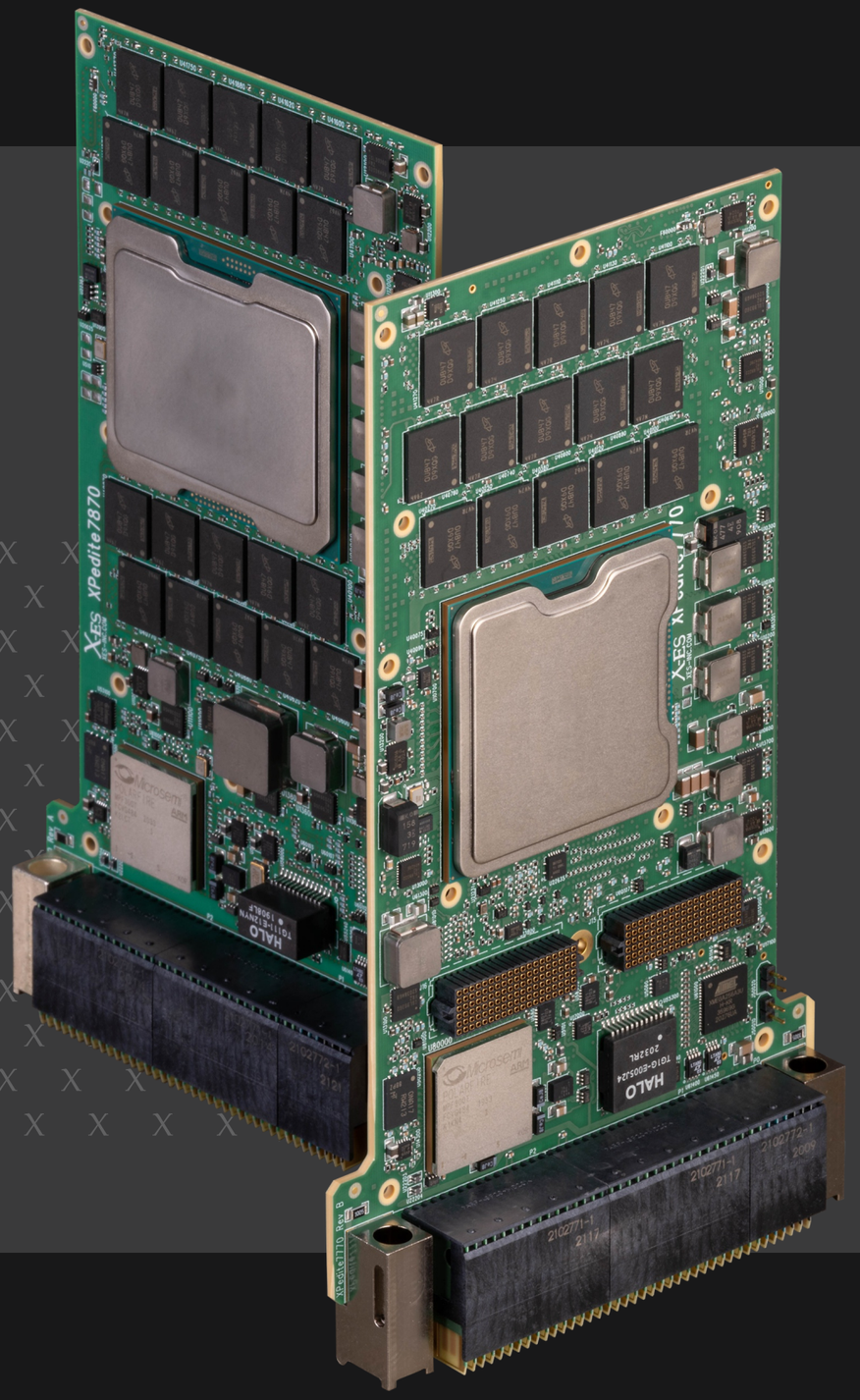
Intel®
Xeon® D

PROCESSOR-BASED RUGGED, EMBEDDED COMPUTING SOLUTIONS FROM **EXTREME ENGINEERING SOLUTIONS (X-ES)**



X-ES

Why Choose X-ES

As a critical embedded computing hardware and software provider, X-ES has decades of experience delivering trusted solutions on-time and on-budget.

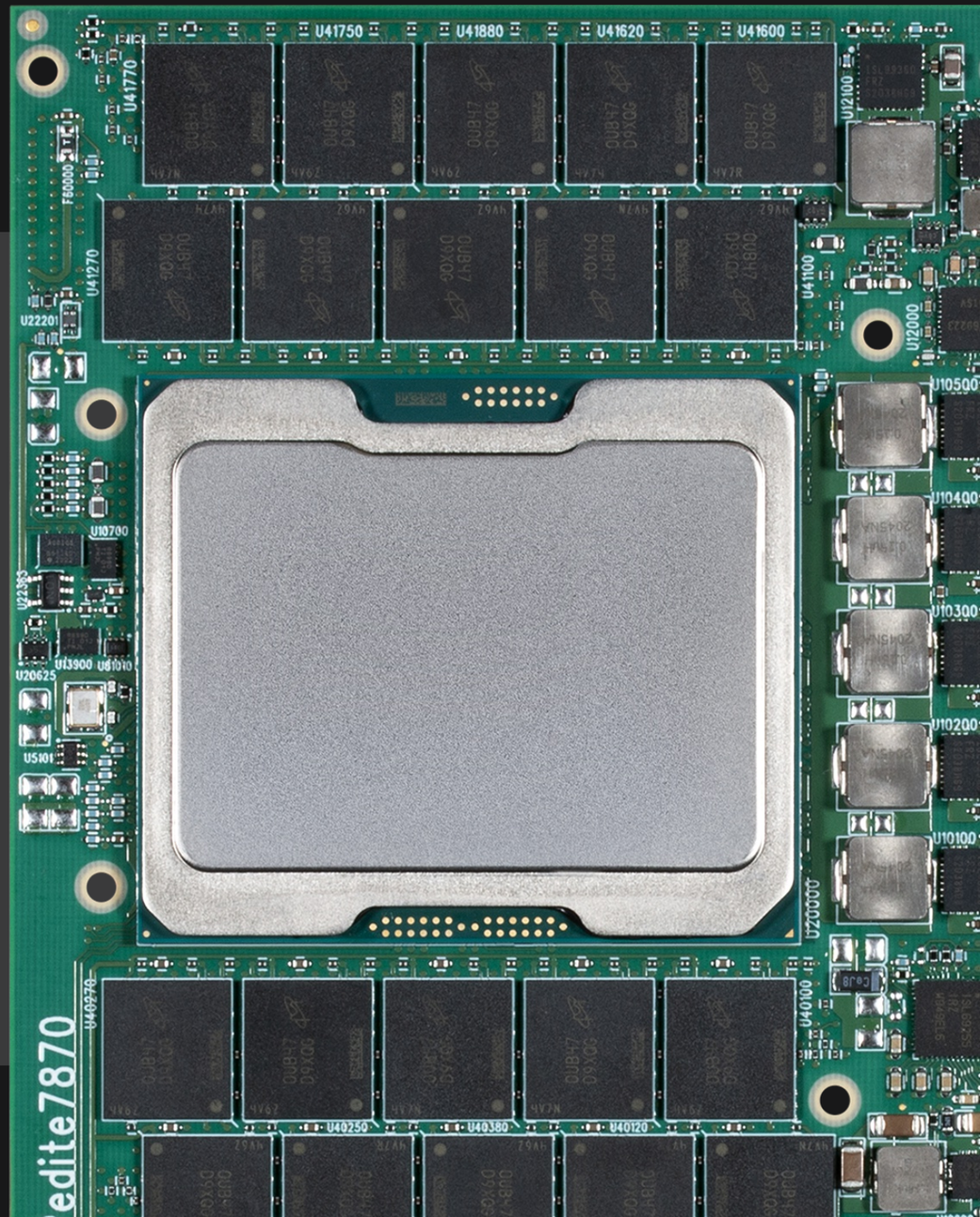
With the launch of our line of Intel® Xeon® D-1700 and D-2700 processor-based SBCs, X-ES will be continuing our tradition of engineering excellence and dedication to customer service.

IMMEDIATE AVAILABILITY

With boards built and ready to go, X-ES' commitment to rapidly ship product after receipt of customer PO helps programs hit the ground running without delay.

DERIVATIVE DESIGN CAPABILITY

BUILT FOR EXTREME ENVIRONMENTS



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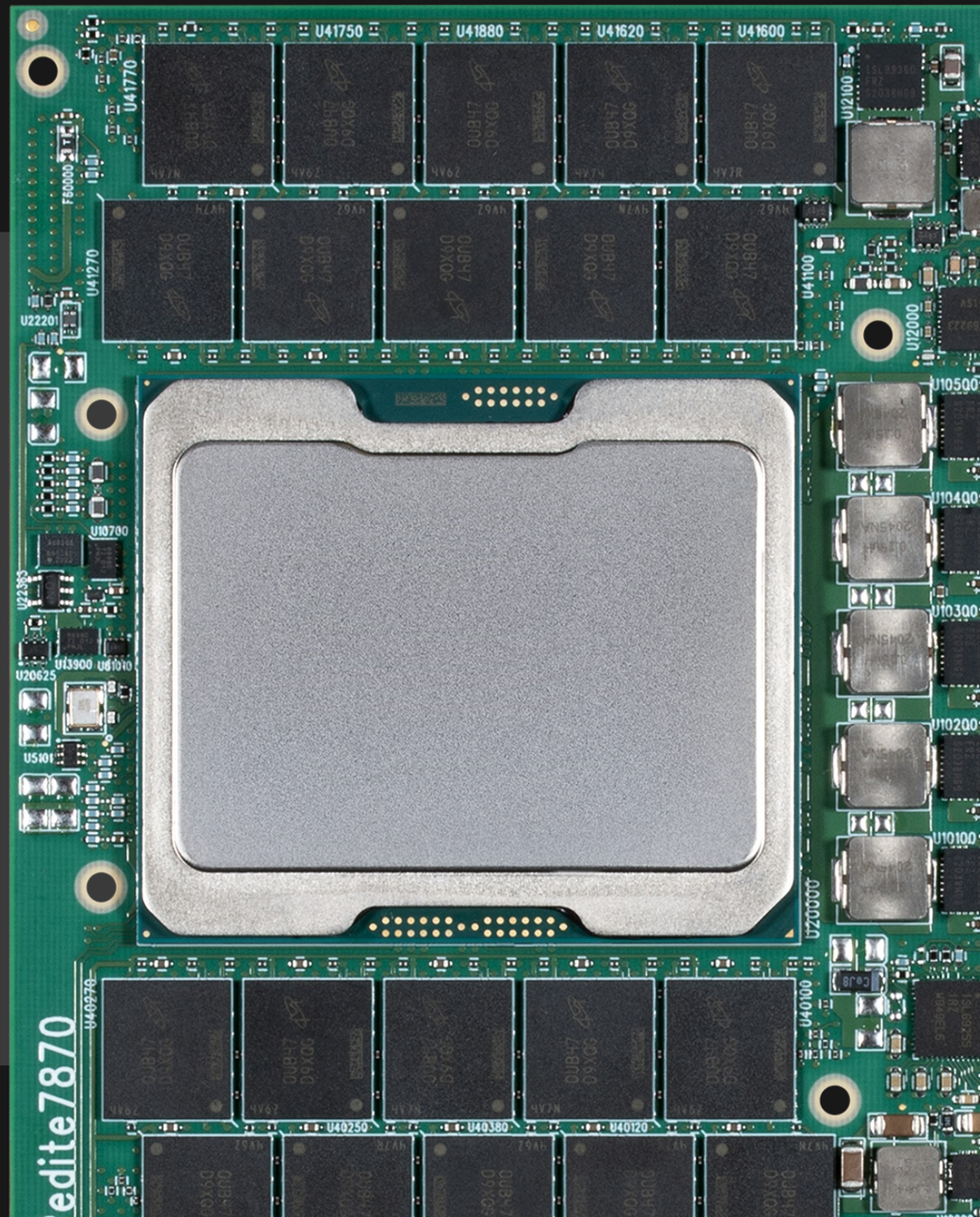
IMMEDIATE AVAILABILITY

DERIVATIVE DESIGN CAPABILITY

X-ES' Assembly Line Design methodology allows us to design a core board architecture that can be rapidly deployed to a variety of standard and custom form factors, expediting time-to-market for new products.

BUILT FOR EXTREME ENVIRONMENTS



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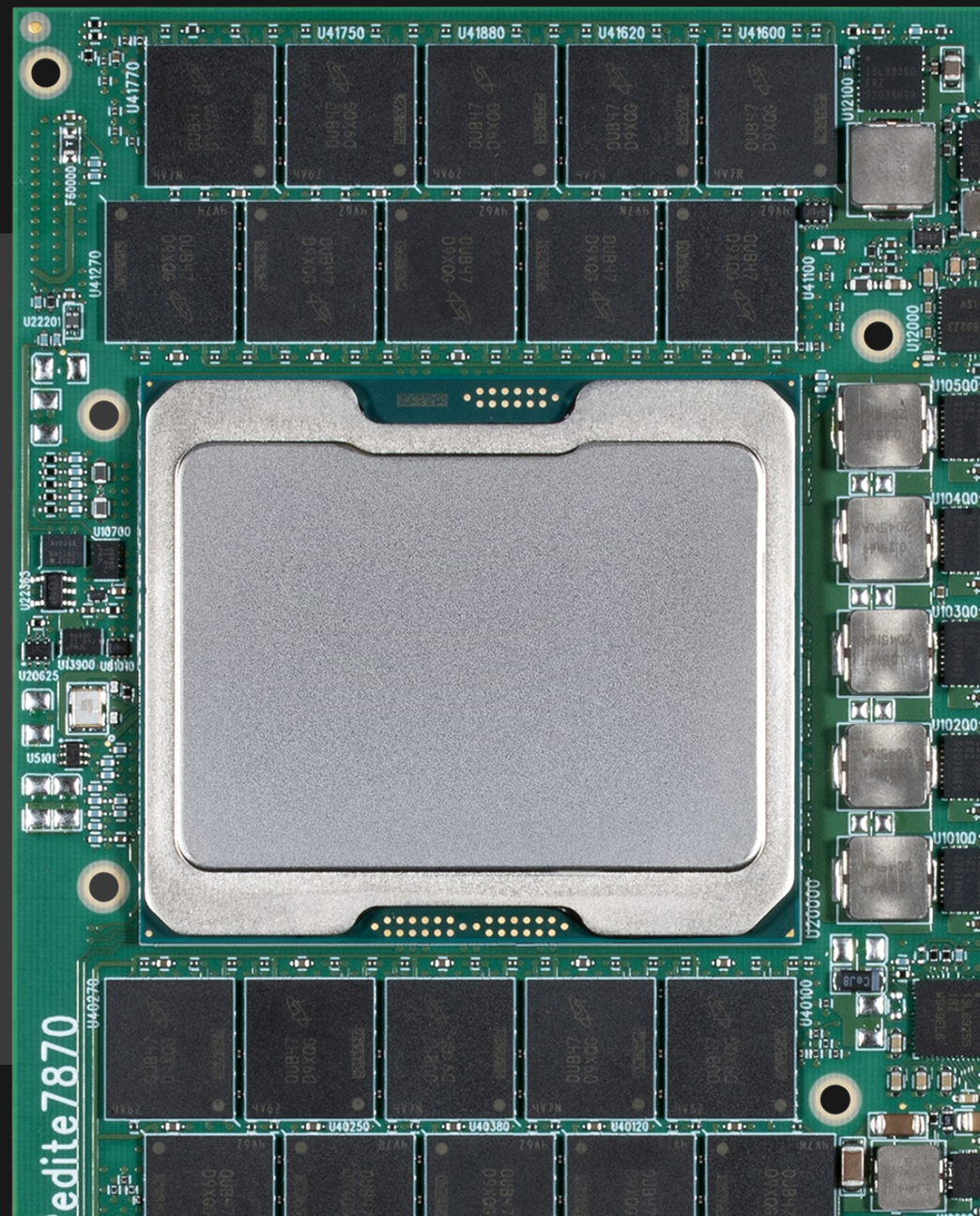
- IMMEDIATE AVAILABILITY
- DERIVATIVE DESIGN CAPABILITY
- BUILT FOR EXTREME ENVIRONMENTS

  Purpose-built for the demands of deployable applications in challenging conditions, X-ES' fully ruggedized hardware integrates critical features to support maximum performance in the extremes.



X-ES

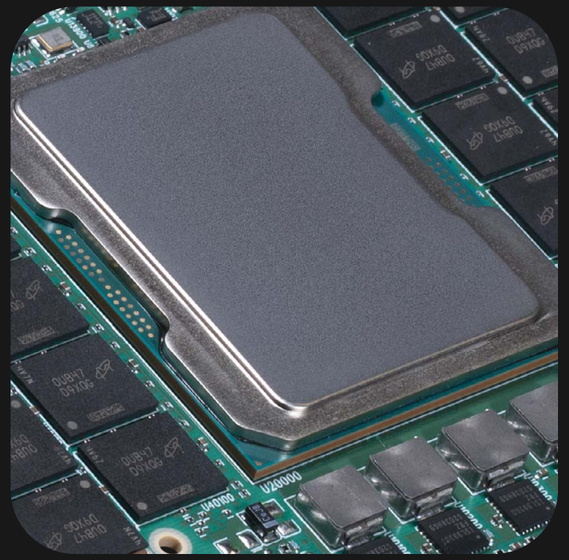
Introducing:
Extreme Engineering Solutions

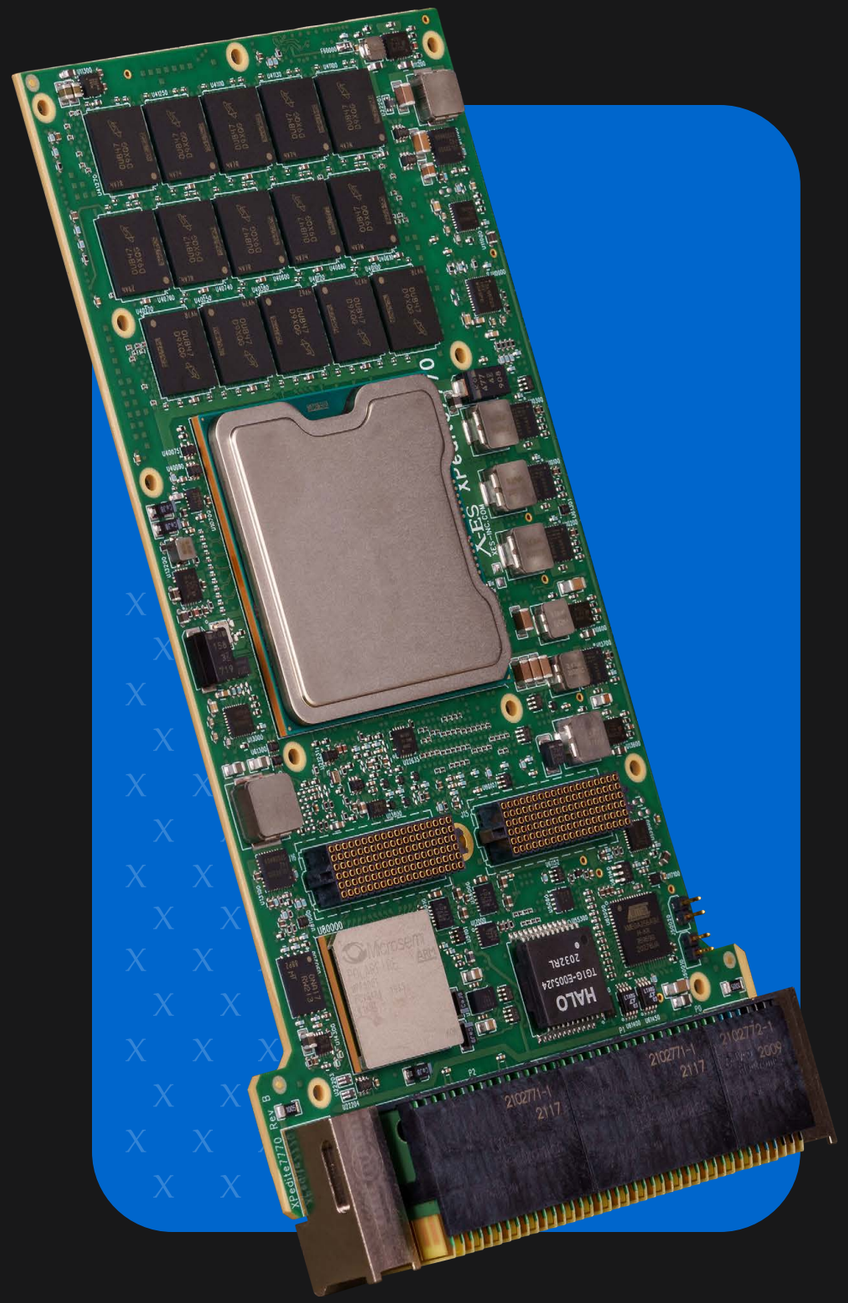
Founded in 2002, **Extreme Engineering Solutions (X-ES)** has been a leader in the rugged embedded computing industry for two decades.

Our products are **trusted in mission-critical applications** around the world and we have earned a reputation as a preferred defense hardware supplier for our **uncompromising focus on quality and performance**.

For extreme environments

Rugged, trusted, and secure embedded solutions for deployable applications.





Core Competencies

100% US-MADE

X-ES products are fully designed, configured, tested, and supported at our headquarters in Verona, WI, where we have built a dynamic team with wide-ranging expertise in embedded computing hardware and software.

INTEL EXPERIENCE

Building on our extensive history with Intel® processor families, X-ES' Intel® Xeon® Ice Lake-D solutions provide next-generation performance paired with proven reliability and an unparalleled suite of features and capabilities.

SUPPORT GUARANTEE

We understand how valuable time is and the harm that can come from unexpected downtime. Our four-hour support guarantee means customers receive a rapid response from one of our talented Support Engineers to get their questions answered promptly.

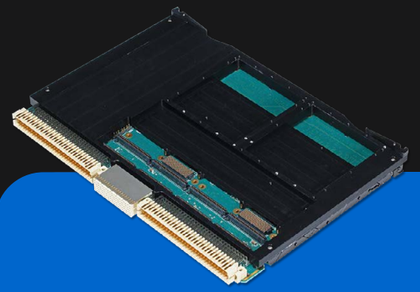
CUSTOM ENGINEERING

As a result of our reliable engineering and manufacturing practices and methodologies, X-ES has a proven track record of delivering cost-effective custom or derivative product designs that meet our customers' typically aggressive schedules.

X-ES

XPedite7770
3U VPX

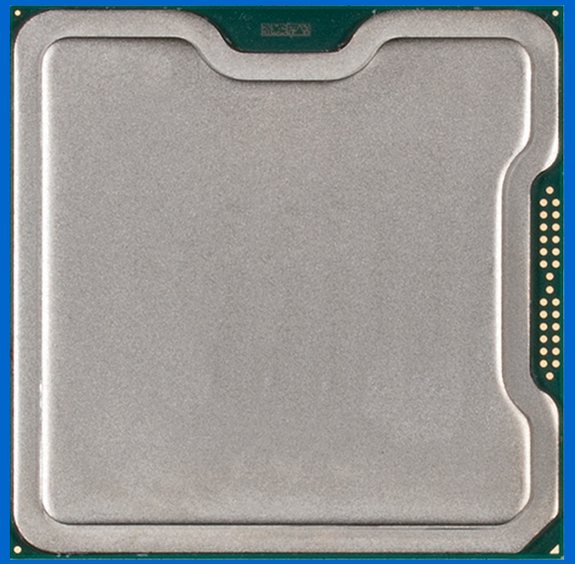
XCalibur4740
6U VPX



XCalibur4730
6U VME

XCalibur4702
6U cPCI

XPedite7750
COM Express



D-1700

X-ES boards supporting the Intel® Xeon® D-1700 processor.
Featuring up to 48 GB DDR4 ECC SDRAM,
three channels of memory, and up to 10 cores.

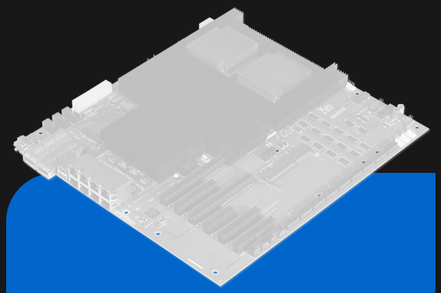
X-ES

XPedite7870

3U VPX

XCalibur4840

6U VPX



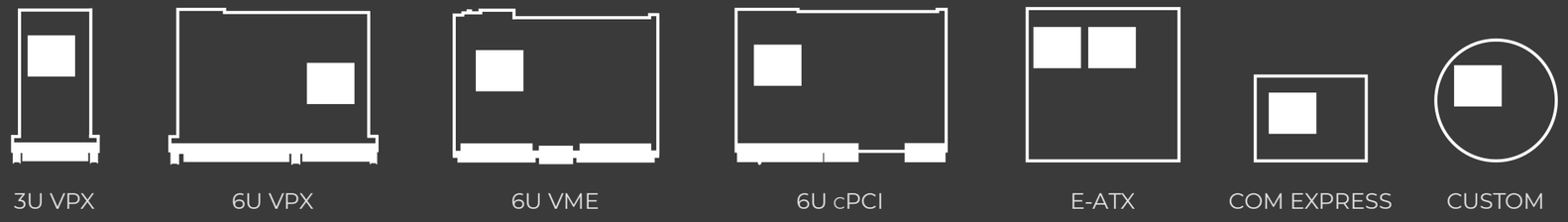
XAct1110

E-ATX

D-2700

X-ES boards supporting the Intel® Xeon® D-2700 processor.
Featuring up to 64 GB DDR4 ECC SDRAM,
four channels of memory, and up to 20 cores.

X-ES

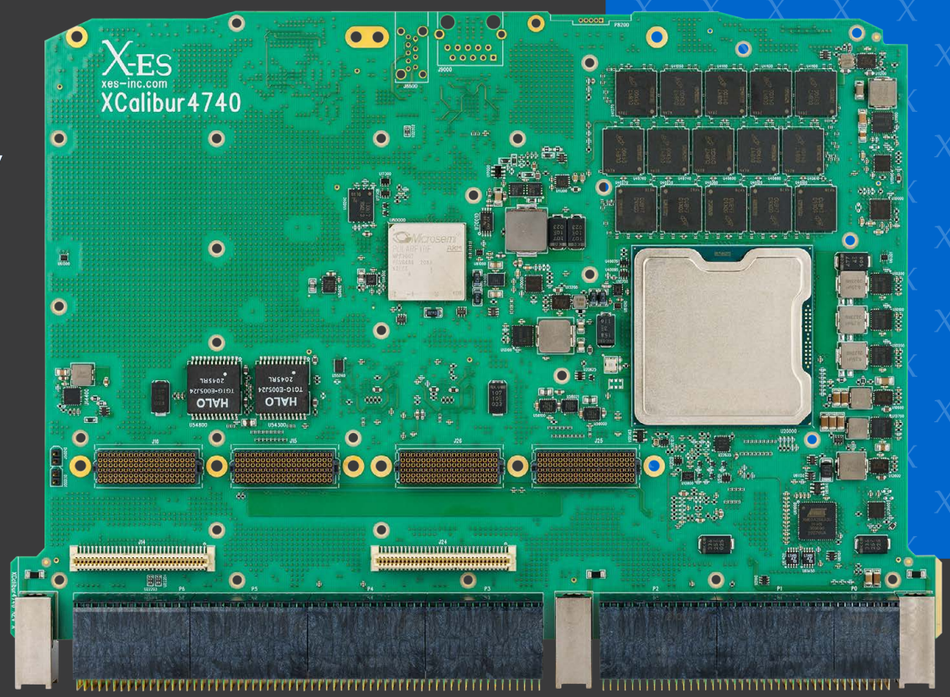


Assembly Line Design Methodology

X-ES employs an innovative, modular engineering methodology referred to as *Assembly Line Design* that drives our entire approach to product development.

By designing and fully validating the core architecture when starting with a new processor family, we are able to re-use trusted elements across a wide variety of standard and custom form factors instead of starting anew with each board.

This saves X-ES time and customers money on development efforts, allowing us to deliver thoroughly proven new designs at unparalleled speeds.



X-ES

Assembly Line Design

Utilizing a modular approach to design, X-ES has created more than 35 Intel® Xeon® D-1500 (formerly Broadwell-DE) processor-based boards in industry-standard and custom form factors.

Baseline Product
XPedite7670

XPedite7671

XPedite7672

XPedite7673

XPedite7674

XPedite7676

XPedite7677

XPedite7680

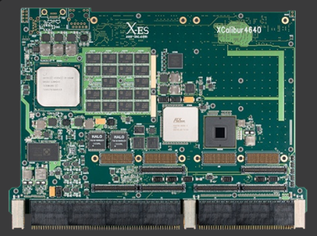
XPedite7682

XPedite7683

XPedite####

XPedite7687

3U VPX



Baseline Product
XCalibur4640

XCalibur4641

XCalibur4642

XCalibur4643

XCalibur4645

XCalibur4646

XCalibur4647

6U VPX

Baseline Product
XCalibur4630

XCalibur4631

XCalibur4632

6U VME

Baseline Product
XPedite7650

XPedite7653

COM EXPRESS

XPedite####

SEM-E

XCalibur4690

XCalibur4691

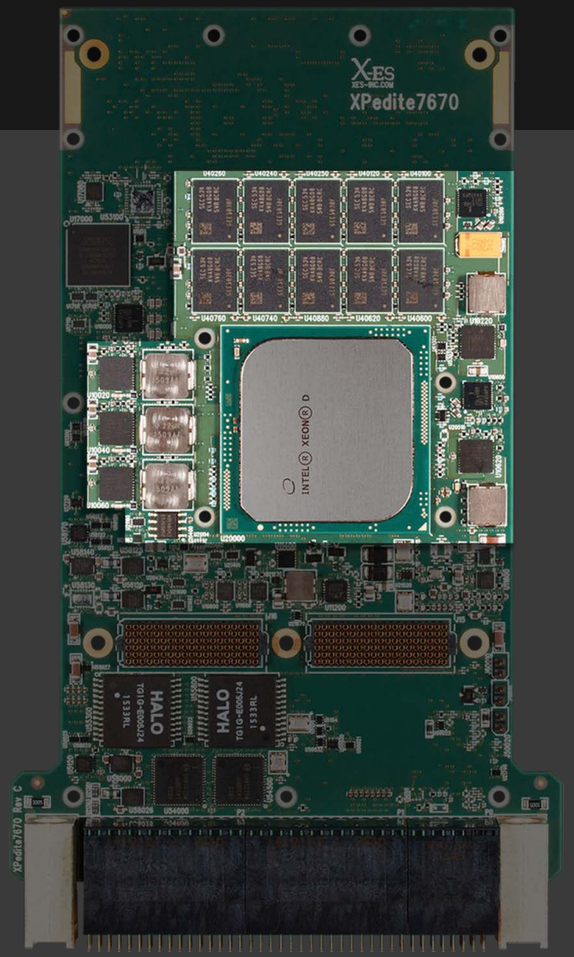
XPedite####

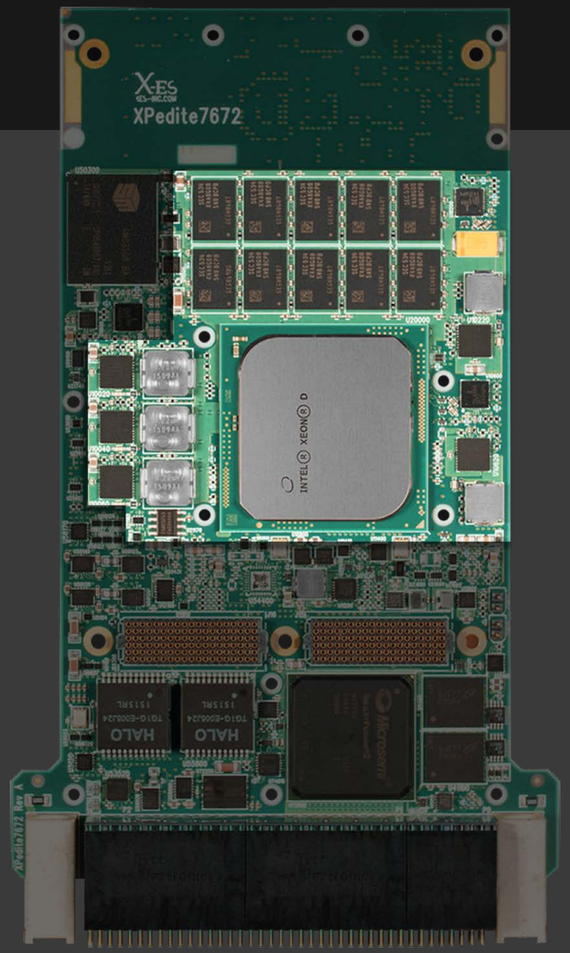
XPedite####

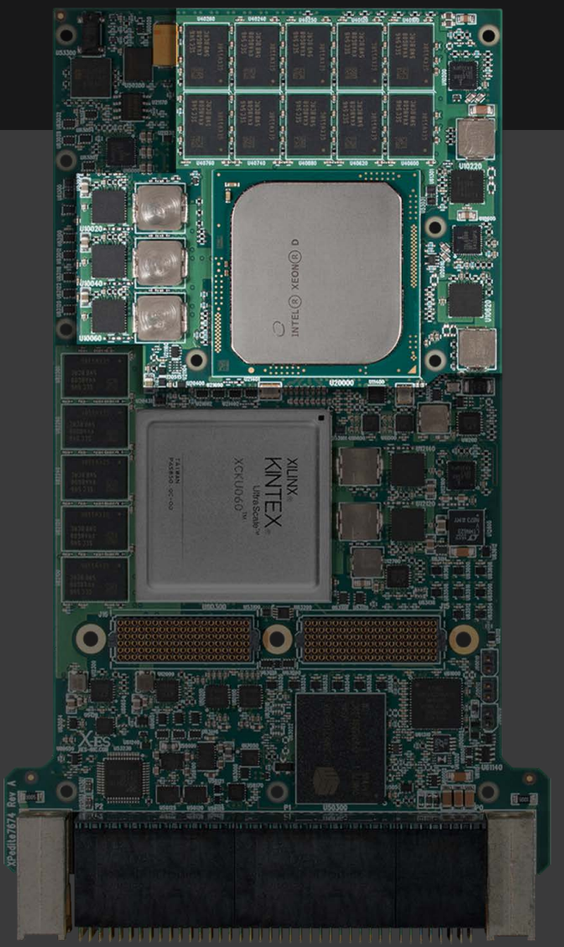
XPedite####

CUSTOM

X-ES







1

DESIGN CORE ARCHITECTURE

2

DEPLOY TO DERIVATIVES

3

DELIVER RAPID CUSTOMIZATION

X-ES

Key Features

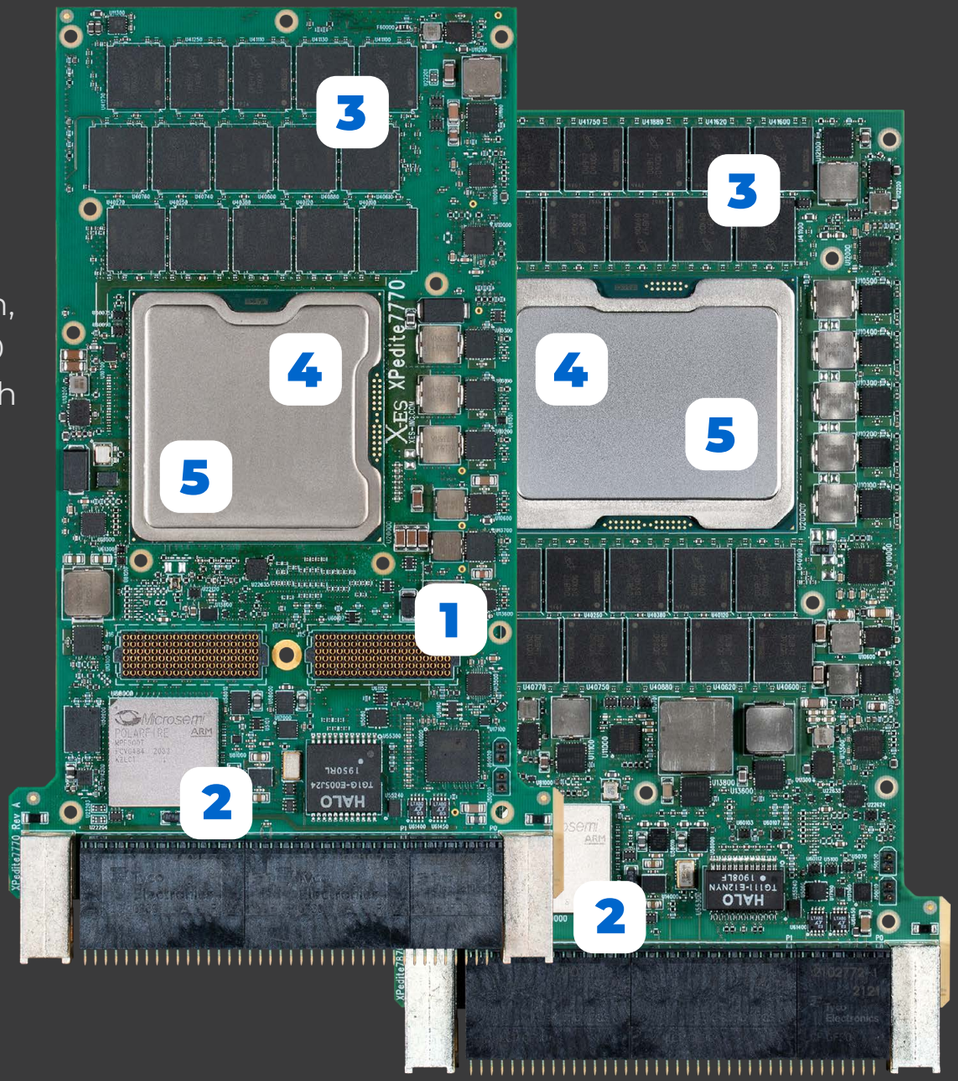
Through experienced and careful design, X-ES is able to offer Intel® Xeon® D-1700 and D-2700 processor-based boards with an unmatched suite of features.

XMC SITE 1

Extend system functionality with highly configurable hosted mezzanine modules

SECURITY FPGA 2

Integrated SecureCOTS™ technology to protect sensitive data from being modified or observed



SOLDERED MEM. 3

Highly optimized memory layout supports industry standard, extended temp., DRAM components with long life cycle support

EXTENDED TEMP. 4

Native operating temperature support for -40°C to 85°C, making these processor boards ideal for extreme environments

40G ETHERNET 5

Integrated 40 Gigabit Ethernet connectivity for incredible networking speed and throughput

X-ES

Extreme Engineering Solutions (X-ES)

The most trusted provider of rugged, embedded computing hardware and software solutions.

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Verona, WI 53593

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1

IMMEDIATE AVAILABILITY

2

RAPID DERIVATIVE CUSTOMIZATION

3

FOR EXTREME ENVIRONMENTS