

5.0" TFT-LCD Series Product Brief

Model Number : DT050-00-0

CT050-00-0

RT050-00-0

DOCUMENT DATE: 7th Oct 2019

DOCUMENT REVISION: 1.1

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Revision History

Version	Date	Changes
V 1.0	2019-08-16	Initial version.
V 1.1	2019-10-07	Update product name.

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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: 5.0" TFT-LCD
- Display resolution: 800(RGB) × 480 dots
- Display color: Full color
- 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: DT050-00-0

Description: 5.0" TFT-LCD display module



Model: CT050-00-0

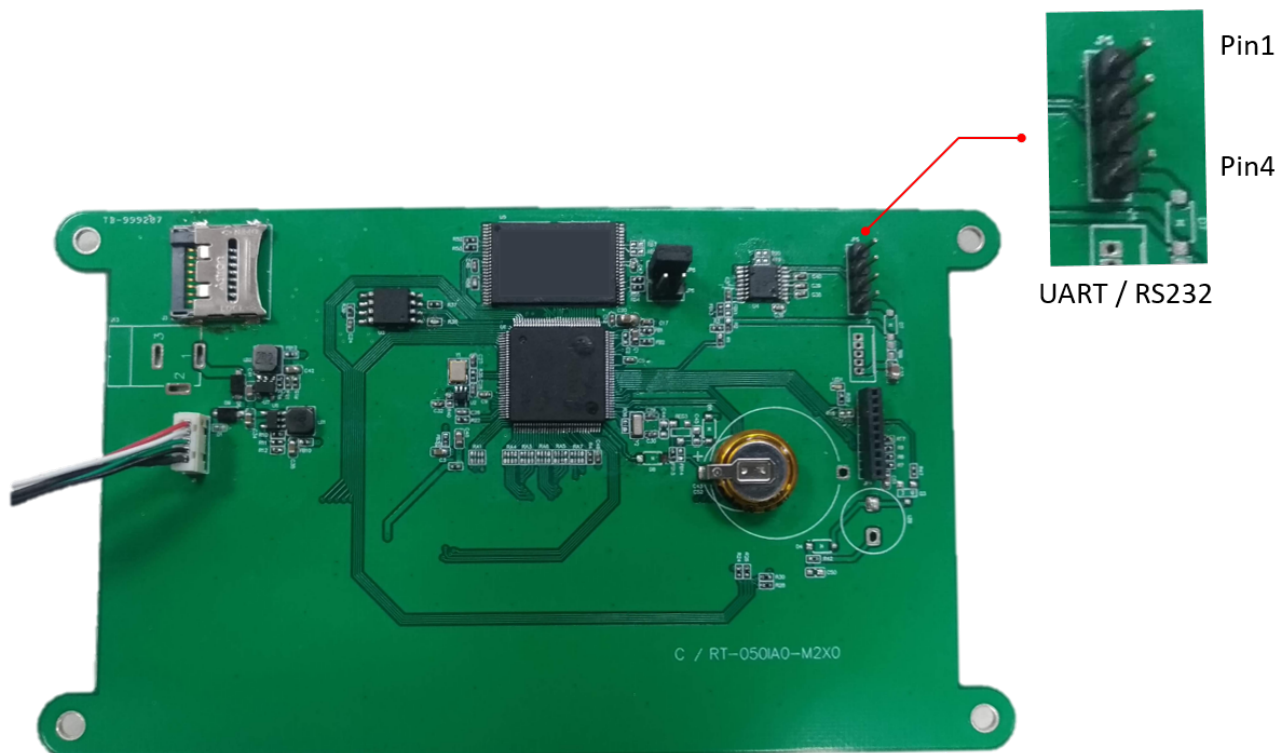
Description: 5.0" TFT-LCD display module with capacitive touch



Model: RT050-00-0

Description: 5.0" TFT-LCD display module with resistive touch

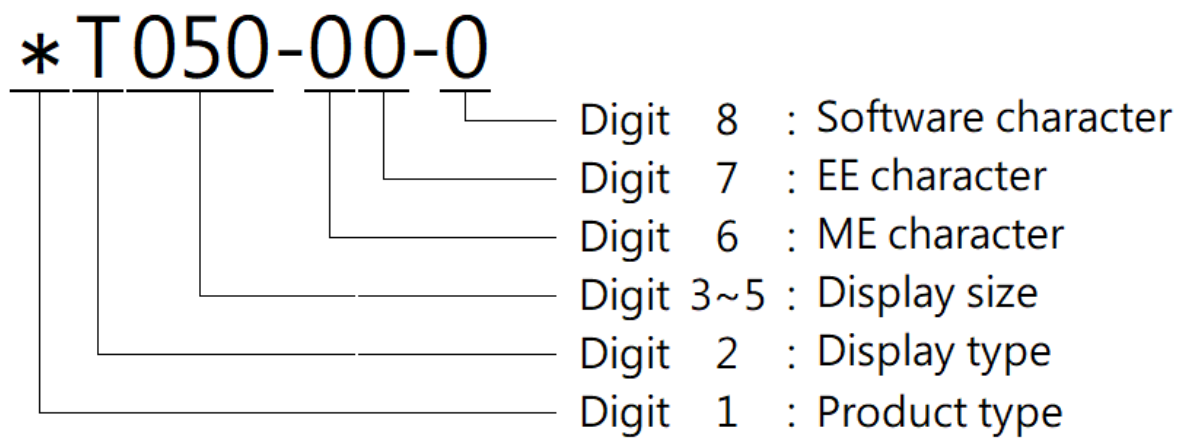
4. HARDWARE CONFIGURATION



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

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	050	5.0 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	SPECIFICATION
Display Type	5.0" TFT-LCD
Display Mode	Normally White TN
Display Resolution	800(RGB) × 480 dots
Color	Full color
Color Filter Array	RGB vertical stripe
View Angle(T/B/L/R)	50 / 70 / 70 / 70 Degree
Back Light LED	12 White LED
Luminance	400 cd/m ²
Display Endurance	> 50000 Hr
Contrast Ratio	500
Module Dimension	non-touch: 140.4(W) × 79.5(H) × 19.02(T) mm Capacitive: 140.4(W) × 79.5(H) × 19.23(T) mm Resistive: 140.4(W) × 79.5(H) × 18.55(T) mm
Active Area	108(W) × 64.80(H) mm
Pixel Pitch	0.135(W) × 0.135(H) mm
Touch Type	Non-Touch Capacitive / Single Point Resistive / Single Point
Touch Screen Transparency	Resistive: ≥ 78 % 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

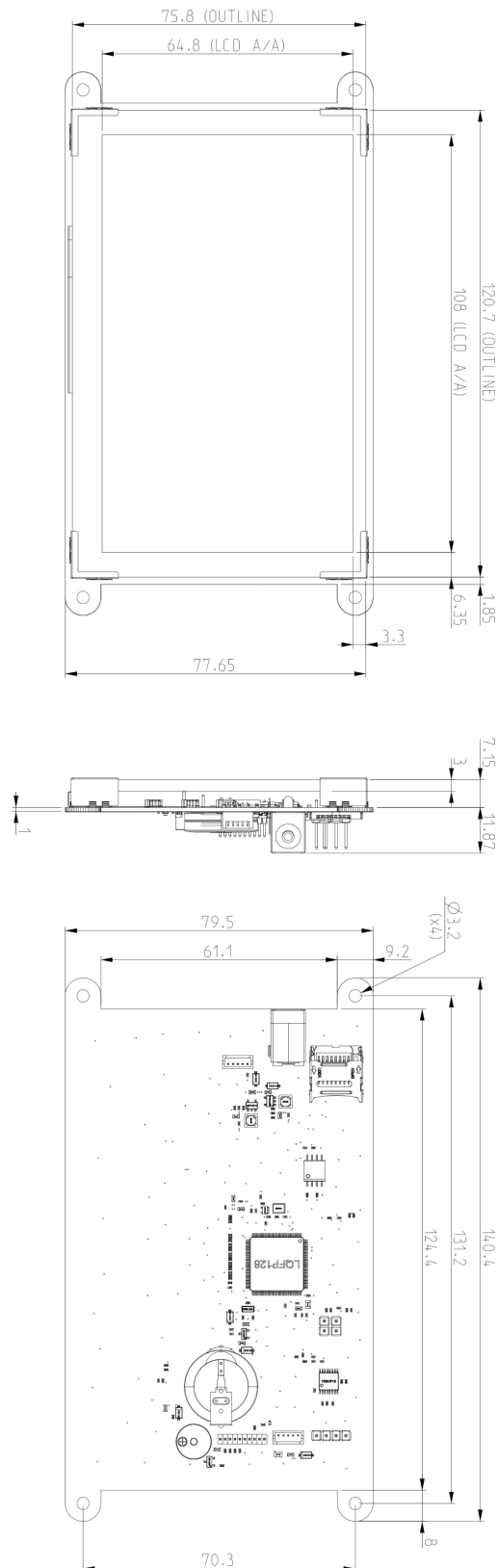
PARAMETER	MIN	Typ	MAX	Unit
VCC(Supply Voltage)	-	5	-	V
ICC(Supply Current)	-	410	-	mA

6.4 Storage Capacity

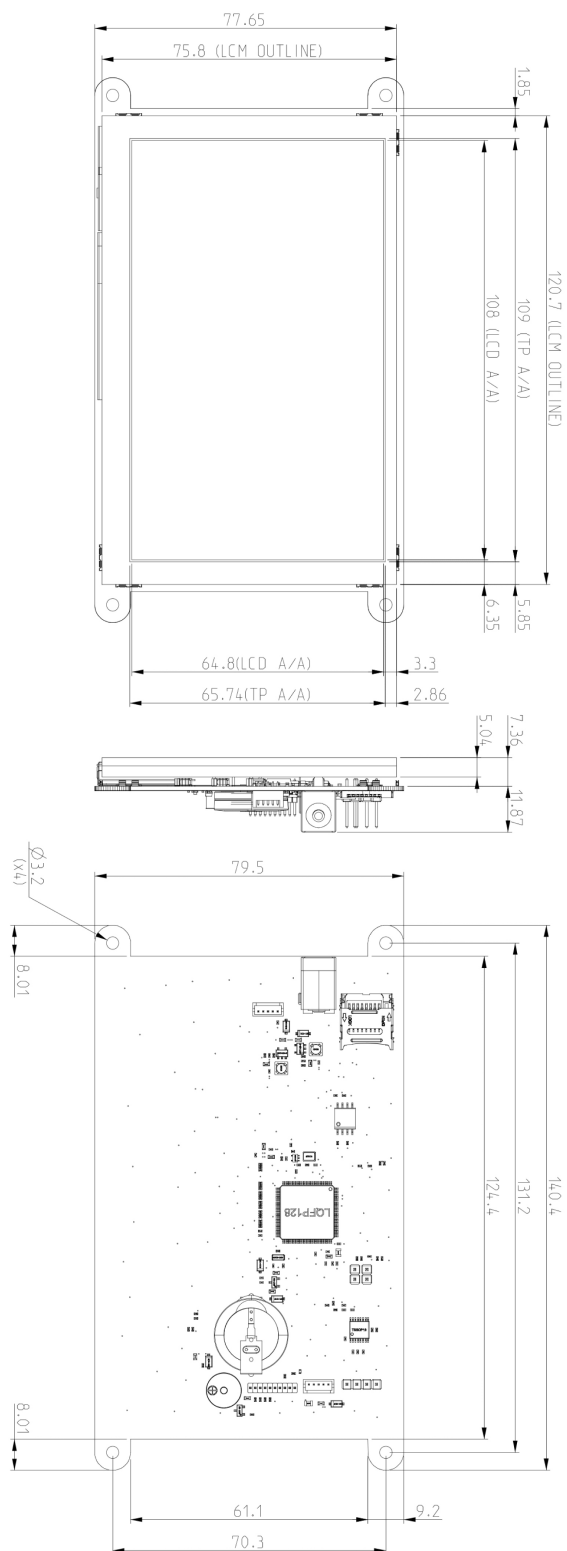
PARAMETER	SPECIFICATION	Unit
Estimated Number of Full Screen Images Stored (.jpg)	349	pieces
Estimated Number of Full Screen Images Stored (.bmp)	116	

7. MECHANICAL DETAIL

Model: DT050-00-0 (5.0" TFT-LCD display module)



Model: CT050-00-0 (5.0" TFT-LCD display module with capacitive touch)



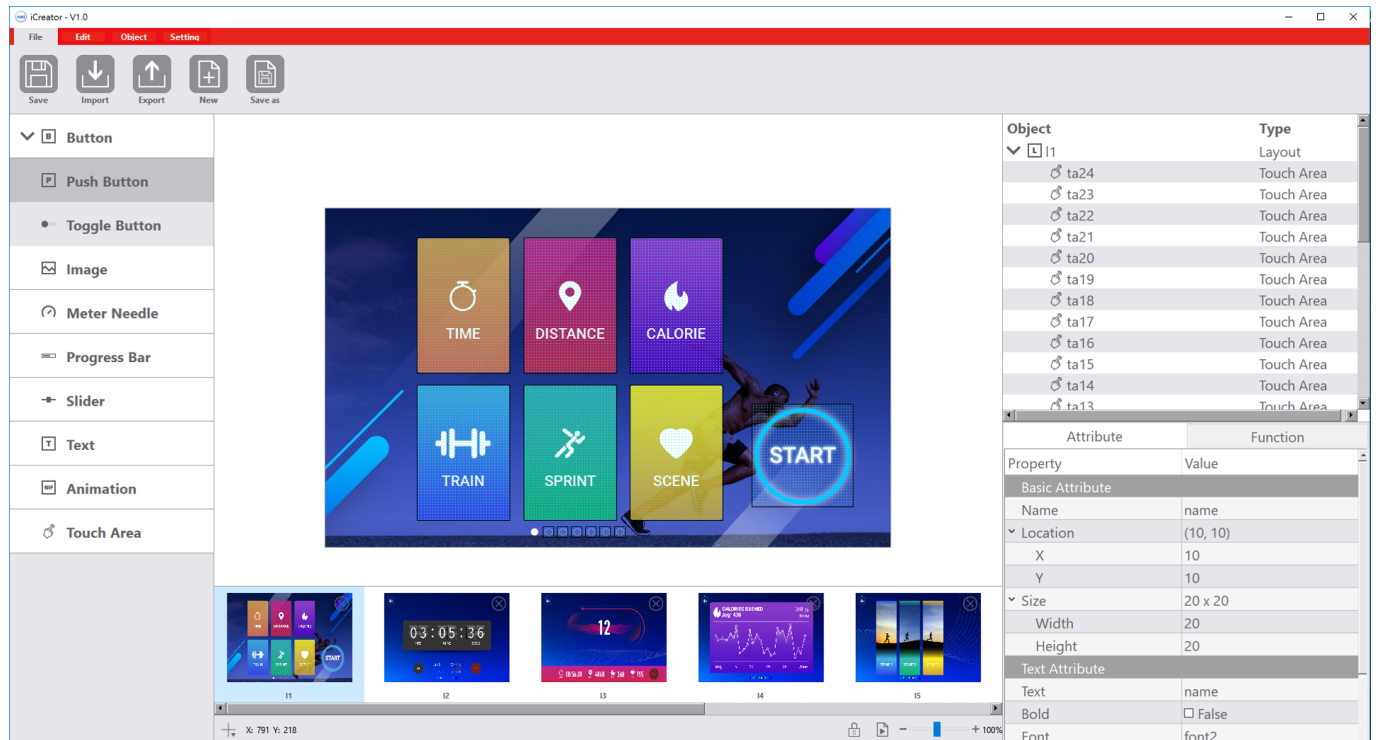
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8. HMI Configurator - iCreator

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.