IDP-7010-04A Touch Display Module Datasheet

1 Introduction

The IDP-7010-04A is a smart display module featuring a 7-inch TFT LCD panel with an 800x480 resolution, 16.7 million color support, and a capacitive touch interface. It integrates Bridgetek's Embedded Video Engine (EVE) Graphics Controller, the BT815, delivering rich, interactive, multi-touch user experiences. Powered by Bridgetek's FT903 System-On-Chip (SoC) microcontroller, it offers high integration and low power consumption.

This enhanced version of IDP-7000-04A includes an RFID reader for application-based access authentication. It also features a system LED indicator unit for application-specific status displays.

Designed for seamless control and monitoring, the IDP-7010-04A Touch Display allows users to sense, display, and manage events efficiently. Unlike mobile devices that require frequent recharging, this module can be installed in accessible locations and continuously powered via a Cat 5e cable.

1.1 Features

- Integrated FT903 32-bit RISC microcontroller with 100MHz system clock
- Built-in advanced BT815 graphics controller with display, touch, and audio functionality
- 7-inch high-brightness 800x480 resolution TFT LCD with support for capacitive 5-point touch
- Ambient light sensor for adaptive brightness control
- Integrated buzzer for audio notifications
- Two RJ45 Ports supporting RS485 interface for data communication, allowing daisy chain to another IDP-7010-04A module
- Powered by a 9V–24V DC supply through the RJ45 port
- Built-in 13.56MHz RFID Reader
- Built-in 23mm X 36mm LED Matrix System Indicator

1.2 Typical Applications

- Home Automation Systems: Smart Thermostats, Lighting Control.
- Audio Equipment: Mixing Consoles, Hi-Fi Systems.
- Medical Devices: Portable Medical Monitors, Patient Monitoring Devices.
- Industrial Applications: Control Panels, Measurement Instrument.
- Automotive Interfaces: Infotainment Systems, Dashboards
- Consumer Electronics: Smart Speakers and Media Players, portable Gaming Consoles.
- Test and Measurement Equipment such as Oscilloscopes and Multi-meters.
- …… and many more.

2 Part Number/Ordering Information/Package Content

Part No.	Description
IDP-7010-04A	Intelligent Display Product 7 inch Plus with Enclosure

Table 1 - Part Number/Ordering Information

Description		Quantity
Hardware components	IDP-7010-04A Display Module	1
	M3 Screws (4 Arlington LV2 Wall Mounting + 2 additional wall screws)	6

Table 2 - Package Content

Table of Contents

3 Hardware Features

3.1 Module Overview

The IDP-7010-04A module features a 7-inch TFT LCD and CTP panel with dimensions of 232 mm (L) X 125.45 (W) X 26.4mm (T) and weighing 528g.

Figure 1 - Front View of IDP-7010-04A Module

Figure 2 - Back View of IDP-7010-04A Module

3.2 PCBA Profile

The IDP-7010-04A display module is made up of four boards:

1. **Mainboard:** PCBA containing microprocessor and graphics controller ICs.
2. **Sensor Board:** PCBA containing reset button, microphone, ambient light sensor and smart LED.
3. **LED Indicator Board:** PCBA containing array of smart LED modules
4. **RFID Board:** PCBA containing RFID reader module

3.2.1 Mainboard

Dimensions of main board: 176.9mm (L) X 111.58mm (W) X 1.6mm (T) with maximum component height of approximately 13mm.

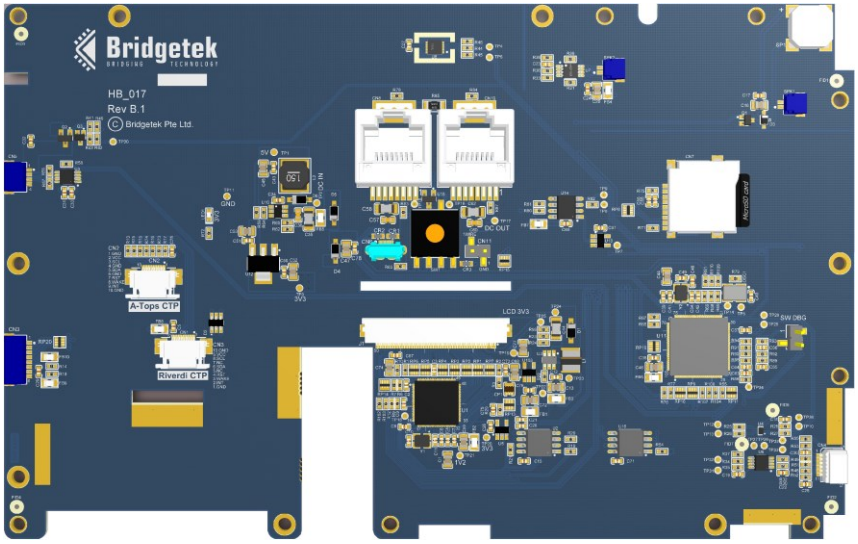

Figure 3 - Mainboard PCBA Front View

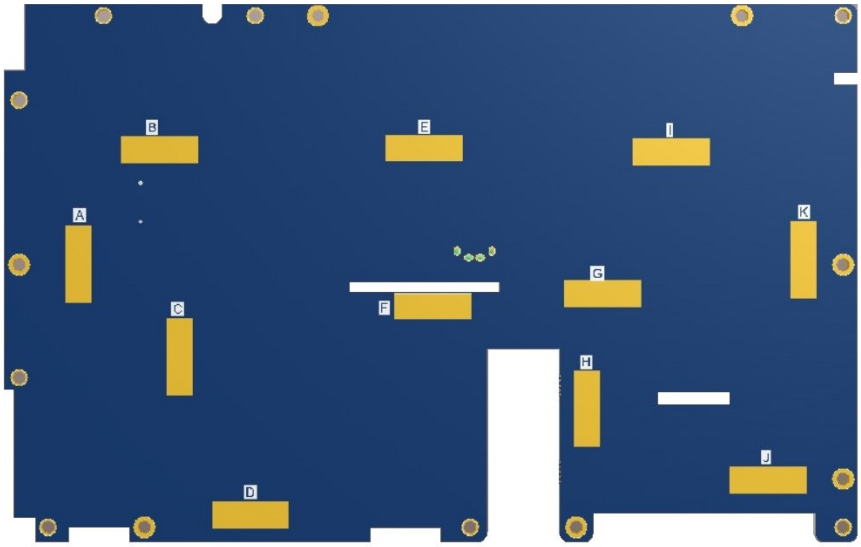

Figure 4 - Mainboard PCBA Back View

3.2.2 Sensor Board

Dimensions of sensor board: 30mm (L) X 7mm (W) X 1.6mm (T) with maximum component height of approximately 3.6mm (H).

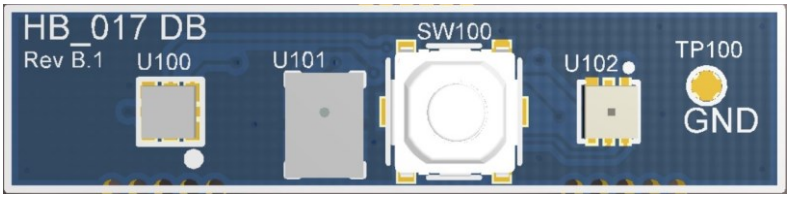

Figure 5 - Sensor Board Front View

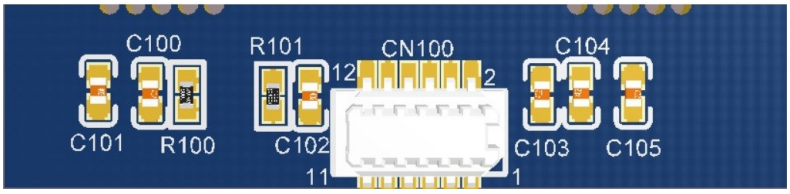

Figure 6 - Sensor Board Back View

3.2.3 LED Indicator Board

Dimensions of sensor board: 47mm (L) X 26mm (W) X 1.6mm (T).

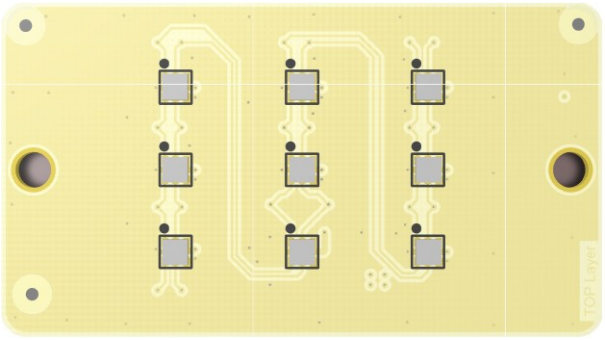

Figure 7 - LED Indicator Board Front View

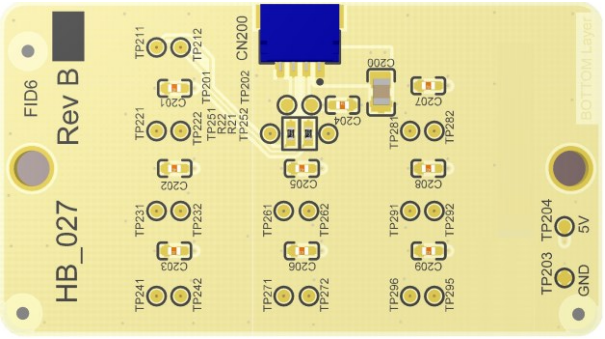

Figure 8 - LED Indicator Board Back View

3.2.4 RFID Board

Dimensions of sensor board: 59.8mm (L) X 39.8mm (W) X 1.6mm (T).

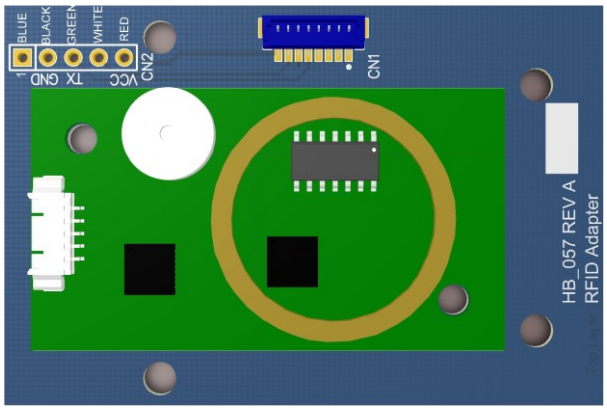

Figure 9 - RFID Board Front View

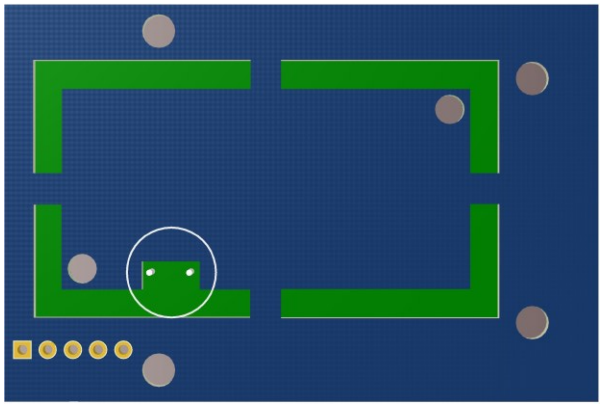

Figure 10 - RFID Board Back View

3.2.5 Key Features

- 7-inch 800 x 480 TFT-LCD panel with capacitive touch panel
- Bridgetek BT815 EVE chip for graphics, touch, and audio control
- 16Mbyte NOR Flash for BT815 assets
- LED backlight driver integrated
- Bridgetek FT903 microcontroller
- 8Mbyte NOR Flash for FT903 data storage
- Micro-SD card socket
- Micro USB port for communication to FT903 MCU
- Two RJ45 ports for I/O supply and RS485 communication
- Built-in audio buzzer for sound notifications
- Built-in digital microphone
- Built-in ambient light sensor
- Built-in smart LED indicator
- Built-in RFID reader
- Built-in LED indicator
- ID switch for unique ID setting
- Hardware reset button

3.3 PCB Profile

Main and sensor printed circuit boards (PCBs) in the IDP-7010-04A module are designed with four layers, stacked as follows:

1. Layer 1: Routing & Component placement (Top)
2. Layer 2: Ground Plane
3. Layer 3: Power Plane
4. Layer 4: Routing & Component placement (Bottom)

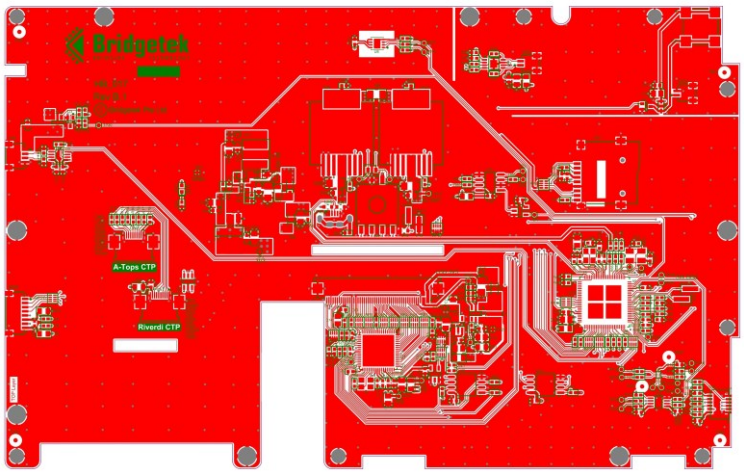

Figure 11 - Main PCB Top Layer

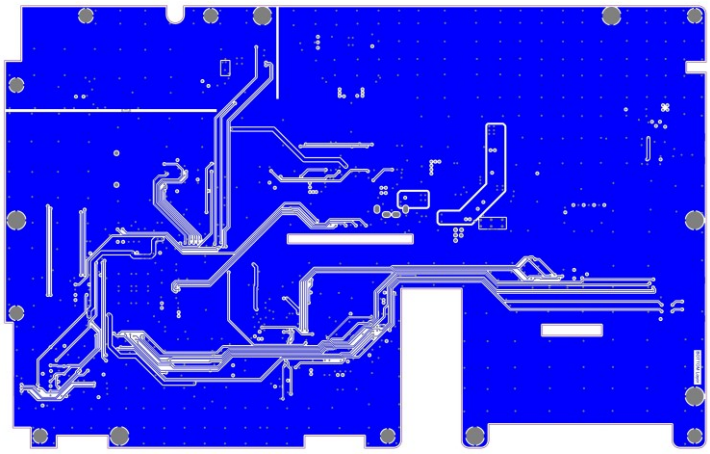

Figure 12 - Main PCB Bottom Layer

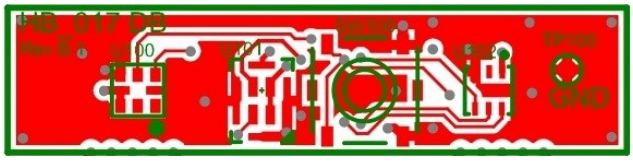

Figure 13 - Sensor PCB Top Layer

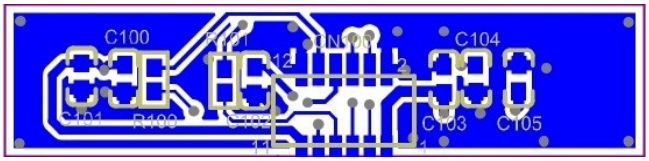

Figure 14 - Sensor PCB Bottom Layer

LED Indicator and RFID printed circuit boards are designed with double layers:

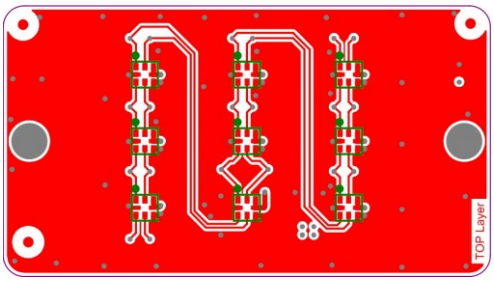

Figure 15 - LED Indicator PCB Top Layer

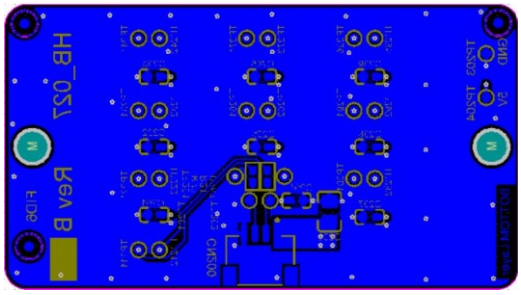

Figure 16 - LED Indicator PCB Bottom Layer

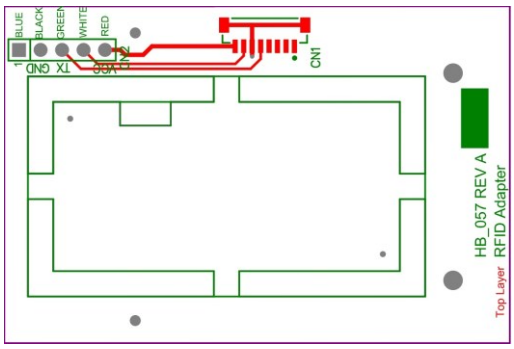

Figure 17 - RFID PCB Front Layer

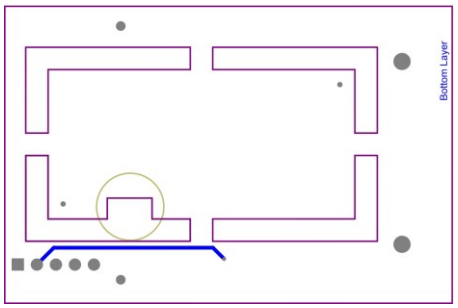

Figure 18 - RFID PCB Bottom Layer

3.4 Connectors, Switches and Buttons

The following section provides details about the connectors, their pin configurations and the functions of the switches and buttons on the boards. Refer to section 3.2 for connector locations.

- **CN2 – Capacitive Touch Panel Interface**

The 10-postion 0.5mm pitch top-contact FFC connector provides support to LCD panels with capacitive touch function.

Pin No.	Name	Type	Description
1	GND	P	Ground
2	CTP3V3	P	Output 3.3V power supply
3	CTP_SCL	O	I2C serial bus, clock line
4	NC	NA	No connection
5	CTP_SDA	I/O	I2C serial bus, data line
6	NC	NA	No Connection
7	CTP_RST#	O	Reset output to CTP
8	WAKE	NA	No Connection
9	CTP_INT#	I	Interrupt input from CTP
10	GND	P	Ground

Table 3 - CN2 Pinout

- **CN3 – SPI Host Interface**

Pin No.	Name	Type	Description
1	S_CS2#	O	SPI chip select, active low
2	S_SCK	O	SPI clock output
3	S_MOSI	O	SPI master output, slave input
4	S_MISO	I	SPI master input, slave output
5	IRQ1	I	Interrupt input from external device
6	GND	P	Ground
7	RST1#	O	Reset output to external device
8	VDD_3V3	P	3.3V Output power supply

Table 4 - CN3 Pinout

- **CN4 – Sensor board Inter-Connector**

The 12-position, 0.8mm pitch right-angle header serves as an interconnect for the sensor board.

Pin No.	Name	Type	Description
1	VDD_3V3	P	3.3V Output power supply
2	GND	P	Ground
3	AMLSCL	O	I2C serial bus, clock line
4	AMLINT	I	Interrupt input from ambient light sensor
5	RESET#	I	Reset input to MCU
6	AMLSDA	I/O	I2C serial bus, data line

7	PDM_DAT	I	Microphone data line
8	PDM_CLK	O	Microphone clock line
9	LED_K	O	Smart LED clock line
10	LED_D	O	Smart LED data line
11	LED_5V	P	5V Output power supply
12	GND	P	Ground

Table 5 - CN4 Pinout

- **CN5 – LED Control Interface**

Pin No.	Name	Type	Description
1	LED_5V	P	5V Output power supply
2	LED_K2	O	Smart LED clock line
3	LED_D2	O	Smart LED data line
4	GND	P	Ground

Table 6 - CN5 Pinout

- **CN6 – Micro-USB Receptacle**

The micro-USB receptacle enables PC communication with FT903 MCU and device firmware debug and updates.

- **CN7 – Micro SD Card Connector**

Supports SPI communication mode with auto card detection.

- **CN8, CN10 – I/O Power Supply and RS485 Interface**

These RJ45 ports are interconnected, integrating input/output power supplies along with the RS485 communication interface.

Pin No.	Name	Type	Description
1	RS485_B/Z	I/O	Inverting receiver input and inverting driver output. Pin is an input if DE = 0; pin is an output if DE = 1
2	RS485_A/Y	I/O	Noninverting receiver input and noninverting driver output. Pin is an input if DE = 0; pin is an output if DE = 1.
3	NA	I	Pin shorted to 6
4	DC_IN/ DC_OUT	P	Input/ Output power supply
5	DC_IN/ DC_OUT	P	Input/ Output power supply
6	NA	I	Pin shorted to 3
7	GND	P	Ground
8	GND	P	Ground

Table 7 - CN8, CN10 Pinout

- **CN11 – One Wire Debugger Interface**

This 2-position, 2.54mm pitch header enables a one-wire half-duplex serial connection for accessing the FT903 memory-mapped address space.

Pin No.	Name	Type	Description
1	GND	P	Ground
2	DBG	I/O	For in-circuit debugging

Table 8 - CN11 Pinout

- **CN100 – Mainboard Inter-Connector**

The 12-position, 0.8mm pitch right-angle receptacle serves as an interconnect to the mainboard.

Pin No.	Name	Type	Description
1	D3V3	P	3.3V input power supply
2	GND	P	Ground
3	AML_SCL	I	Ambient light sensor I2C clock line
4	AML_INT	O	Ambient light sensor interrupt output, open drain
5	RSTn	O	Reset output signal
6	AML_SDA	I/O	Ambient light sensor I2C data line
7	MIC_DAT	O	Microphone data output
8	MIC_CLK	I	Microphone clock line
9	LED_CLK_1	I	RGB LED clock line
10	LED_DAT_1	I	RGB LED data line
11	D_5V	P	5V Output power supply
12	GND	P	Ground

Table 9 - CN100 Pinout

- **J1 – LCD Panel Interface**

This 50-position, 0.5mm pitch top-contact FPC connector is used for inter-connection to the 5-inch LCD panel. The manufacturer's part number for this connector is "62684-402100ALF."

Pin No.	Name	Type	Description
1	LEDA	P	LED Anode
2	LEDA	P	LED Anode
3	LEDK	P	LED Cathode
4	LEDK	P	LED Cathode
5	GND	P	Ground
6	LCD3V3	P	3.3V Output power supply
7	LCD3V3	P	3.3V Output power supply
8	MODE	O	10KΩ pull-up to 3.3V
9	DE	O	Enable valid pixel data being sent to LCD
10	HSYNC	O	Horizontal sync signal to LCD
11	VSYNC	O	Vertical sync signal to LCD
12	B7	O	Blue channel intensity bit 7
13	B6	O	Blue channel intensity bit 6

14	B5	O	Blue channel intensity bit 5
15	B4	O	Blue channel intensity bit 4
16	B3	O	Blue channel intensity bit 3
17	B2	O	Blue channel intensity bit 2
18	B1	O	Blue channel intensity bit 1
19	B0	O	Blue channel intensity bit 0
20	G7	O	Green channel intensity bit 7
21	G6	O	Green channel intensity bit 6
22	G5	O	Green channel intensity bit 5
23	G4	O	Green channel intensity bit 4
24	G3	O	Green channel intensity bit 3
25	G2	O	Green channel intensity bit 2
26	G1	O	Green channel intensity bit 1
27	G0	O	Green channel intensity bit 0
28	R7	O	Red channel intensity bit 7
29	R6	O	Red channel intensity bit 6
30	R5	O	Red channel intensity bit 5
31	R4	O	Red channel intensity bit 4
32	R3	O	Red channel intensity bit 3
33	R2	O	Red channel intensity bit 2
34	R1	O	Red channel intensity bit 1
35	R0	O	Red channel intensity bit 0
36	GND	P	Ground
37	PCLK	O	Pixel clock to LCD
38	GND	P	Ground
39	LR	O	Connected to 3V3
40	UD	O	Connected to ground
41	LCD3V3	P	3.3V Output power supply
42	LCD3V3	P	3.3V Output power supply
43	NA	O	Connected to ground
44	DISP	O	Enable Display to LCD
45	NA	O	33Ω pull-down to ground
46	NA	O	33Ω pull-down to ground
47	NA	O	10KΩ pull-up to 3.3V
48	GND	P	Ground
49	NA	O	33Ω pull-down to ground
50	NA	O	33Ω pull-down to ground

Table 10 - J1 Pinout

- **SW1** is a 4-position rotary switch use for configuring a unique ID for the device.
- **SW100** is hardware reset button to reset FT903 MCU.

4 Board Schematics

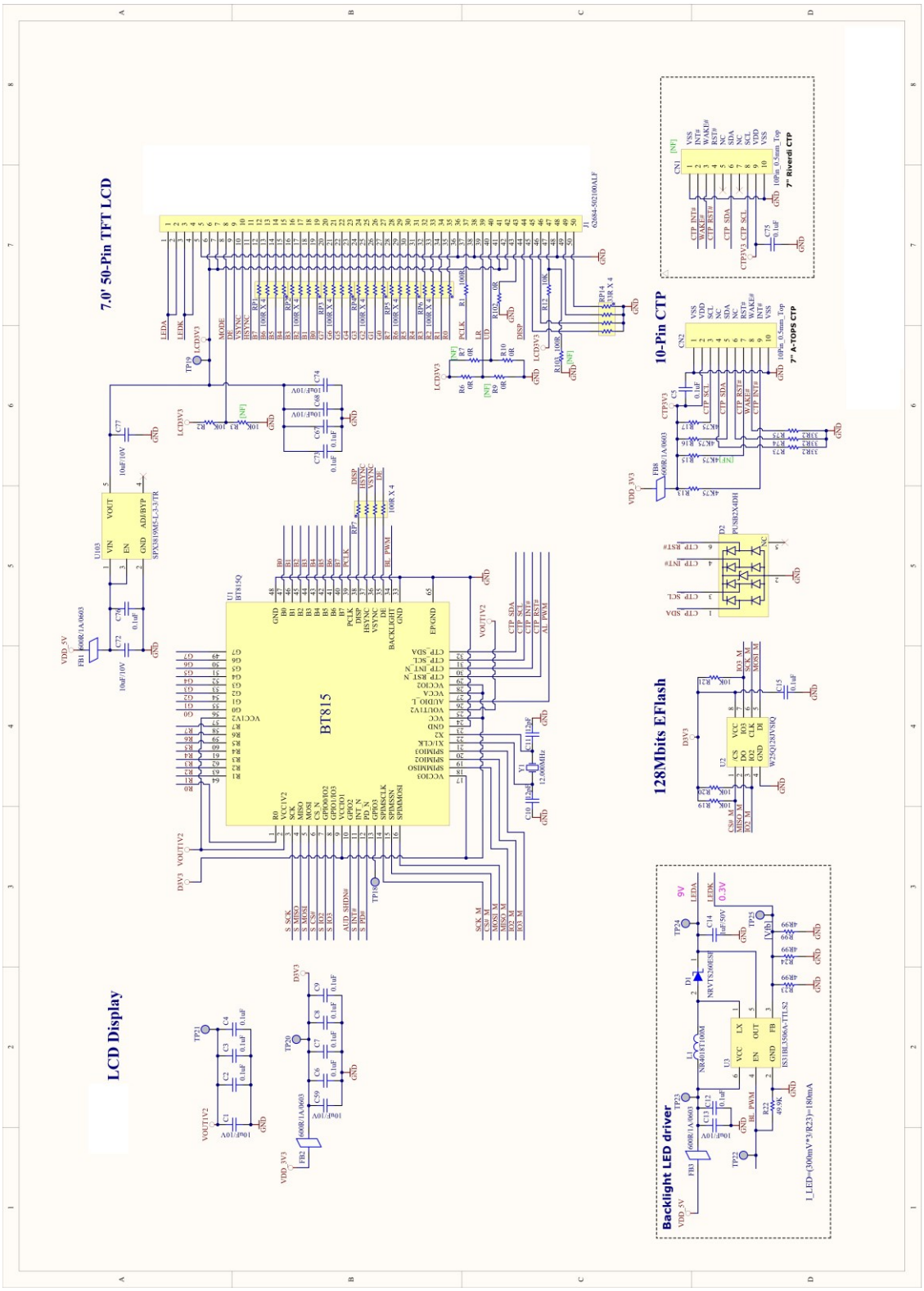

Figure 19 - 7-inch TFT LCD Display

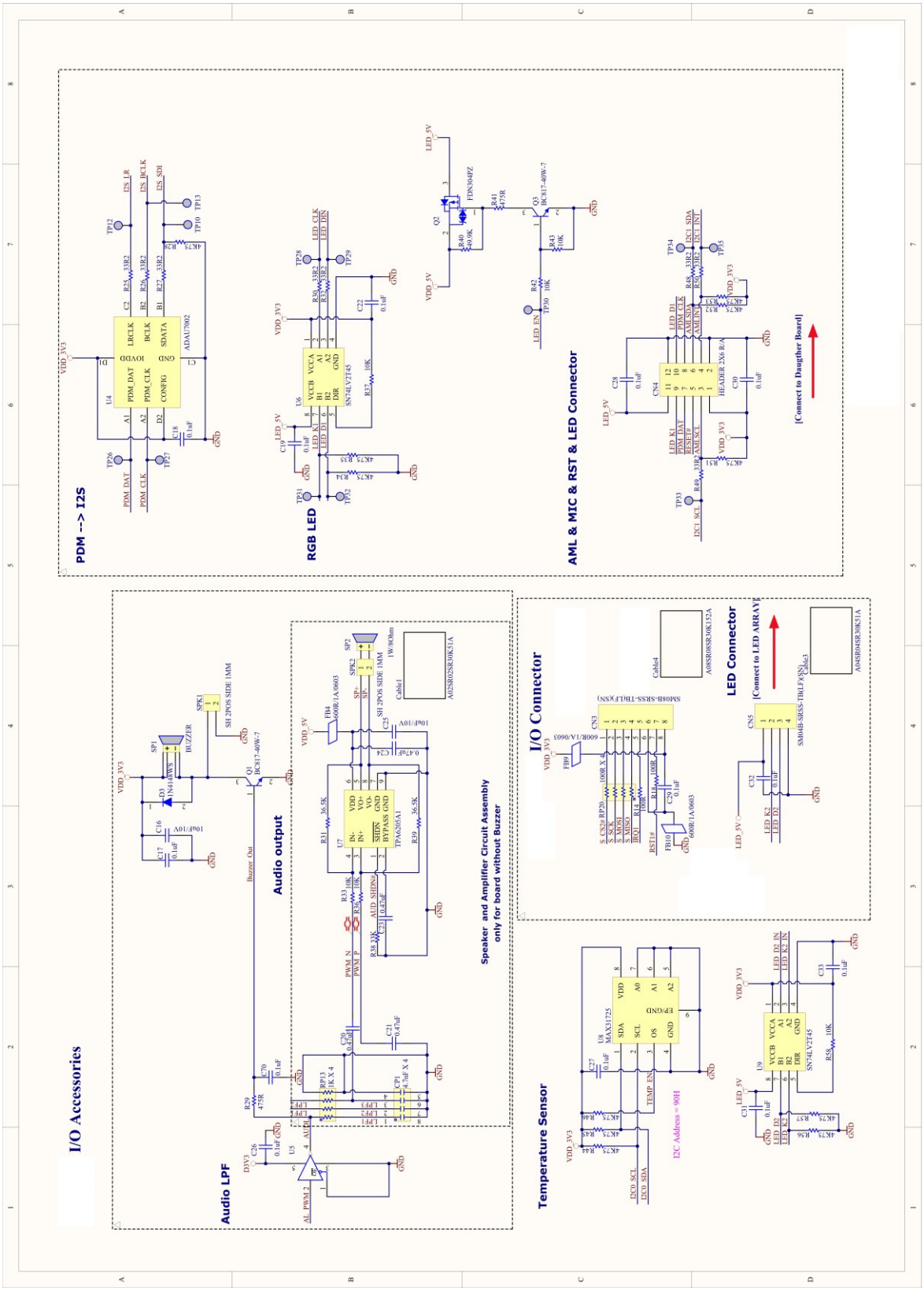

Figure 20 - I/O Accessories

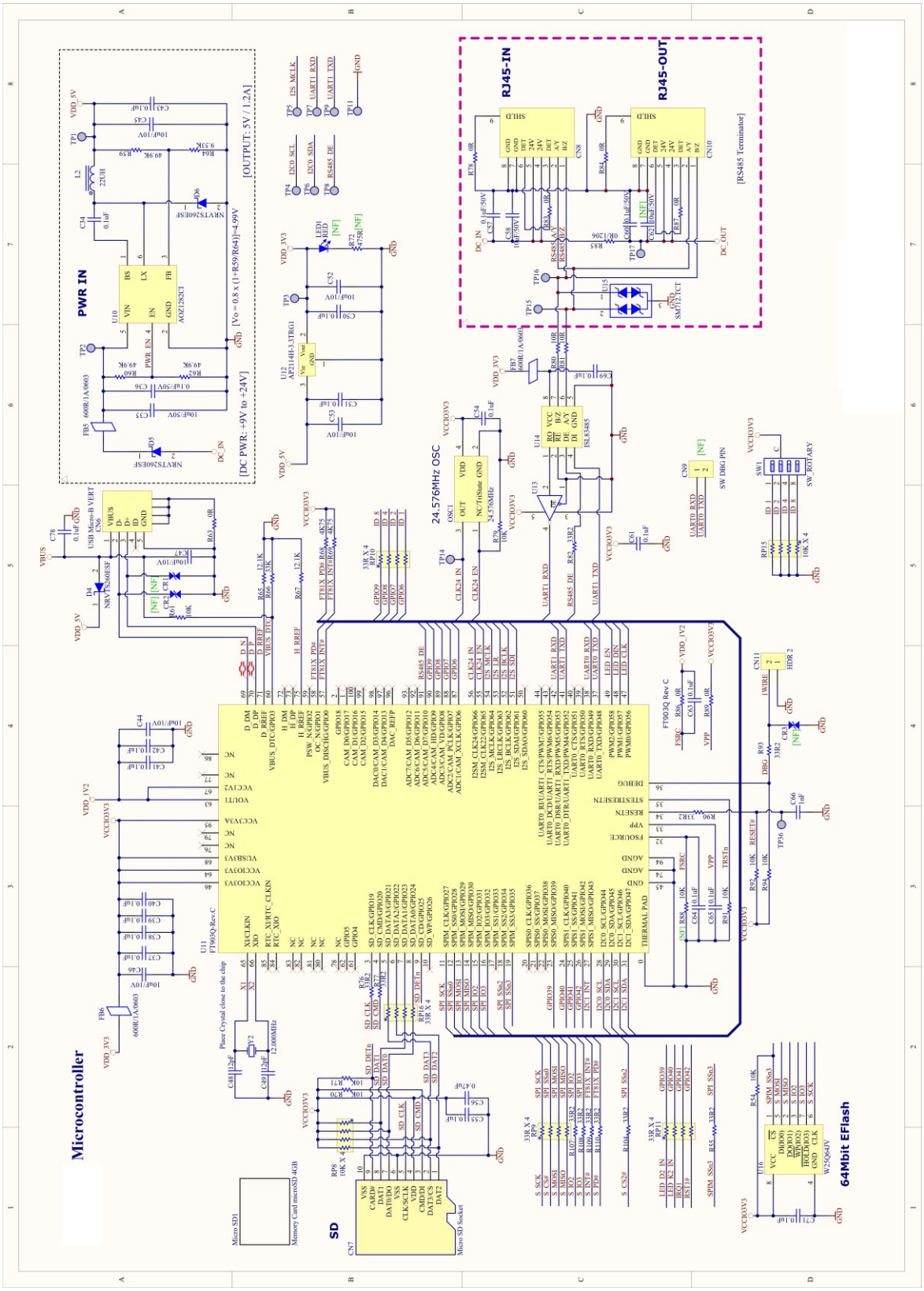

Figure 21 - MCU Controller

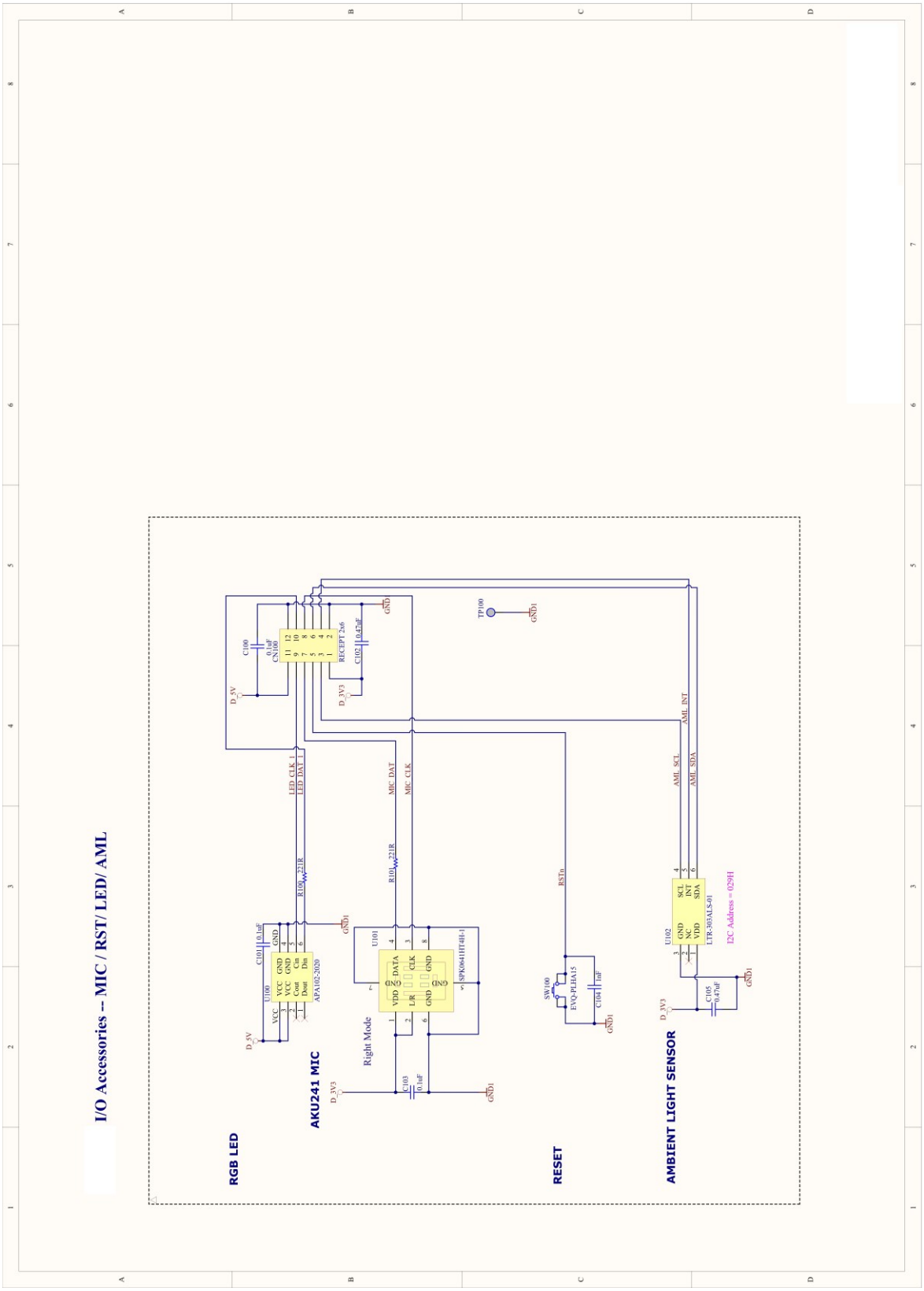

Figure 22 - Sensor Board

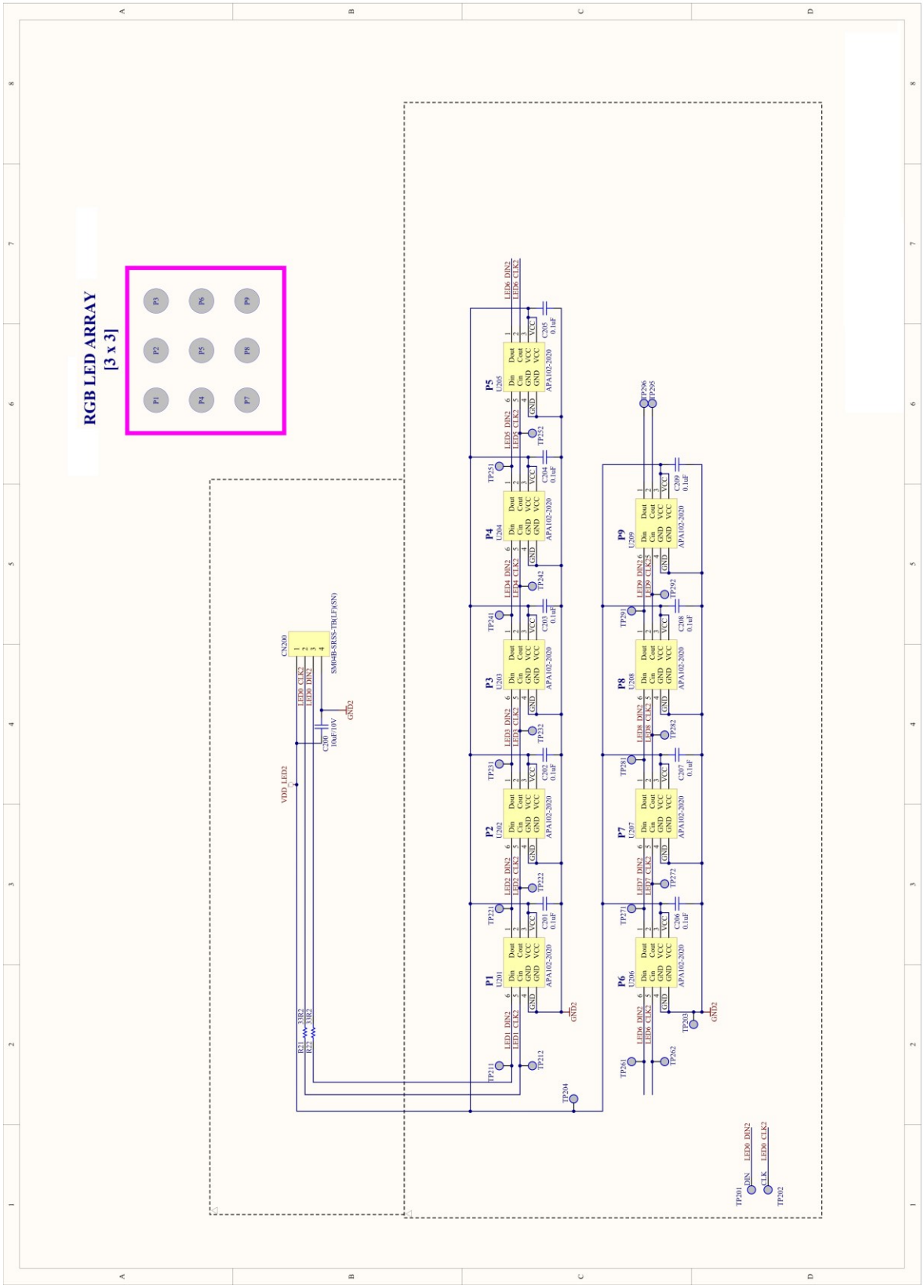

Figure 23 - LED Indicator Board

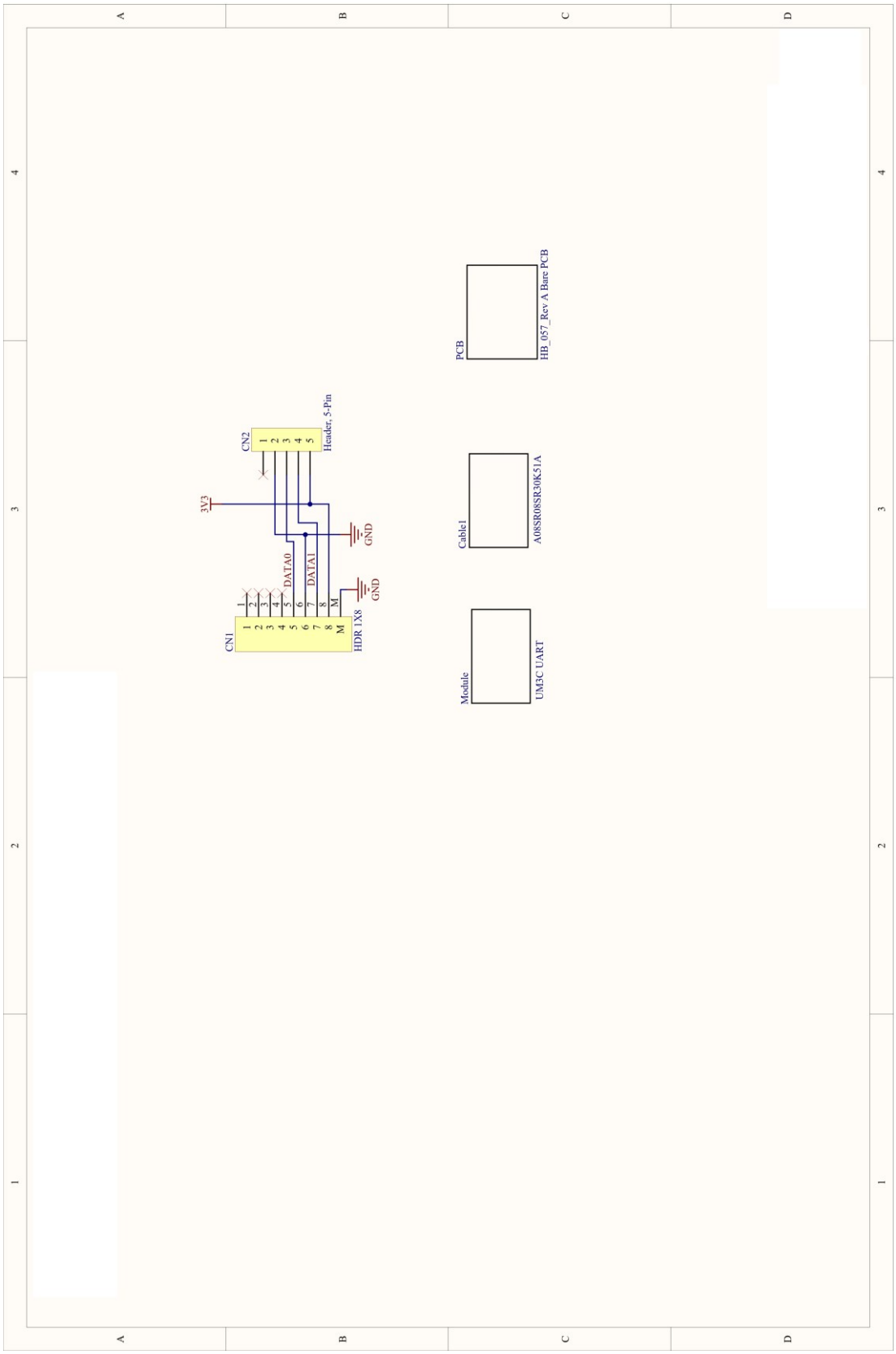

Figure 24 - RFID Board

5 Device Description and Configuration

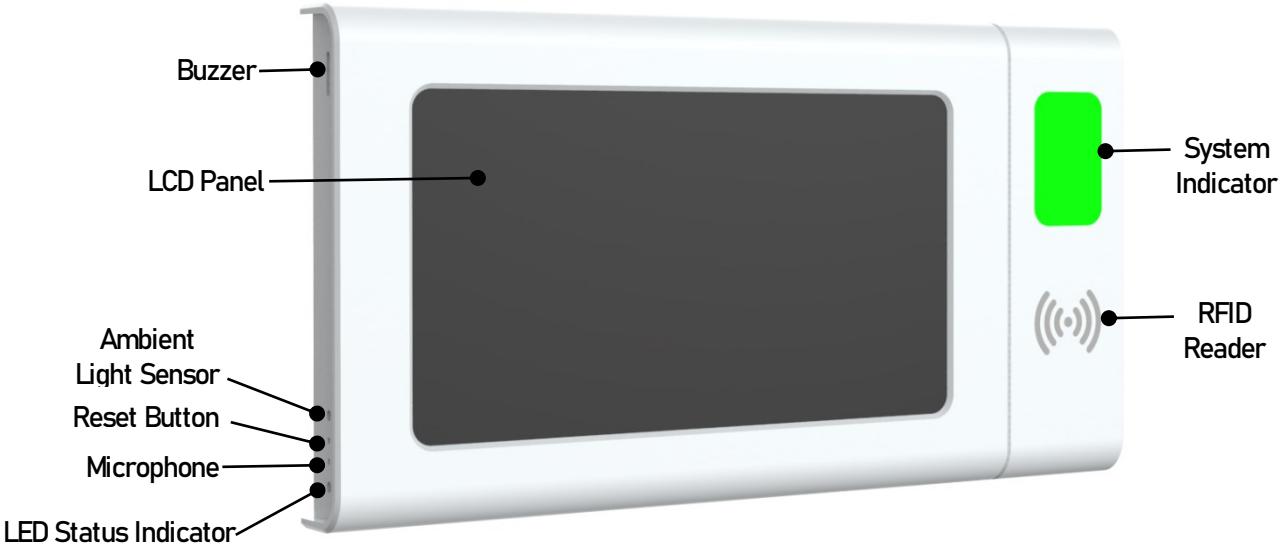

Figure 25 - IDP-7010-04A Touch Display Front View

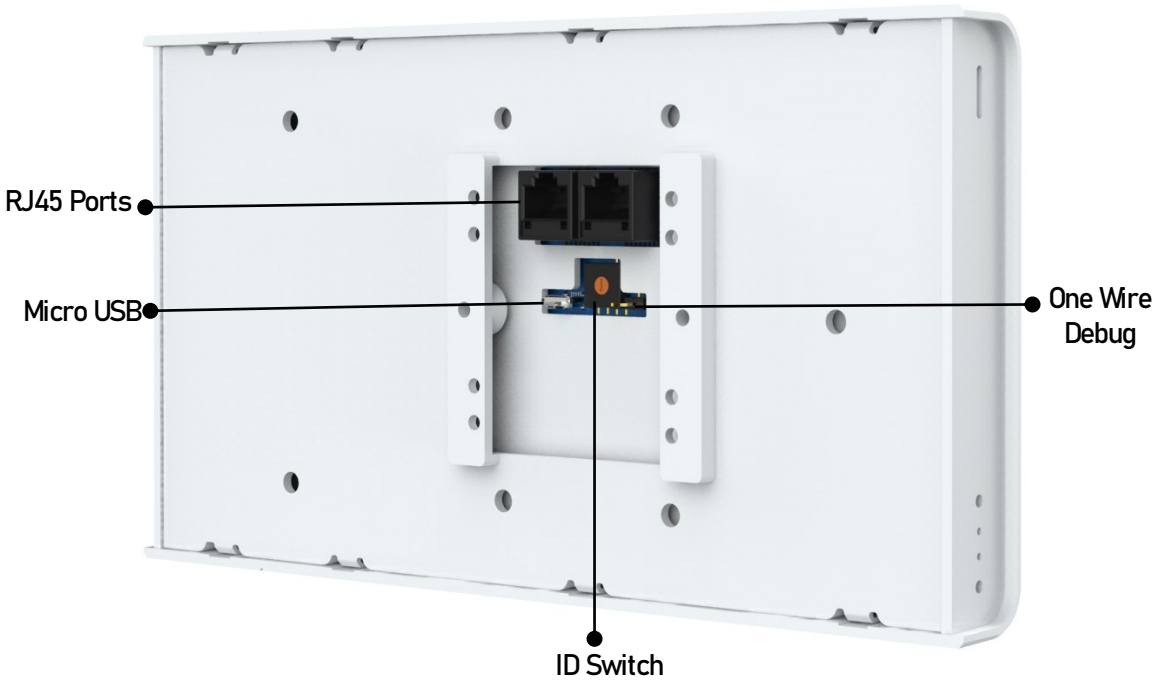

Figure 26 - IDP-7010-04A Touch Display Rear View

5.1 Power Supply

The IDP-7010-04A display module receives power through the RJ45 port on its back and can also pass power directly from the input source. It supports an input voltage range of 9VDC to 24VDC, with a recommended minimum power supply of 6W.

5.2 Microcontroller

The display module is powered by the FT903, a 32-bit RISC microcontroller from Bridgetek's System-On-Chip series. It features:

- 32-bit FT32 core processor running at 100MHz
- 256kB on-chip flash memory
- 256kB on-chip shadow program memory
- 64kB of on-chip data memory
- OTP memory for security configuration
- USB 2.0 EHCI-compatible host controller supporting high-speed (480 Mbit/s), full-speed (12 Mbit/s), and low-speed (1.5 Mbit/s)
- USB 2.0 device controller supporting high-speed (480 Mbit/s) and full-speed (12 Mbit/s)

Bridgetek provides a free software toolchain to simplify the creation and downloading of .bin files. The FT9xx-Toolchain is available for download on the Bridgetek website.

5.3 Graphic Controller

The IDP-7010-04A utilizes Bridgetek's third-generation Advanced Embedded Video Engine (EVE) BT815 for high-quality Human Machine Interfaces (HMIs), integrating graphic control, audio, and touch interface capabilities.

Bridgetek provides the EVE Toolchains, an essential suite of tools for free, enabling developers to design impressive and highly responsive graphics user interfaces (GUIs) for EVE-based solutions. The toolchain contains the following tools:

- EVE Screen Designer
- EVE Screen Editor
- EVE Asset Builder

5.4 RJ45 Ports

5.4.1 Pin Definition

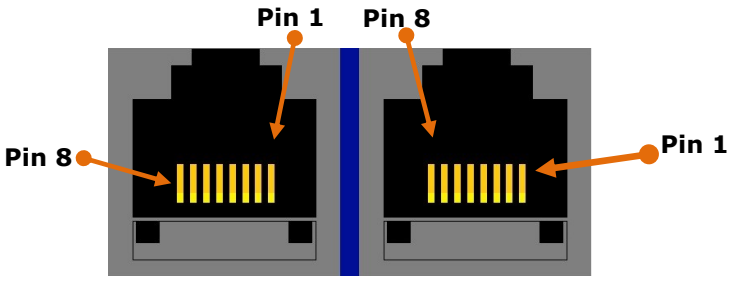

Figure 27 - RJ45 Ports Pin orientation

Pin Number	1	2	3,6	4,5	7,8
Function	RS485 B/Z	RS485 A/Y	Pins Connected	DC_IN/ OUT	GND

Table 11 - RJ45 Ports Pin Function

5.4.2 Powering and Communication

The RJ45 ports support both power and data transmission. Below are two methods for powering and communicating with the IDP-7010-04A module.

Method 1: Use of BRTSys LDS Bus USB Adaptor

For development purposes, developers can use a BRTSys **LDS Bus USB Adaptor** designed for RS485 device applications. Refer to the purchase link below for the adaptor and an illustration in Figure 28.

- BRTSys – LDS Bus USB Adaptor

Figure 28 - BRTSys LDS Bus USB Adaptor

For connection details when using the adapter, see Figure 29.

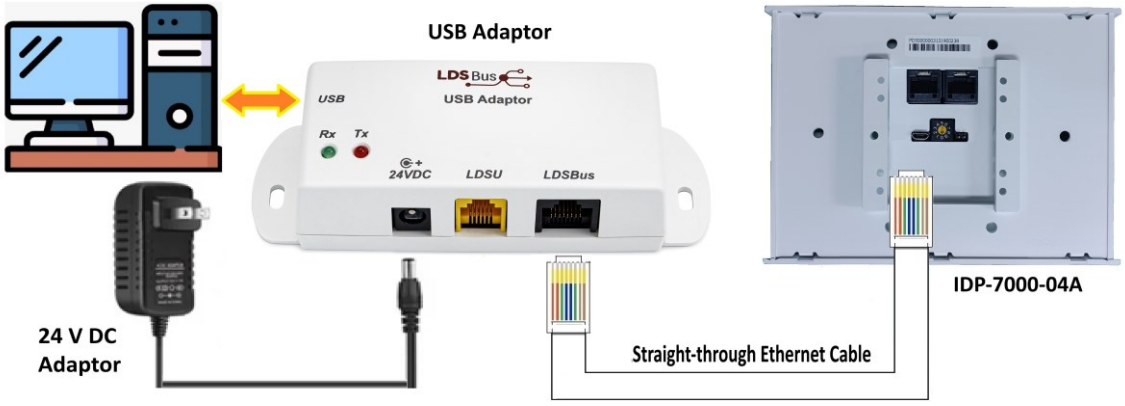

Figure 29 - Connection to PC and Supply via LDS Bus USB Adaptor

Method 2: Use of Power-over-Ethernet (PoE) Splitter

A **PoE splitter** can separate power and data, enabling connection to both a power source and a host controller. An illustration of the PoE splitter and purchase links are provided in Figure 30.

- PoE Splitter - Digikey
- PoE Splitter- AliExpress

Figure 30 - PoE Splitter

Refer to Figure 31 for connection details using a PoE splitter.

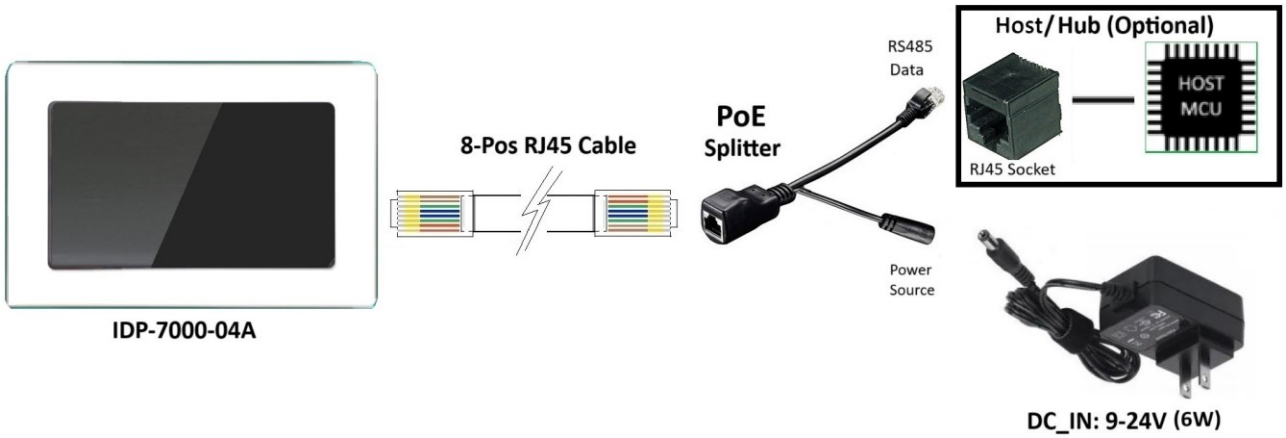

Figure 31 - Connection to Host and Supply via PoE Splitter

5.4.3 Port Connection

The RJ45 ports are interconnected, with their power lines shorted through a 0-ohm resistor and RS485 signals linked. When a power source or interface is connected to one port, it is automatically routed to the other. Refer to Figure 32 below for a simplified block diagram of the IDP-7010-04A's internal RJ45 connections.

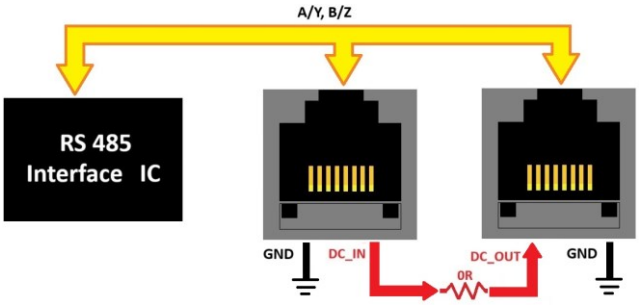

Figure 32 - PCB Connections of RJ45 Ports

Caution: Only one power source should be supplied at a time.

5.4.4 Port Termination

The port terminator contains a 120Ω resistor across the RS485 bus (pins 1 and 2 of the port). When using the IDP-7010-04A module as a standalone device or as the last unit in a Daisy Chain configuration, connect the port terminator to the final RJ45 port as illustrated in Figure 33.

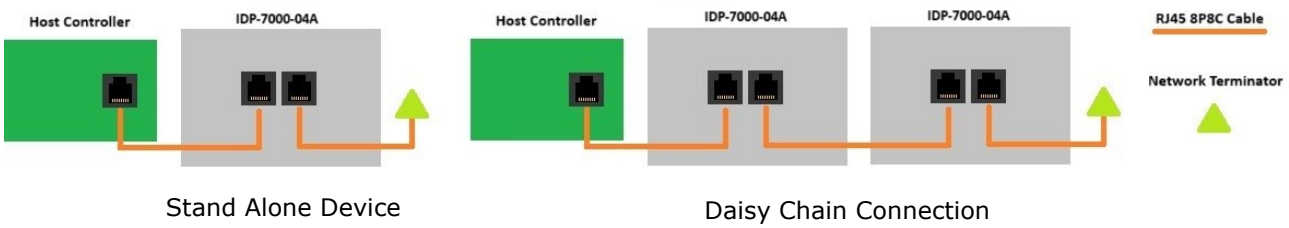

Figure 33 - Port Termination

5.5 Integrated Smart RGB LED

A built-in smart RGB LED provides programmable status indications. Positioned on the module's side (Figure 25), it operates using a 24-bit color signal controlled via clock and data inputs.

5.6 ID Switch

Located on the module's back (Figure 26), the ID switch enables custom configurations or the use of the default factory setting (zero). It facilitates device management in multi-device setups and boot mode configurations.

5.7 Reset Button

The module features a reset button on the side (Figure 25). The reset function can be activated by pressing through the designated hole.

5.8 Micro USB

A micro USB connector provides USB communication interface to the FT903 microcontroller. Refer to the **Software Setup Information** section for detailed setup instructions.

5.9 One Wire Debug

The module includes a one-wire debug function accessible via a 2-position header on the back (Figure 26), connecting to the microcontroller. This mode supports code, firmware, and bootloader downloads to the NOR flash. Refer to the **Software Setup Information** section for installation details.

5.10 Buzzer

The IDP-7010-04A display module includes an integrated buzzer circuit for event notifications.

5.11 Microphone

The IDP-7010-04A display module includes a built-in digital microphone for capturing audio signals. The microphone module and its acoustic opening are positioned on the side of the display module (see Figure 25).

Data input of the microphone is converted by Analog Devices ADAU7002 pulse density modulation (PDM) to I^2S/TDM format for recording by MCU.

5.12 System Indicator

The module includes an LED matrix indicator with programmable colour codes to represent specific application events.

5.13 RFID Reader

The built in 13.56MHz RFID reader supports ISO/IEC 14443 A/MIFARE and NTAG. Able to detect RFID tags and RFID fobs up to 3cm.

6 Specifications

6.1 Electrical Specifications

Parameter		Min	Typ	Max	Unit
DC_IN	Input voltage range	9	24.0	28	V
DC_OUT	Output voltage range	-	DC_IN	-	V
Icc_12V	Operating current, DC_IN=12V: Normal *Note	-	350	-	mA
V_{OD1}	Driver Differential VOUT (no load)	-	-	3.3	V
V_{OD2}	Driver Differential VOUT (with load) RL=100Ω (RS-422) (Figure 34) RL = 54Ω (RS-485) (Figure 34) RL = 60Ω, -7V ≤ VCM ≤ 12V	 2 1.5 1.5	 2.7 2.3 2.6	 - 3.3 -	V
ΔV_{OD}	Change in Magnitude of Driver Differential VOUT for Complementary Output States RL = 54Ω or 100Ω (Figure 34)	-	0.01	0.2	V
V_{OC}	Driver Common-Mode VOUT RL = 54Ω or 100Ω (Figure 34)	-	1.8	3	V
ΔV_{OC}	Change in Magnitude of Driver Common-Mode VOUT for Complementary Output States RL = 54Ω or 100Ω (Figure 34)	-	0.01	0.2	V
Temperature	Operating temperature Storage temperature	0 0	- -	55 70	℃

Table 12 - Operating Voltage and Current

Note: Measurement taken with the screen turned on.

Test Circuits

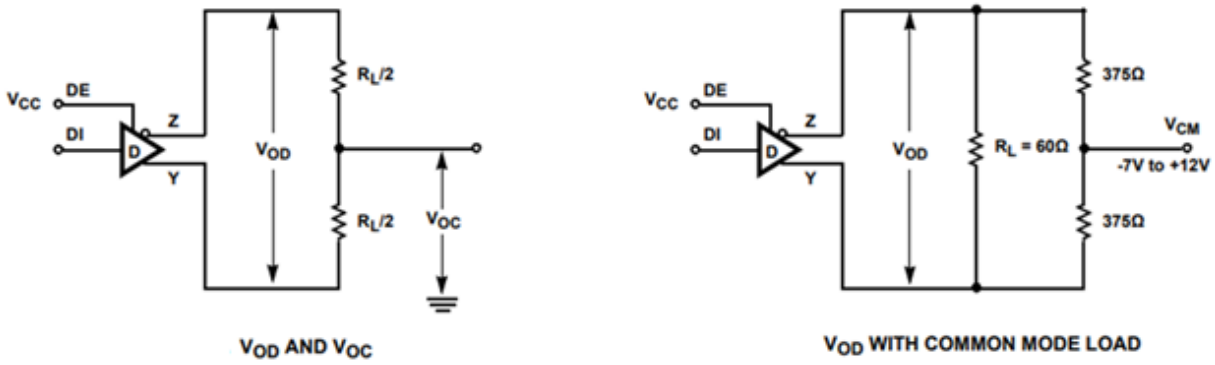

Figure 34 - DC Driver Test Circuits

6.2 Optical Specifications

Item	Symbol		Condition	Min.	Typ.	Max.	Unit
Brightness	Bp		θ=0° ☐=0°	-	420	-	Cd/m^2
Uniformity	⊿Bp			75	-	-	%
Viewing Angle	3:00		*Cr≥10*	-	65	-	Deg
	6:00			-	65	-	
	9:00			-	65	-	
	12:00			-	65	-	
Contrast Ratio	Cr		θ=0° ☐=0°	300	500	-	-
Response Time	Tr +Tf			-	10	-	ms
Color of CIE Coordinate	W	x	θ=0° ☐=0°	-	0.28	-	-
		y		-	0.33	-	-
	R	x		-	0.51	-	-
		y		-	0.34	-	-
	G	x		-	0.31	-	-
		y		-	0.56	-	-
	B	x		-	0.15	-	-
		y		-	0.14	-	-
NTSC Ratio	S			50	60	-	%

Table 13 - Optical Specifications

Note: The parameter is slightly changed by temperature, driving voltage and material.

7 Mechanical Dimensions and Mounting Guides

7.1 Dimensions

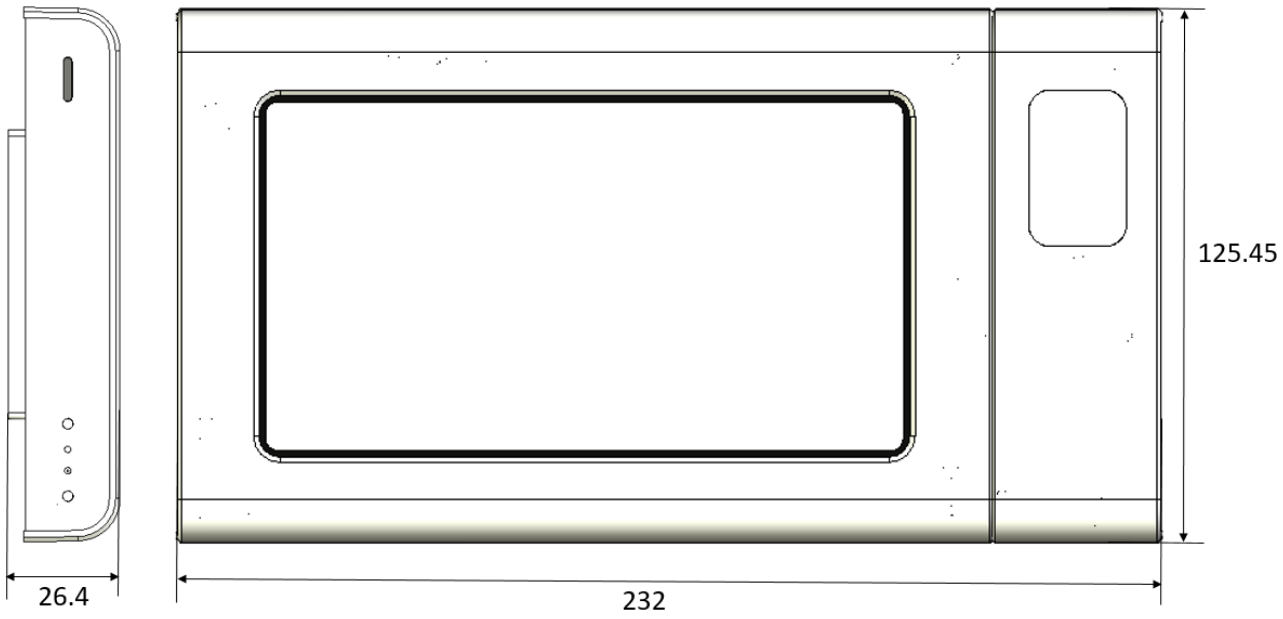

Figure 35 - IDP-7010-04A Touch Display Dimensions

7.2 Mounting Guides

The following steps provide guidance on wall mounting the IDP-7010-04A module.

1. Secure the IDP-7010-04A back cover using one of the following methods:
   - Attach it to an Arlington LV2* bracket with the provided self-tapping screws (3.5mm x 16mm, minimum length 12mm), refer to Figure 40.
   - Mount it onto a standard 86mm x 86mm x 40mm electrical junction box using screws (minimum length 12mm, maximum length 20mm, not included in package), refer to **Error! Reference source not found.**.
2. Connect RJ45 8P8C cable and add a terminator, refer to Section **Error! Reference source not found.**.
3. Install the front panel on back cover and secure the panel.

Figure 36 - Arlington LV2 Mounting

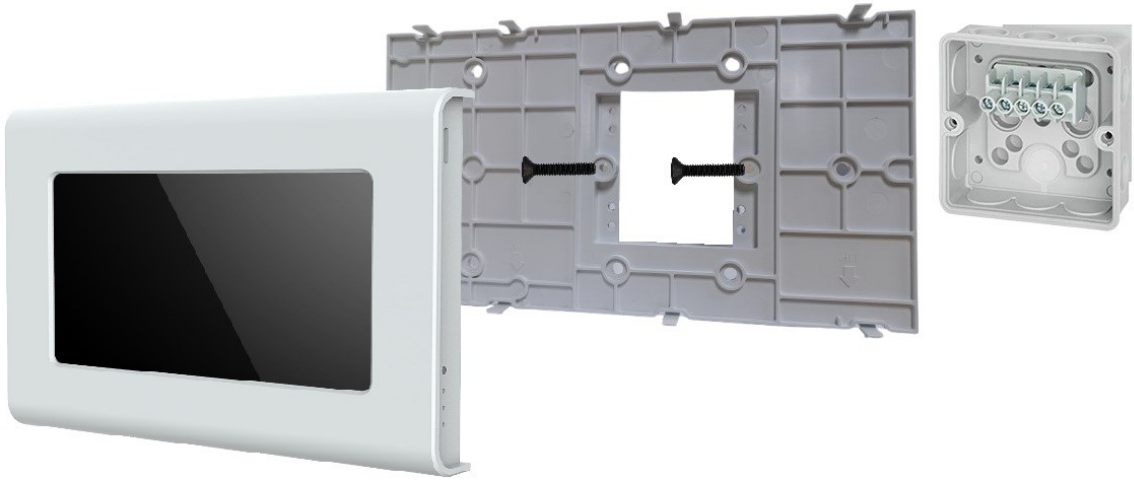

Figure 37 - Electrical Junction Box Mounting

**Arlington LV2 low voltage mounting bracket and electrical junction box are not part of the package. Electrical junction box screws not provided.*

8 Software Setup Information

8.1 Startup Test

The device comes preloaded with default firmware stored in the integrated NOR-Flash. Follow these steps to perform an initial test of the set before flashing developers' own code.

Step 1: Powering Up the Device

Connect the device to power source via the RJ45 connector. For details, refer to section 5.4.2 Powering and Communication.

Step 2: Touch Calibration

When powered on, the display module's preloaded firmware will prompt the user to perform a touch calibration test, as shown in Figure 38. During calibration process, an audible beep tone will be activated. Complete the calibration as required for the application.

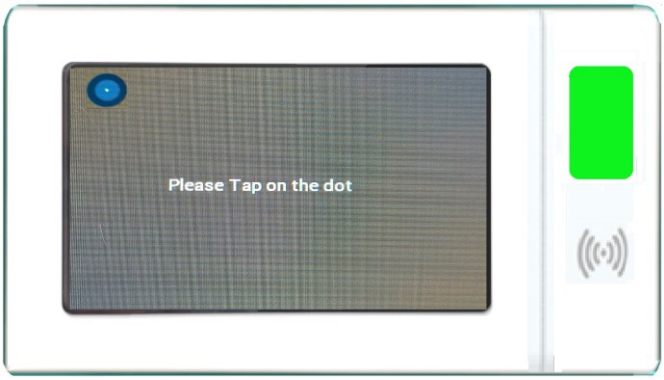

Figure 38 - Touch Calibration

Upon calibration, the Bridgetek company logo will be displayed as shown in Figure 39.

Figure 39 - Bridgetek Logo

Conducting this startup test ensures the device is operational before developers load their custom code.

8.2 Firmware Download and Debugging Methods for FT903 MCU

There are two methods for downloading firmware and debugging with the FT903 MCU:

Method 1: One Wire Communication Mode

This method requires additional hardware, specifically the UMFTPD2A programming module developed by Bridgetek, which supports downloading of firmware and debugging. For detailed information on the module and hardware pin definitions, refer to the UMFTPD2A link.

To establish the hardware connection, simply connect the **DBG** (CN2/CN3-8) and **GND** (CN2/CN3-7) pins from UMFTPD2A to the **One-Wire Debug** header pins of IDP-7010-04A display module, as shown in Figure 40.

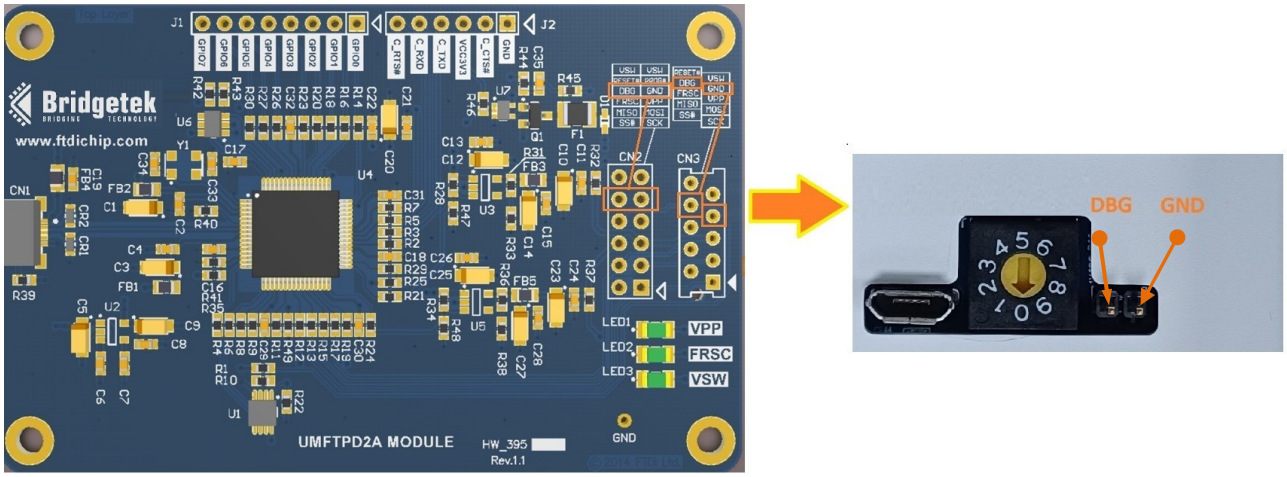

Figure 40 - One-Wire Debug Mode Hardware Connection

Method 2: USB Communication Mode

The USB-micro connector at the back of the module facilitates communication with the FT903 MCU. The application code can configure this USB port as either a **Device Firmware Upgrade (DFU)** port or a USB CDC serial port.

Figure 41 – USB Mode Communication

For more details, refer to the FT9xx_Programming-Debugging-and-Troubleshooting Guide.

8.3 Software Development Tools and Support

Bridgetek provides free and comprehensive software tools to simplify application development:

- **FT9XX Toolchain -** Download here
- **EVE Toolchain** - Download here

For example, projects, documentation, and additional support resources, please refer to the dedicated open-source repository:

https://github.com/Bridgetek/

9 Disclaimer Notice: Use of Third-Party Software or Websites

We may recommend use of software or web sites that are owned or operated by other companies. We offer or facilitate this recommendation by hyperlinks or other methods to aid your access to the third-party resource. While we endeavour to direct you to helpful, trustworthy resources, we cannot endorse, approve, or guarantee software, information, products, or services provided by or at a third-party resource or track changes in the resource. Thus, we are not responsible for the content or accuracy of any third-party resource or for any loss or damage of any sort resulting from the use of, or for any failure of, products or services provided at or from a third party resource.

We recommend these resources on an "as is" basis. When you use a third party resource, you will be subject to its terms and licenses and no longer be protected by our privacy policy or security practices, which may differ from the third policy or practices or other terms. You should familiarize yourself with any license or use terms of, and the privacy policy and security practices of, the third party resource, which will govern your use of that resource.

10 Warranty Statement

According to our after-sales policy, the warranty (if applicable) will be void under the following circumstances:

- The device has been damaged due to human factors, such as dropping, impact, water exposure, or unauthorized disassembly/modification
- The device has malfunctioned due to improper use, mishandling, or usage beyond its intended design.
- The device has been disassembled, repaired, or modified by unauthorized personnel.
- Any other conditions that do not comply with our warranty policy.

11 Contact Information

Refer to https://brtchip.com/contact-us/ for contact information.

Distributor and Sales Representatives

Please visit the Distribution Network – IC & Module (brtchip.com) page for the contact details of our distributor sales representative(s) in your country.

Appendix A - References

Document References

DS_FT903

DS_BT815

Acronyms and Abbreviations

Terms	Description
CTP	Capacitive Touch Panel
DFU	Device Firmware Upgrade
EVE	Embedded Video Engine
I/O	Input/Output
IC	Integrated Circuit
LCD	Liquid Crystal Display
LED	Light Emitting Diode
MCU	Microcontroller Unit
MIC	Microphone
NOR	NOT-OR
PCB	Printed Circuit Board
PCBA	Printed Circuit Board Assembly
RFID	Radio Frequency Identification
RGB	Red, Green Blue
RISC	Reduced Instruction Set Computer
TFT	Thin Film Transistor
USB	Universal Serial Bus

Appendix B - List of Figures and Tables

List of Figures

List of Tables

Appendix C – Revision History

Document Title: IDP-7010-04A Touch Display Module Datasheet
Document Reference No.: BRT_000456
Clearance No.: BRT#232
Product Page: https://brtchip.com/product/idp-7010-04a
Document Feedback: Send Feedback

Revision	Changes	Date
Version 1.0	Initial Release	07-04-2025