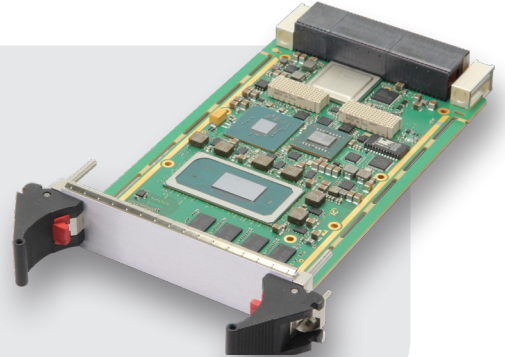


# IC-INT-VPX3I

SOSA™-aligned 3U VPX Intel® Xeon® W SBC

- 3U VPX
- Intel® Xeon® W (Tiger Lake-H)
- DDR4 with ECC up to 32GB
- 1 \* 100G Ethernet port (Data Plane)
- 1 \* PCIe x4 (Expansion Plane)
- Aligned with the SOSA™ Technical Standard



## Overview

The **IC-INT-VPX3I** is a 3U VPX Single Board Computer based on the Intel® Xeon® W (code name Tiger Lake-H) processor and designed in alignment with the SOSA™ Technical Standard. This high-processing module is ideally suited for mil-aero applications and edge applications such as Mission Computer, Radar and Sonar HPEC.

## Description

The **IC-INT-VPX3I** is able to manage and process a significant number of I/O throughput for graphics, networking and storage owing to the Intel® Xeon® W 8 cores, the advanced Intel® Xe graphics engine, the large number of Ethernet ports and the DDR4 memory with ECC.

The XMC slot provides the capability to report IOs (compliant with the P1w9-X12d+P2w9-X16s+X8d mapping) on the rear connector to extend IO system-specific interface requirements.

The **IC-INT-VPX3I** can be seamlessly coupled with additional Interface Concept 3U VPX Intel or ARM-based SBCs, FPGA boards and Ethernet switches to obtain a complete 3U VPX High-Performance Embedded Computing (HPEC) system.

As a compute-intensive 3U VPX board, the **IC-INT-VPX3I** can act as a System or non-System Controller module in a VPX platform.

The **IC-INT-VPX3I** complies with VITA 65.0 SLT3-PAY-1F1F2U1TU1T1U1T-14.2.16 I/O intensive Slot Profile.

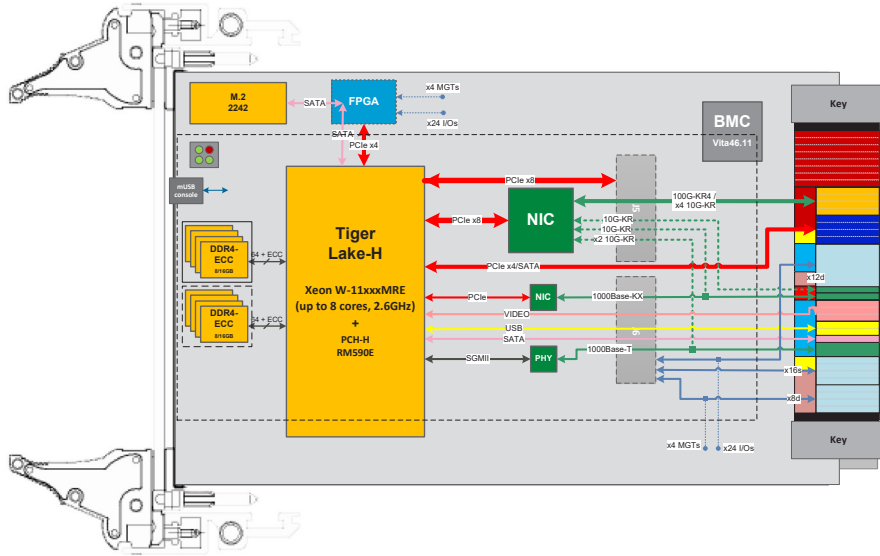
The **IC-INT-VPX3I** features:

- 1 \* 100G Ethernet port (\*)
- 1 \* PCIe x4 (\*)
- 10GBASE-KR Ethernet ports
- 1000BASE-KX Ethernet ports
- 1000BASE-T Ethernet ports (\*)
- 1 \* Maintenance serial port
- 4 \* GPIOs
- 1 \* Video Display Port
- 2 \* USB Ports (USB3.0 & UBS2.0)
- 1 \* SATA Port
- 1 or 2 \* Serial ports (232/422)
- 1 \* XMC slot with rear IO report
- 1 \* M2 socket (on board)

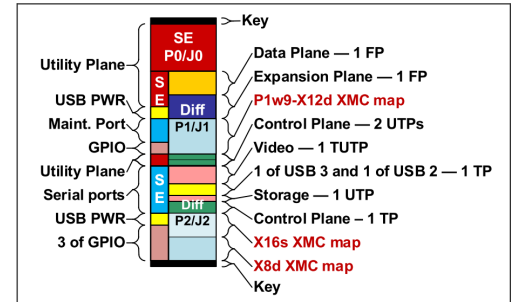
(\*) see detailed configurations in page 2

The **IC-INT-VPX3I** is available in air-cooled and conduction cooled versions (-40°C to +85°C according to Thermal Design Power (TDP) configuration).

## Block Diagram



The **IC-INT-VPX3I** is compliant with VITA 65.0 SLT3-PAY-1F1F2U1TU1T1U1T-14.2.16 Slot Profile.



SLT3-PAY-1F1F2U1TU1T1U1T-14.2.16

## Main features

### Processing Unit

- 1 \* Intel® Xeon® (Tiger Lake-H)
  - W-11555MRE (6 Cores, 2.60 GHz) or
  - W-11865MRE (8 Cores, 2.60 GHz)
- 2 \* banks of DDR4 with ECC (up to 8/16 GB/bank)
- Boot flash memory
- 1 \* XMC slot
- 1 \* M. 2242 slot for SATA SSD
- 1 \* FPGA
- 1 \* Board Management Controller
  - Thermal/voltage monitoring sensors

### Front connectors

- mini USB console port

### P1 connector

- 1 \* 100G Ethernet port or 4 \* 10GBASE-KR ports
- 1 \* PCIe x4 or 4 \* SATA ports
- 1 \* 10GBASE-KR Ethernet port
- 1 \* 10GBASE-KR Ethernet port or 1 \* 1000BASE-KX Ethernet port (\*)
- 1 \* Maintenance serial port
- 1 \* GPIO
- XMC IOs report (x12d)

### P2 connector

- 1 \* Video Display port
- 1 \* USB3.0 port
- 2 \* USB2.0 ports
- 1 \* SATA port
- 2 \* 10GBASE-KR Ethernet ports or 1 \* 1000BASE-T Ethernet port (\*)
- 1 or 2 \* Serial ports (232/422)
- 3 \* GPIOs
- XMC IOs report (X16s+X8d)

(\*) factory configuration

### Miscellaneous

- Status LEDs

### Accessories

- 3U Rear Transition Module

The **IC-INT-VPX3I** is a 3U VPX board compliant with VITA 46.0 standard.

## Software Features

### BMC

- VITA46.11 IPMC
  - TIER-2 IPMI
  - Redundant IPMB
- Power-on Built-In Test
  - On-board hardware components
  - Add-on cards (XMC, FMC)
  - Accessible from the OS
- Human Machine Interface
  - Devices management
  - Health management
  - Password
  - Log
- Over-temperature board protection

### OS Support

- Supported Linux distributions
  - Red Hat Enterprise Linux
  - Ubuntu
  - Yocto
- BSP Features
  - Standard or Preempt-RT kernel (Yocto only)
  - BMC drivers
  - IC Control Node driver
  - Board information (P/N, S/N, PBIT results...)
  - IBIT/CBIT (Integrated/Continuous)
  - Other utilities

Please consult us for other Linux distributions (Debian, Fedora, etc), VxWorks® and Windows.

### Firmware

- UEFI-compliant Boot Firmware
  - Based on InsydeH2O® UEFI BIOS
  - Integrated and tested by IC R&D team
- Boot options
  - UEFI shell
  - Storage devices (HDD, USB, CD, DVD)
  - Network
- Power-on Built-In Tests (PBIT)
  - On-board hardware components
  - Add-on connectivities (VPX PCIe, XMC PCIe, SATA disks, USB devices...)
  - Results accessible from the OS

## Grades

Criterion	Coating	Operation Temperature	Rec. Airflow	Oper. HR% no cond.	Storage Temperature	Sinusoidal Vibration	Random Vibration	Shock 1/2 Sin. 11ms
Standard	Optional	0 to 55°C	1 .. 2 m/s	5 to 90%	-45 to 85°C	2G [20..2000]Hz	0.002g2 /Hz [10..2000]Hz	20G
Extended	Yes	-20 to 65°C	2 .. 3 m/s	5 to 95%	-45 to 85°C	2G [20..2000]Hz	0.002g2 /Hz [10..2000]Hz	20G
Rugged	Yes	-40 to 75°C or 85° C (+)	2 .. 5 m/s	5 to 95%	-45 to 100°C	5G [20..2000]Hz	0.05g2 /Hz [10..2000]Hz	40G
Conduction-Cooled 71°C	Yes	-40 to 71°C at the thermal interface (+)	-	5 to 95%	-45 to 100°C	5G [20..2000]Hz	0.05g2 /Hz [10..2000]Hz	40G
Conduction-Cooled 85°C	Yes	-40 to 85°C at the thermal interface (+)	-	5 to 95%	-45 to 100°C	5G [20..2000]Hz	0.1g2 /Hz [10..2000]Hz	40G

(+) : Temperature grades are subject to availability according to IC products. Please consult us.

For more information, please contact:



3, rue Félix Le Dantec  
29000 QUIMPER  
Tel. +33 (0)2 98 57 30 30  
Fax. +33 (0)2 98 57 30 00  
[info@interfaceconcept.com](mailto:info@interfaceconcept.com)

All information contained herein is subject to change without notice.