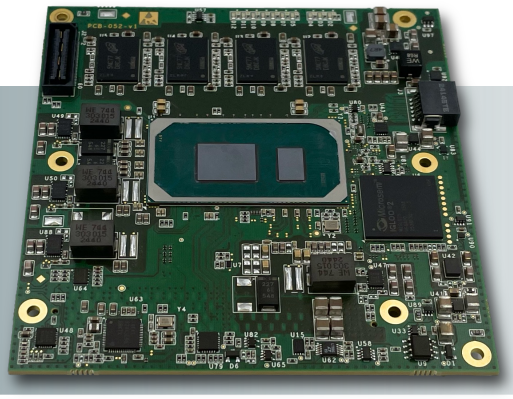
SummitX CB-1002

Flight safety certifiable Intel Tiger Lake System On Module for commercial and defense airborne applications.



- Intel ® Core i7-1186GRE Tiger Lake processor
- Intel® Iris®Xe graphics
- 32 GB LPDDR4x with IB-ECC
- Independent BMC & watchdog
- Certification Package for DAL A applications

Datacenter performance in a small package

Intel Core i7-1186GRE processing, integrated Iris Xe graphics, and 32 GB LPDDR4x IB-ECC deliver high-performance compute and graphics in a compact 100 × 105 mm module making them ideal for integration into rugged edge AI mission computers.

Processing control

For high-reliability use cases where processing predictability is required, the module specifically supports disabling thermal throttling. The fixed CPU frequency enables deterministic algorithms to be executed, thus increasing safety and reliability of results.

Independent CPU supervision

A dedicated board management controller, developed to the highest safety standards supervises the CPU independently through power, temperature, and functional-safety monitoring. A processor-independent watchdog supports fault detection and recovery.

Integrated health monitoring

Board and processor temperatures, supply rails, processor errors, and reset events are monitored and logged. Dedicated warning signals allow the carrier system to react to abnormal conditions.

Dense mission and sensor connectivity

Ten PCIe Gen3 x1 lanes, SATA, 2.5Gb Ethernet, and USB 3.1 provide flexible high-speed expansion. Two DisplayPort and one embedded DisplayPort support display integration.

DAL certification package

CB-1002 can be delivered with an optional DO-254 (Design Assurance Level) certification data package up to DAL A that demonstrates the rigorous safety and reliability design standards required for airborne systems.

LYNX Lynx Support

LYNX MOSA.ic.AI® software supports the CB-1002 with graphics acceleration through the Lynx CoreSuite 2.0 component, which provides a Vulkan SC foundation for efficient GPU access and support for OpenGL SC 2.0 applications. Its LYNX MOSA.ic® CPU operating environment stack enables control of customer applications. Together, they let customers run graphics and deterministic AI inference on a single SummitX CB-1002 module.

Learn more by visiting:
https://www.lynx.com/solutions/lynxmosaic-ai

Elix Systems SA is a commercial provider of mission processing systems and subsystems. Elix solutions power a wide variety of critical commercial, defense and intelligence programs that are optimized for customer and mission success.

CB-1002 Technical Specifications



CB-1002

Processor & Memory

Intel Core i7-1186GRE @ 2.8 GHz

Integrated Intel Iris Xe graphics
32 GB LPDDR4x with IB-ECC

Display & Camera

2× DP (4K60)
1× eDP (4K60)

Communications

1× 2.5Gb Ethernet (magnetics off-module)
10× PCIe Gen3 x1 lanes, with 6× PCIe clock outputs
1× SATA interface (SSD off-module)
3× UART
6× I²C
3× GSPI
1× SPI0 with 2x chip selects, 1x for TMP (off-module)
32× GPIO
1× USB 3.1 for maintenance
3x Reference clocks output for monitoring
Backup BIOS support (memory off-module)

12 V main power input
Form factor - 100 × 105 mm
≤100 g

Environmental Specification

Condition	Limits/standards
Board temperature range	-40°C to +85°C

Reliability

MTBF ≥ 40,000 flight hours (AIC environment at 55°C)



CB-1002-xDAL-1

Product Ordering

CB-1002	Tiger Lake COM, 32 GB LPDDR4x IB-ECC

Optional

CB-1002-DK	CB-1002 development carrier
CB-1002-ADAL	CB-1002 DO-254 DAL A documentation package
CB-1002-CDAL	CB-1002 DO-254 DAL C documentation package

ELIX Systems SA

Route de Chavannes 9 1007 Lausanne
Switzerland Phone: +41 21 510 24 80

@ElixSwiss elixsystems elix.swiss