

2.4" TFT-LCD Series Product Brief

Model Number : DT024-00-0

CT024-00-0

RT024-00-0

DOCUMENT DATE: 29th Apr 2019

DOCUMENT REVISION: 1.2

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www.idisplay.com.tw

Revision History

Version	Date	Changes
V 1.0	2019-08-16	Initial version.
V 1.1	2019-10-05	Update product name.
V 1.2	2020-04-29	Update product picture.

Table of Contents

1.	DESCRIPTION	1
2.	FEATURES	2
3.	MODULES OVERVIEW	3
4.	HARDWARE CONFIGURATION	4
5.	PRODUCT NUMBER NAMING GUIDE	5
6.	GENERAL SPECIFICATION	6
6.1	LCD and Touch Panel	6
6.2	Environment	6
6.3	Electronic	6
6.4	Storage Capacity	7
7.	MECHANICAL DETAIL	8
8.	HMI Configurator - iCreator	11

1. DESCRIPTION

HMI is redefined

iDisplay has released the iCreator Software for Interface Programming, Design and Control Configuration. The Powerful but Simple iCreator Software help hardware developer to adopt to HMI with ease and speed. GUI is designed with the principle "What You See is What You Get". Speed up all the software learning process. With iDisplay HMI Module, it can lead your product to be Intelligent, User Friendly and High Tech Category.

Hardware Design

Integrated with iDisplay HMI Module, your product will be Intelligent, User Friendly and State-of-the-art. Advanced ARM Processor for Fast Graphical Processing and Input Control. Upgradable Firmware for Continuous Enhancement. Customizable PCB (on client request) which suit any scenario.

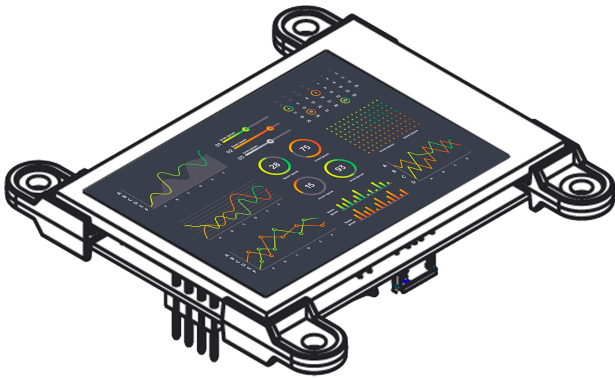
Suitable Application

Industrial Automation and Machine, Vending Machine, Electronic Appliance, Consumer Electronics, Medical Device, Musical Device, IOT Device, Automotive and Printer Instrument.

2. FEATURES

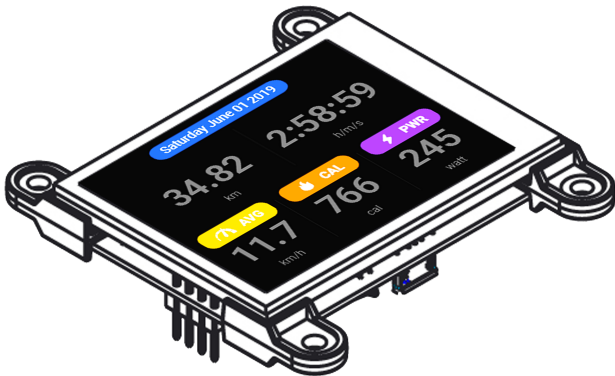
- Display type: 2.4" TFT-LCD
- Display resolution: 240(RGB) × 320 dots
- Display color: 262K
- Advanced ARM core processor
- 8 MB DDR RAM / 128 MB NAND Flash
- Touch type: non-touch / capacitive touch / resistive touch
- Interface: USB 2.0 HS / UART / RS232
- GPIO supported
- RTC supported
- Buzzer supported
- ADC supported
- SD card optional
- GUI software provided

3. MODULES OVERVIEW



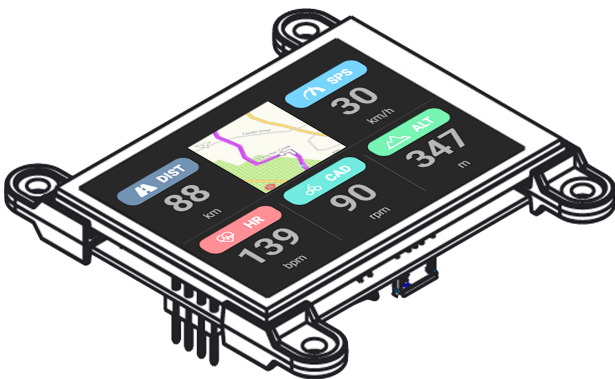
Model: DT024-00-0

Description: 2.4" TFT-LCD display module



Model: CT024-00-0

Description: 2.4" TFT-LCD display module with capacitive touch

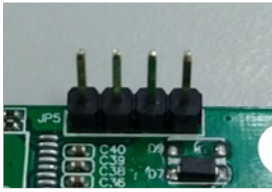


Model: RT024-00-0

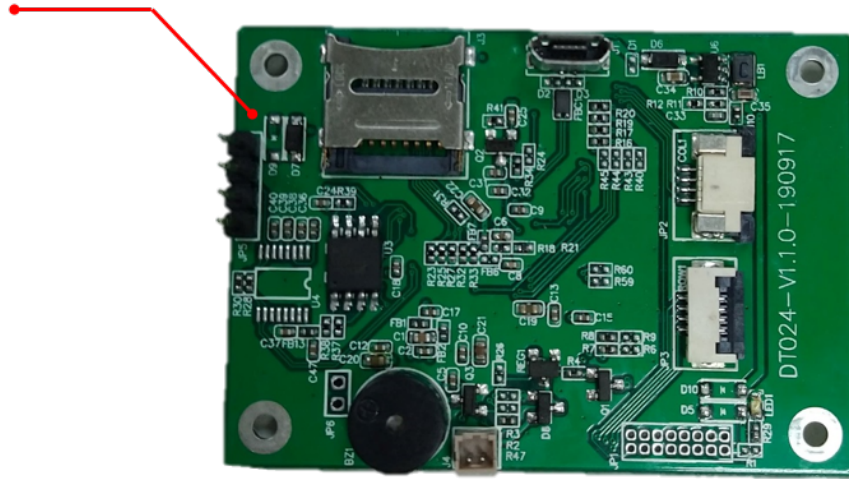
Description: 2.4" TFT-LCD display module with resistive touch

4. HARDWARE CONFIGURATION

Pin4 Pin1



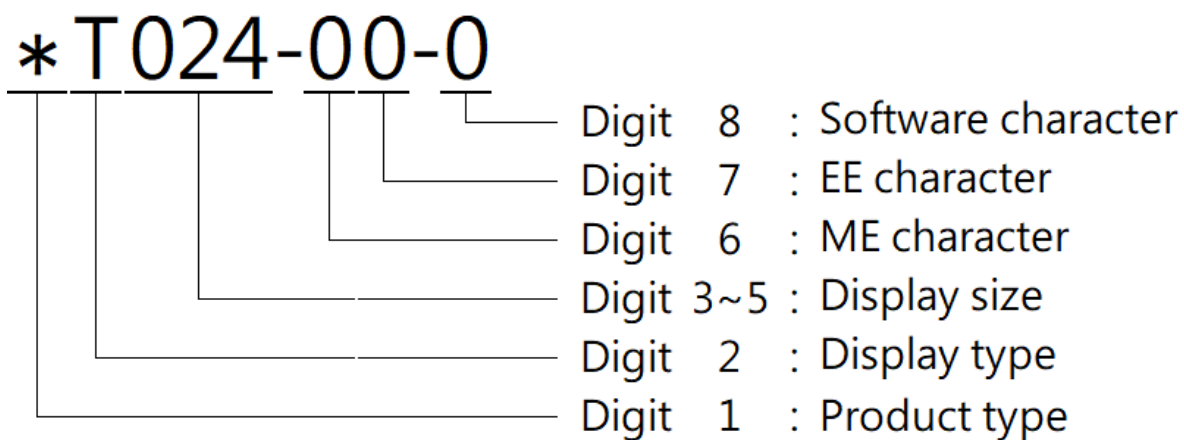
UART / RS232



Pin	Component	Symbol	I/O	Description
1	UART / RS232	5V in	Power	Main Voltage Supply input pin.
2		TX	Out	This pin is to Transmit (Tx) signal of other serial devices.
3		RX	In	This pin is to Receive (Rx) signal from other serial devices.
4		GND	Power	Supply Ground

5. PRODUCT NUMBER NAMING GUIDE

Each part of module name represents some product details, the following example will show what they mean.



Category	Digit	Character	Meaning
Product type	1	D	Display Module
		R	Resistive Touch Panel
		C	Capacitive Touch Panel
Display type	2	T	TFT LCD
Display size	3~5	024	2.4 inches
ME character	6	0	type 0
EE character	7	0	type 0
Software character	8	0	type 0

6. GENERAL SPECIFICATION

6.1 LCD and Touch Panel

PARAMETER	Condition	SPECIFICATION
Display Type	2.4" TFT-LCD	
Display Mode	Transmission / Normally Black	
Display Resolution	240(RGB) × 320 dots	
Color	262K	
Color Filter Array	RGB vertical stripe	
View Angle(T/B/L/R)	80 / 80 / 80 / 80 Degree	
Back Light LED	4 White LED	
Luminance	80 mA	250 cd/m ²
Display Endurance	80 mA	> 50000 Hr
Contrast Ratio	800	
Module Dimension	non-touch: 47.94(W) × 86.85(H) × 13.72(T) mm Capacitive: 47.94(W) × 86.85(H) × 13.12(T) mm Resistive: 47.94(W) × 86.85(H) × 12.97(T) mm	
Active Area	36.72(W) × 48.96(H) mm	
Pixel Pitch	0.153(W) × 0.153(H) mm	
Touch Type	Non-Touch Capacitive / Single Point Resistive / Single Point	
Touch Screen Transparency	Resistive: ≥ 76 % Capacitive: ≥ 85 %	
Touch Screen Endurance	1,000,000 times	

6.2 Environment

PARAMETER	SPECIFICATION	Unit
Operating Temperature	-20 ~ +70	°C
Storage Temperature	-30 ~ +80	°C

6.3 Electronic

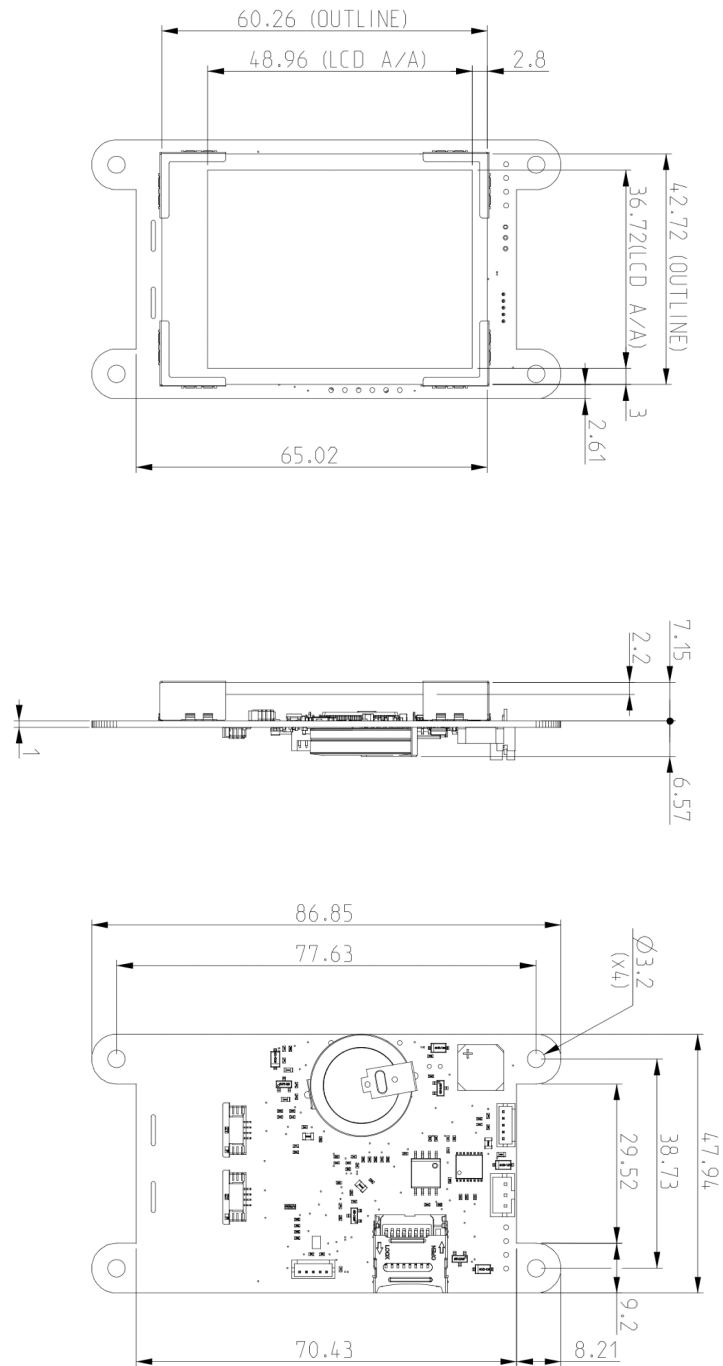
PARAMETER	MIN	Typ	MAX	Unit
VCC(Supply Voltage)	-	5	-	V
ICC(Supply Current)	-	170	-	mA

6.4 Storage Capacity

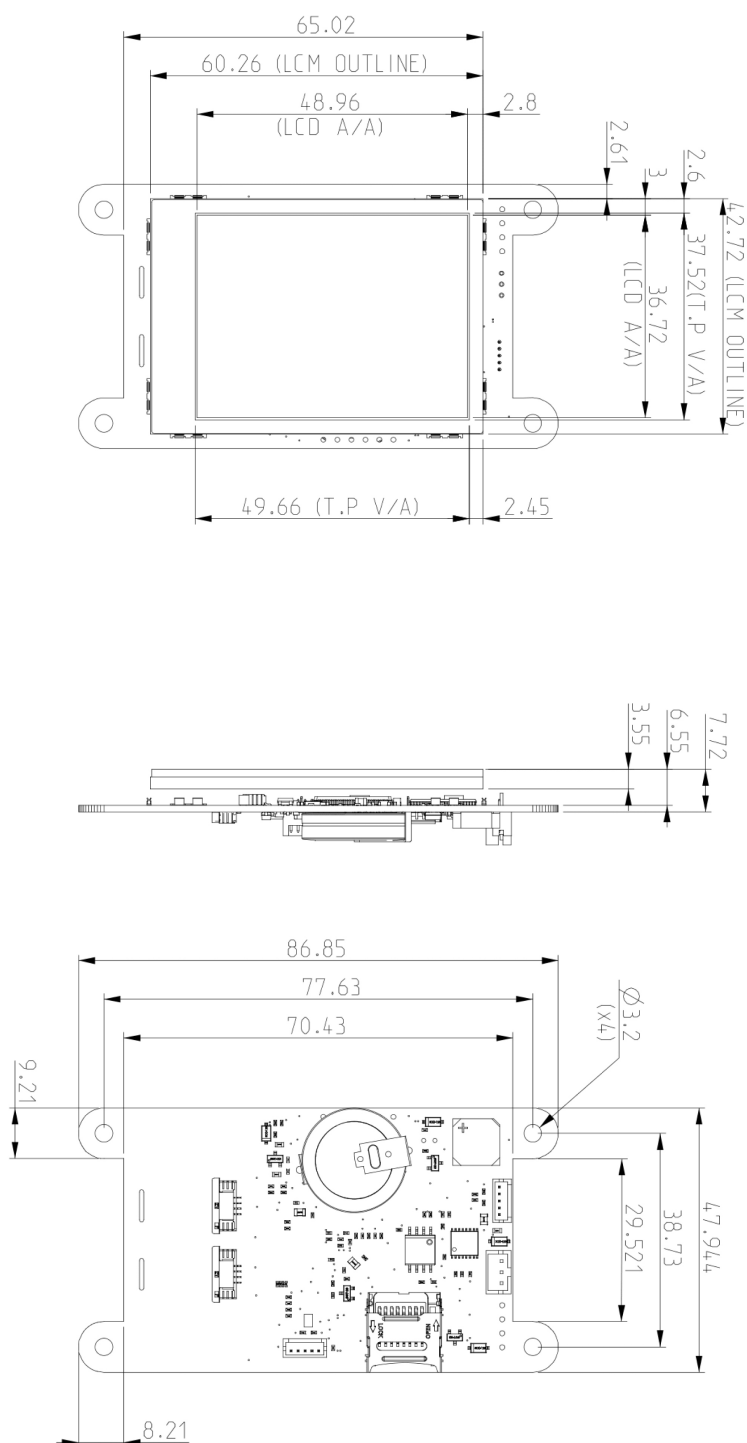
PARAMETER	SPECIFICATION	Unit
Estimated Number of Full Screen Images Stored (.jpg)	1747	pieces
Estimated Number of Full Screen Images Stored (.bmp)	436	

7. MECHANICAL DETAIL

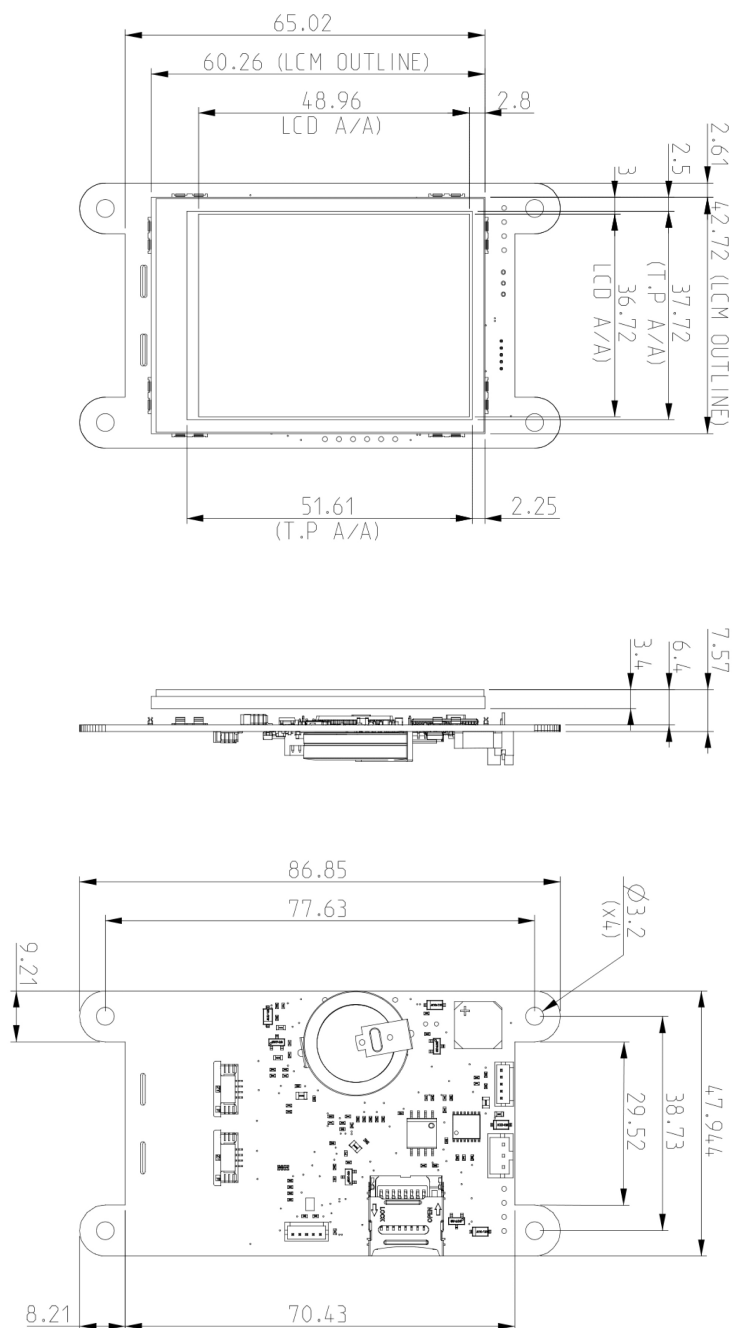
Model: DT024-00-0 (2.4" TFT-LCD display module)



Model: CT024-00-0 (2.4" TFT-LCD display module with capacitive touch)



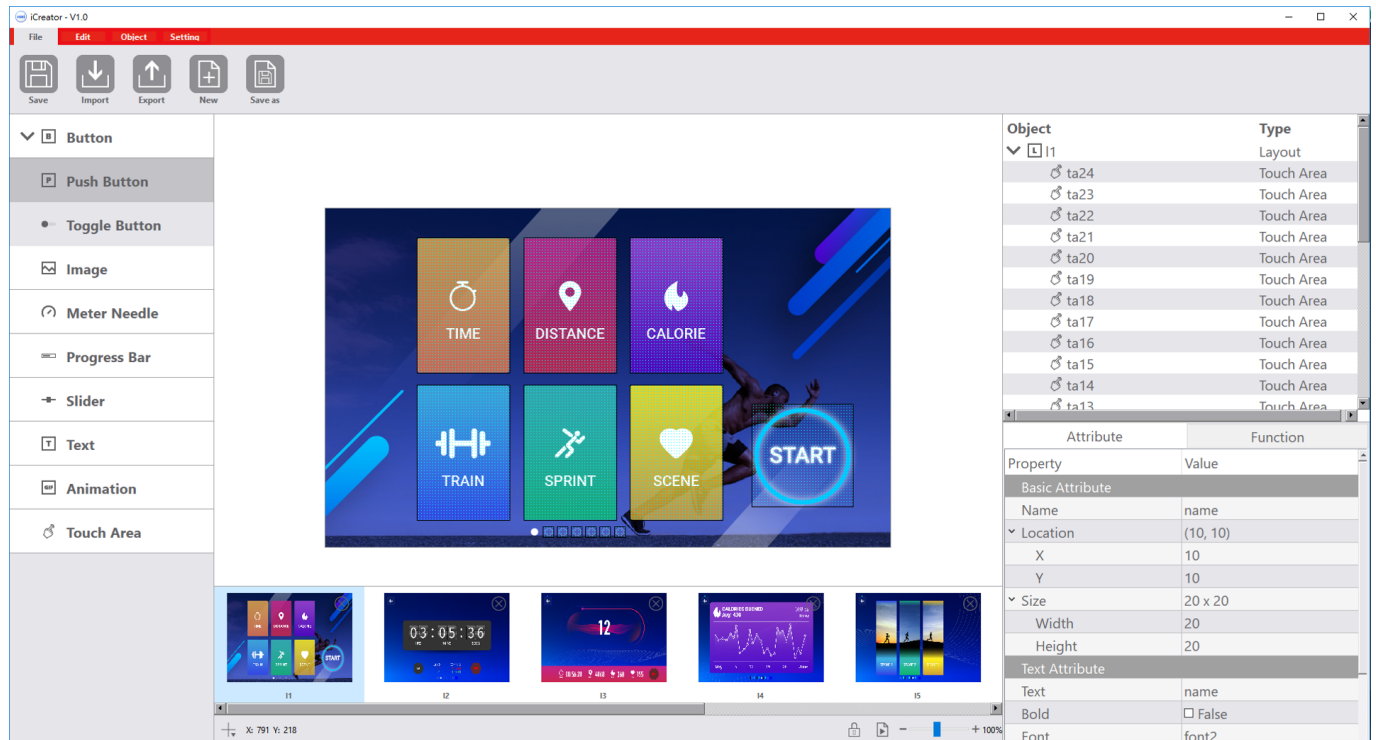
Model: RT024-00-0 (2.4" TFT-LCD display module with resistive touch)



8. HMI Configurator - iCreator

HMI is redefined

iDisplay has created the iCreator Software Environment for Programming, Control Configuration and Interface Design. GUI is designed with the principle - “What You See is What You Get” for seamless and ease in design.



iCreator Interface

For more information, please refer to iDisplay HMI Developer Documentation.