



ECM-RPL

**13th Gen Intel® Core™ SoC
i7/i5/i3/Pentium®/Celeron® BGA Processor 3.5”
Micro Module**

- > Bottom Layer Soldered Processor
- > One 262-pin DDR5 4800MHz SO-DIMM socket, supports up to 32GB Max. (non ECC only)
- > Four Display, 1 x DP++, 1 x HDMI, 1 x 2CH LVDS or eDP, 1 x USB Type C support DP
- > Expansion Slot, M.2 Key-B, M.2 Key-E, M.2 Key-M
- > Two Gigabit Ethernet, 2 x 2.5GbE
- > Extend Temperature -40°C ~ 70°C sku supported
- > DC-Input, +9~+36VDC

+ Spec

-System Information-	
Processor	Onboard Intel® 13th Gen Core™ i7/i5/i3/Pentium®/Celeron® BGA Processor, supports Up to 15/28W Max
System Memory	One 262-pin DDR5 4800MHz SO-DIMM socket, supports up to 32GB Max. (non ECC only)
I/O Chipset	IT5782VG
BIOS Information	AMI BIOS, 256Mbit SPI Flash ROM
Watchdog Timer	HW Reset, 1sec. ~ 65535sec and 1sec. or 1min./step
H/W Status Monitor	CPU & system temperature monitoring Voltages monitoring
TPM	TPM 2.0 (Onboard NuvoTon NPCT754AADYX) (BOM optional)
Expansion	
Expansion	1 x M.2 Key M 2280 (with 1 x PCI-e Gen4 x4) 1 x M.2 Key B 3042/3052/2242 (with SATA and USB2.0, USB 3.0, with 1 x SIM card slot, support WWAN+GNSS or SSD) * Only supports one SIM card (co-lay 1 x 10pin FPC connector for uSIM card adapter) support 5G (3.3V & 3.8V) 1 x M.2 Key E 2230 support CNVi and WiFi 6E module (1 x PCI-e x1 & USB 2.0 Signal)
Storage	
Storage	1 x M.2 (Key-M, 2280) 1 x M.2 (Key-B, 3042/3052/2242) 1 x SATA III
I/O	
USB Port	3 x USB 3.2 Gen 2 3 x USB 2.0
COM Port	2 x RS-232/422/485
SATA	1 x SATA III
DIO	1 x 2 x 6 pin, pitch 2.00mm connector for GPIO: 8 bits & +3.3S Level
Other	2 x LAN
Display	
Graphic Chipset	Intel® UHD Graphics or Iris® Xe Graphics CPU integrated
Spec. & Resolution	1 x DP 2.1 : Max 7680 x 4320@60 Hz 1 x HDMI 2.0b 4096x2160@60Hz 24bbp 1 x USB Type C support DP: 4096 x 2304@60Hz 36bbp ,5120 x 3200@60Hz 24bbp 1 x LVDS: 1920 x 1080 Dual channel 18/24-bits LVDS (Chrontel CH7513A-BF eDP to LVDS) or 1 x eDP: 1920 x 1080@60Hz (2 Lanes), default LVDS Note: JLVD51 Support 1 x LVDS or 1 x eDP
Multiple Display	Four Display
LVDS	1 x LVDS: 1920 x 1080 Dual channel 18/24-bits LVDS (Chrontel CH7513A-BF eDP to LVDS) or 1 x eDP: 1920 x 1080@60Hz (2 Lanes), default LVDS Note: JLVD51 Support 1 x LVDS or 1 x eDP
Audio	
Audio Codec	Realtek ALC888S
Audio Interface	Mic-In, Line-In, Line-Out
Audio Amplifier	3W Amplifier (TBC)
Certifications	
Certification Information	CE FCC Class B
Ethernet	
LAN Chipset	Intel® I226LM for standard temperature Intel® I226IT for extend temperature
Ethernet Interface	2 x Intel® I226LM/I226IT 2.5 Gigabit Ethernet (I226IT for Extend Temperature SKU)
LAN Port	2 x RJ-45
Mechanical & Environmental	
Operating Temperature	Intel® Standard Temperature CPU SKU: 0°C ~ 60°C (-4~140°F) with 0.5m/s air flow Intel® Extend Temperature CPU SKU: -40°C ~ 70°C(-40~158F) with 0.5m/s air flow for Wide Temp CPU SKU
Storage Temperature	-40°C ~ 75°C (-40°F ~ 167°F)



Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Weight	0.44lbs (0.2kg)
Power Requirement	DC in +9V ~ +36V or USB type C Adapter (20V) Note: DCIN & USB type C Adapter can only use either one.
Power Mode	AT/ATX (Default Setting: AT)
Dimension (L x W)	5.7" x 4" (146mm x 101mm)
Software Support	
OS Information	Win 11 Linux
Ordering Information	
Ordering Information	TBC