

Main Features

- 11th Generation Intel® Core™ i Processors
- 1 x VGA and 1 x HDMI Display ports
- 2 x DDR4 SO-DIMM non-ECC 3200 MHZ up to 64 GB
- 1 x Intel® GbE LAN ports and 2 x 2.5 GbE LAN
- 4 x USB 3.2 (Gen1), 2 x USB 2.0
- 3 x RS232 and 1 x RS232/422/485
- 1 x SATA 3.0 port
- 1 x Full size Mini PCIe slot
- 1 x PCIe x 4, 2 x M.2 Key B
- 1 x 8bit GPIO, 2 x DI / 2 x DO, Onboard TPM
- 24V DC input

Product Overview

RCB601 is equipped with Tiger Lake-UP3 11th generation Intel® Core™ i processor, with high-performance AI computing capabilities, High-performance architecture x86-64 for visual recognition applications.

The I/O of various devices can be connected to various devices. Supports real-time I/O for environmental sensors (GPIO, COM).

Instant messaging software communicates between software components and devices.

RCB601 has rich IO interfaces, which can easily meet the diversified needs of robots, instead of being limited to simple handling robots AMR is suitable for application services in different fields of various industrial enterprises, various manufacturing industries, building parks, medical institutions, e-commerce logistics related industrial services.

The introduction of AMR can not only greatly improve work efficiency and reduce the fixed cost of operating personnel! It also conforms to current affairs applications such as "assisted labor-saving handling", "human-machine collaborative operation", "AMR/AGV", "IoT Internet of Things concept" and "epidemic".

Specifications

CPU Support

- 11th Generation Intel® Core™ i Processors
- i7-1185G7E (4C8T, 1.8GHz, up to 4.4GHz, TDP-up 28W) standard
- i5-1145G7E (4C8T, 1.5GHz, up to 4.1GHz, TDP-up 28W) optional
- i3-1115G4E (2C4T, 2.2GHz, up to 3.9GHz, TDP-up 28W) optional

Main Memory

- Support dual channel DDR4 with non-ECC SO-DIMM 3200 MHZ up to 64 GB

Display Option

- 1 x VGA (resolution up to 1920 x 1080@60Hz)
- 1 x HDMI 1.4b (resolution up to 3840 x 2160@30Hz)

Tip: Multiple display : (VGA+HDMI).

System

- 4 x USB3.2 (Gen1), 4 x USB2.0
- 3 x RS232, 1 x RS232/422/485
- Realtek HDA Codec
- 1 x Front panel header, 8 bit digital I/O(4In/4Out), 2 x DI/DO
- WDT, SMBus, Onboard TPM.
- 1 x Fan connector.

Storage

- 1 x SATA 3.0, 1 x SATA power connector (+5V).
- 1 x M.2 2242/2280 Key B (support SATA/PCIe).

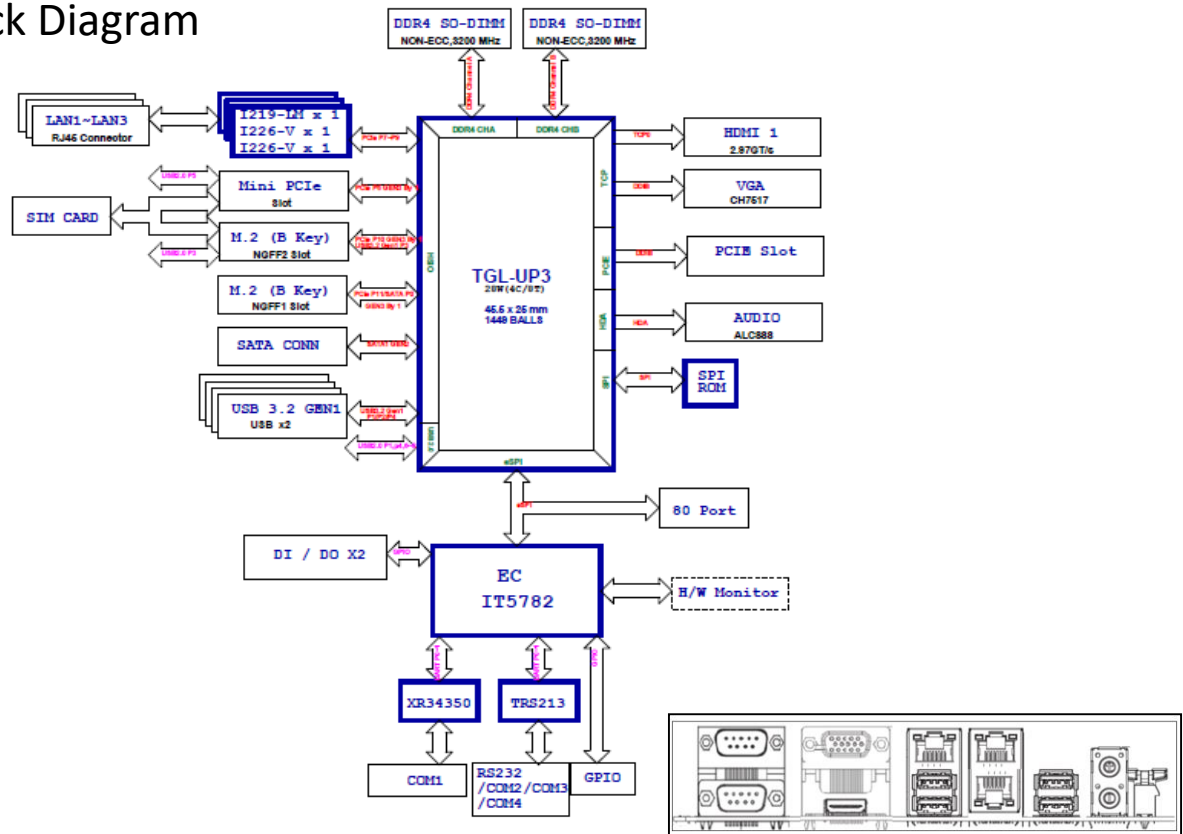
Expansion Slot

- 1 x Full size mPCIe x 1 with nano SIM (support PCIe/USB2.0 Interface)
- 1 x M.2 3052/3042 Key B (for LTE 5G),(support PCIe/USB3.2 Gen1) with nano SIM
- 1 x PCIe x 4

Rear I/O

- 2 x USB3.2 (Gen1), 2 x USB2.0
- 1 x VGA, 1 x HDMI
- 2 x DB9 (COM 1:RS232/422/485, COM2: RS232).
- 3 x GbE LAN
 - > LAN1 : Intel® I219-LM
 - > LAN2,3 : Intel® I226V
- 1 x 2 ports HD Audio Jack (Mic-in, Line-out).

Block Diagram



Internal I/O

- 2 x USB2.0.
- 2 x COM ports: COM3, COM4: RS232
- 1 x Front panel header, 8 bit digital I/O(4In/4Out)
- 2 x DI/ DO, WDT, SMBus
- HA Audio:
 - 1 x Line-out, 1 x Mic-in
- 1 x 4Pin DC In (+24V)

Power Requirement

- 1 x 4-pin (2x2) ATX Power connector
 - Input power DC 24V
- Support both AT and ATX power supply mode

Dimension

- 6.7"x6.7" (170mm x 170 mm)

Environment

- Board level operation temperature: 0°C to 60°C
- Storage temperature: -40°C to 85°C
- Relative humidity:
 - 0% to 90% (operating, non-condensing)
 - 0% to 90% (non-operating, non-condensing)

Certifications

- CE/FCC Class A

Support OS

- Windows 10 (64bit)
- Ubuntu 18.04.05/Kernel 5.4

Ordering Information

• RCB601 (P/N: 10J200RCB11X0)

Mini-ITX, 11th Generation Core™ i7-1185G7E Processors , 2 x DDR4 SO-DIMM, 1 x VGA , 1x HDMI , 4 x USB3.2 (Gen1), 4 x USB2.0, 3 x GbE LAN, 1 x SATA, 3 x RS232, 1 x RS232/422/485, 8bit GPIO, 2 x DI/DO, WDT, SMBus, 2 x M.2 Key B ,1 x Mini PCIe, 1 x PCIe4, Onboard TPM, 24V DC.

Optional Accessories

- **SATA Cable** (P/N: 603ATA0162X00)
- **SATA POWER Cable**(P/N: 603POW0510X00)
- **COMPORT Cable** (P/N: 60233SIO62X00)
- **CPU Cooler**(P/N: 5050200117X00)