

# Slim Mini ITX MI31 Series

*Slim Mini-ITX with Intel® 12<sup>th</sup> Alder Lake-N SoC Processor*

## Features

1. Intel® 12<sup>th</sup> Alder Lake-N SoC Processor
2. 1\* DDR5 4800MHz SO-DIMM up to 16GB
3. 1\* M.2 M-key, 1\* M.2 E-key for WiFi, 1\* M.2 B-key for 4G/5G module, 1\* Nano SIM card
4. 2\* HDMI, 1\* LVDS (co-lay eDP)
5. 5\* RS232, 1\* RS232/422/485, 1\* SATAIII (6Gb/s)
6. 1\* USB3.2 (Gen.2), 1\* USB3.2 (Gen.2) Type-C support DP ALT mode, 6\* USB2.0
7. Onboard TPM2.0 (option)
8. 12~28V DC-in

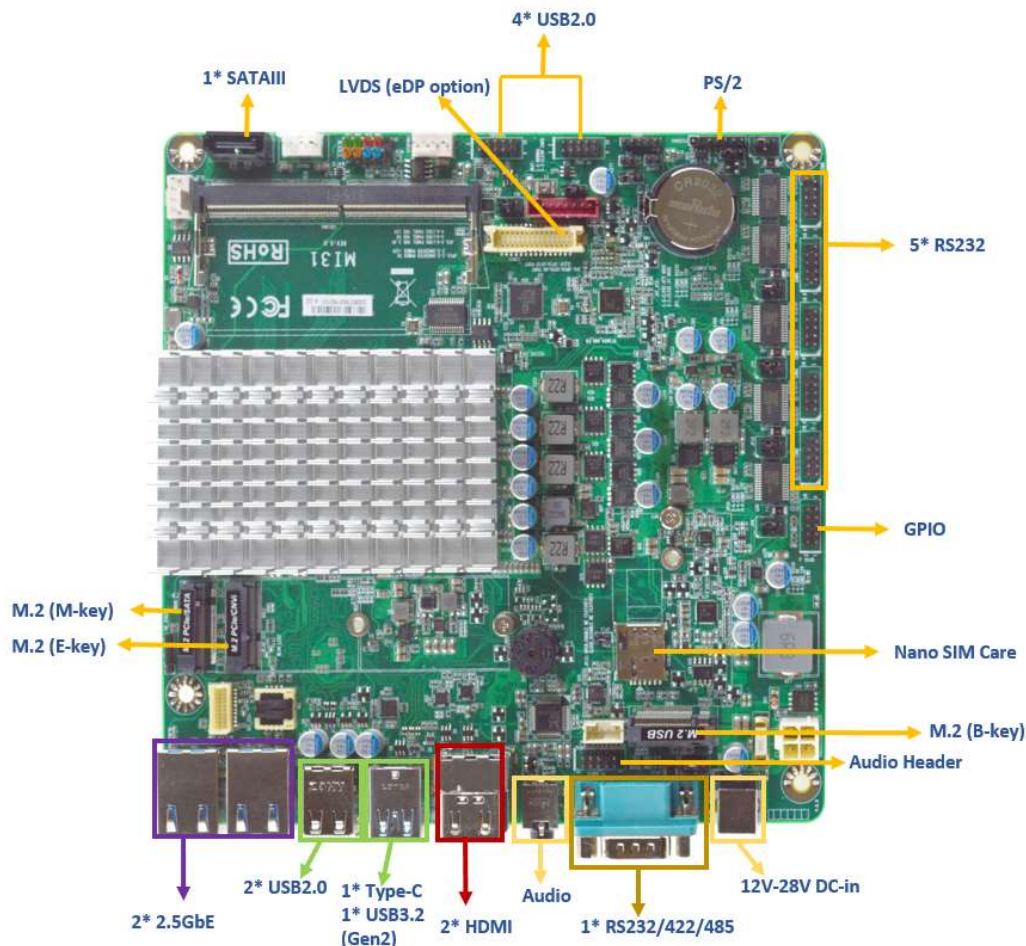


intel. FC CE RoHS  
COMPLIANT

## Overview

**Application:** Industrial Automation / Digital Signage / KIOSK / POS

## I/O Diagram



## Specifications

<b>Model</b>	<ul style="list-style-type: none"> <li>•</li> <li>•</li> </ul>
<b>Form Factor</b>	<ul style="list-style-type: none"> <li>• Slim ITX (170 * 170mm)</li> </ul>
<b>Processor System</b>	<ul style="list-style-type: none"> <li>• Intel® 12<sup>th</sup> Alder Lake-N SoC Processor</li> <li>• AMI Flash ROM BIOS</li> </ul>
<b>Memory</b>	<ul style="list-style-type: none"> <li>• 1* DDR5 4800MHz SO-DIMM up to 16GB</li> </ul>
<b>Storage</b>	<ul style="list-style-type: none"> <li>• 1* SATAIII (6 Gb/s)</li> <li>• 1* M.2 M-key (2242/2280, SATA/PCIe Gen.3x2 interface) support NVMe</li> </ul>
<b>Expansion</b>	<ul style="list-style-type: none"> <li>• 1* M.2 E-key (2230, USB2.0/PCIe Gen.3x1 interface) support CNVi for WiFi</li> <li>• 1* M.2 B-key (3042/3052, USB3.1/USB2.0) for 4G/5G module</li> </ul>
<b>Ethernet</b>	<ul style="list-style-type: none"> <li>• 2* Intel i225-V 2.5GbE</li> </ul>
<b>Graphics</b>	<ul style="list-style-type: none"> <li>• Intel® UHD Graphics, shared memory</li> <li>• 2* HDMI 2.0b (Max Resolution: 4096x2304@60Hz)</li> <li>• 1* 24 Bit Dual Channel LVDS/eDP (Max Resolution: 1920 x 1200@60Hz)</li> <li>• Support Triple Displays</li> </ul>
<b>Audio</b>	<ul style="list-style-type: none"> <li>• HD audio: Realtek ALC897 + 3W Amplifier</li> </ul>
<b>Watchdog Timer</b>	<ul style="list-style-type: none"> <li>• From Super I/O to drag RESETCON#</li> <li>• 256 segments (10sec ~ 255min)</li> </ul>
<b>Internal I/O</b>	<ul style="list-style-type: none"> <li>• 4* USB2.0</li> <li>• 5* RS232 (COM2 with 5V/12V selectable)</li> <li>• 1* LVDS (eDP option)</li> <li>• 1* SATAIII</li> <li>• 1* Speak connector</li> <li>• 1* Audio Header</li> <li>• 1* Nano SIM Card Slot</li> <li>• 1* PS/2</li> <li>• 1* SMBUS</li> <li>• 1* 8-bit GPIO</li> <li>• 1* Chassis intrusion</li> <li>• 1* AT mode</li> <li>• Support onboard TPM2.0 (MI31XXXX)</li> </ul>
<b>External I/O</b>	<ul style="list-style-type: none"> <li>• 1* USB3.2 (Gen.2)</li> <li>• 1* USB3.2 (Gen.2) Type-C support DP ALT mode</li> <li>• 2* USB2.0</li> <li>• 2* HDMI</li> <li>• 2* RJ45</li> <li>• 1* RS232/422/485 with 5V/12V selectable</li> <li>• 1* Audio Jack (Line-out/MIC combo)</li> <li>• 12~28V DC-in PWR jack</li> </ul>
<b>Power</b>	12~28V DC-in, AT/ATX Supported - AT: Directly PWR on as Power input ready - ATX: Press Button to PWR on after Power input ready
<b>Compliance</b>	CE, FCC, LVD, RoHS, REACH
<b>Temperature</b>	<ul style="list-style-type: none"> <li>• Operating Temperature: 0 ~ 60° C</li> <li>• Storage Temperature: -20 ~ 85° C</li> <li>• Humidity: 10% ~ 90% RH @40°C (non-condensing)</li> </ul>
<b>OS Support</b>	<ul style="list-style-type: none"> <li>• Linux</li> <li>• Windows 10</li> <li>• Windows 11</li> </ul>
<b>Warranty</b>	<ul style="list-style-type: none"> <li>• 2 Years limited warranty</li> </ul>

\* Specifications subject to change without notice, not responsible for typographical errors. Does not include HDD or OS.

## Standard Accessories

Part Number	Description
-----	MI31 Series M/B
	MI31 I/O shield
	1* COM cable
	1* SATAIII cable

1\* SATA PWR cable

## Mechanical Drawings (Unit=mm)

