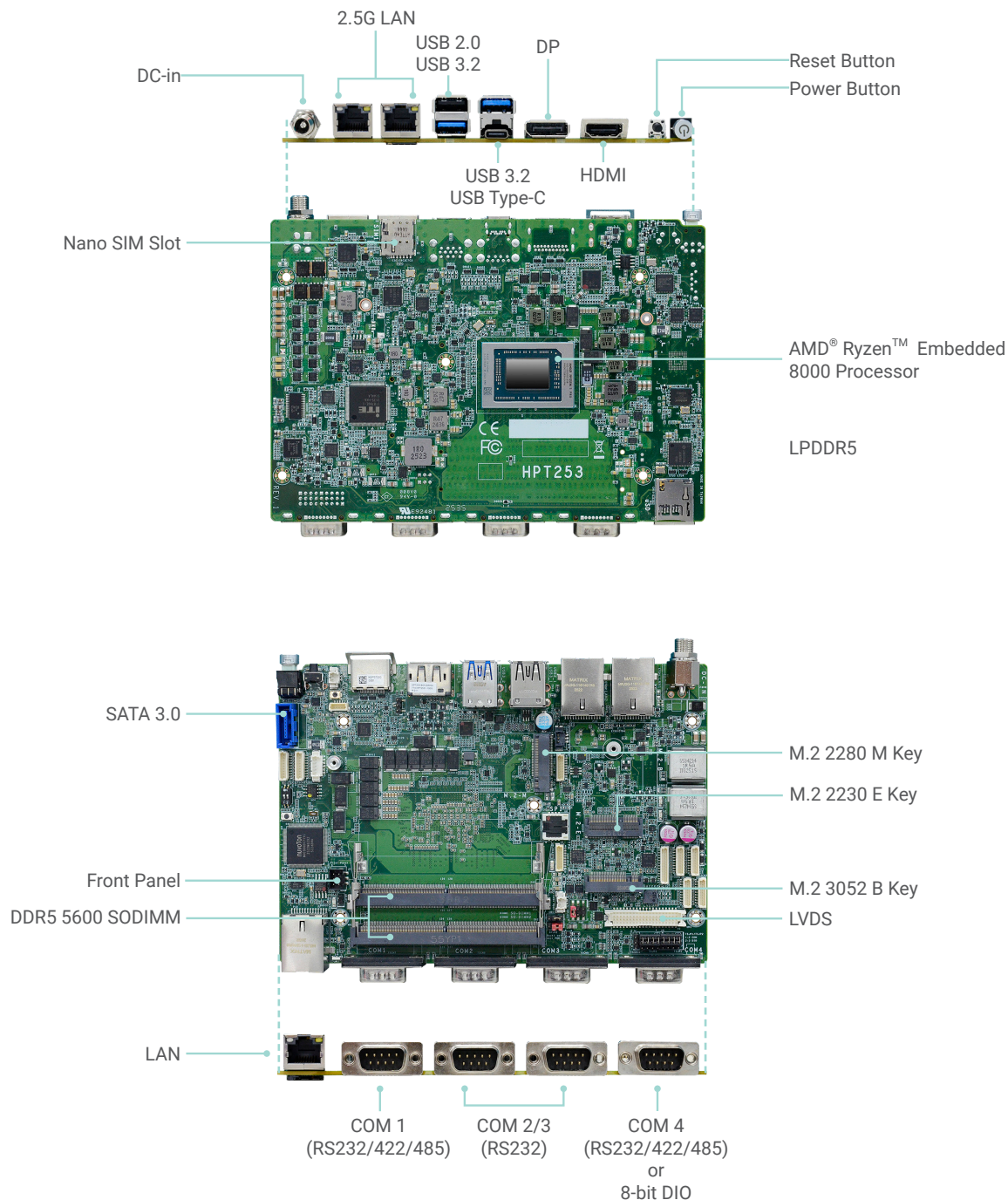


HPT253

AMD® Ryzen™ Embedded 8000 Processor
4" SBC



KEY FEATURES



DDR5

Dual DDR5-5600
SODIMM Up to 96GB



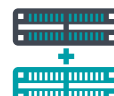
4K High Resolution

Supports 4K/ 2K
resolution



Quad Displays

1 HDMI, 1 LVDS/eDP,
1 DP Type C Alt mode,
1 DP



Expansion

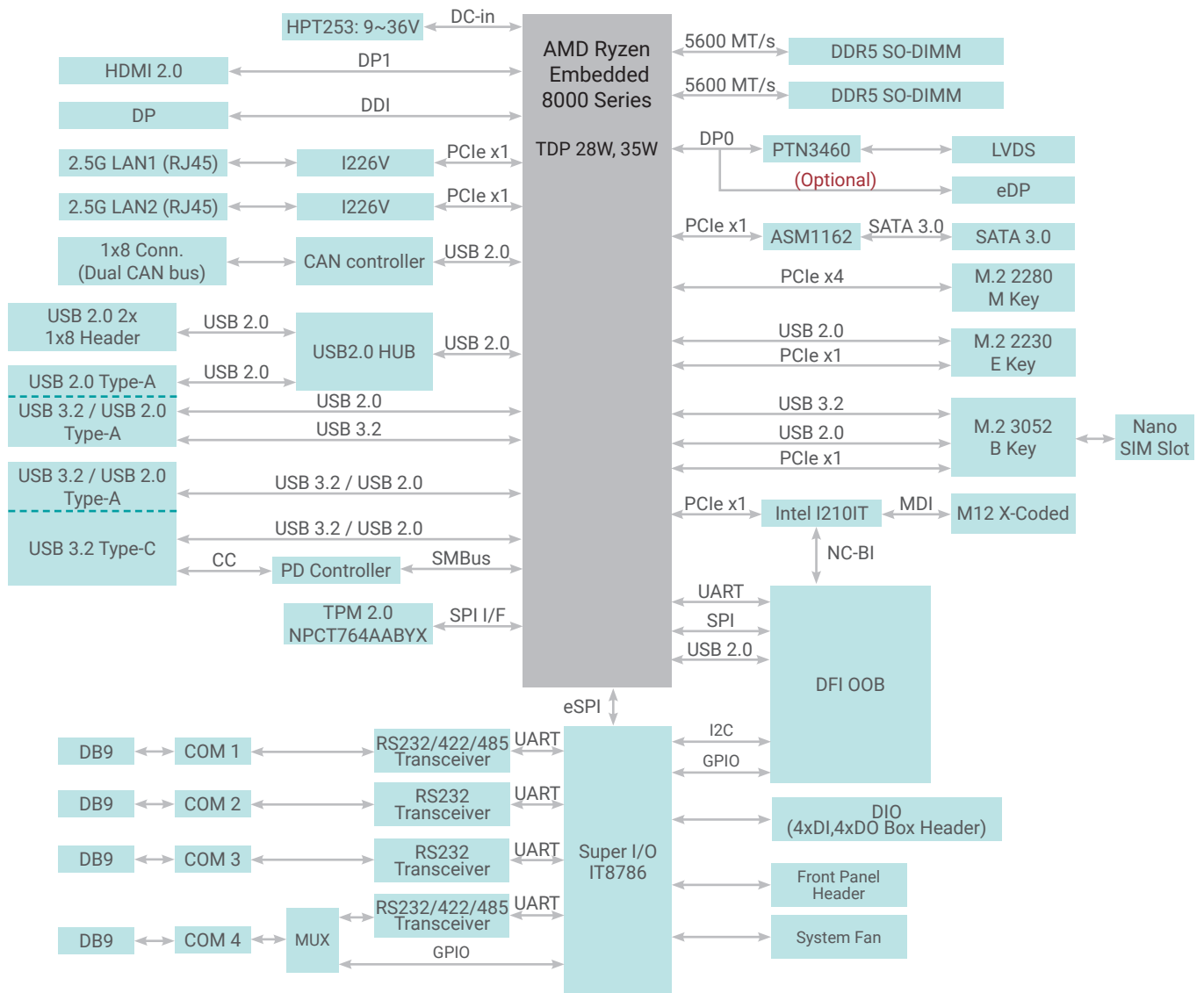
1 M.2 M Key,
1 M.2 B Key,
1 M.2 E Key



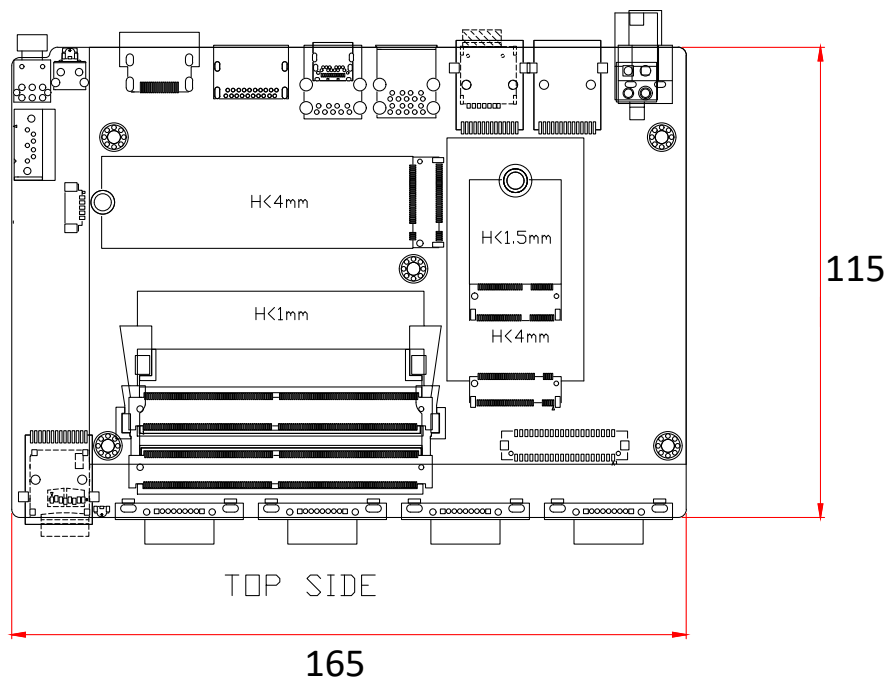
Rich I/O

2 2.5GbE, 1 GbE,
2 USB 3.2, 1 USB-C,
3 COM, 1 COM/DIO

BLOCK DIAGRAM



MECHANICAL DRAWING



SPECIFICATION

SYSTEM	Processor	AMD® Ryzen™ Embedded 8000 Processors, TDP upto45W AMD® Ryzen™ Embedded 8845HS Processors, 8C, 16M Cache, 3.8GHz (5.0GHz) AMD® Ryzen™ Embedded 8640U Processors, 6C, 16M Cache, 3.5GHz (4.9GHz)	
	Memory	Dual DDR5-5600 SODIMM Up to 96GB	
	BIOS	AMI SPI 256Mbit	
	GRAPHICS	Controller	AMD® Radeon RDNA3 Graphics
Display		1 x HDMI 2.0 1 x LVDS/eDP 1 x DP 1.4 1 x DP Type C Alt mode	HDMI: resolution up to 4096x2160@60Hz LVDS: dual channel 24-bit, resolution up to 1920x1200@60Hz DP: resolution up to 4096x2160@60Hz
Quad Displays		HDMI + LVDS + DP + DP Type C 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), 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	2 x USB 3.2 1 x USB 2.0 1 x USB Type C (USB 3.2 only)	
	Display	HDMI + LVDS + DP + DP Type C Alt mode	
	Audio	1 x Front audio (Line-out, Line-in, Mic-in)	
	Button	1 x Power Button 1 x Reset Button	
	REAR I/O	Serial	COM 1: RS-232/422/485 COM 2/3: RS-232 COM 4: RS-232/422/485 or 8-bit DIO by jumper setting
Ethernet		1 x GbE(RJ-45), Intel® i210AT (10/100/1000Mbps) (support OOB available upon request)	
INTERNAL I/O	USB	2 x USB 2.0 (1.0mm pitch)	
	SATA	1 x SATA 3.0	
	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	DC-in Jack Right Angle Connector (4-pin, available upon request)	
	RTC Battery	CR2032 Coin Cell (Cable type)	
OS SUPPORT	Microsoft	Windows 11 IoT Enterprise 64-bit	
	Linux	Linux	
ENVIRONMENT	Temperature	Operating: 0 to 60°C Storage: -40 to 85°C	
	Humidity	Operating: 5 to 90% RH Storage: 5 to 90% RH	
	MTBF	TBD	
MECHANICAL	Dimensions	4" SBC Form Factor 165mm (6.49") x 115mm (4.53")	
	Height	PCB: 1.6mm	
STANDARDS AND CERTIFICATIONS	Certification	CE, FCC, RoHS	

ORDERING INFORMATION

Model Name	P/N	Processor	Display	RJ45	Serial	USB 3.2	Power	Temp.
HPT253-BCN-8845HS	TBD	AMD® Ryzen™ Embedded 8845HS, 8 cores, 45W	HDMI + LVDS + DP + DP Type C Alt mode	3	4	2	9~36 VDC	0~60°C
HPT253-BCN-8640U	TBD	AMD® Ryzen™ Embedded 8640U, 6 cores,28W						

PACKING LIST

• 1 HPT253 motherboard	
• 1 Cooler	TBD