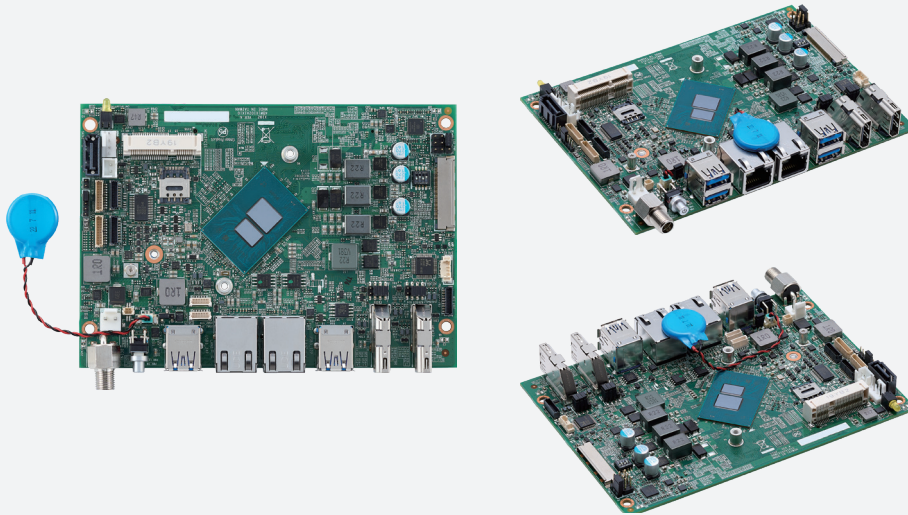




## Main Features

- Intel® processor N-series & Intel® Core™ processor N-series
- 1 x DDR4 SO-DIMM, up to 16GB
- Support 2 x HDMI® 1.4 output 4K@30Hz
- 1 x eDP 1920x1080@60Hz (optional: LVDS selected by jumper)
- TPM 2.0 design for security technology
- Rich I/O connectivity: 2 x 2.5GbE LAN, 4 x USB 3.2 Gen 1
- 1 x M.2 Key M 2242 for supporting a PCIe/SATA storage device
- 1 x Mini PCIe slot supports a Wi-Fi/LTE module
- Support power input 12V DC

## Product Overview

The X104 is a 3.5" SBC powered by Intel® Processor N150 and Intel® Core™ 3 Processor N355. It offers enhanced computing performance, low power consumption, and a rich set of integrated IoT features.

The board supports dual HDMI® 1.4 display outputs, dual 2.5GbE LAN ports, four USB 3.2 Gen 1 ports, one RS-232/422/485 port, and an M.2 Key M 2242 storage slot compatible with both PCIe and SATA formats. Additionally, the Mini PCIe slot supports either a Wi-Fi 6/6E/7 or LTE module.

The X104 series is an ideal solution for a variety of applications, including IoT gateways, self-service kiosks, endless aisles, QSRs, drive-thru kiosks, bus stops, digital transit information signs, intelligent poles/lighting systems, and information display systems such as PIDS for smart city deployments.

## Specifications

### Processor

- Intel® processor N150, PBP 6W
- Intel® Core™ 3 processor N355, PBP 15W

### Memory

- 1 x DDR4 SO-DIMM, non-ECC, unbuffered, up to 16GB

### Integrated Graphics

- Intel® UHD Graphics

### Display Interface

- 2 x HDMI® 1.4, up to 3840x2160@30Hz
- 1 x eDP, up to 1920x1080@60Hz (optional: LVDS selected by jumper)

### Storage

- 1 x M.2 Key M 2242 (SATA & PCIe 3.0 x1 signal)
- 1 x 7-pin SATA connector and 1 x 2-pin for SATA power connector

### I/O Interface Side

- 2 x 2.5GbE RJ45 port with LEDs
- 2 x HDMI® 1.4 output

- 4 x USB 3.2 Gen 1
- 1 x Power button with LED
- 1 x DC-in jack with lock
- 1 x Storage active LED

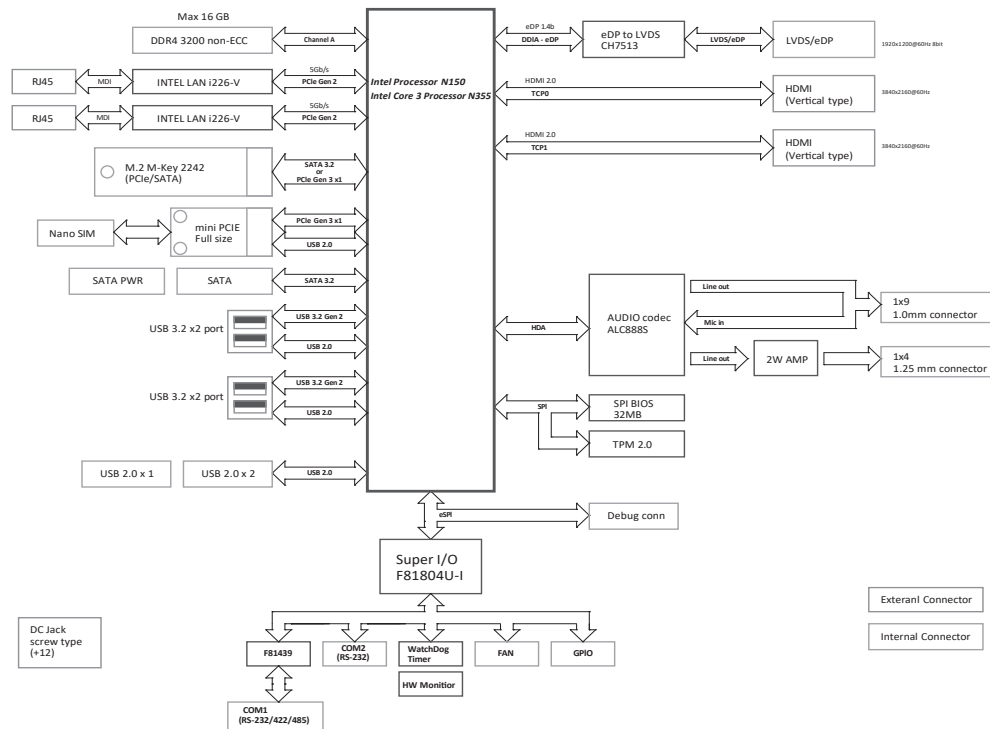
### I/O Interface Internal

- 1 x 9-pin header for COM1, supports RS-232/422/485
- 1 x 9-pin header (RI/5V/12V) for COM2, supports RS-232
- 1 x 10-pin header for GPIO, 4 x GPI, 4 x GPO
- 1 x 10-pin debug connector
- 1 x 4-pin fan connector
- 1 x 2-pin header for system reset button
- 2 x 6-pin header for three USB 2.0 ports
- 1 x 4-pin DIP switch for resolution selection
- 2 x 3-pin header for LVDS inverter connector
- 1 x 9-pin header for mic in and line out
- 1 x 4-pin header for speaker out, 2W

### Expansion Slot

- 1 x Full-size Mini PCIe slot with 1 x nano-SIM slot
  - Support a Wi-Fi 6/6E/7 or LTE module

## Block Diagram



### Power Supply

- Nominal voltage: +12V DC input

### Environment

- Operating temperature: 0°C~60°C
- Storage temperature: -20°C~80°C
- Relative humidity: 95% (non-condensing)
- Shock protection: 50G peak acceleration, 11ms according to IEC 60068-2-27
- Vibration protection
  - Random: 2Grms@5Hz~500Hz, IEC 60068-2-64
  - Sinusoidal: 2G@5Hz~500Hz, IEC 60068-2-6

### Mechanical

- Dimensions: 146mm (L) x 102mm (W) (5.7" x 4.0")

### Operating System

- Windows 11
- Windows 10, 64bit
- Linux

## Ordering Information

### ♦ X104-N150 (P/N: 10W10X10403X0)

Embedded board with Intel® processor N150, 6W with 2 x HDMI® 1.4, 4 x USB 3.2 Gen 1, 2 x 2.5GbE LAN, 2 x COM, 1 x eDP, 1 x M.2 Key M, 1 x Mini PCIe

### ♦ X104-i3 (P/N: 10W10X10405X0)

Embedded board with Intel® Core™ 3 processor N355, 15W with 2 x HDMI® 1.4, 4 x USB 3.2 Gen 1, 2 x 2.5GbE LAN, 2 x COM, 1 x eDP, 1 x M.2 Key M, 1 x Mini PCIe