

# MTH556

Intel® Core™ Ultra Processor  
3.5" SBC



Top View



Bottom View

## KEY FEATURES



### DDR5

2 DDR5-5600 SODIMM



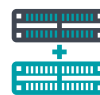
### 4K High Resolution

Support 4K/2K resolution



### Triple Displays

1 HDMI, 1 LVDS,  
1 USB-C DP Alt. mode



### Multiple Expansion

1 M.2 M Key,  
1 M.2 B Key,  
1 M.2 E Key



### Rich I/O

2 2.5GbE, 4 COM,  
3 USB 3.2, 1 USB-C

## SPECIFICATION

SYSTEM	Processor	Intel® Core™ Ultra 7/5 Processors, TDP up to 28W Intel® Core™ Ultra 7 165H, 16C, 24M Cache, 1.4GHz (5.0GHz) Intel® Core™ Ultra 5 135H, 14C, 18M Cache, 1.7GHz (4.6GHz) Intel® Core™ Ultra 7 155U, 12C, 12M Cache, 1.7GHz (4.8GHz) Intel® Core™ Ultra 5 125U, 12C, 12M Cache, 1.3GHz (4.3GHz)	
	Memory	Two 262-Pin DDR5-5600 SO-DIMM up to 96GB	
	BIOS	AMI SPI 256Mbit	
GRAPHICS	Controller	<b>165H/135H:</b> Intel® Arc™ Graphics <b>155U/125U:</b> Intel® Graphics	
	Feature	OpenGL 4.6, Direct X 12.1, OpenCL 3.0 <b>HW Decode:</b> HEVC, VP9, AV1, AVC <b>HW Encode:</b> HEVC, VP9,AV1, AVC	
	Display	1 x HDMI 1.4b 1 x LVDS 1 x USB-C DP Alt. mode	<b>HDMI:</b> resolution up to 4096x2160@24Hz <b>LVDS:</b> dual channel 24-bit, resolution up to 1920x1200@60Hz <b>DP:</b> resolution up to 4096x2304@60Hz
	Triple Display	HDMI + LVDS + USB-C DP Alt. mode	
EXPANSION	Interface	1 x M.2 M key 2280 (PCIe Gen4 x4) 1 x M.2 B key 3052(USB 3.0/2.0, PCIe x1, SATA), 1 x SIM slot for 4G/5G 1 x M.2 E key 2230 (USB 2.0/PCIe x1)	
ETHERNET	Controller	2 x Intel® I226V (10/100/1000/2500Mbps)	
FRONT I/O	Ethernet	2 x 2.5GbE (RJ-45)	
	USB	3 x USB 3.2 1 x USB Type C	
	Display	1 x HDMI 1 x USB-C DP Alt. Mode	
INTERNAL I/O	Serial	2 x RS-232/422/485 2 x RS-232 (1.0mm pitch)	
	USB	1 x USB 2.0 (1.0mm pitch)	
	DIO	1 x 8-bit DIO	
	Audio	1 x Audio (Line_out/Mic_in)	
	Fan	1 x Smart FAN	
WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds	
SECURITY	TPM	TPM 2.0	
POWER	Type	9~36V DC	
	Connector	Right Angle Connector (ATX 4-pin) Vertical connector (ATX 4-pin) (available upon request)	
	RTC Battery	CR2032 Coin Cell (Cable type)	
OS SUPPORT	Microsoft	Windows 11 & 10 IoT Enterprise 64-bit	
	Linux	Linux	
ENVIRONMENT	Temperature	<b>Operating:</b> -5 to 65°C <b>Storage:</b> -40 to 85°C	
	Humidity	<b>Operating:</b> 5 to 90% RH <b>Storage:</b> 5 to 90% RH	
	MTBF	TBD	
MECHANISM	Dimensions	3.5" SBC Form Factor 146mm (5.75") x 102mm (4.02")	
	Height	<b>PCB:</b> 1.6mm	
STANDARDS AND CERTIFICATIONS	Certifications	CE, FCC Class B, RoHS	

## ORDERING INFORMATION

Model Name	Part Number	Processor	Display	RJ45	Serial	USB 3.2	Power	Temp.
MTH556-BN-165H	770-MTH5561-000G	Intel® Core™ Ultra 7 165H, 16 cores, 28W	HDMI + LVDS + USB- C DP	2	4	3	9~36 VDC	-5~65°C
MTH556-BN-135H	770-MTH5561-100G	Intel® Core™ Ultra 5 135H, 14 cores, 28W	HDMI + LVDS + USB- C DP	2	4	3	9~36 VDC	-5~65°C
MTH556-BN-155U	770-MTH5561-200G	Intel® Core™ Ultra 7 155U, 12 cores, 15W	HDMI + LVDS + USB- C DP	2	4	3	9~36 VDC	-5~65°C
MTH556-BN-125U	770-MTH5561-300G	Intel® Core™ Ultra 5 125U, 12 cores, 15W	HDMI + LVDS + USB- C DP	2	4	3	9~36 VDC	-5~65°C

## PACKING LIST

• 1 MTH556 board	
• 1 Heatsink for 15W CPU or 1 Cooler for 28W CPU	TBD

## OPTIONAL ITEMS

• Heat spreader	TBD
-----------------	-----