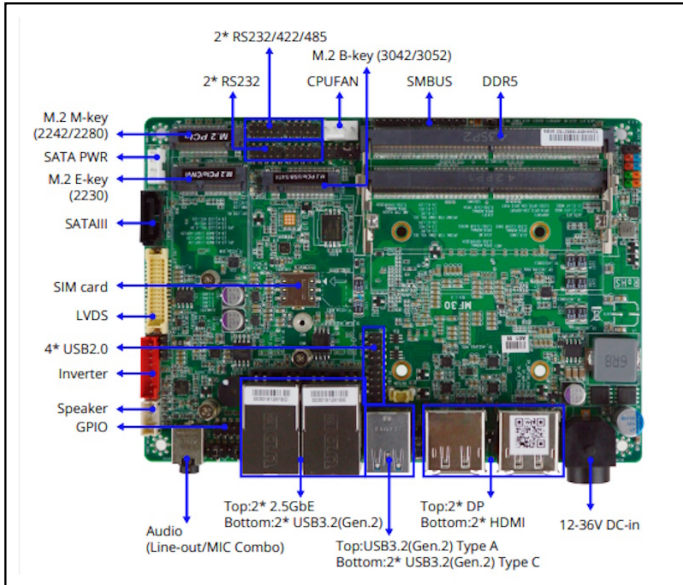


## 3.5" Motherboard with Intel® 13th Gen i7/i5/i3 Processor SoC



## Features

- **High-Performance Memory:** 2 x DDR5 SODIMM slots, up to 64GB
- **Dual 2.5GbE:** High-speed, reliable networking
- **Quad Display Support:** 2 x HDMI, 2 x DP, 1 x Type-C DP, 1 x LVDS
- **Flexible Storage Expansion:** 1 x SATA III, 1 x M.2 M-key (2242/2280) with NVMe support
- **Additional Expansion:** 1 x E-key 2230 with CNVi, 1 x B+M-key 2242, 1 x B-key 3042 for 4G/5G
- **Comprehensive I/O:** 3 x USB 3.2 Gen 2, 4 x USB 2.0, 1 x USB Type-C
- **Flexible Serial Ports:** 2 x RS232/422/485, 2 x RS232
- **Wide Range Power Input:** DC-in 12–36V

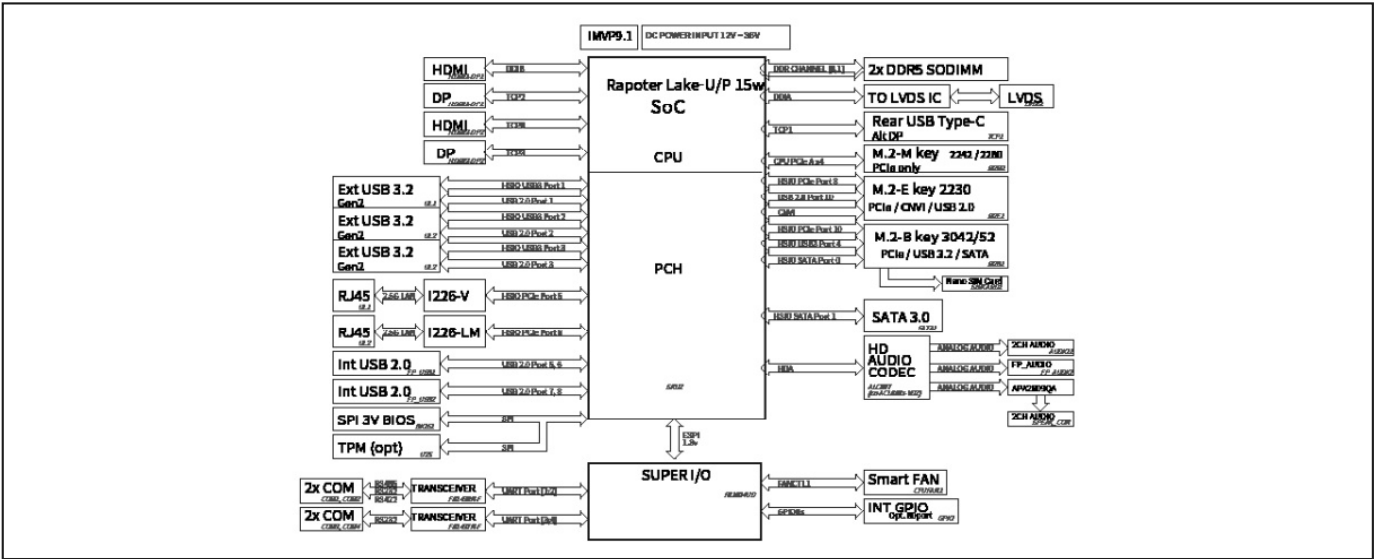
## Packing List

PART NUMBER	DESCRIPTION	QTY
MF30	MF30 MB	1
HCS3XXMHT02S-F HCS3XXMHT03S-1F	Flat type Heatsink (assembled)	1
G01-COM-H2M22-1F	COM Port Cable, 22cm, Pitch 2.0	2
G01-PW4PS-2S-323F	SATA Power Y cable, 5.0pitch for 32cm, 2.54pitch for 20cm	1
G01-SATA3-BL-1F	SATA cable, 50cm	1

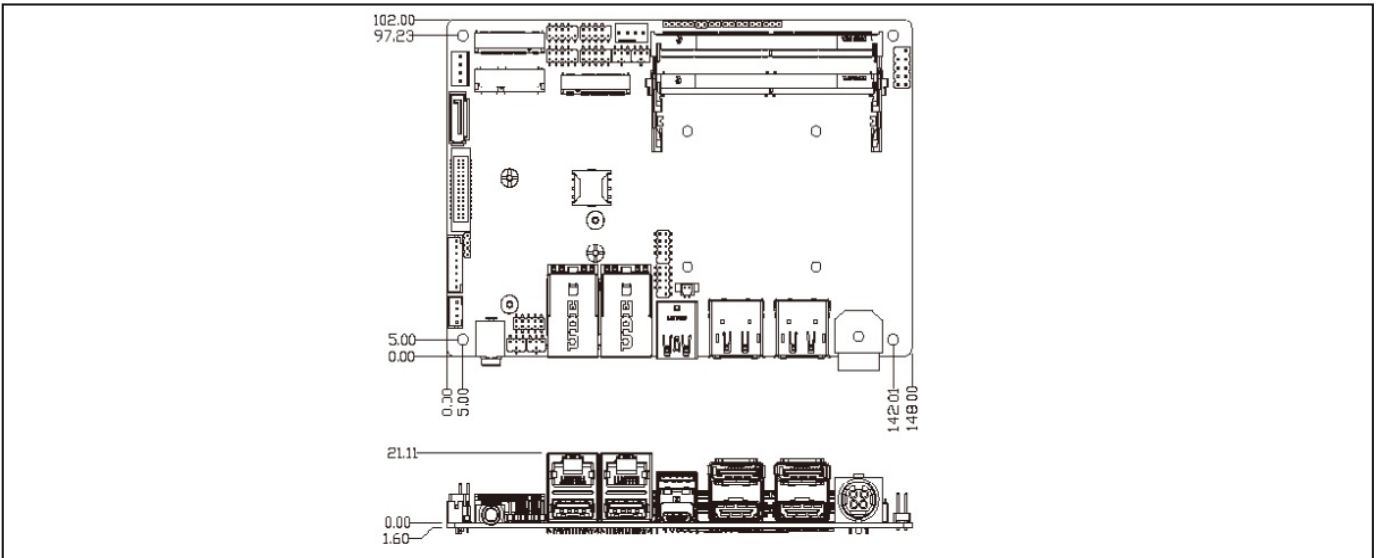
## Specifications

SYSTEM	
MB FORM FACTOR	3.5"
CPU	Onboard Intel® 13th Gen Core™ i5-1335U (Formerly Raptor Lake-P, TDP 15W)
CHIPSET	Intel® SoC
MEMORY	2 x DDR5 4800MHz, Dual Channel SO-DIMM, up to 64GB
BIOS	UEFI
WAKE ON LAN	Yes
WATCHDOG TIMER	255 Levels
SECURITY	TPM2.0 (dTPM, Optional)
RTC BATTERY	Lithium Battery
DIMENSION (W X D)	148.0 (W) x 102.0 (D) mm (5.8" x 4.0")
OS SUPPORT	Windows® 11 (64bit) Windows® 10 (64bit) Linux
POWER	
POWER REQUIREMENT	DC-in 12-36V
POWER ON MODE	AT / ATX (Default) Mode
CONNECTOR	DC Jack
DISPLAY	
GPU	Intel® Iris® Xe Graphics
LVDS	1 x 24-bit Dual Channel LVDS (Max. Resolution: 1920 x 1200 @60Hz, Co-lay eDP)
Type C DP	1 x Type C DP1.4 (Max Resolution: 4096 x 2160@60Hz)
DP	2 x DP1.4 (Max Resolution: 4096 x 2160@60Hz)
HDMI	2 x HDMI 2.0b (Max Resolution: 4096 x 2160@60Hz)
MULTIPLE DISPLAY	Support 4 Displays
AUDIO	
CODEC	Realtek Audio Codec
COMBO	1 x Combo Audio Jack for Line-Out / Mic-In
AMPLIFIER	3W
LAN	
ETHERNET	1 x RJ45 for Intel® I226-V 2.5GbE 1 x RJ45 for Intel® I226-LM 2.5GbE
USB PORT	
USB	3 x USB 3.2 Gen 2x1 (10Gbps, Formerly USB 3.1 Gen 2) 1 x USB 3.2 Gen 1x2 Type-C (10Gbps) Support DP ALT Mode Internal Header for 4 x USB 2.0
SERIAL PORT	
COM	Internal Header for 2 x RS-232 Internal Header for 2 x RS-232/422/485
INTERNAL I/O	
GPIO	8-Bit
SMBUS	Yes
FAN	1 x CPU Fan Header
FRONT PANEL	HDD Active LED Power LED Power On/Off Reset
ADDITIONAL	1 x Chassis intrusion 1 x AT Mode Selection
STORAGE	
SATA	1 x SATA III 1 x SATA Power Connector
EXPANSION	
M.2	1 x B-Key 3042/3052 (USB 3.2) for 4G/5G/LTE or 1 x B+M-Key 2242 (SATA III/PCIe 3.0 x1) for SSD 1 x M-Key 2242/2280 (PCIe 4.0 x4) support NVMe 1 x E-Key 2230 (USB 2.0/PCIe 3.0 x1) Support CNVi
SIM	1 x Nano SIM Card Slot
ENVIRONMENT & CERTIFICATION	
OPERATING TEMPERATURE	-20°C ~ 60°C (-4°F ~ 140°F)
STORAGE TEMPERATURE	-20°C ~ 85°C (-4°F ~ 185°F)
OPERATING HUMIDITY	10 ~ 90% relative humidity, non-condensing
CERTIFICATION	CE/FCC Class A

## Block Diagram



## Dimension Unit: mm



## Ordering Information

PART NUMBER	MF30-13350	MF30-13352	MF30-133E0	MF30-133E2
CPU	Intel® Core™ i5-1335U	Intel® Core™ i5-1335U	Intel® Core™ i5-1335UE	Intel® Core™ i5-1335UE
SECURITY		TPM2.0		TPM2.0
POWER REQUIREMENT	DC-in 12-36V	DC-in 12-36V	DC-in 12-36V	DC-in 12-36V
GPU	Intel® Iris® Xe Graphics	Intel® Iris® Xe Graphics	Intel® Iris® Xe Graphics	Intel® Iris® Xe Graphics
LVDS	1 x LVDS	1 x LVDS	1 x LVDS	1 x LVDS
TYPE C DP	1 x Type C DP	1 x Type C DP	1 x Type C DP	1 x Type C DP
DP	2 x DP	2 x DP	2 x DP	2 x DP
HDMI	2 x HDMI	2 x HDMI	2 x HDMI	2 x HDMI
MULTIPLE DISPLAY	Support 4 Displays	Support 4 Displays	Support 4 Displays	Support 4 Displays
ETHERNET	2 x 2.5GbE	2 x 2.5GbE	2 x 2.5GbE	2 x 2.5GbE
USB	3 x USB 3.2 Gen 2	3 x USB 3.2 Gen 2	3 x USB 3.2 Gen 2	3 x USB 3.2 Gen 2
USB	1 x USB 3.2 Gen 2 Type C	1 x USB 3.2 Gen 2 Type C	1 x USB 3.2 Gen 2 Type C	1 x USB 3.2 Gen 2 Type C
USB	4 x USB 2.0	4 x USB 2.0	4 x USB 2.0	4 x USB 2.0
COM	2 x RS-232	2 x RS-232	2 x RS-232	2 x RS-232
COM	2 x RS-232/422/485	2 x RS-232/422/485	2 x RS-232/422/485	2 x RS-232/422/485
SATA	1 x SATA III	1 x SATA III	1 x SATA III	1 x SATA III
M.2	1 x M-Key 2242/2280	1 x M-Key 2242/2280	1 x M-Key 2242/2280	1 x M-Key 2242/2280
M.2	1 x E-key 2230	1 x E-key 2230	1 x E-key 2230	1 x E-key 2230
M.2	1 x B-key 3042/3052 or 1 x B+M-Key 2242	1 x B-key 3042/3052 or 1 x B+M-Key 2242	1 x B-key 3042/3052 or 1 x B+M-Key 2242	1 x B-key 3042/3052 or 1 x B+M-Key 2242
SIM	1 x Nano SIM Card Slot	1 x Nano SIM Card Slot	1 x Nano SIM Card Slot	1 x Nano SIM Card Slot
OPERATING TEMPERATURE	-20°C - 60°C (-4°F - 140°F)	-20°C - 60°C (-4°F - 140°F)	-20°C - 60°C (-4°F - 140°F)	-20°C - 60°C (-4°F - 140°F)