CEXD-INTRBL PRELIMINARY

Open Robotic System

Features

- Open Robotic System
- Intel® Core™ Ultra Processors Series 3 (formerly Panther Lake)
- 137mm x 135mm x 86mm
- 22-pin GPIO
- GMSL x 2 (up to 6 Channels)
- 19V-24V
- USB 3.2 Gen 1 x 4, USB 2.0 x 2, HDMI x 1, DP x 1
- 2.5GbE x 4 (support IEEE), CANBUS x 1

Specifications

System	
Form Factor	Open Robotic system
CPU	Intel® Core™ Ultra Series 3 processors (formerly Panther Lake): Intel® Core™ Ultra X7 Processor 358H (16C, up to 4.8 GHz)
Chipset	Integrated with Intel® SoC
Memory Type	Onboard LPDDR5 8533MT/s, up to 64GB
BIOS	UEFI
Wake on LAN	Yes
Watchdog Timer	255 Levels
Security	TPM 2.0
RTC Battery	Lithium Battery 3V/240mAh
Dimensions	5.39" x 5.3" x 3.3" (137mm x 135mm x 86mm)
OS Support	Windows® 11 (64-bit), Ubuntu 25.04 or 24.04 and later
Power	
Power Requirement	19V - 24V
Power Supply Type	AT mode
Connector	4-pin DIN Plug
Power Consumption	200W - 250W
Display	
Controller	Intel® Arc™ B390
LVDS/eDP	—
Display Interface	HDMI 1.4 x 1, up to 3840 x 2160 @30Hz DP 1.4 x 1, up to 3840 x 2160 @144Hz
Multiple Display	Up to 2 Simultaneous Displays
Audio	
Codec	Realtek® ALC897
Audio Interface	3.5mm jack, Line-Out, Mic-in
Speaker	5W speaker, 2-pin header
External I/O	
Ethernet	Intel® Ethernet Controller I226-V, 2.5GbE x 4
USB	USB 3.2 Gen 1 (Type-C) x 4 USB 2.0 (Type A) x 2
Serial Port	—
Video	HDMI 1.4 x 1 DP 1.4 x 1
Others	CANBus x 1 GMSL x 2 (FAKRA connector), up to 6 channels.
Internal I/O	
USB	—
Serial Port	RS-232 x 2 RS-485 x 2
Video	—
SATA	—
Audio	—
DIO/GPIO	22-bit GPIO via HAT 40
SMBus/I2C	—
Touch	—
Fan	Fan
SIM	—
Front Panel	—
Others	MISC Header MIPI CSI x 2
Expansion	
Mini PCIe/mSATA	—
M.2	M.2 2280 B-Key x 1 (PCIe [x2]) M.2 2280 M-Key x 1 (PCIe [x4]), 256GB as default M.2 2230 E-Key x 1 (Wifi/BT)
Others	—
Environment & Certification	
Operating Temp.	System Level: -14°F – 122°F (0°C – 50°C) with 0.7m/sec air flow
Storage Temp.	-40°F – 185°F (-40°C – 85°C)
Operating Humidity	0% ~ 95% relative humidity, non-condensing
MTBF (Hours)	TBD
Vibration	IEC 60068-2-24 , 5-500Hz ; 2grms
Drop	ISTA PROJECT 1A (with Packing box)
Altitude	3000m (TBD)
EMC	CE/FCC Class A

Packing List

Part Number	Description	QTY
CEXD-INTRBL01-A10-0001	System	1
1255X00135	Power Adapter	1
1701090270	COM port cable	1
170X001288	Pin Header to D-SUB GPIO Cable.	1

Optional Accessories

Part Number	Description	QTY
Power Adapter	EDAC.EA12521K-2400.250W	1

Ordering Information

- **CEXD-INTRBL01-A10-0002**

Note: All specifications are subject to change without notice.