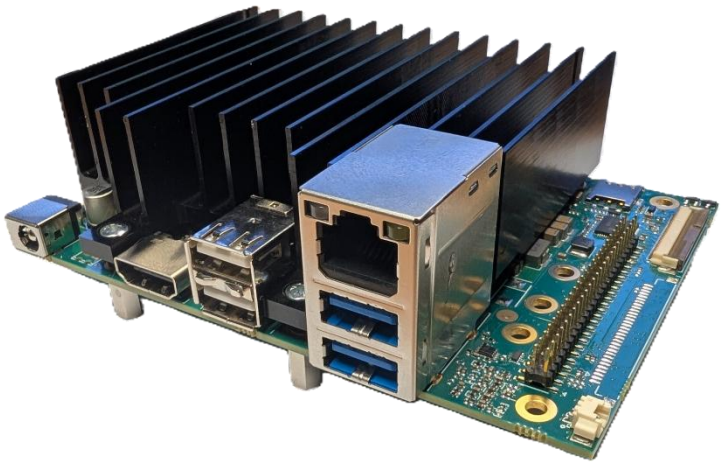
Blue Chip Technology

XE2

High-performance, low-power x86 single board computer featuring Quad-Core Intel processors

PROCESSOR **OPERATING SYSTEM** **I/O**



› Maximum compatibility

X86/64 processor runs all Windows-based applications with minimal effort in migration. Supports all mainline Linux builds and distributions.

› High Performance

Features a quad e-core CPU and Xe-LP GPU supporting DirectX 12.1 and OpenGL 4.6, OpenCL 3. LPDDR5 4800MT/s. 3 x M.2, 2 x USB 3.1, 2 x USB 2.0, 2.5Gbps Ethernet

› Focussed on embedded applications

Integrated passive heatsink keeps the system fully functional in 60°C ambient. LCD and Touch support.

› Long-Life Components

Carefully-chosen components mean the XE2 will be available for at least 10 years.

SUMMARY

The XE2 single board computer offers high performance, low power and long life in a small form factor.

Capable of running Windows 11 IoT Enterprise and other desktop versions of Windows 11, the XE2 is the ideal choice for customers wanting to run their existing applications with little fuss.

- Quad-core 3.6GHz APU
- Xe-LP graphics supporting DirectX 12.1
- 8GB and 16GB 64-bit LPDDR5 4800MT/s memory options
- eMMC, M.2 NVMe x2 storage options
- WiFi, Bluetooth and 4G/5G available via M.2 expansion with onboard SIM card slot
- 1 x 2.5Gbps Ethernet
- 2 x USB 3.1 and 2 x USB 2.0 ports
- SMBUS and 12 GPIOs
- Three serial ports - RS232 and RS232/RS422/RS485
- LCD and HDMI display options
- Runs Windows 11 and Linux

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XE2

TECHNICAL SPECIFICATIONS

Core System

Processor	Intel: Amston Lake: Atom X7211RE (wide temperature) Twin Lake-N: N150, N250
Memory	Low-power DDR5 4800MT/s 64-bit memory bandwidth 8GB and 16GB options
Storage	64, 128, 256GB eMMC (chip on board) M.2 NVMe x2 2230 SSD USB3.1, USB2.0
Graphics	Intel Xe-LP graphics processorDirectX 12.1 HDMI DisplayLVDS Display Dual independent displays
Audio	High Definition Audio Cirrus Logic CS4207 codec Stereo Inputs and Outputs 3W Class-D amplifier
Watchdog	Yes
Real Time Clock	Yes - battery backup option

Processor options

Processor	TDP (W)	Cores	CPU Boost (GHz)	GPU EU	GPU Boost (GHz)
N150	6	4	3.6	24	1.0
N250	6	4	3.8	32	1.25
X7211RE	6	2	3.2	16	1.0

Display & Touch

Touch Interface Type	Support for Resistive and Projected Capacitive touch screens
HDMI	HDMI 2.1, 4K@60Hz
LVDS	LVDS (build options support Blue Chip Technology's standard for 7" HD, 9.7" and 12" LCD's)

I/O

Ethernet	10/100/1000/2500 LAN Optional second LAN through 50way expansion header or M.2
Wireless	WiFi, Bluetooth, 4G/5G and GPS via USB or M.2 Onboard SIM socket for M.2 modems
Serial	2x USB 3.1 connector 1x USB 2.0 connector 1x USB 2.0, 50W header SMBUS up to 400KHz 2x RS232, 50W header 1x RS232 / RS422 / RS485 port (jumper selectable) *Note: The RS485 TX/RX switch timing may be subjectto operation system latency*
GPIO	12 signals, 50-way expansion connector
Camera Interface	USB

Power

Input Connector	DC Jack or Screw Terminal (factory options)
Input Voltage	Recommended operating voltage: 12-24V DC +/-5%
Power Consumption (Typical)	Windows 11 Desktop Idle 6W Windows 11 BurnInTest 10.2: 20W *Additional power supply capacity is required for additional M.2, USB & 50W devices

Firmware

OS Support	Windows 10, 11 Linux Ubuntu
BIOS	Slimboot / UEFI
Security	TPM2.0, BitLocker

Physical

Operating Temperature	Standard: 0°C to 60°C, Wide: -40°C to 60°C
Storage Temperature	TBD
Humidity	TBD
Overall Dimensions	120 x 85 x 40 (LxWxH) mm inc H/S & feet for M.2 clearance
Mounting Options	TBD
Approvals	CE, UKCA

OPTIONAL FEATURES

Add further functionality that you require through these optional extras:

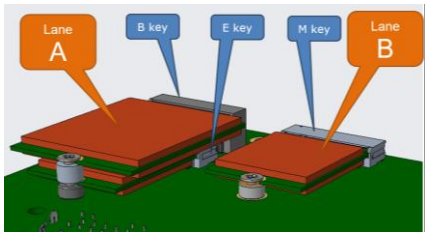
WiFi Bluetooth 4G/5G GNSS

Please note, these components may alter the technical specifications of the overall product (i.e. a change to the EMI performance, power requirement or operating temperature).

M.2 SLOTS

M.2 cards and sockets are labelled to indicate both the functionality and the size of the card, for example '2230 Key A'. The number (2230) refers to the width and length of the card. The 'Key' refers to the physical connector / socket and the interfaces it supports.

The details of the three M.2 sockets provided on the XE2 are as follows:



Location	Key	Interface	Number	Measurements W x L mm
Lane A lower	E	PCIe x1 USB2.0 CNVi	2230	22 x 30mm *Not possible to fit 2 2230 in Lane A*
Lane A upper	B	PCIe x1 USB3.0 USB2.0	2230 2242 2252	22/42 x 30/42/52mm *Cards to 42mm W supported to accommodate 5G modems*
Lane B	M	NVMe PCIe x2	2230	22 x 30mm

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