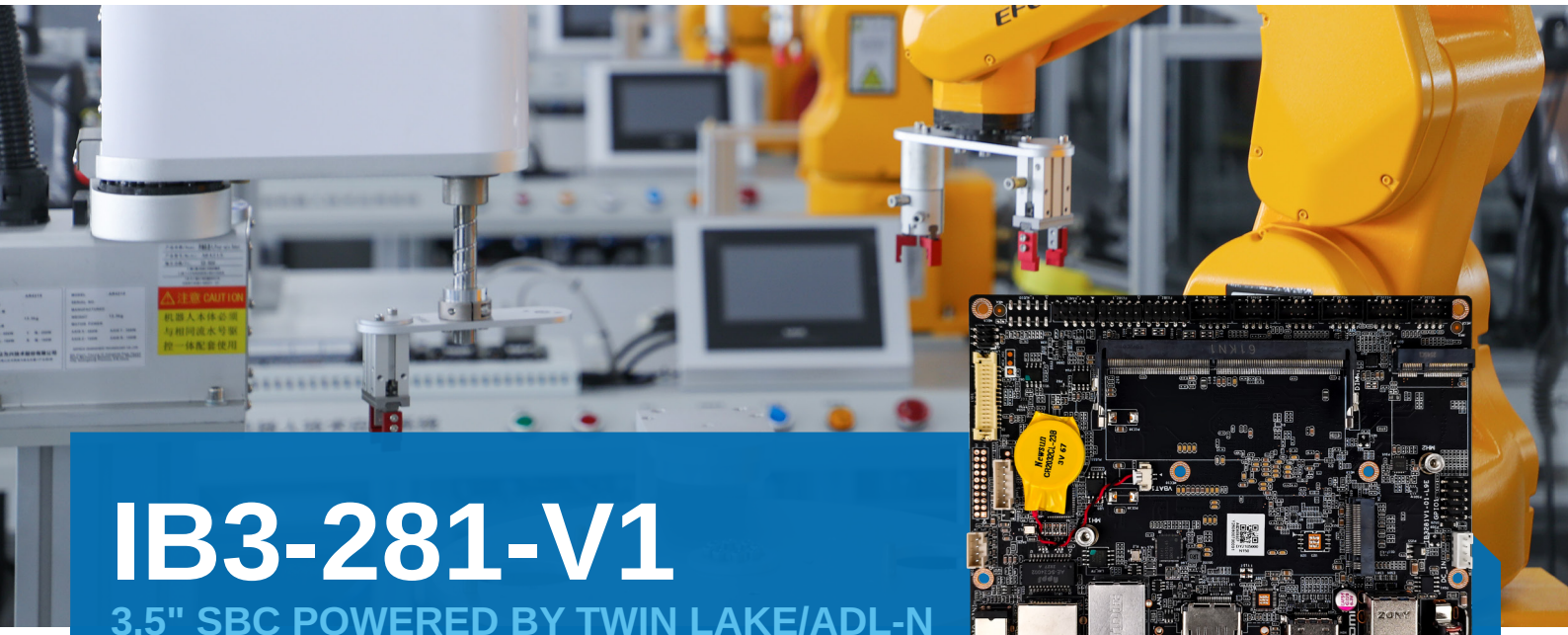
Giada

Embedded Motherboard



IB3-281-V1

3.5" SBC POWERED BY TWIN LAKE/ADL-N

Intel® Twin Lake/
Alder Lake-N processors

2

1 x DP, 1 x LVDS
Up to 3840 x 2160 @60 Hz

Support Wi-Fi/BT module

3.5 inch

3.5inch form-factor
146 mm x 102 mm (5.75” x 4.02”)

CPU

CPU	Intel® Processor N150/N100/N97
Chipset	SoC
Total Cores	4 Cores/4 Cores/4 Cores
Total Threads	4/4/4
TDP	6 W/6 W/12 W

Network

Network Controller	1 x Intel® Ethernet Controller I226-V 1 x Intel® Ethernet Controller I210-AT
Wi-Fi/BT	1 x E-Key M.2 (2230) for Wi-Fi/BT, support Wi-Fi 5, Wi-Fi 6/6E (CNVi)
Mobile Network	NA

System

GPU	Intel® Graphics (N150) Intel® UHD Graphics (N100/N97)
Graphic Engine	DirectX 12.1, OpenGL 4.6, OpenCL 3.0
System Memory	Up to 16 GB, 1 x SO-DDR4-3200 MHz
Storage	1 x M-Key M.2 (2280) PCIe3.0 X2 for SSD
TPM	Optional: TPM2.0
Watchdog Timer	Yes
Auto Power On	Yes
RTC	Set up independently every day, a week as a cycle
Power Requirement	Lockable DC-IN, 12 V ~ 24 V, 45 W
Dimensions	146 mm x 102 mm (5.75” x 4.02”)
Cooling System	Fanless, passive cooling
Operating System	Windows 10 (64bit) /Windows 11 (64bit) Linux Ubuntu (64bit)
Storage Temperature	-40°C ~ 80°C (-40°F ~ 176°F)
Operating Temperature	-20°C ~ 60°C (-4°F ~ 140°F) @0.7m/s Air Flow
Humidity	95% @ 60°C (non-condensing)

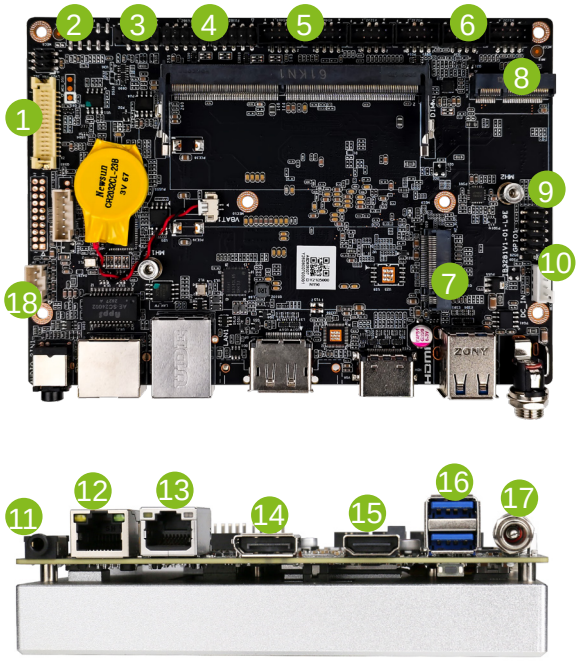
Rear I/O

USB	2 x USB3.2 Gen1
Display Interface	1 x HDMI (Max.3840 x 2160 @60 Hz) 1 x DP (Max.4096 x 2160 @60 Hz) colay VGA
Ethernet Interface	1 x 2.5GbE RJ45, 1 x 1GbE RJ45
Audio	1 x 2-in-1 Headset (MIC-IN & AUDIO-OUT)

Internal I/O

USB	4 x USB2.0, signal by 2 x 2 x 5pin header
Display	2 x 15pin dual channel 24bit LVDS (Max. 1920 x 1200 @60 Hz), eDP colay with LVDS
Serial port	4 x RS232, signal by 4 x 5pin header 2 x RS485, signal by 2 x 5pin header
GPIO	4 x GPI, 4 x GPO
Audio	2 x 5pin F_Audio, 1 x 4pin SPEAKER
Others	1 x 6pin INVERTER, 1 x 4pin DC-IN

Dimensions and Drawing



No.	Dimensions
1	LVDS
2	F_AUDIO
3	F_PANEL
4	4*USB2.0
5	2*RS485
6	4*RS232
7	M-KEY M.2
8	E-KEY M.2
9	GPIO
10	DC-IN
11	HEADSET
12	1 GbE RJ45
13	2.5 GbE RJ45
14	DP
15	HDMI
16	2*USB3.2 GEN1
17	DC-IN
18	SPK

Order information

IB3-281-V1-N15040N0G-GIA	CPU: Intel® Processor N150 RAM: NA Storage: NA
IB3-281-V1-N10040N0G-GIA	CPU: Intel® Processor N100 RAM: NA Storage: NA
IB3-281-V1-N9740N0G-GIA	CPU: Intel® Processor N97 RAM: NA Storage: NA

Optional

Operation System	Windows 11 (64bit)

The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.