



IT7000 Series HMI

Selection Guide



Industrial
Automation



Intelligent
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Transit



Data code 19012106 A00

Preface

Introduction

The Linux-based IT7000 series HMI adopts high performance processor and Android-style interface to enable high-speed data processing/response and interactive interface experience. It supports customized styles, VNC remote desktop, vector icons, and script programming. The HMI, which can be connected to the PC through an USB or Ethernet, supports Modbus protocol to allow automatic PLC communication. You can update the HMI firmware, screen programs, and recipe data through inserting an USB flash disk. This HMI also supports offline simulation and online simulation for easy commissioning.

This guide describes the models, dimensions, specifications, and options of IT7000 series HMI.

More Documents

Name	Description
InoTouchPad User Guide	Describes the software installation, quick start, controls, project configuration, and function application of InoTouchPad.
IT7000 Series HMI Quick Start Guide	Describes quick commissioning and start guide of the HMI.
IT7150E HMI User Guide	Describes the technical specifications, mounting dimensions, mounting mode, and power-on commissioning of 15-inch HMIs.
IT7100 HMI User Guide	Describes technical specifications, mounting dimensions, mounting mode, and power-on commissioning of IT7000 series 10.1-inch HMIs.
IT7070 HMI User Guide	Describes technical specifications, mounting dimensions, mounting mode, and power-on commissioning of IT7000 series 7-inch HMIs.

Revision History

Date	Version	Revision
July 2021	A00	First release

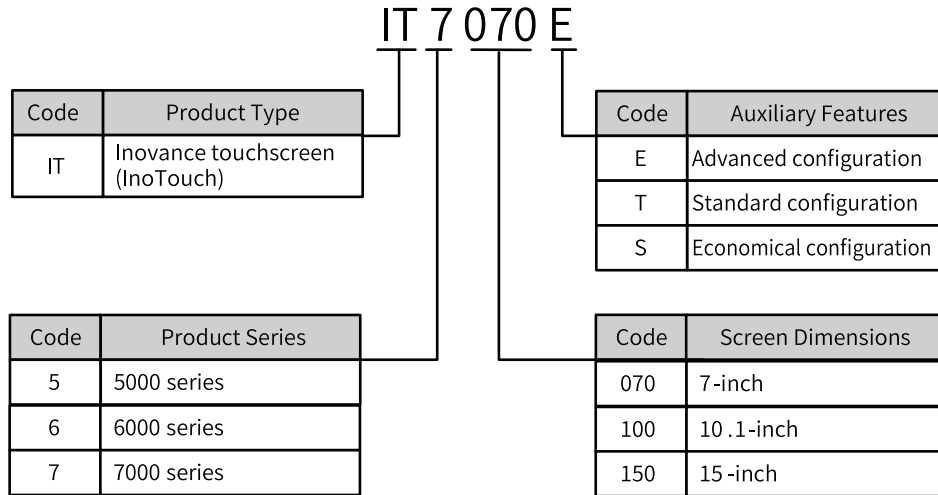
Document Acquisition

This guide is not delivered along with the product. Visit www.inovance.com to download the PDF document.

1 Product Model

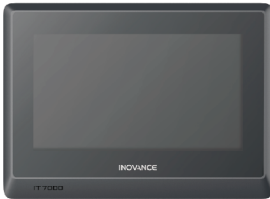

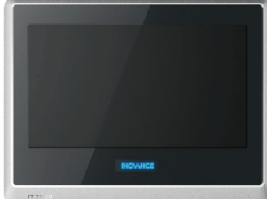

1.1 Naming Rules

The naming rules of IT7000 series HMI are as follows.



1.2 Product Model

Table 1-1 IT7000 series HMIs models

Model	IT7070S IT7070S-F03	IT7070T/IT7070E IT7070E-F03	IT7100E/IT7100S	IT7150E
Size	7-inch	7-inch	10.1-inch	15-inch
Appearance				
Description	S: Economical configuration	T: Standard configuration E: With Ethernet interface	E: With Ethernet interface S: Economical configuration	E: With Ethernet interface

1.3 Product Appearance

The appearance of IT7000 series HMIs is as follows.



Figure 1-1 IT7070S/IT7070S-F03



Figure 1-2 IT7070T/IT7070E/IT7070E-F03/IT7100S/IT7100E



Figure 1-3 IT7150E

2 Motor Specifications

2.1 Screen and Processor

Item	IT7070S x 1	IT7070T	IT7070E x 2	IT7100S	IT7100E	IT7150E
Screen Size	7-inch			10.1-inch		15-inch
Resolution	800 x 480			1024 x 600		1024 x 768
Brightness (cd/m ²)	250	250	250	250	250	350
Display Color	24-bit true color					
Number of designed clicks	1,000,000 clicks					
Lifetime of backlight (hrs)	35,000			30,000		50,000
Processor	Cortex A8 600 MHz			Cortex A8 1 GHz		
Memory	128 M DDR3			128 M DDR3	256 M DDR3	256 M DDR3
Flash	128 M			128 M	256 M	256 M
Dongle	Supported					
Model code	01450038	01450030	01450039	01450037	01450036	01450028

Note

*1: IT7070S-F03: model with high IP rating and same processor configurations as IT7070S, model code: 01450081

*2: IT7070E-F03: model with high IP rating and same processor configurations as IT7070E, model code: 01450079

2.2 Hardware Interfaces

Interface	IT7070S x 1	IT7070T	IT7070E x 2	IT7100S	IT7100E	IT7150E
Power interface	Input voltage: 24 VDC \pm 20%; Rated current: 250 mA					
USB disk interface	USB 2.0 interface x 1, providing current output lower than 200 mA					
USB download port	Mini USB interface x 1 (user program download port)					
SD card interface	/	/	Micro SD interface x 1	/	Micro SD interface x 1	Micro SD interface x 1
RS232	/	COM2 DB9 male	COM2 DB9 male	/	COM2 DB9 male	COM2 DB9 male
RS485/RS422	COM1 DB9 male (RS422/RS485)	COM1 DB9 male (RS422/RS485)	COM1 DB9 male (RS422/RS485) COM3 DB9 male (RS485)	COM1 DB9 male (RS422/RS485)	COM1 DB9 male (RS422/RS485) COM3 DB9 male (RS485)	COM1 DB9 female (RS422/RS485) COM3 DB9 female (RS485)
Ethernet interface	/	/	10/100 M adaptive RJ45 Ethernet port x 1 (user program download available)			
Model code	01450038	01450030	01450039	01450037	01450036	01450028

Note

*1: IT7070S-F03: model with high IP rating and same external hardware interface as IT7070S, model code: 01450081

*2: IT7070E-F03: model with high IP rating and same external hardware interface as IT7070E, model code: 01450079

2.3 Mechanical Characteristics

Item	IT7070S x 1	IT7070T	IT7070E x 2	IT7100S	IT7100E	IT7150E
Overall dimensions (mm)	200 x 146 x 35			271 x 213 x 36		367.8 x 294.8 x 53
Cut-out mounting dimensions (mm)	193 x 139			260 x 202		352 x 279
Enclosure color	Front/Rear cover: black	Front/Rear cover: silvery white		Front/Rear cover: silvery white		Front/Rear cover: silvery white
Hardware interface position	Back of rear cover					Lower part of back cover
Mechanical structure	ABS					Aluminum alloy frame
Model code	01450038	01450030	01450039	01450037	01450036	01450028

Note

*1: IT7070S-F03: model with high IP rating and same mechanical design specifications as IT7070S, model code: 01450081

*2: IT7070E-F03: model with high IP rating and same mechanical design specifications as IT7070E, model code: 01450079

2.4 Environment Characteristics

Item	IT7070S x 1	IT7070T	IT7070E x 2	IT7100S	IT7100E	IT7150E
IP rating of the panel	IP65 for front panel and IP20 for rear cover					
Operating temperature	0°C to 50°C	-10°C to +55°C	-10°C to +55°C	-10°C to +55°C	-10°C to +55°C	-5°C to +55°C
Operating humidity	10% to 90% RH (without condensation)					
Storage temperature	-20°C to +70°C					
UV protection	Do not expose the IT7000 series HMI to environments with strong UV (such as outdoors with direct sunlight) for a long time.					
Vibration resistance	Sinusoidal vibration, 5 Hz to 8.4 Hz, 3.5 mm, 8.4 Hz to 150 Hz, 1 g, 10 cycles each in X, Y, and Z directions					
Shock resistance	15 g, 11 ms, three times per each of X, Y, and Z directions					

Item	IT7070S x 1	IT7070T	IT7070E x 2	IT7100S	IT7100E	IT7150E
EMC	Compliant with EN 61131-2:2007 standard and CE certification					
Model code	01450038	01450030	01450039	01450037	01450036	01450028

Note

*1: IT7070S-F03: model with high IP rating and resistance against greasy dirt and UV, model code: 01450081

*2: IT7070E-F03: model with high IP rating and resistance against greasy dirt and UV, model code: 01450079

2.5 Product Dimensions

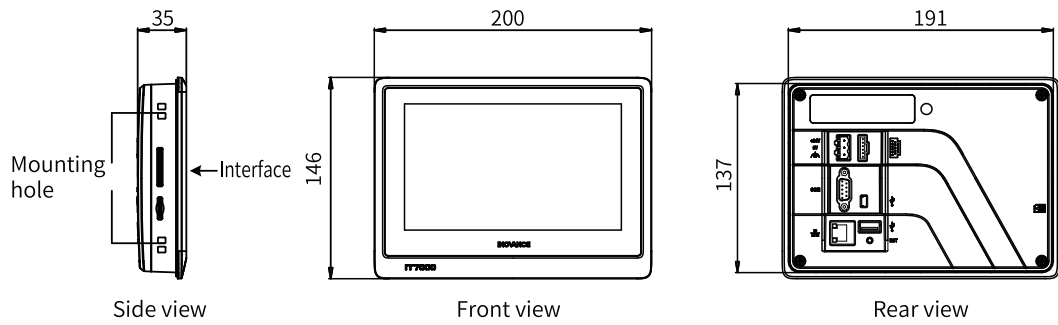


Figure 2-1 Dimension of 7-inch HMI

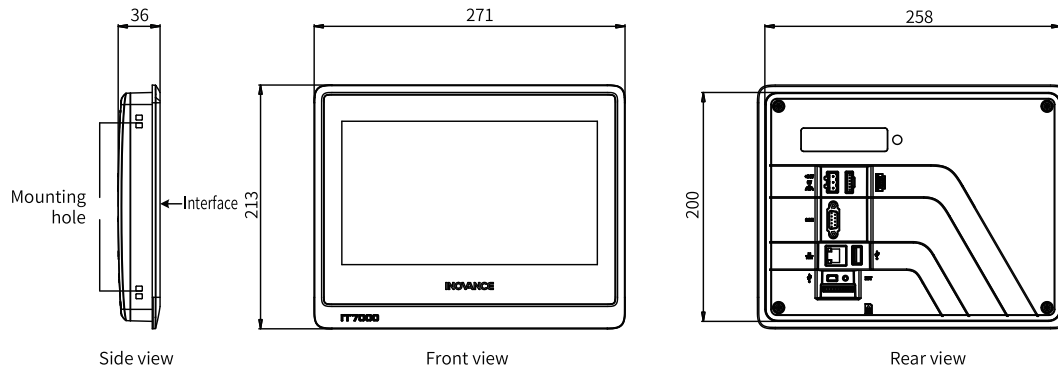


Figure 2-2 Dimension of 10-inch HMI

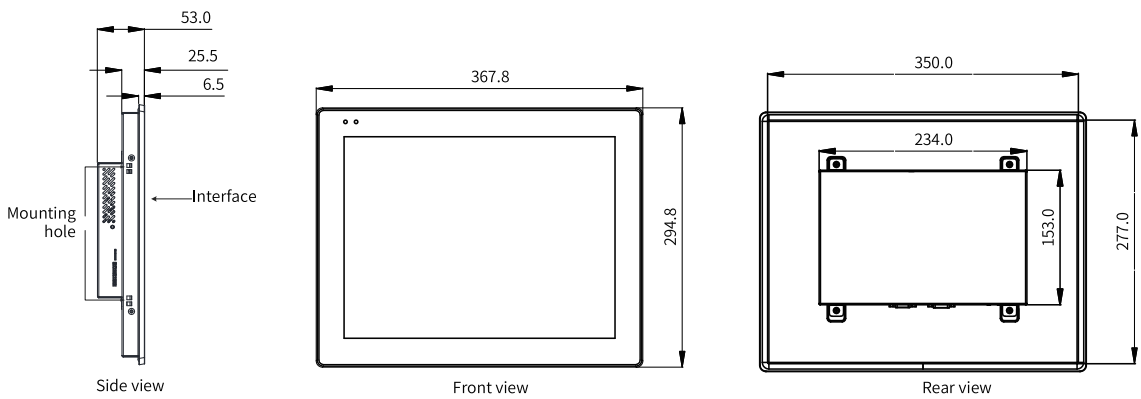


Figure 2-3 Dimension of 15-inch HMI

Model	Display Dimensions (inch)	Outline Dimensions Width x Depth x Thickness (mm)	Through-hole Mounting Dimensions (Width x Height) (mm)	Cut-out Dimensions (W+2) (mm)	Cut-out Dimensions (H+2) (mm)
IT7070S	7	200 x 146 x 35	191 x 137	193	139
IT7070T	7	200 x 146 x 35	191 x 137	193	139
IT7070E	7	200 x 146 x 35	191 x 137	193	139
IT7100E	10.1	271 x 213 x 36	258 x 200	260	202
IT7100S	10.1	271 x 213 x 36	258 x 200	260	202
IT7150E	15	367.8 x 294.8 x 53	350 x 277	352	279

3 Accessories

3.1 Program Download and Communication Cable

Cable Code	Model	Applicable HMI	Cable Port	Applicable PLC	Remark
15041140	IT5-H2U-CAB	IT6000: RS232 model IT7000: IT7150E	Name: Straight-through communication cable Port: HMI end - DB9 male (RS422); PLC end - MD8 male, round (RS422)	1. Inovance H1U/H2U/H3U - connected to RS422 round communication port 2. Mitsubishi FX1N/2N/3U/3G - connected to RS422 round communication port	This cable is used to connect COM1 port (422 line sequence) of IT6000 series HMI to RS422 communication port of Inovance H1U/H2U/H3U or RS422 communication port of Mitsubishi FX1N/2N/3U/3G. This cable is only compatible with IT7150E among all models of IT7000 series HMIs because: 1. The COM1 port of IT7000 series HMI is also male, which cannot be connected to this cable directly. 2. The COM1 line sequence of IT7000 is different from that of IT6000.
1504AX53	IT7-H3U-CAB	IT6000: All series of models IT7000: IT7070S/IT7070T/IT7070E/IT7100S/IT7100E	Name: Straight-through communication cable Port: HMI end - DB9 female (RS422); PLC end - MD8 male, round (RS422)	1. Inovance H1U/H2U/H3U - connected to RS422 round communication port 2. Mitsubishi FX1N/2N/3U/3G - connected to RS422 round communication port	It is recommended to use this communication cable.

Cable Code	Model	Applicable HMI	Cable Port	Applicable PLC	Remark
15042148	H2U-232-CAB	IT7000: IT7070T/ IT7070E/IT7100E/ IT7150E	Name: RS232-to-RS422 communication cable Port: HMI end - DB9 female (RS422); PLC end - MD8 male, round (RS422)	1. Inovance H1U/ H2U/H3U - connected to RS422 round communication port 2. Mitsubishi FX1N/ 2N/3U/3G - connected to RS422 round communication port	This cable is not recommended. You can prepare a RS232- to-RS422 cable with pins assigned properly. 1. If you are using this cable currently, it is recommended to replace with IT7-H3U- CAB and change the device communication solution. 2. This cable is used to connect COM2 port (RS232 line sequence) of IT7000 series HMI. IT7-H3U-CAB is used to connect COM1 (RS422 line sequence) port of IT7000 series HMI.
15041200	H2U-USB-CAB	IT7000: All series of models	Name: USB cable (mini USB port) Port: PC end - USB 2.0/3.0 interface; HMI end - mini USB interface	/	This cable is used to upload/download user programs of IT7000 series HMI. The mini USB port is not compatible with USB B port of IT6000 series HMI.

3.2 Power Terminals and Clamp Options

Name	Applicable HMI	Code
Metal clip and terminal block (accessories)	IT7000: All series of models	98050285



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