

# F007N

## 规格书 (Datasheet)

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官方网站 (Website) : [www.flexem.com](http://www.flexem.com)

# 1 产品概述

## 1.1 产品简介

- ◆ 创新嵌入式放松脱锁紧卡扣，便捷安装
- ◆ 升级采用 3pin 结构电源端子，便捷安装
- ◆ 4 路串口，带以太网口，更强大的扩展能力
- ◆ 主机板三防漆处理，适应各种恶劣环境

## 1.2 产品外观

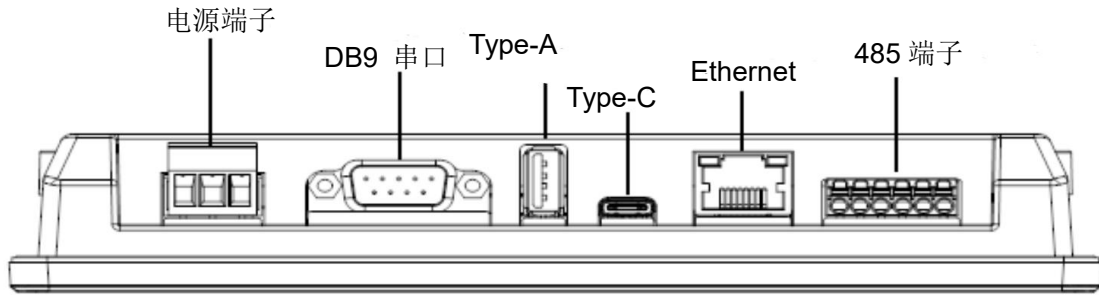


## 2 产品规格


分类	项目	参数
硬件参数	显示屏	7 英寸, 16:9 TFT LCD 屏
	分辨率	1024×600
	色彩	24 位
	亮度	350 cd/m <sup>2</sup>
	背光	LED
	LCD 寿命	50000 小时
	触摸屏	Glass+Glass 投射式多点电容触摸屏
	CPU	Cortex-A7 (主频 1GHz, 双核)
	存储器	256MB DDR3+4GB eMMC
	RTC	实时时钟内置
	以太网接口	1 个 10M/100M 自适应 RJ-45 接口
	SD 卡	不支持
	蓝牙	不支持
	USB 端口	1 个 USB Type-C 2.0 接口, 1 个 USB Type-A 2.0 接口
	程序下载方式	USB Type-C 2.0/U 盘/以太网口
	串行通讯端口	COM1: RS232/RS485/RS422; COM2/COM4: RS485; COM3: RS232
液晶可视角度 (T/B/L/R)	85° /85° /85° /85°	
电气规格	额定功率	<6W
	额定电压	DC24V, 可工作范围 DC 9V~28V
	电源保护	具备雷击浪涌保护
	允许失电	<5mS
	CE&RoHS	符合 IEC61000-6-2:2019、IEC 61000-6-2:2019 标准 符合 RoHS, 雷击浪涌±1KV, 群脉冲±2KV 静电接触±4KV, 静电空气±8KV

分类	项目	参数
环境要求	工作温度	-10~60℃
	存储温度	-20~70℃
	防紫外线	禁止在强紫外线环境下工作（例如阳光直射）
	环境湿度	10%~90%RH（无冷凝）
	抗震性	10~25Hz（X、Y、Z 方向 2G/30 分钟）
	冷却方式	自然风冷
机械特性	防护等级	前面板符合 IP65（配合平整盘柜安装），机身后壳符合 IP20
	机械结构	锌合金+工程塑料
	开孔尺寸	178mm×125mm
	整机尺寸	185.1mm×130.9mm×32.6mm
	整机重量	约 500g

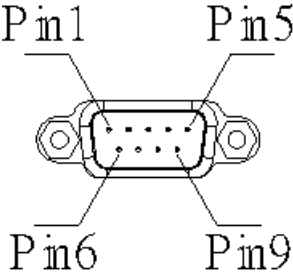
### 3 接线定义



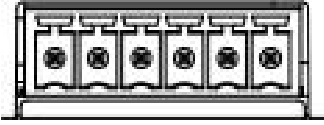
#### 3.1 电源端子

电源端子 (Pin1~Pin3 从左至右)	引脚	功能
	Pin1	FG
	Pin2	0V
	Pin3	DC 24V

#### 3.2 DB9 串口

	引脚	COM1(RS485)	COM1(RS422)	COM1(RS232)	COM3(RS232)
	Pin1	B-	Rx-		
	Pin2			RxD	
	Pin3			TxD	
	Pin4		Tx-		
	Pin5			GND	GND
	Pin6	A+	Rx+		
	Pin7				RxD
	Pin8				TxD
	Pin9			Tx+	

#### 3.3 RS485 串口

RS485 串口 (Pin1~2 由左至右)	引脚	功能
	Pin1	A+ (COM2 RS485+)
	Pin2	B-(COM2 RS485-)
	Pin3	GND
	Pin4	A+ (COM4 RS485+)
	Pin5	B-(COM4 RS485- )
	Pin6	GND

### 3.4 以太网接口

RJ45 接口，用于与支持以太网协议的设备（如 PLC、服务器等）进行通讯。



### 3.5 USB Type-C 2.0 接口

USB Slave 接口，用于下载程序。



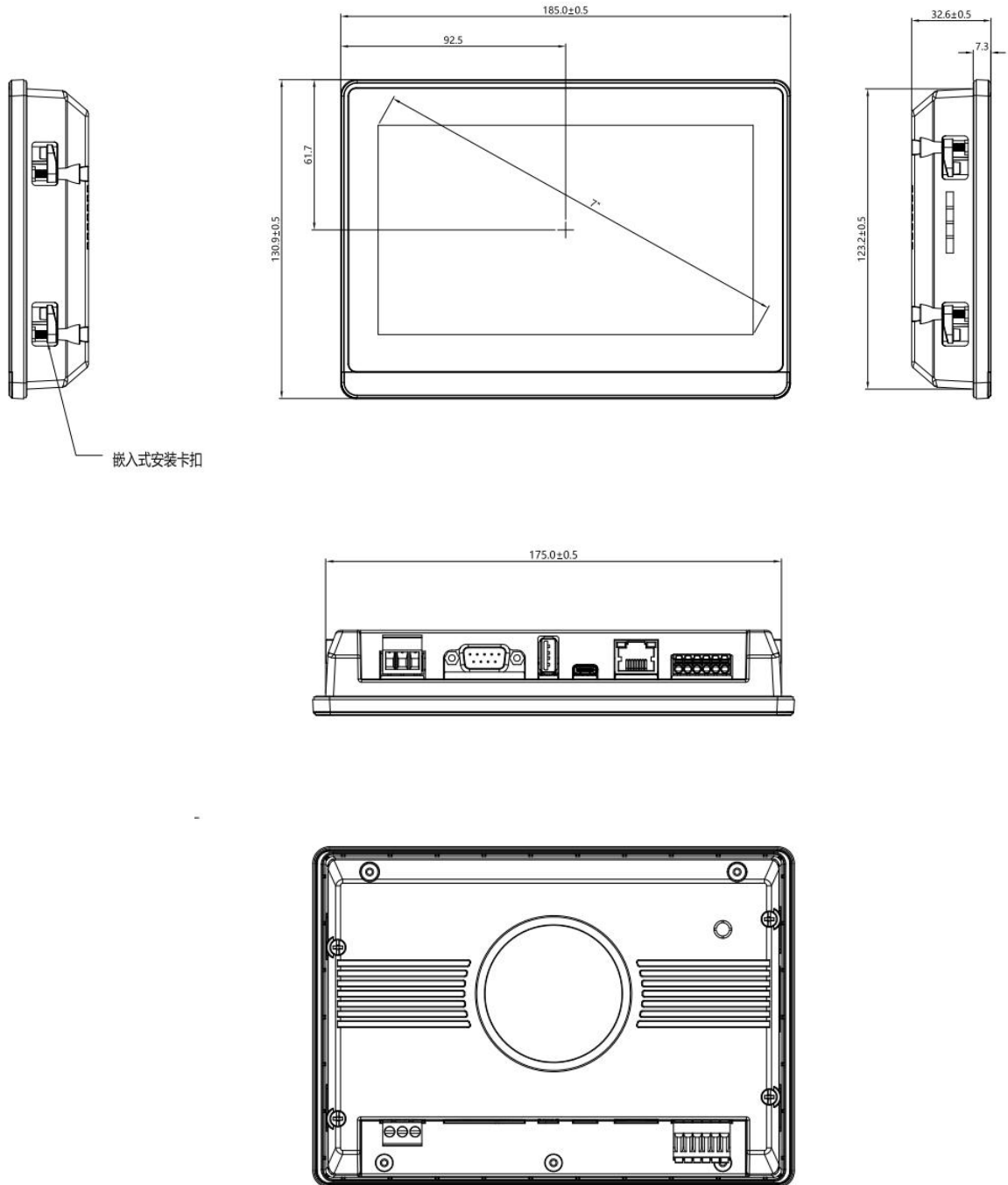
### 3.6 USB Type-A 2.0 接口

USB Host 接口，用于连接 U 盘、扫码枪等外设。



# 4 产品尺寸

尺寸单位: mm



嵌入式安装开孔尺寸: 178mm\*125mm (+1.0mm/-1.0mm)

# 5 Product Overview

## 5.1 Product introduction

- ◆ Innovative embedded release and locking clip for convenient installation
- ◆ The upgrade adopts a 3-pin structure power terminal for convenient installation
- ◆ 4-way serial port with Ethernet port, more powerful expansion capability
- ◆ Three-proof paint treatment for main board, which can adapt to various harsh environments

## 5.2 Product Appearance



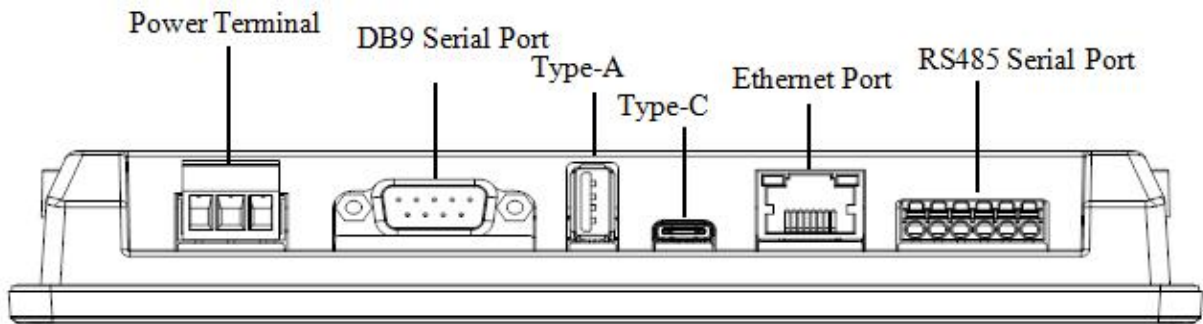


## 6 Specifications


Category	Item	Description
Hardware	Display	7" 16:9 TFT LCD
	Resolution	1024×600
	Colors	24-bit
	Brightness	350 cd/m <sup>2</sup>
	Backlight	LED
	LCD Lifetime	50000 hours
	Touch Panel	Glass+Glass Projection multi-point capacitive touch screen
	CPU	Cortex-A7(main frequency is 1GHz,dual-core)
	Storage	256MB DDR3+4GB eMMC
	RTC	Built-in
	Ethernet	1* 10M/100M self-adaptive RJ45 port
	SD Card	NA
	Bluetooth	NA
	USB Port	1*USB Type-C 2.0 port;1*USB Type-A 2.0 port
	Program Download Method	USB Slave/U disk/Ethernet
Serial Port	COM1:RS232/RS485/RS422 COM2: RS485 COM3:RS232	
LCD Viewing Angles (T/B/L/R)	85° /85° /85° /85°	
Electrical feature	Rated Power	<6W
	Rated Voltage	DC24V,operational range:DC 9V~28V
	Power Protection	Lightning surge protection

Category	Item	Description
	Power Interruption Tolerance	<5ms
	CE&RoHS	IEC61000-6-2:2019 and IEC 61000-6-2:2019 standards certified; RoHS certified;lightning surge±1kV; group pulse±2kV;electrostatic contact 4kV,air discharge 8kV
Environmental requirement	Operating Temperature	-10~60℃
	Storage Temperature	-20~70℃
	UV Resistance	Operating in high UV environment is prohibited(e.g.,in direct sunlight)
	Environmental Humidity	10%~90%RH(non-condensing)
	Vibration Endurance	10~25Hz(X/Y/Z direction,2G/30 minutes)
	Cooling Method	Natural air cooling
Mechanical feature	Protection Level	Front:IP65(with flush panel cabinet installation),Rear:IP20
	Enclosure Material	ZINC+ engineering plastics
	Cutout Dimensions	178mm×125mm
	Dimensions	185.1mm×130.9mm×32.6mm
	Weight	About 500g

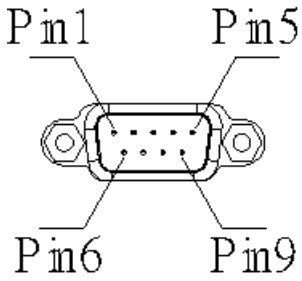
# 7 Wiring Definition




## 7.1 Power Terminal

Power Terminal(Pin 1~3 from left to right)	Pin	Description
	Pin1	FG
	Pin2	0V
	Pin3	DC 24V

## 7.2 DB9 Serial Port

	Pin	COM1(RS485)	COM1(RS422)	COM1(RS232)	COM3(RS232)
	Pin1	B-	Rx-		
	Pin2			RxD	
	Pin3			TxD	
	Pin4			Tx-	
	Pin5			GND	GND
	Pin6	A+	Rx+		
	Pin7				RxD
	Pin8				TxD
	Pin9			Tx+	

## 7.3 RS485 Serial Port

RS485 Terminals (Pin 1~2 from left to right)	Pin	Description
	Pin1	A+ (COM2 RS485+)
	Pin2	B-(COM2 RS485-)
	Pin3	GND
	Pin4	A+ (COM4 RS485+)
	Pin5	B-(COM4 RS485- )
	Pin6	GND

## 7.4 Ethernet Port

RJ45 port for Ethernet communication with the controller or server.



## 7.5 USB Type-C 2.0 Port

USB Slave port, Used for program download.



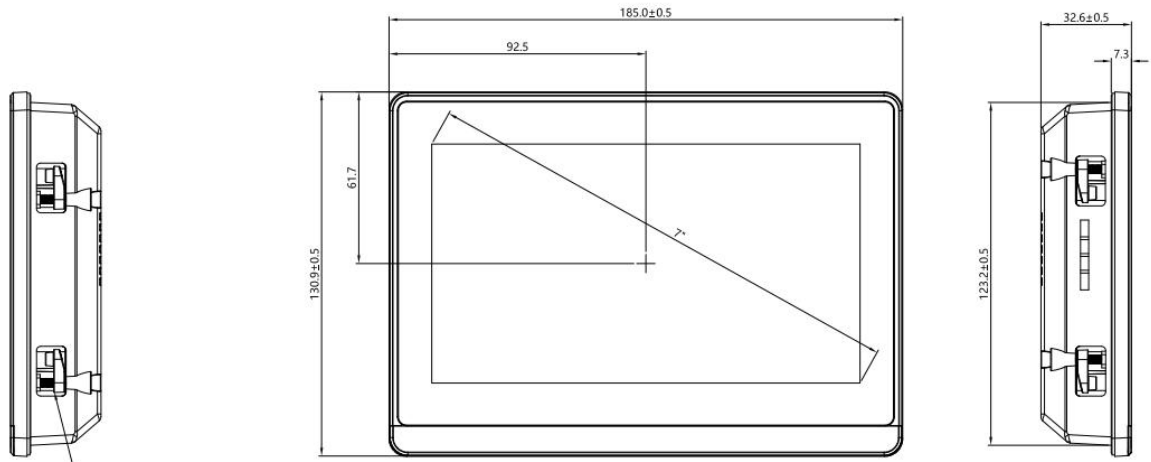
## 7.6 USB Type-A 2.0 Port

USB Host port, Used for connecting peripheral devices, such as Flash drive or bar code scanner.

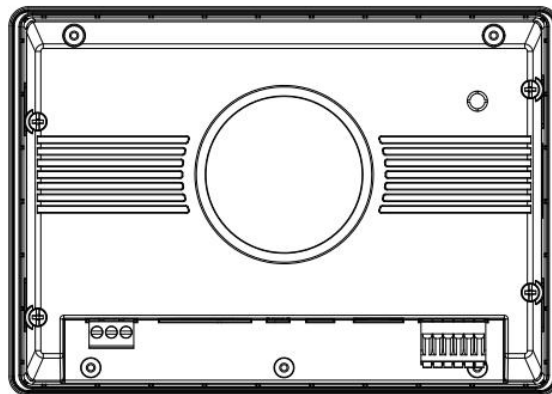
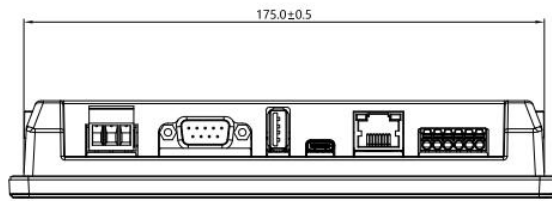


# 8 Dimension

Unit: mm



Embedded installation buckle



Embedded installation hole size:  $178\text{mm} \times 125\text{mm}$  ( $+1.0\text{mm}/-1.0\text{mm}$ )