SHIELD-156

IEI Stainless Steel Industrial Panel PC

Powered by Intel Amston Lake Processor
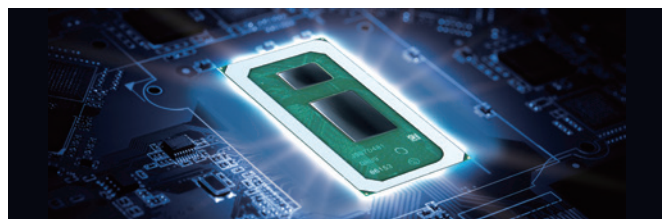

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SHIELD-156

Stainless Steel Panel PC equips Intel Amston Lake Processor , Preinstalled with 8GB SO-DIMM DDR5, PCAP touch, 10~28V DC, 304 Stainless Steel Chassis, Full body IP69K Rated With Water-Proof Connectors.
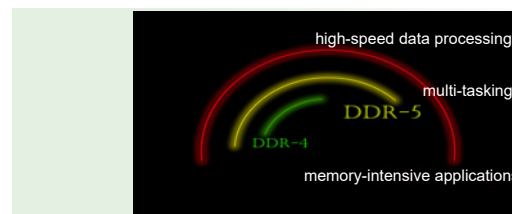
Fanless | M.2 | Touchscreen | Dual 2.5GbE LAN

Excellent processor performance

Amston Lake is a new generation mobile processor launched by Intel. It uses Intel's ultra-low power technology and the latest Gracemont core, with higher performance and lower energy consumption.
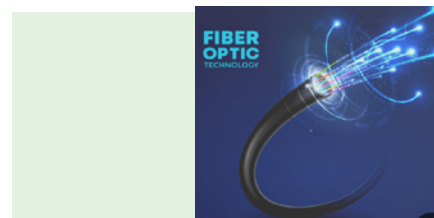
Comprehensive stainless steel solutions

The Shield Series features a corrosion-resistant 304 stainless steel housing with fully waterproof ports. And it has longer life cycle and lower maintenance costs

Seamless Connections

SHIED series is all equipped with M12/M20 waterproof connectors with easy installation. Providing seamless and stable signal transmissions.

Next Gen high-speed memory

Compared to DDR4, DDR5 has the advantage of its wider bandwidth and lower power consumption, supporting high-speed data processing, multi-tasking, and memory-intensive applications.

high-speed data processing
multi-tasking
DDR-5
DDR-4
memory-intensive applications

High-Speed Transmission Optical Fiber Module

Optical fiber can support ultra-large bandwidth to meet high-speed transmission requirements.Effectively reduce signal attenuation enabling high-quality transmission over long distances.
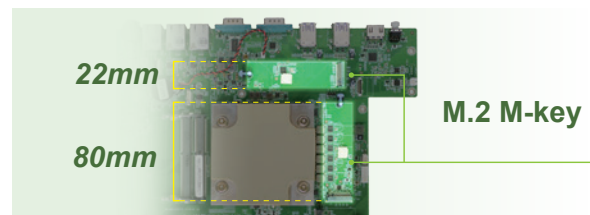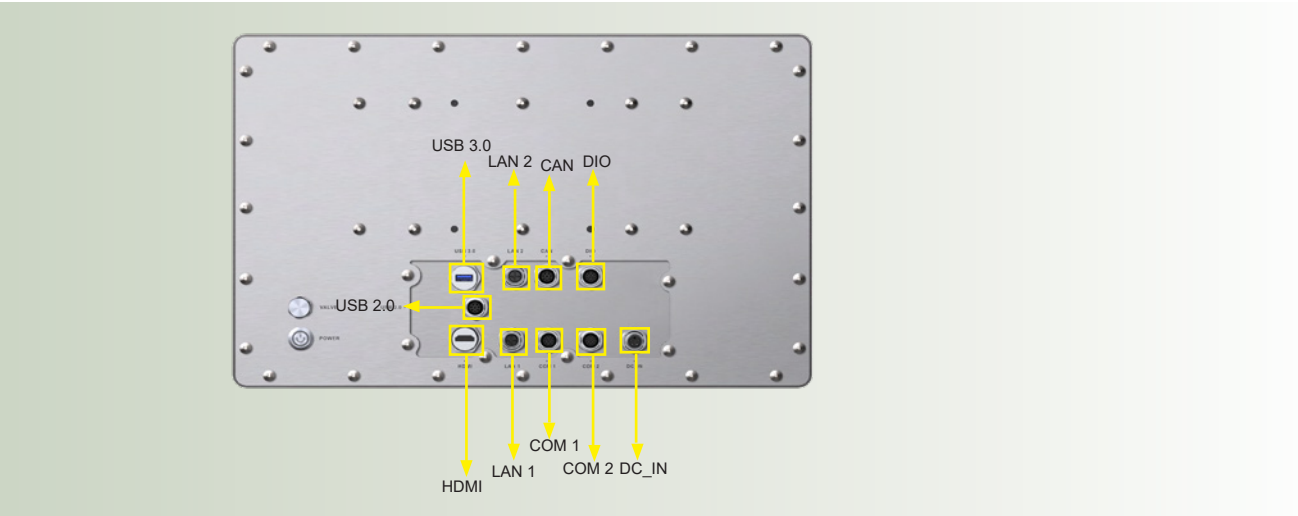
FIBER OPTIC TECHNOLOGY

Multiple M.2 Expansions
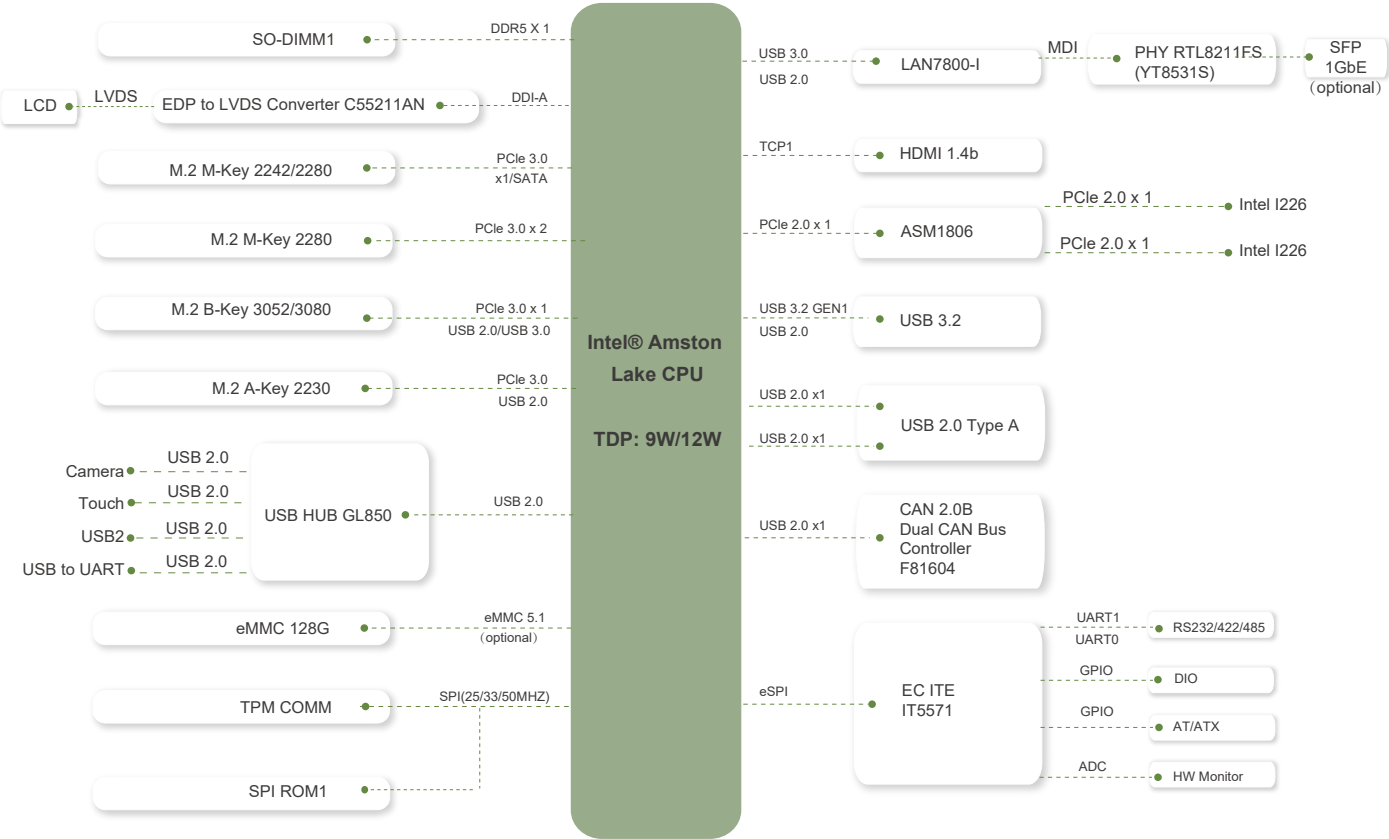
SHIELD series features various M.2 expansion slots, providing users with flexible expansion space for different application scenarios.
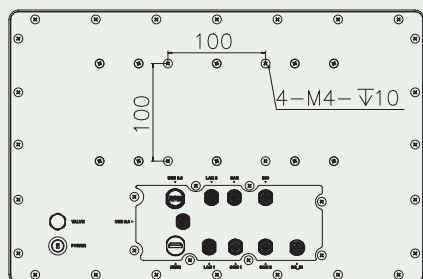
22mm
80mm
M.2 M-key

Fully Integrated I/O

Block Diagram

SO-DIMM1	DDR5 X 1
LCD — EDP to LVDS Converter C55211AN	LVDS / DDI-A
M.2 M-Key 2242/2280	PCIe 3.0 x1/SATA
M.2 M-Key 2280	PCIe 3.0 x 2
M.2 B-Key 3052/3080	PCIe 3.0 x 1 / USB 2.0/USB 3.0
M.2 A-Key 2230	PCIe 3.0 / USB 2.0

Camera — USB 2.0
Touch — USB 2.0
USB2 — USB 2.0
USB to UART — USB 2.0
USB HUB GL850 — USB 2.0

eMMC 128G — eMMC 5.1 (optional)

TPM COMM — SPI(25/33/50MHZ)

SPI ROM1

Intel® Amston Lake CPU

TDP: 9W/12W

LAN7800-I — USB 3.0 / USB 2.0 — MDI — PHY RTL8211FS (YT8531S) — SFP 1GbE (optional)

HDMI 1.4b — TCP1

ASM1806 — PCIe 2.0 x 1 — PCIe 2.0 x 1 → Intel I226 / PCIe 2.0 x 1 → Intel I226

USB 3.2 — USB 3.2 GEN1 / USB 2.0

USB 2.0 Type A — USB 2.0 x1 / USB 2.0 x1

CAN 2.0B Dual CAN Bus Controller F81604 — USB 2.0 x1

EC ITE IT5571 — eSPI — UART1 / UART0 → RS232/422/485 — GPIO → DIO — GPIO → AT/ATX — ADC → HW Monitor

Dimensions (Unit: mm)

279.50

71.90

424.40

100

100

4—M4—▽10

Specifications

Model	SHIELD-156
LCD Display	15.6"
Resolution	1920 (W) x 1080 (H)
Brightness	450 cd/m²
Contrast Ratio	800:1
LCD Color	16.2M
Pixel Pitch (mm)	0.179 (H) x 0.179 (V)
Viewing Angle (H-V)	178°/178°
Backlight MTBF	50000 hours
Touchscreen	Multi-point projected capacitive type (anti-UV / anti-glare coating,support gloves) Surface hardness: ≥7H
Touch Controller	Projected capacitive type: ILI2520
CPU (SoC)	Intel Atom® x7433RE Processor 6M Cache, up to 3.40 GHz / TDP 9w Intel Atom® x7835RE Processor 6M Cache, up to 3.40 GHz / TDP 12w
Memory	1 x SO-DIMM DDR5-4800 up to 16GB (Pre-installed 8GB)
Ethernet	2 x 2.5GbE LAN via Intel I226-IT
Storage	1 x M-Key 2280 (PCIe Gen3 x2) for M.2 SSD 1 x 128GB eMMC (optional)*
Expansion slot	1 x M.2 M-Key 2242/2280 (PCIe Gen3 x1 + SATA) 1 x M.2 B-Key 3052/3080 (PCIe Gen3 x1 + USB 3.0 x1) 1 x NANO-SIM 1 x M.2 A-key 2230 (PCIe Gen3 x1 + USB 2.0 x1)
Camera	1 x Camera (Wide-viewing angle)
External I/O Interface	M12 Waterproof Connector for 2 x RJ-45 2.5GbE LAN M12 Waterproof Connector for 1 x RS-232(with 2.0 kV isolation) M12 Waterproof Connector for 1 x RS-232/422/485(with 2.0 kV isolation) M12 Waterproof Connector for 1 x CANBUS(with 2.0 kV isolation) M12 Waterproof Connector for 1 x 8bit DIO (Isolator) (with 1.6 KV isolation) with SMbus M12 Waterproof Connector for 1 x USB2.0 M20 Waterproof Connector for 1 x USB3.0 M20 Waterproof Connector for 1 x HDMI 1.4b Waterproof Connector for Power switch M12 Waterproof Connector for DC Input Power
Construction Material	304 Stainless Steel Chassis
Mounting	VESA Mount 100 x 100 / Pole Mount / YOKE Mount
IP Rating	Fully IP69K
Power Input	DC 10~28V
Operating Temperature(with airflow)	-30°C~55°C@50%RH
Storage Temperature	-40°C~70°C
Humidity	10 to 90%RH @ 40°C, non-condensing
Safety and EMC	CE/FCC
OS	Windows 10/11 IoT Enterprise 64-bit Linux

*Based on project discussion, it might have MOQ criteria. Please contact with Sales Account.

Ordering Information

SHIELD-156-R3C-R10	15.6" 450cd/m² 1920x1080 Panel PC with Intel® Atom x7433RE Processor, TDP 9W, Preinstalled with 8GB DDR5, PCAP touch, 10~28V DC, 304 Stainless Steel Chassis, Full body IP69K Rated With Water-Proof Connectors , R10
SHIELD-156-R4C-R10	15.6" 450cd/m² 1920x1080 Panel PC with Intel® Atom x7835RE Processor, TDP 12W, Preinstalled with 8GB DDR5, PCAP touch, 10~28V DC, 304 Stainless Steel Chassis, Full body IP69K Rated With Water-Proof Connectors , R10

Packing List

1 x Power Cable	1 x USB2.0 Cable	1 x LAN Cable

Options

Item	Part No.	Length	Description
LAN cable	32013-007300-100-RS	1000mm	M12 X code 8pin Male to RJ45 Female
USB 2.0 cable	32001-033000-100-RS	1000mm	M12 A code 8pin Male to USB Type-A female X2
DIO cable	32031-000700-100-RS	1000mm	M12 A code 12pin Male to HDB15 Male
COM cable	32005-006300-100-RS	1000mm	M12 A code 9pin Male to DB9 Male
CAN cable	32005-006400-100-RS	1000mm	M12 A code 8pin Male to DB9 Male
USB3.0 cable	32001-033200-100-RS	1000mm	waterproof Type-A Male to USB3.0 Type-A female
HDMI CABLE	32012-003800-100-RS	1000mm	waterproof Type-A Male to HDMI Type-A female)

Item	Part No.	Quantity	Description
YOKE MOUNT	41320-0594C0-00-HF	1	Yoke Mount Bracket
SCREW	44040-050161-HF	2	M5*16 Pan Head Machine Screw
	44030-050121-HF	2	M5*12 Round Head Machine Screw
iuOF-1G1PW-WF-R10	70-034SB104-001-100-RS	1	IEI 1G USB optical fiber Module