 5: J2 Pin Description

Pin Number	Pin Name	Description
1	UART2_TX	UART2 transmit
2	UART2_RX	UART2 receive
3	CAN H	CAN high
4	CAN L	CAN low
5	UART3_RX/I2C_SDA	UART3 receive / I2C data
6	UART3_TX/I2C_SCL	UART3 transmit / I2C clock
7	GND	Power ground
8	VDD	Power input, 3.3 V to 5.0 V

Table 6: J3 Pin Description

Pin Number	Pin Name	Description
1	NC	Reserved
2	NC	Reserved
3	SPI_MOSI	SPI data input signal (slave)
4	SPI_MISO	SPI data output signal (slave)
5	SPI_SCK	SPI clock signal
6	SPI_CS	SPI chip select signal
7	GND	Power ground
8	VDD	Power input, 3.3 V to 5.0 V

5 Optional Cable Assemblies

5.1 Molex A (501330-0800) to Dupont Cable Assembly

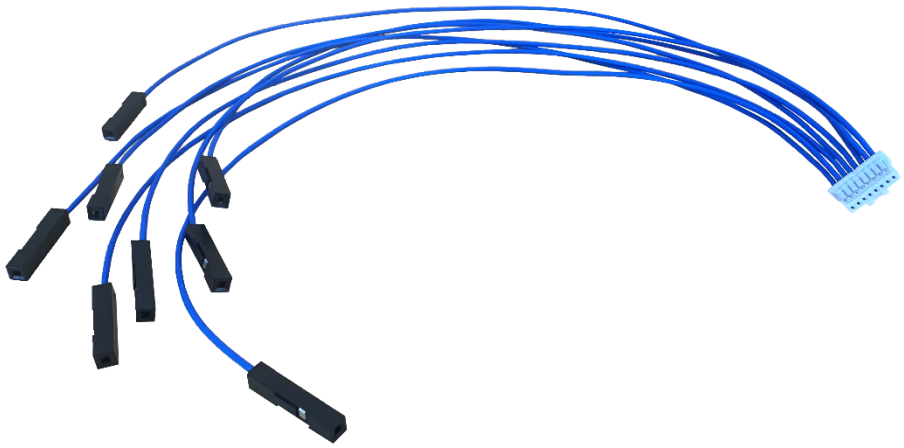


Figure 2: Molex A (501330-0800) to Dupont Cable Assembly

Note 1: Cable length: 30 cm

5.2 USB to Molex A (501330-0800) Cable Assembly

Figure 3: USB to Molex A (501330-0800) Cable Assembly

Note 2: This cable assembly is intended for EVAL HI03XX products. The cable length is 1 m, and it integrates a USB-to-UART converter (TTL level).

Note 3: Driver download: CP210x USB to UART Bridge VCP Drivers