

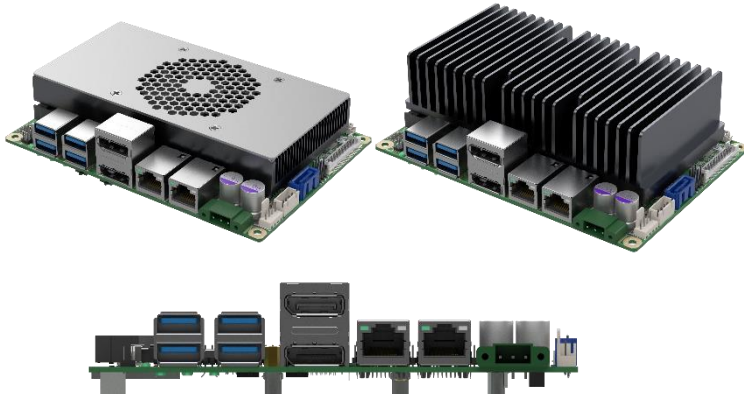
# ECM-I913

Intel® Tiger lake U Soc CPU, Dual Channel DDR4, 1\*HDMI, 1\*DP, 2\*LAN, 4\*USB3.2, 4\*COM, 1\*8bit DIO, 1\*M.2 B-key/1\*M.2 E-key, 1\*mSATA, 1\*SATA3.0, DC 12V power

**JHCTECH**

IoT Computer  
Connecting the Data

Single Board Computer-SBC



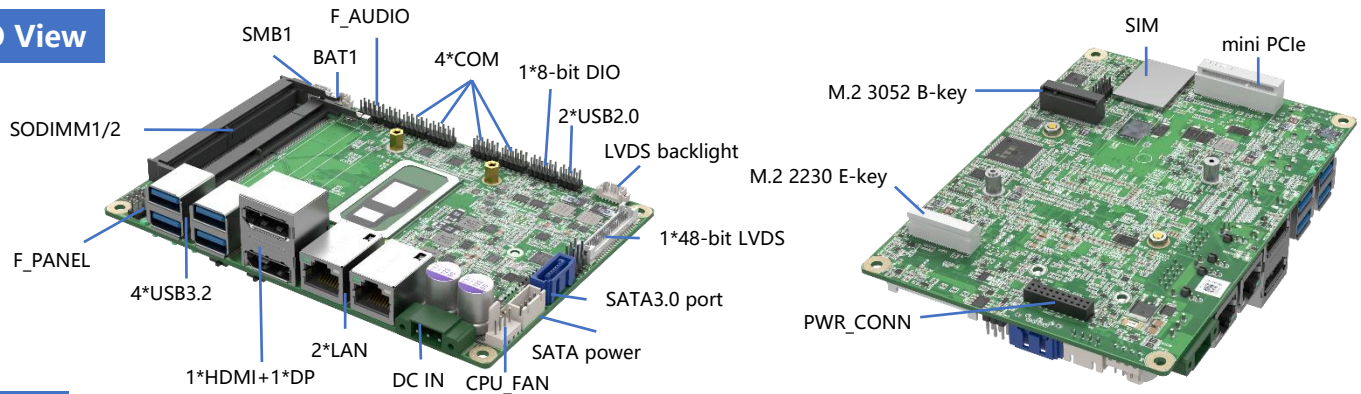
## Key Features

- Intel® Tiger lake Soc CPU
- Dual channel DDR4 SODIMM, support 3200MHz, up to 64GB
- 1\*HDMI, 1\*DP, 1\*48-bit LVDS, 3 independent displays
- 2\*LAN, 4\*USB3.2, 2\*USB2.0, 4\*COM, 1\*8-bit DIO
- 1\*M.2 2230 E-key supports WIFI/BT or 1\*M.2 3052 B-key with SIM card slot, supports 4G LTE/5G NR
- 1\*full size Mini PCIe, supports PCIe modules
- 1\*SATA3.0 HDD/SSD, 1\*mSATA(Opt.) for storage
- Active or passive, two different thickness radiator selection
- DC IN12V, 9-36V wide power input for optional (OFX-075)

## Description

ECM-I913 is a 3.5-inch embedded mainboard equipped with Intel® Tiger Lake U Soc CPU. It has complete IO functions, flexible selection of power supply, active and passive radiators, and the compact size is suitable for installation in limited space scenarios. It is very suitable for AGV and AMR, medical inspection, machine vision, industrial control, digital city and smart security and other industries and fields.

## I/O View

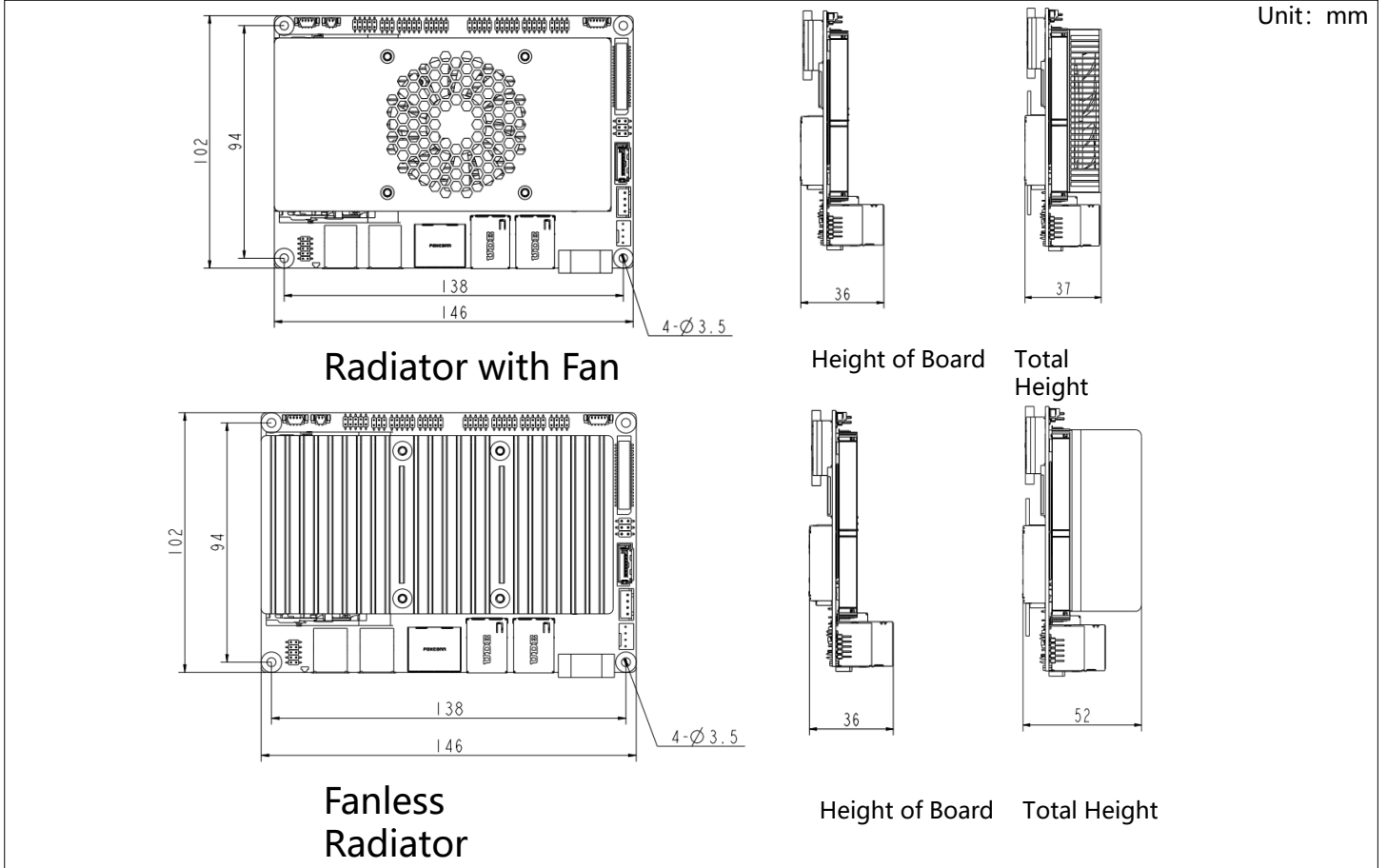


## SPEC.

CPU	Intel® Tiger lake U Soc CPU (core i3-1115G4/i5-1135G7/i7-1165G7, Celeron 6305), TDP 12W/15W/28W
System Memory	2*260-pin DDR4 SODIMM, supports 3200MHz, up to 64GB
Expansion	1* M.2 2230 E-key (USB2.0 signal and PCIeX1 signal), supports WiFi5/BT5.0 1*M.2 B-key 3052 (USB2.0 signal and PCIeX1 signal), with SIM slot, supports 4G LTE/5G NR 1*Full size Mini PCIe(PcieX1 signal), supports PCIe modules, mSATA signal selection can be realized through BIOS
Graphics	Intel UHD Graphics or iRIS® X <sup>e</sup> Graphics, Supports Intel Deep Learning boost, DirectX12.1, OpenGL 4.6 and OpenCL 3.0, HDMI: up to 4096*2304@60Hz, DP: up to 7680*4320@60Hz, LVDS: up to 1920*1200@60Hz, support 3 independent displays
Audio	1*Line out & Mic in, Realtek ALC897 HD audio chip, support 5.1 channels
LAN	1*Intel I226V PCIe Gig. Ethernet, 10/100/1000Mbps; 1*Intel®I219LM, supports iAMT13.0
Storage	1*SATA3.0 port, supports up to 6 Gbps transmission speed; 1*mSATA (Opt.)
Rear I/O	2*LAN(RJ45); 1*HDMI+1*DP;
Internal I/O	4*USB3.2 gen2.0(Type A), support up to 10 Gbps transmission speed 2*USB2.0(2*4pin dupont pin), 2*RS232/422/485(two 2*5pin dupont pins), 2*RS232(two 2*5pin dupont pins), 1*8-bit DIO(2*5pin dupont pin), 1*F-audio(2*5pin dupont pin), 1*48-bit LVDS(2*20pin DF13 port), 1*SM BUS(1*4pin wafer), 1*SATA 3.0, 1*FAN
Switch & LED	1*HDD LED; 3*CPU Temp.LED (Red is warning, Yellow is high, Green is normal) 1*F_Panel(PowerSW, Reset, Power LED, HDD-LED), 2x5pin dupont pin; 1*AT/ATX SW, 1*Clear CMOS SW, 1*USB 5V/SB SW
Power Supply	DC 12V (1*3pin phoenix socket, colay 2*10pin Dupont mother), it can be connected to OFX-075 75W power board and supports 9-36V wide voltage input TDP: 45.36W (CPU: i7-1165 G7/4G DDR4/128 SSD)
Watchdog Timer	Programmable timeout interrupt or system reset, 1 to 255 seconds
OS Support	Windows 11*IoT enterprise, Windows 10*IoT enterprise, Android, SUSE, Ubuntu, Wind River, Red Hat*Enterprise, Wind River VxWorks*7, Yocto

Dimension	(W*H) : 146*102mm
Height	Signal board: 36mm, the radiator with fan: 37mm, fanless radiator: 52mm, PCB: 1.6mm
Operating Temperature	0 ~ 60°C
Storage Temperature	-40°C~85°C
Storage Humidity	10~95%@40°C, Non-condensing
EMC/Certification	CE/FCC Class A

## Dimension



## Ordering Info

Model No.	CPU	Introduction
ECM-I913/S001	Intel® Core I3-1115G4	3.5" Embedded Single Board Computer, 2*SODIMM DDR4, 2*LAN, 4*USB3.2, 2*USB2.0, 1*M.2 2230 E-Key, 1*M.2 3052 B-Key, 1* Full size mini PCIe/mSATA, 4*COM, 1*8-bit DIO, 1*DP, 1*HDMI, 1*LVDS, 1*SM BUS, 1*Audio, 1*SATA3.0, DC 12V
ECM-I913/S002	Intel® Core I5-1135G7	
ECM-I913/S003	Intel® Core I7-1165G7	
ECM-I913/S004	Intel® Celeron 6305	
OFX-075	75W power board, DC IN 9-36V, DC OUT 12V, 38*53mm, TDP mini 54W, max 78W	
Radiator with Fan(Opt.)	Pure copper+Aluminium alloy heat radiator, four-wire intelligent temperature control ball-bearing fan, silent ultra-thin design, fan cable 100mm, size: 137*70*24.2mm (After installation, the total thickness of the motherboard is 37mm)	
Fanless Radiator(Opt.)	Pure copper+Aluminium alloy heat radiator, size: 137*70*39.3mm (After installation, the total thickness of the motherboard is 52mm)	

## Accessory Pack

Standard configuration			Selectinve configuration		
Accessory	description	Amount	Accessory	description	Amount
Serial ports cable	DB9 male, 300mm	4	DIO cable	DB9 male, 300mm	1
SATA cable	(7+15)pin SATA power supply +SATA data cable, 300mm	1	Audio cable	Three in a row(Line-out/Line-in/Mic) 3.5mm phone jack, 300mm	1
Screw jumper package	Two M2 screws +Two jumper caps (spare)	1	USB2.0 cable	Two in a row Type A, 300mm	1
DC – IN pin	3.81 pitch 3pin phoenix plug with earhole	1			