

Partner Presentation

# COM-HPC Modules Leverage Intel® Xeon® D Processor for Server-Level Performance at the Edge

Christian Eder, congatec



congatec

# Contents & Speaker

**COM-HPC Modules by congatec  
Leverage Intel® Xeon® D Processor for  
Server-Level Performance at the Edge**



Dipl.-Ing. (FH) Christian Eder  
– Director Marketing at congatec  
– Chairman of the PICMG workgroup  
for COM-HPC  
– SGET Board Member

Creating **industry leading**  
embedded **computing platforms**  
for a more **intelligent** world



**Embedded**  
in your success

We **simplify** the use of **embedded technology**

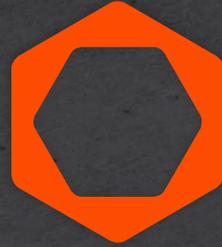
# congatec: Fact Sheet

12 congatec sites

~300 Employees

Founded 2004

Headquarters  
Deggendorf, Germany



## congatec

### Major Markets

- Automation
- Medical
- Entertainment
- Transportation
- Test & Measurement
- Retail/POS & Kiosk
- And most others ...

>40 Sales Partner

>20 Solution Partner

**CSO**

Gerhard  
Edi



**CTO**

Konrad  
Garhammer



**CFO**

Daniel  
Jürgens



# The Modules: **Benefits**

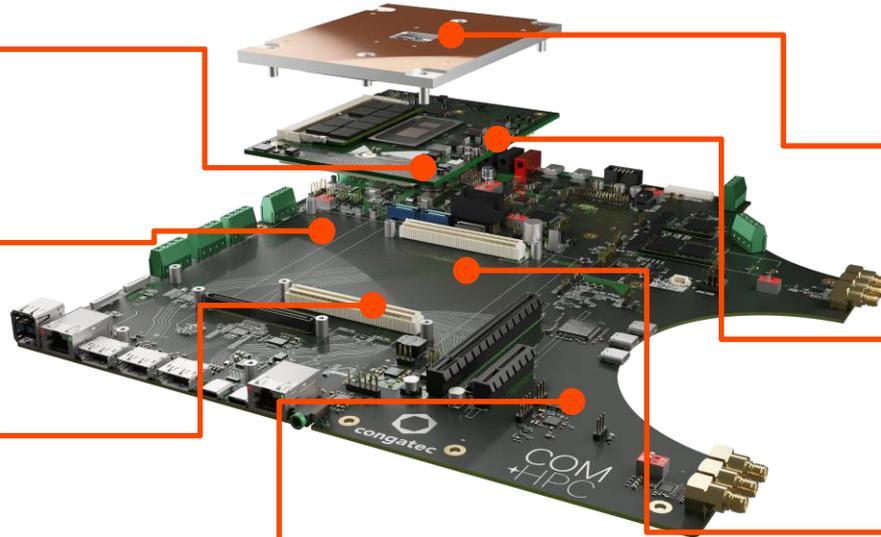
The advantages of Computer-On-Modules

Faster  
time to market

Reduced  
development cost

Scalable  
product range

Allows focus on  
system features



Faster reaction to  
market trends

Second source  
philosophy

Minimize inventory  
cost

# The Modules: COM-HPC Server

COM+HPC™

High performance  
Server-On-Module

Scalable Sizes  
D and E

64x PCIe Gen 5  
Lanes

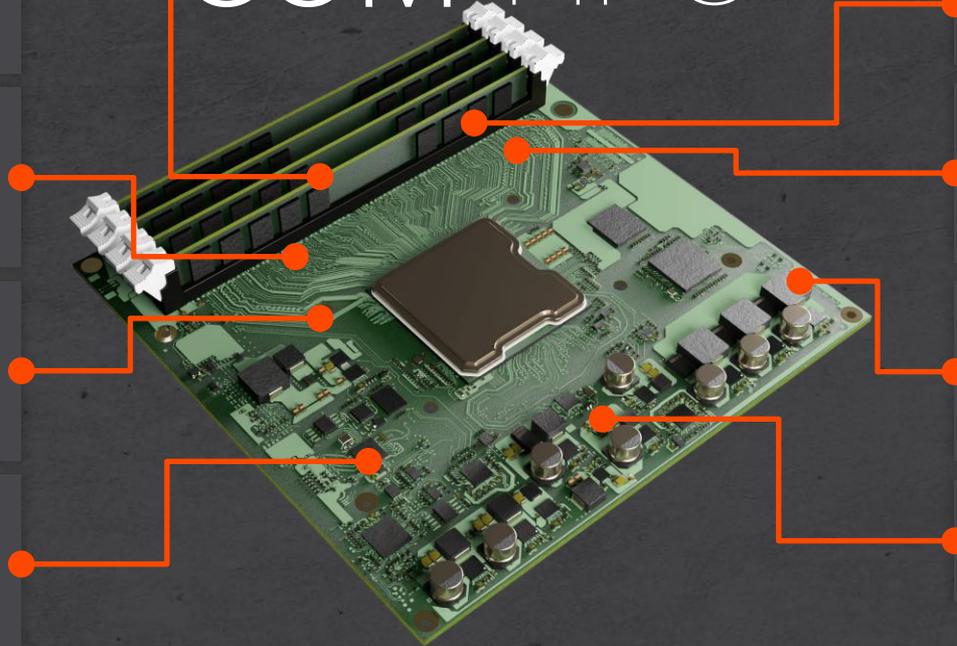
Platform  
Management

Up to 1 TB DRAM

8x 25 Gb Ethernet  
Connectivity

High speed 800 pin  
connector

PICMG Standard



# Client Type Modules

COM  
+HPC®

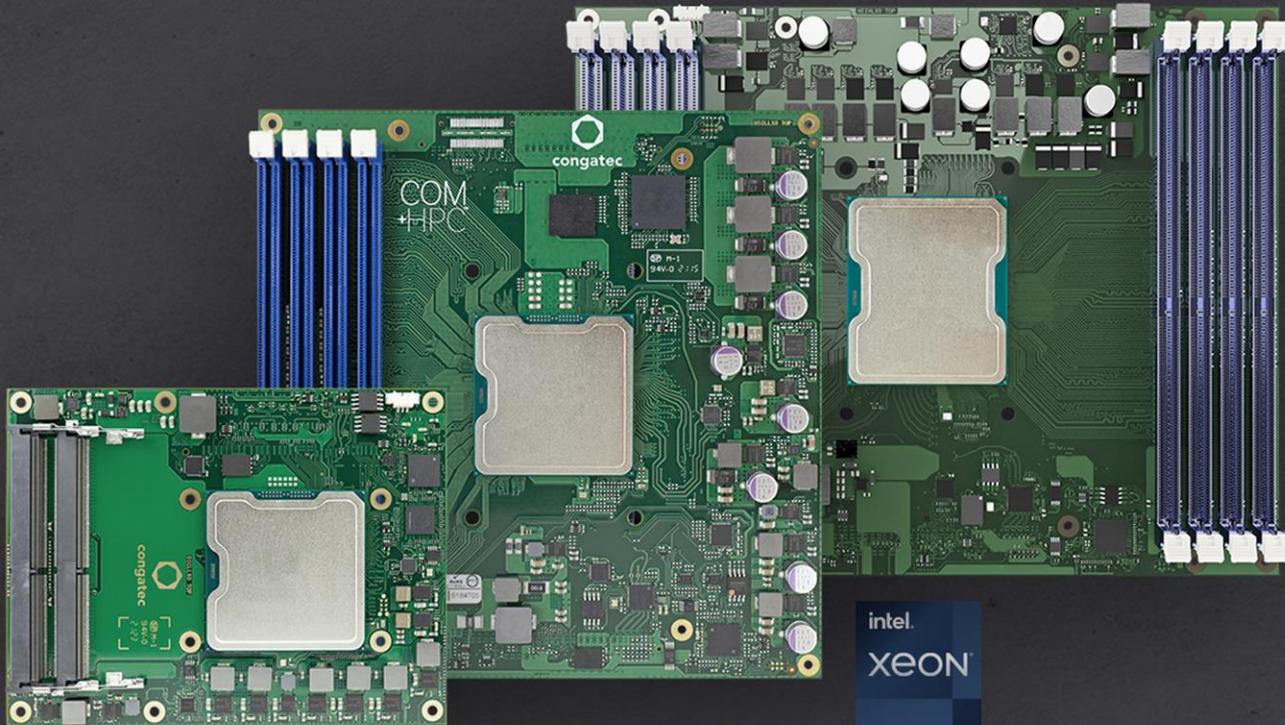


12<sup>th</sup> Gen

Intel® Core™ processors

COM  
Express®

# Server Type Modules



COM  
+ HPC®

COM  
Express®

intel.  
XEON

# COM+HPC<sup>®</sup>

## COM-HPC Client

49x PCIe
2x NBaseT (max. 10 Gb)
2x 25GBE KR
4x USB 4.0
4x USB 2.0
3x DDI
eDP, 2x MIPI-CSI
2x SoundWire, I2S
2x SATA
12x GPIO
2x UART
eSPI, 2x SPI, 2xI2C, IPMB, SMB
Power 8-20V DC

## COM-HPC Server

65x PCIe
1x NBaseT (max. 10 Gb)
8x 25GBE KR
2x USB 4.0
4x USB 2.0
2x USB 3.2
2x SATA
12x GPIO
2x UART
eSPI, 2x SPI, 2xI2C, IPMB, SMB
Power 12V DC

# COM-HPC Server

powered by Intel® Xeon® XEON D-1700 processor (codenamed Ice Lake D)

## conga-HPC/sILL | Intel Ice Lake-D (LCC)

Form Factor	COM HPC Server Type Size D
Processor	<b>Intel® Xeon® XEON D-1700 processor</b> <ul style="list-style-type: none"><li>- 40W-67W TDP   4-10 cores</li><li>- 1,5 MB cache / core</li></ul>
Memory	<ul style="list-style-type: none"><li>- 4 DIMM sockets (RDIMM/UDIMM)</li><li>- Up to 256 GB DDR4 2933MT/s</li></ul>
PCIe	<ul style="list-style-type: none"><li>- <b>16x PCI Express Gen 4</b></li><li>- <b>16x PCI Express Gen 3</b></li></ul> <p>Please note: Depends on CPU Variant</p>
Further Interfaces	<ul style="list-style-type: none"><li>- 2x SATA III (optional)</li><li>- 4x USB 3.1 Gen1   4x USB 2.0</li><li>- Optional eMMC 5.1</li></ul>
Ethernet	<ul style="list-style-type: none"><li>- 1x 2,5 GbE</li><li>- 2x 25/4x 10/8x 2,5 GbE (KR or SFI Interface support)</li></ul>



# COM-HPC Server

powered by Intel® Xeon® XEON D-2700 processor (codenamed Ice Lake D)

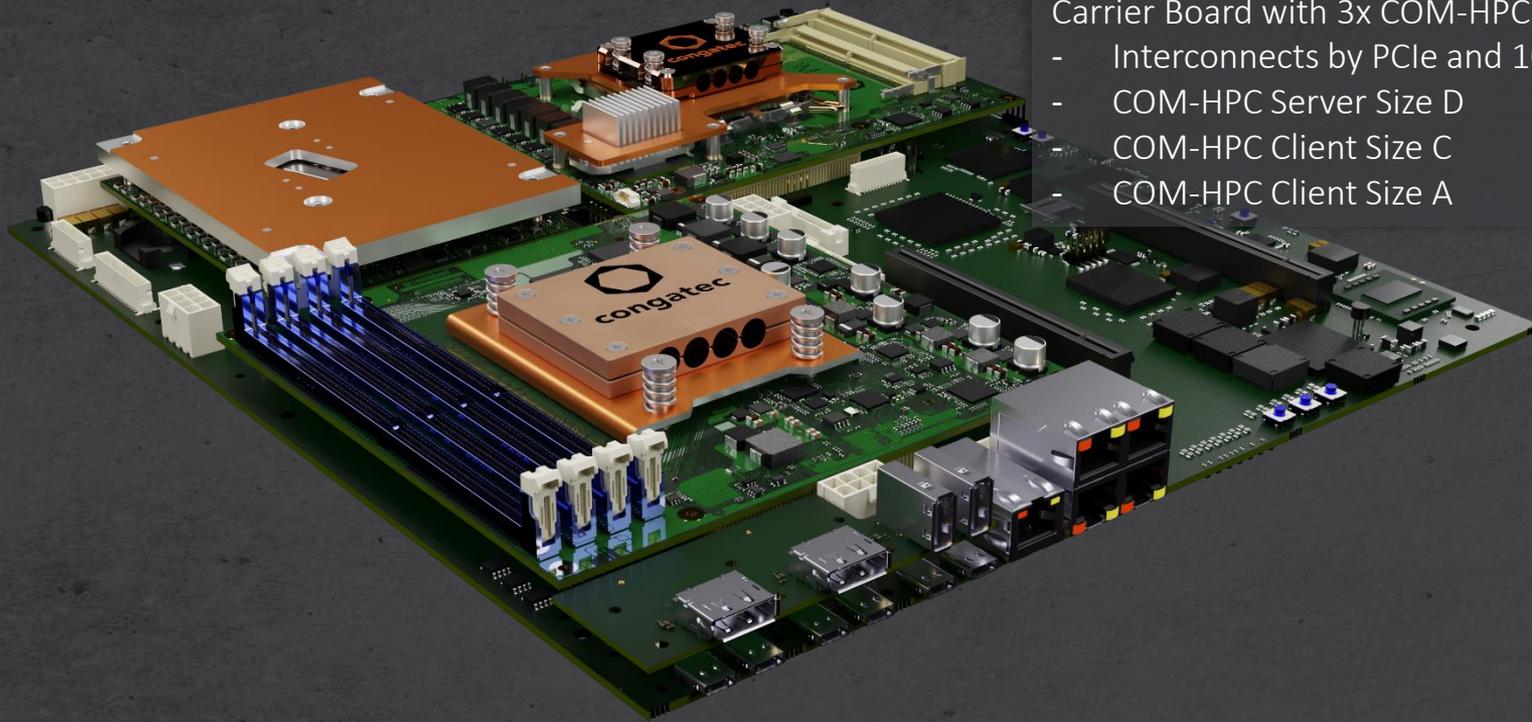
## conga-HPC/silH | Intel Ice Lake-D (HCC)

Form Factor	COM HPC Server Type Size E
Processor	<b>Intel® Ice Lake D (HCC)</b> <ul style="list-style-type: none"><li>- 65-118W TDP   4-20 cores</li></ul>
Memory	<ul style="list-style-type: none"><li>- 8 DIMM sockets (RDIMM/UDIMM)</li><li>- <b>Up to 1 TB</b> DDR4 2933MT/s</li></ul>
PCIe	<ul style="list-style-type: none"><li>- <b>32x PCI Express Gen 4</b></li><li>- <b>16x PCI Express Gen 3</b></li></ul> <p>Please note: Depends on CPU Variant</p>
Further Interfaces	<ul style="list-style-type: none"><li>- 2x SATA III (optional)</li><li>- 4x USB 3.1 Gen1   4x USB 2.0</li><li>- Optional eMMC 5.1 (128GB)</li></ul>
Ethernet	<ul style="list-style-type: none"><li>- 1x 2,5 GbE</li><li>- <b>1x 100/2x 50/4x 25 GbE/...</b> (KR or SFI support)</li></ul>



# High Dimensional Data Application

University Bielefeld / Christmann

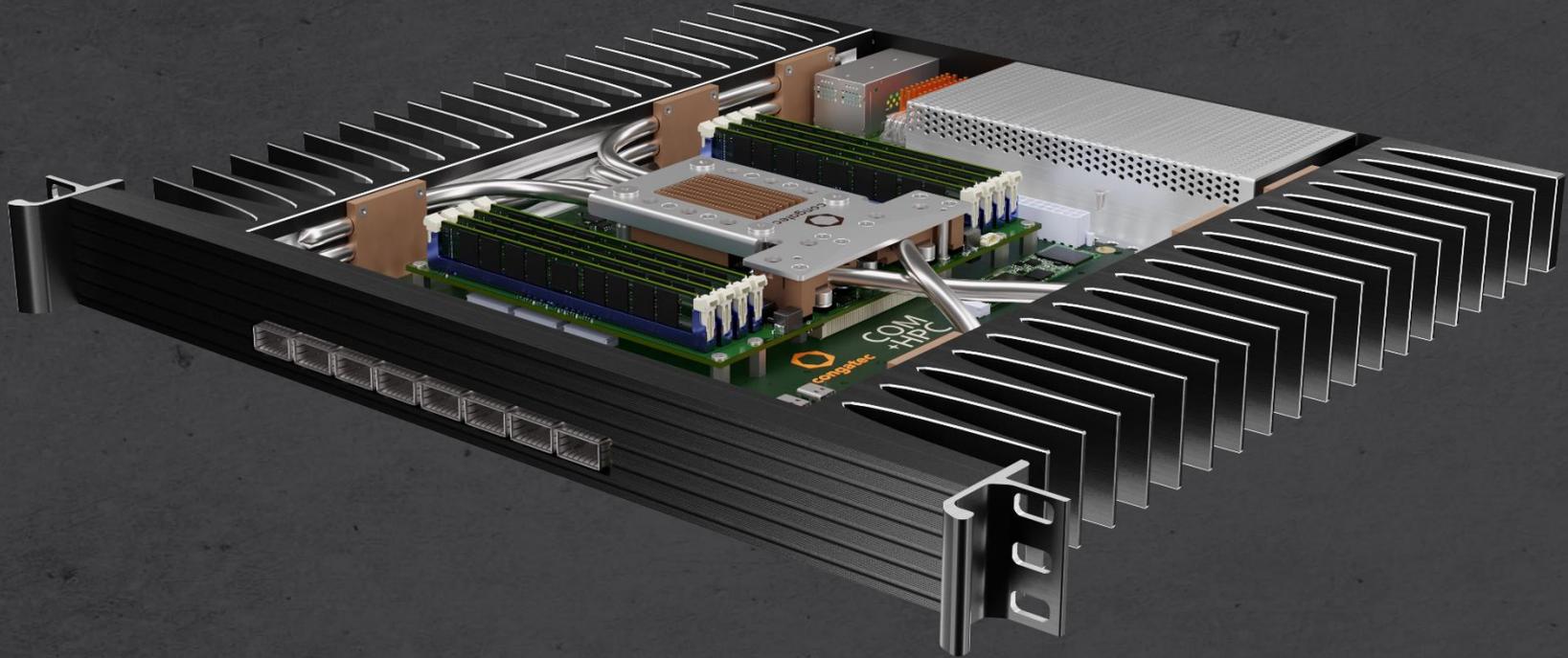


Carrier Board with 3x COM-HPC

- Interconnects by PCIe and 10G Ethernet
- COM-HPC Server Size D
- COM-HPC Client Size C
- COM-HPC Client Size A

# Rugged Edge Server

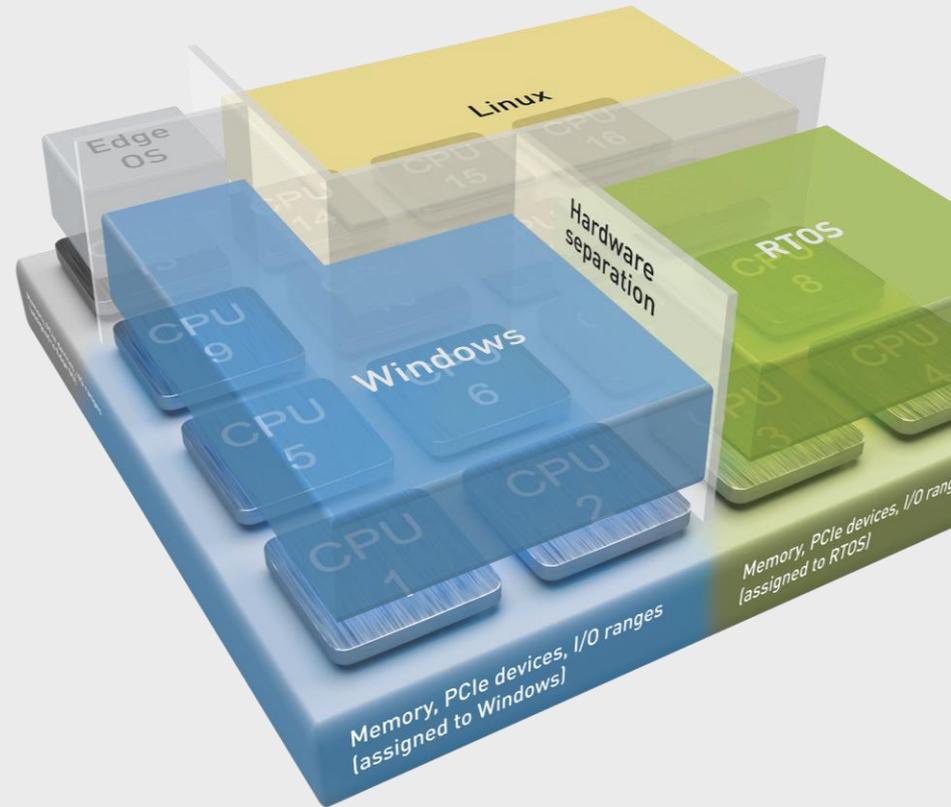
1 U passive cooled industrial server



# Real-Time Hypervisor

- Runs various real-time and general-purpose operating systems on one single hardware platform
- **Proven solution**  
Used in thousands of customer applications worldwide for more than 10 years

**REAL-TIME  
HYPERVISOR**

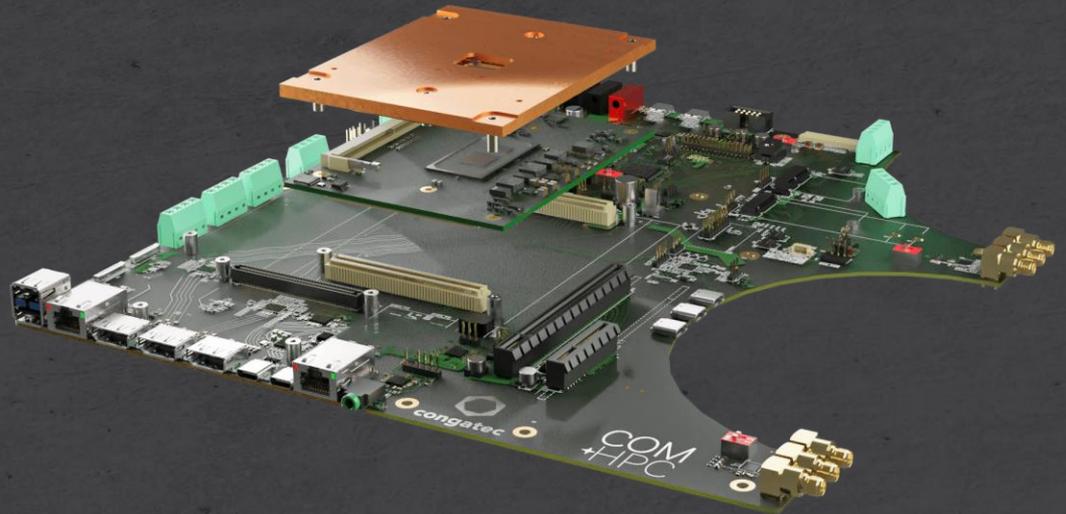


# Call to action

For more information on COM-HPC / COMe modules, please refer to the links below

- COM-HPC: <https://www.congatec.com/us/technologies/com-hpc/>
- COM-HPC Portfolio: <https://www.congatec.com/us/products/com-hpc/>
- Modules based on Intel® Xeon® D processor: <https://www.congatec.com/en/technologies/intel-xeon-d-modules/>

congatec.com



The background features a complex, abstract pattern of glowing, overlapping lines in shades of blue, purple, and yellow, creating a sense of depth and movement. A solid red rectangular box is positioned on the left side of the image, containing the text.

Thank you  
for watching!

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