

# X6-MTH-ORN

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

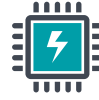


## KEY FEATURES



### Nvidia Edge AI engine

Nvidia ORIN NX up to 100 TOPS



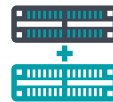
### Control engine by Intel Core Ultra

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

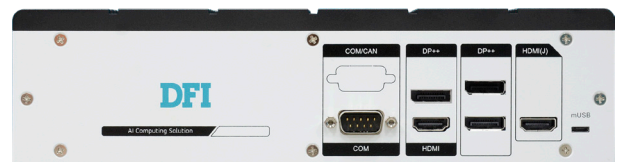


IoT Solutions Alliance

## 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)

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