Panel mount Industrial IoT HMI

PHMI-MN-EN-01	NOV-2025

This document is applied for the following products

SKU	PHMI	**HW Ver.**	1H	**FW Ver.**	1F1118
Item Code	PHMI-10-01	Industrial IoT HMI for panel mount, LCD display,10-inch touchscreen;			

1. Functions Change Log

HW Ver.	FW Ver.	Release Date	Functions Change
1H	1F1118	Nov-2025	Initial firmware

2. Introduction

PHMI is an all-in-one industrial HMI device that functions as both a user-friendly interface and an intelligent gateway for Industrial IoT applications. Featuring a 10.1" or 8" IPS LCD multi-touch display, it comes with standard interfaces such as Ethernet, RS485, and USB, along with optional wireless connectivity including WiFi, 4G, and 5G for seamless integration with cloud platforms and IoT systems.

The device is programmable via Node-Red, enabling fast deployment of customized HMI applications. It also supports optional expansions such as a 433 MHz Wireless Concentrator for WS433 sensors, BLE for MESH sensor networks, and a built-in LoRaWAN Gateway for wide-area sensor networks.

With powerful features and flexible architecture, PHMI is the ideal solution for Smart Factory, Smart Building, and Smart Agriculture applications.

3. Specification

Standard Communication	01 x RS485, 01 x USB, 01 x RJ45 Ethernet and Wifi
Optional Communication	4G or 5G, BLE, LoRaWAN Gateway, WS433 Sub-GHz Co-ordinator

Protocol support	ModbusRTU/ASCII, ModbusTCP, BacnetIP, OPC-UA, EthernetIP, MQTT, HTTP...
Screen type	10.1" 1290x800 colour IPS LCD Display with capacitive touch screen
Power supply	5VDC via USB type C port. Included power adapter with input of 100-240VAC and output USB type C 5VDC max 5A
Consumption	500mA avg.
Mounting type	Panel mount 246x165 mm cut-out, VESA mount screws
Working temperature/humidity	0..60 degC / 95%RH non-condensing
Dimension	H169xW250xD50
Net weight	750 grams..

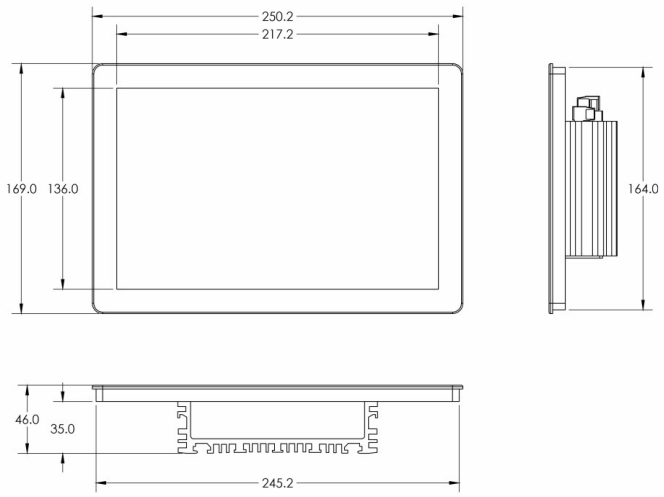
4. Installation and wirings

4.1 Installation

Installation type: Panel mount

Installation steps:

Step 1: Based on HMI dimension, cut the rectangular hole on the panel



Step 2:

Use screw driver to loose 4 screws, then turn 4 batches 90 degree

Step 3:

Fix 4 batches to the panel by 4 provided bolts

4.2 Wiring

Power Supply:

5VDC via USB type C port. The product is provided with power adapter having input of 100-240VAC and output USB type C 5VDC max 5A

RS485 connection:

RS485+ of Modbus Master to A pin on HMI

RS485 - of Modbus Master to B pin on HMI

5. Operation principle

The HMI operates as Modbus slave device. The Modbus Master device will write real time values to HMI via RS485 Modbus RTU and HMI will show these values on HMI screens. The clock time on Modbus Master device also be written on HMI.

6. Configuration

HMI operate with Modbus RTU - slave communication via RS485 port as below fixed configurations:

Protocol: Modbus RTU

Address: 2

Baud rate: 9600

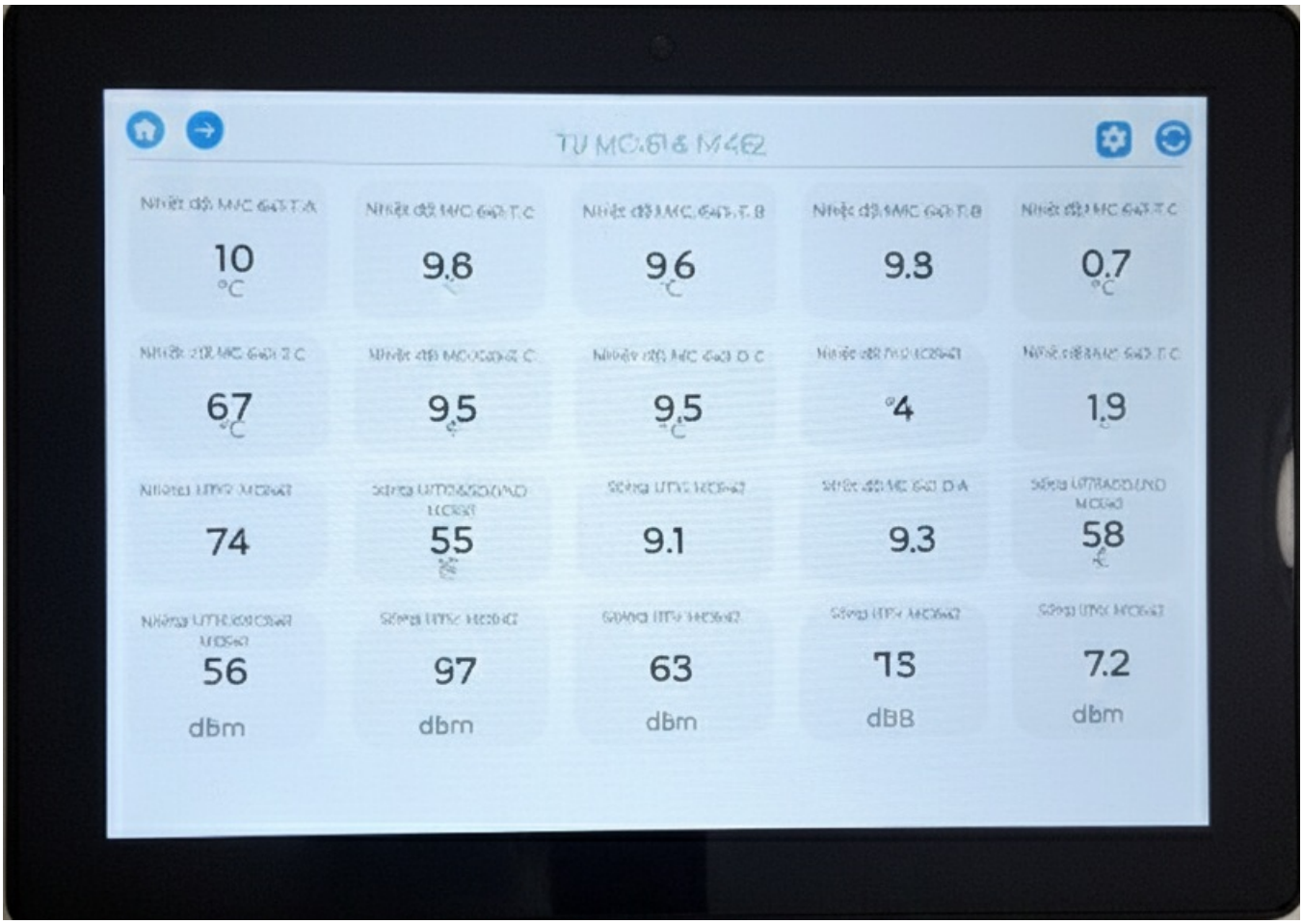
Parity: none

Stop bit: 1

7. Graphic user interface

7.1 Home Screen

After power up, the HOME screen will show 5 rows x 4 columns = max 20 data from Modbus Masters



HOME icon: Click to return home page

LEFT ARROW icon: Click to move to next page

RIGHT ARROW icon: Click to move to previous page

REFRESH icon: Click to refresh data

7.2 Other screens

There are total four screens, click RIGH ARROW icon and LEFT ARROW icon to navigate screens and click HOME icon to return HOME screen. Each screen shows maximum 20 paramter values which are written from Modbus Master device

8. Support contacts

Manufacturer
Daviteq Technologies Inc

No.11 Street 2G, Nam Hung Vuong Res., An Lac Ward, Binh Tan Dist., Ho Chi Minh City, Vietnam.
Tel: +84-28-6268.2523/4 (ext.122)
Email: info@daviteq.com | www.daviteq.com

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