

7.0" TFT-LCD Series Product Brief

Model Number : DT070-00-0

CT070-00-0

RT070-00-0

DOCUMENT DATE: 29th Apr 2020

DOCUMENT REVISION: 1.3

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Please refer to the iDisplay website for the latest revision of this document

www.idisplay.com.tw

Revision History

Version	Date	Changes
V 1.0	2019-08-16	Initial version.
V 1.1	2019-10-07	Update product name.
V 1.2	2020-02-07	Update product hardware and related contents.
V 1.3	2020-04-29	Update product picture.

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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: 7.0" TFT-LCD
- Display resolution: 1024(RGB) × 600 dots
- Display color: Full color
- Advanced ARM core processor
- 32 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



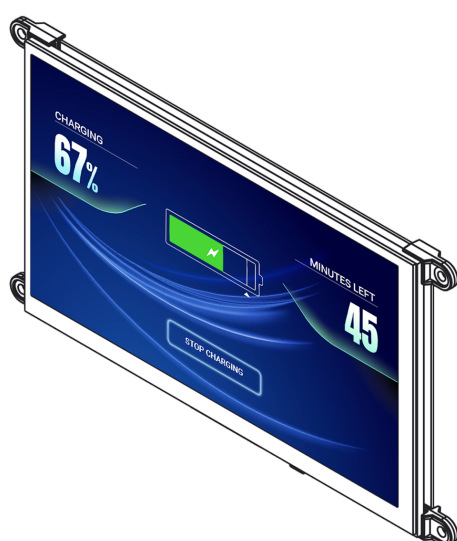
Model: DT070-00-0

Description: 7.0" TFT-LCD display module



Model: CT070-00-0

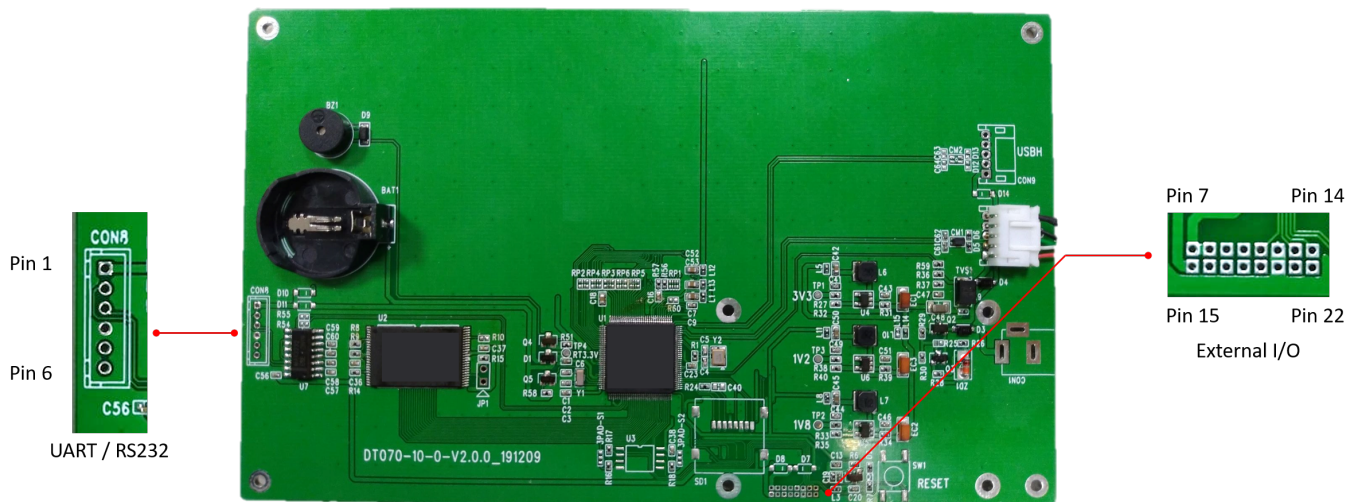
Description: 7.0" TFT-LCD display module with capacitive touch



Model: RT070-00-0

Description: 7.0" TFT-LCD display module with resistive touch

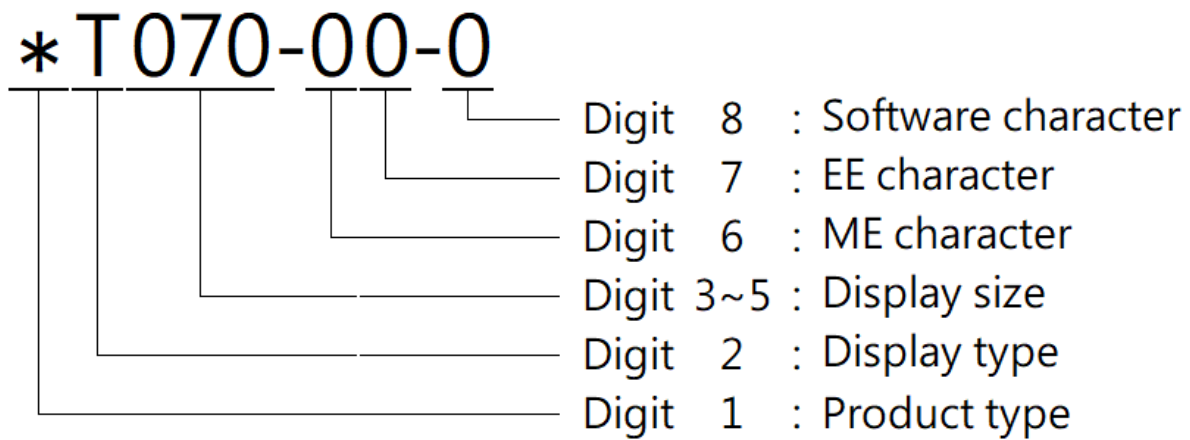
4. HARDWARE CONFIGURATION



Pin	Component	Symbol	I/O
1	UART / RS232	Vin	Power
2		Rx	In
3		Tx	Out
4		GND	Power
5	-	NC	-
6	-	NC	-
7	External I/O	Vin	Power
8		Vin	Power
9		AIN3	In
10		AIN1	In
11		SPI_DI	In
12		GND	Power
13		SPI_CS0	Out
14		SPI_CLK	Out
15		Vout	Power
16		GPIO	I/O
17		GPIO	I/O
18		GPIO	I/O
19		TCK_LCD_BRIGHTNESS	O
20		GND	Power
21		TDO_BUZZER_PWM	Out
22		RESET	Out

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	070	7.0 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	7.0" TFT-LCD
Display Mode	Normally Black, Transmissive
Display Resolution	1024(RGB) × 600 dots
Color	Full color
Color Filter Array	RGB vertical stripe
View Angle(T/B/L/R)	85 / 85 / 85 / 85 Degree
Back Light LED	24 White LED
Luminance	300 cd/m ²
Display Endurance	> 50000 Hr
Contrast Ratio	800
Module Dimension	194.1(W) × 116.0(H) × 17.8(T) mm
Active Area	154.21(W) × 85.92(H) mm
Pixel Pitch	0.1506(W) × 0.1432(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

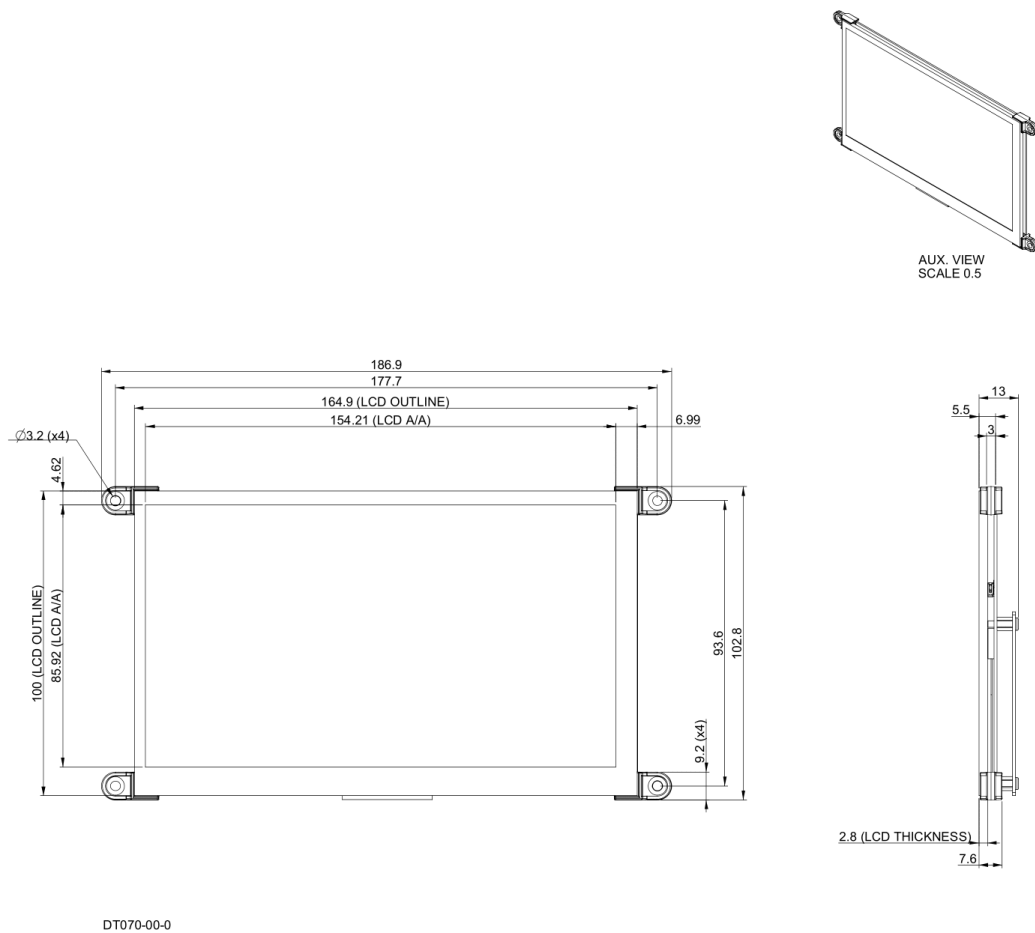
PARAMETER	MIN	Typ	MAX	Unit
VCC(Supply Voltage)	-	5	-	V
ICC(Supply Current)	-	410	-	mA

6.4 Storage Capacity

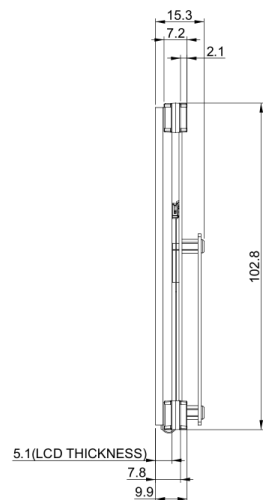
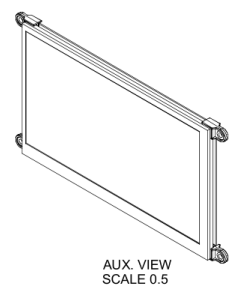
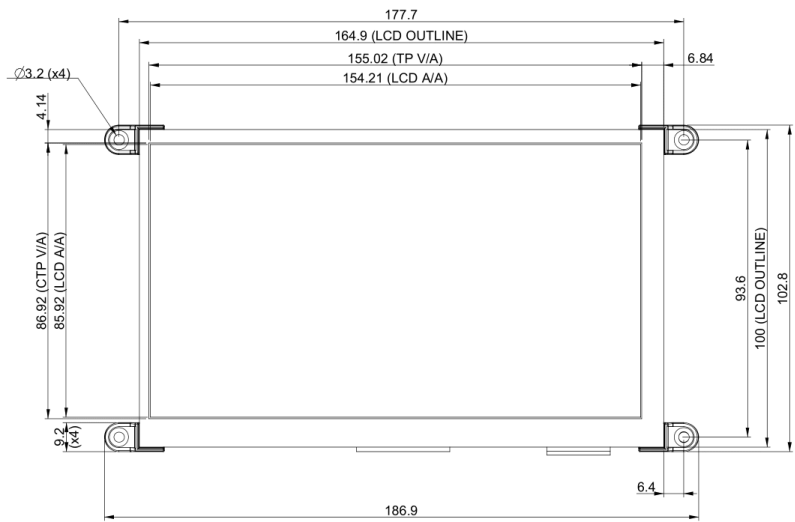
PARAMETER	SPECIFICATION	Unit
Estimated Number of Full Screen Images Stored (.jpg)	218	pieces
Estimated Number of Full Screen Images Stored (.bmp)	54	

7. MECHANICAL DETAIL

Model: DT070-00-0 (7.0" TFT-LCD display module)

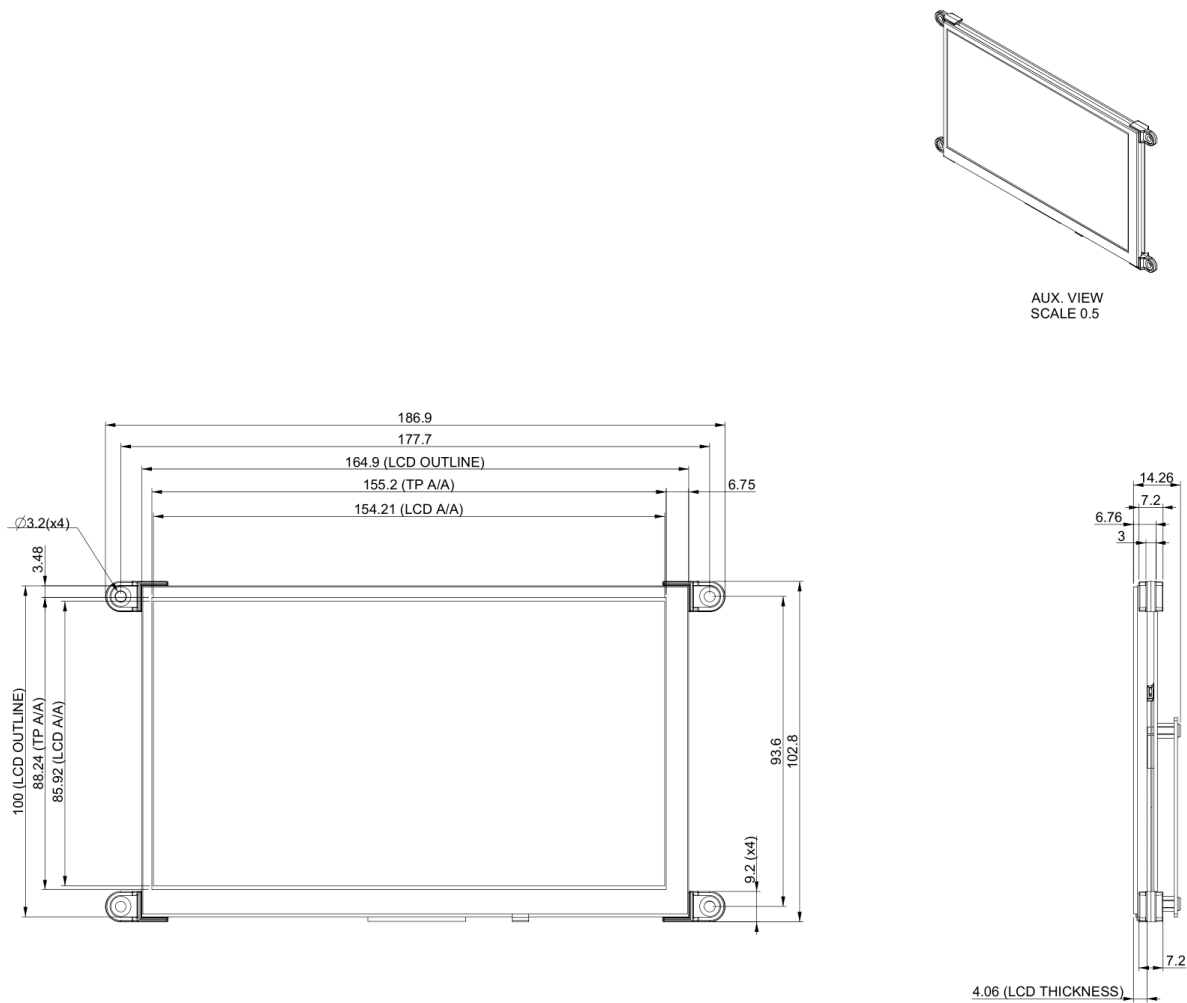


Model: CT070-00-0 (7.0" TFT-LCD display module with capacitive touch)



7" LCD CTP070-00-0

Model: RT070-00-0 (7.0" TFT-LCD display module with resistive touch)

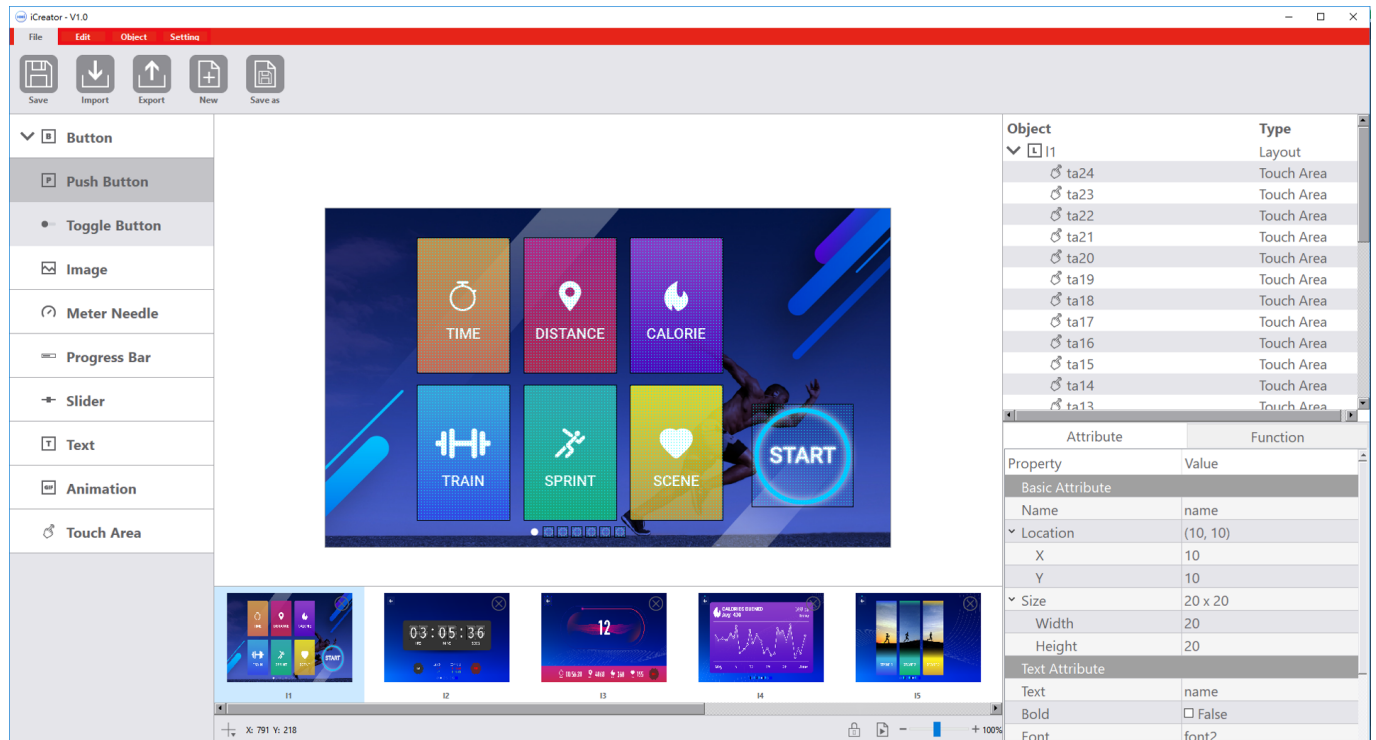


7.0 LCD RTP070

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.