

X6-MTH-ORN

Nvidia Orin NX powered by Intel Core Ultra Processor
Edge AI Box



KEY FEATURES



Nvidia Edge AI engine

Nvidia ORIN NX up to 100 TOPS



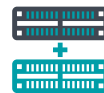
Control engine by Intel Core Ultra

Remote control by Intel Core Ultra processor



Remote BIOS update and OTA

Support Remote management by DFI OOB



Multiple Expansions

4 M.2 B, E, M key expansion slots



Optional Displays

Optional MXM supported with 3 DP and 1 HDMI ports



Rich I/O

4 USB 3.2, 4 RJ45 GbE, micro USB, Serial, CAN bus



IoT Solutions Alliance

PANEL



Front View



Rear View

SPECIFICATION

SYSTEM	Processor	Intel® Core™ Ultra 7 165U (2 P-Cores x 1.7 GHz, 8 E-Cores x 1.2 GHz, 12 MB cache, 15W) Intel® Core™ Ultra 7 155U (2 P-Cores x 1.7 GHz, 8 E-Cores x 1.2 GHz, 12 MB cache, 15W) Intel® Core™ Ultra 5 155U (2 P-Cores x 1.6 GHz, 8 E-Cores x 1.1 GHz, 12 MB cache, 15W) Intel® Core™ Ultra 5 135U (2 P-Cores x 1.3 GHz, 8 E-Cores x 0.8 GHz, 12 MB cache, 15W)
	Memory	Two 260-Pin SO-DIMM up to 64GB Dual Channel DDR5 5600MHz
	BIOS	AMI SPI
GRAPHICS	Controller	Intel® Iris® Xe Graphics
	Feature	DX12, Open GL 4.6, Vulkan 1.2 HW Decode: HEVC/VP9/AV1/AVC/H.265/MJPEG HW Encode: HEVC/VP9/AV1/AVC/H.265/MJPEG
	Display	Stacked type VGA and HDMI from COMe eDP HDMI from Jetson module ITE IT6564FN DP HDMI/VGA converter from eDP
AI ACCELERATOR	Interface	Nvidia Orin NX, up to 100 TOPS Nvidia Orin Nano, up to 40 TOPS (optional Type A MXM supported)
STORAGE	External	1 x 64GB/128GB/256GB/512GB/1024GB on board SSD (available upon request on MTH968) Optional 2x 2.5" SATA tray kit, RAID 0/1 supported
	Internal	M.2 2242/2280 M key on Jetson module (PCIe x4)
EXPANSION	Interface	1 x M.2 3042/3052 B key (PCIex2) and 1 x micro (or nano) SIM slot 1 x M.2 2230 E key (PCIe x1, USB 2.0) 2 x M.2 2242/2280 M key (SATA 3and PCIe gen3 x1 for NVMe) 1 x M.2 A key for DFI OOB
ETHERNET	Controller	1 RJ45 GbE from COMe 1 RJ45 GbE from Intel i210 2x2 stacked RJ45 GbE ports from 4x Intel i210 Optional 2x 15W PoE via X103-PE30-48
LED	Indicators	1 x Power Status 1 x HDD activity
FRONT I/O	Ethernet	2 x GbE 2x2 stacked RJ45 GbE
	USB	2 x USB 3.2 from Type 6 or 2 x USB 2.0 from Type 10 2 x USB 3.2 2 x USB 2.0 from Jetson module
	Display	1 x VGA 1 x HDMI port with screw hole
	DC in	1 x 3-pin power terminal block
REAR I/O	Serial	1 x DB-9 RS232/422/485 port 1 combo DB-9 RS232/422/485/ CAN bus/ GPIO port
	USB	1 x micro USB from Jetson module
	Display	3 x DP++ ports 2 x HDMI port
FLANK I/O	Antenna	6 x antenna holes
INTERNAL I/O	OOB	Support DFI OOB module
SECURITY	TPM	TPM 2.0 on COMe
POWER	Type	9-36V DC
	Connector	1x 3-pin terminal block
	RTC Battery	Rechargeable battery
OS SUPPORT	Microsoft	Windows 10, 11
	Linux	Ubuntu 22.04
MECHANISM	Construction	Aluminum + SGCC
	Mounting	Wall mount (mounting brackets and screws) DIN mount by optional
	Dimensions (W x H x D)	250 x 65 x 150 mm
	Weight	< 3.5 kg
ENVIRONMENT	Operating Temperature	-20°C to 60°C (sku dependent)
	Storage Temperature	-40°C to 85°C
	Relative Humidity	5 to 95% RH (non-condensing)

SPECIFICATION

STANDARDS AND CERTIFICATIONS	Shock	Operation IEC 60068-2-27 Test Ea: Shock test Half-sine, 3G @ 11ms, 18 Shock $\pm X$, $\pm Y$, $\pm Z$ (each axis 3 times) Non- Operation IEC 60068-2-27 Test Ea: Shock test Half-sine, 5G @ 11ms, 18 Shock $\pm X$, $\pm Y$, $\pm Z$ (each axis 3 times)
	Vibration	Operation IEC 60068-2-64 Test Fh: Vibration board-band random test Random, 2Grms @ 5~500 Hz, 30min. Non- Operation IEC 60068-2-6 Test Fc: Vibration Sinusoidal Test Sweep sine, 3Grms @ 10~500Hz, 30min.
	Certification	CE, FCC Class A, RoHS, UL 62368-1
	IP Rating	IP20

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