

History of Revision

Version	Date	Page	Item	Description	Remark
V1.0	2023/11/15	All	All	Draft / Preliminary release	
V1.1	2023/11/21	3	Battery	Modify description	
			Adapter	Modify description	
			IO Ports	Change to TBT4, Modify description	
V1.2	2023/12/04	2	LCD	Modify description	
		4	Measurement	Modify description	
			Function Key	Add Fn+F10	
V1.3	2023/12/06	1	SoC	Modify description	
		4	Measurement	Modify description	
			Validation: Others	Add MIL-STD-810G	
V1.4	2023/12/13	2	Memory	Modify description	
			Keyboard	Modify description	
			Wireless LAN	Remove AX201	
		3	Power Button	Modify description	
		4	Function Key	Remove Fn+F10	
V1.5	2023/12/18	4	Certification Design Ready	Modify Thunderbolt4 description	
		5	MIL-STD-810H	Amend to MIL-STD-810H	
V1.6	2023/12/21	2	LCD	Modify description	
		3	System Status Indication	Modify description	
V1.7	2024/01/03	4	BIOS SYSTEAM	ADD Support NIST SP 800-88	
V1.8	2024/01/09	5	MIL-STD-810H	Dust/sand by request	
V2.0	2024/01/10	All	All	EVT Phase	
V2.1	2024/2/5	3	IO Port	Update HDMI 2.1 TMDS	
V3.0	2024/03/15		All	DVT Phase	
V3.1	2024/05/07	2	Card Reader	Remove Realtek GL835L	
V3.2	2024/05/09	4	Weight	Modifiy Weight	
V4.0	2024/05/21	All	All	MP Phase	
V4.1	2024/05/31	4	Battery life	Modifiy Battery life	
V4.2	2024/06/19	2	LCD	QHD Modify description	

Prepared by: Sam Zeng	Approved by: Howard Su	Date of Issue: 2023/11/15 Date of Revise: 2024/6/19 Version: 4.2
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SOC	Intel Meteor Lake-U/H 15W & 28W-45W	<ul style="list-style-type: none"> ■ Intel® ML-U Series 15W ■ Intel® ML-H Series 28W-45W (by request) ■ CPU supports V-pro and non-V-pro (AVL)
Memory	SO-DIMM DDR5 DRAM	<ul style="list-style-type: none"> ■ DDR5 speed up to 5600MT/s ■ RAM Socket * 2 ■ Standard System DRAM Module 8GB/16GB supported ■ System DDR5 up to 64GB
Storage	M.2 2280 SSD	<ul style="list-style-type: none"> ■ M.2 2280 Key M Type SSD ■ Support PCIe Gen4 NVME ■ Support 256GB/512GB/1TB
LCD		<ul style="list-style-type: none"> ■ 14" IPS, 1920 x 1200 FHD+ (Anti-Glare), sRGB 100% ■ 14" IPS, 2560 x 1600 QHD+ (Anti-Glare), sRGB 100%,60Hz
Audio Codec	SENARYTECH CX11880	<ul style="list-style-type: none"> ■ HDA Interface Audio codec ■ Stereo speaker output ■ Support Digital MIC sets
KBC/EBC	ITE IT5571	<ul style="list-style-type: none"> ■ ACPI compliant ■ Share ROM
Card Reader	Realtek RTS5170	<ul style="list-style-type: none"> ■ USB2.0 interface ■ Supports SD/SDXC/SDHC
	Alcor Micro AU6465RB63	<ul style="list-style-type: none"> ■ USB2.0 interface ■ Supports SD/SDXC/SDHC
DTPM 2.0 (Optional)	NUVOTON NPCT750	<ul style="list-style-type: none"> ■ Power saving mode ■ SPI interface ■ Security features, TCG certified.
LAN (Optional)	Realtek RTL8111H	<ul style="list-style-type: none"> ■ 10/100/1000 support ■ Power saving mode support ■ PXE support
	2.5G i226LM - w/ vPro (Optional)	<ul style="list-style-type: none"> ■ Support Intel® i226 2.5G LAN ■ Built in 10/100/1000/2500Mb Base-TX Ethernet LAN (support WOL feature)
Wireless LAN	2x2 Combo RTL8852BE	<ul style="list-style-type: none"> ■ M2.2230 / 802.11, 2x2 (5GHz/2.4GHz dual band support) ■ PCIE interface supported ■ WLAN support (up to 2.4 Gbps)
	2x2 Combo AX211 (w/ vPRO) (optional , Certification by request)	<ul style="list-style-type: none"> ■ 802.11, 2x2 (6GHz/5GHz/2.4GHz dual band support) ■ M.2 2230 supported ■ WLAN support (up to 2.4 Gbps~)
Keyboard		<ul style="list-style-type: none"> ■ US - 80keys, 282.3mm, with 3.2mm height ■ UK - 81keys, 282.3mm, with 3.2mm height ■ w/ backlit (optional) ■ Caps Lock-& Fn Key-with LED

Pointing Device (Touch Pad)		<ul style="list-style-type: none"> ■ Support Windows Precision Touchpad (PTP) ■ 120 X 75 mm ■ Interface I2C
Battery	55whr	<ul style="list-style-type: none"> ■ Li-Polymer Smart-Battery, soft pack, non-removable ■ 3S1P /11.55V/4656mAh/ 55Wh ■ Certification: CE/CB/UL(cTUVus) ■ Battery life 500 cycle capacity \geq80%
	70whr (optional)	<ul style="list-style-type: none"> ■ Li-Polymer Smart-Battery, soft pack, non-removable ■ 3S1P /11.61V/6000mAh/ 70Wh ■ Certification: CE/CB/UL(cTUVus) ■ Battery life 500 cycle capacity \geq80%
Adapter	65W (for 55whr battery)	<ul style="list-style-type: none"> ■ DC Output for Adapter :5V/3A , 9V/3A , 12V/3A ,15V/3A , 20V/3.25A ■ DC Output for System : 20V / 3.25A ■ 65 Watts, USB type C plug ■ Automatics Voltage adjustment between 100 and 240VAC ■ Input Frequency 50/60Hz ■ Surge protection
	100W (for 70whr battery)	<ul style="list-style-type: none"> ■ DC Output for Adapter : 5V/3A , 9V/3A , 12V/3A ,15V/3A , 20V/5A ■ DC Output for System : 20V / 5A ■ 100 Watts, USB type C plug ■ Automatics Voltage adjustment between 100 and 240VAC ■ Input Frequency 50/60Hz ■ Surge protection
I/O Port		<ul style="list-style-type: none"> ■ 1 x Type C Port (USB3.2 Gen 2 + PD3.0 + DP1.2 with Alt mode support) (MB) ■ 1 x HDMI 2.1 TMDS (4K@60Hz)(MB) ■ 1 x thunderbolt 4 @ 40Gbps (support DP1.4 Alt mode) (MB) ■ 1 x combo Audio jack for microphone/headphone (MB) ■ 1 x Micro SD Card Reader (MB) ■ 1 x LAN (DB) ■ 3 x Type A Port (USB3.2 Gen 1) (DB) <p>* PD priority with Type C (full function) port if Type C port and Thunderbolt 4 port plugged in at the same time</p>
Thunderbolt 4		<ul style="list-style-type: none"> ■ 40Gbps (support DP1.4 Alt mode) ■ Display: Support for two 4K displays or one 8K display
System Status Indication		<ul style="list-style-type: none"> ■ Power on status: power on/blue ■ Battery Charging status (Blue/Red): <ul style="list-style-type: none"> ➢ Battery Charge (not FULL): LED Red Light ➢ Battery Charge (FULL): LED Blue Light ■ Battery not Charge <ul style="list-style-type: none"> ➢ Battery Low (under 10%): LED Red Light blinking(turns-on 1.5Sec and then turns-off 1.5Sec and repeat) (Charge status take priority over power on status) ■ CCD LED indicator (White)
Power Button		<ul style="list-style-type: none"> ■ On/ Off: Programmable Power Buttons to Windows ■ Press power button down for 1 second to enter suspend mode ■ Press power button down for 4 seconds to power off system ■ w/ Fingerprint (optional)

Speaker	<ul style="list-style-type: none"> ■ Build-in 2 stereo speakers ■ Speaker: 2W, 4Ω 	
Camera (RTC: Mainstream Level)	<ul style="list-style-type: none"> ■ Default: Front camera ■ USB2.0 interface, w/ LED indicator ■ 2M FHD w/ 2 D-MICs, MIC-array support ■ IR+RGB w/ 2 D-MICs, MIC-array support (optional) ■ Physical ON/OFF button 	
OS	<ul style="list-style-type: none"> ■ Support Windows 11 (64bit) ■ WHLK Certification ■ Modern Standby support / MSFT SL3 (only vPro SOC can support it) 	
System BIOS AMI	<ul style="list-style-type: none"> ■ Support ACPI 5.0(above) ■ NIST SP 800-88 Guidelines for Media Sanitization 	
Function Key	<ul style="list-style-type: none"> ■ Fn+F1 - Touch Pad Enable/Disable ■ Fn+F2 - Suspend ■ Fn+F3 - Mute ■ Fn+F4 - Keyboard backlight level ■ Fn+F5 - Volume down ■ Fn+F6 - Volume up ■ Fn+F7 - Switch display ■ Fn+F8 - Brightness down ■ Fn+F9 - Brightness up 	
Measurements	<ul style="list-style-type: none"> ■ Dimension: 313.6mm x 224.8mm x 16.3mm (w/o rubber foot) ■ Weight: 1.36kg 	
Form Factor	<ul style="list-style-type: none"> ■ 180 degree Clamshell 	
Battery Life	<ul style="list-style-type: none"> ■ Battery Charger time: 1 hour (Power off, 80% (+/- 5%) battery full w/ 100W adapter) ■ Battery life: 15W (SKU: ultra 7 / LCD FHD+ / 8GB / 256GB PCIE SSD) w/ 55whr battery, with Mobilemark2025 → 9.5 hours 28W (SKU: ultra 7 / LCD FHD+ / 16GB / 256GB PCIE SSD) w/ 70W battery, with Mobilemark2025 → 11 hours 	
Certification Design Ready	RF	<ul style="list-style-type: none"> ■ WLAN for CE (RED / SAR)
	EMC	<ul style="list-style-type: none"> ■ WLAN for CE
	Safety& Environment	<ul style="list-style-type: none"> ■ CB ■ cTUVus (by request) ■ WEEE ■ RoHS (Declaration)
	Others	<ul style="list-style-type: none"> ■ HDCP 2.3 (HDMI) ■ Erp Lot 6 ■ Energy Star 8.0 Compliance ■ TPM2.0 ■ HDMI 2.1 w/certification ■ Thunderbolt 4 compliance (certificate by request)
Validation	Essential vPro support	<ul style="list-style-type: none"> ■ CPU supports V-pro (ultra 5 / ultra 7) ■ Wireless LAN: AX211 w/vPro, 2x2, 802.11 ■ LAN: I226LM-w/vPro

MIL-STD-810H

- Drop, Method 516.8 Procedure IV, 76cm height with 2inches plywood ground
- Mechanical Shock. Method 516.8 Procedure I
- Vibration, Method 514.8 Procedure I, Category 4 and 24
- Humidity, Method 507.6 Procedure II
- Altitude, Method 500.6 Procedures I & II
- Freeze/Thaw, Method 524.1 Procedure III
- Low Temperature Method 502.7 Procedure I & II
- Temperature Shock Method 503.7 Procedure I
- High Temperature Method 501.7 Procedure I
- Blowing Dust, Method 510.7 Procedure I (by request)
- Sand, Method 510.7 Procedure II (by request)