



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 8 channels. |
| Internal I/O | |
| USB | — |
| Serial Port | RS-232 x 2 RS-485 x 2 |
| Video | — |
| SATA | — |
| Audio | — |

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 8 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

| 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-A10-0001