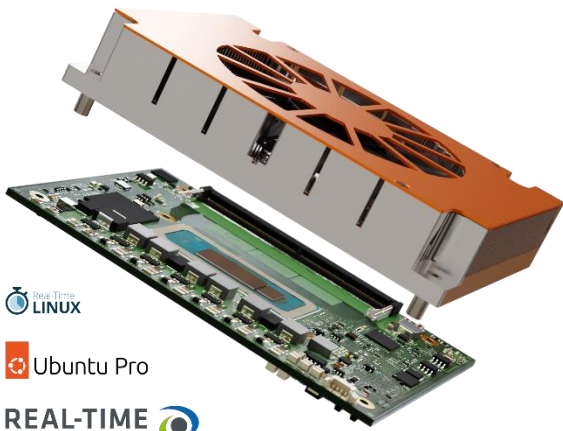# High-Performance aReady.COM Standard Module

conga-aCOM/cRLP

aReady.COM

- Based on conga-HPC/cRLP-i5-1340PE

- High-Performance configuration with 2 pre-configured virtual machines

- Real-Time Linux OS on 2 Cores

- Ubuntu Pro running on 10 Cores

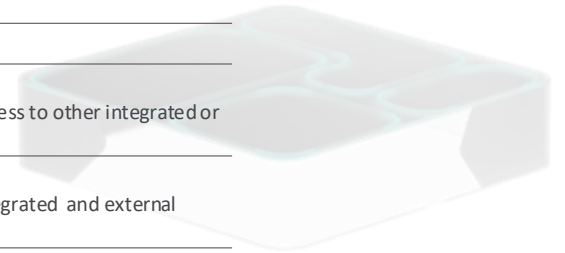- Incl. active cooling solution with heatpipes

Operating Systems

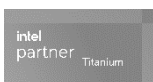|	
Real-Time Linux	RTS Real-TIme Linux reference installation with Kernel 6.1 (Realtime-Preempt, longterm)
Ubuntu Desktop	Ubuntu 22.04 LTS, "Ubuntu Pro" subscription including 10 years security coverage

Virtualization

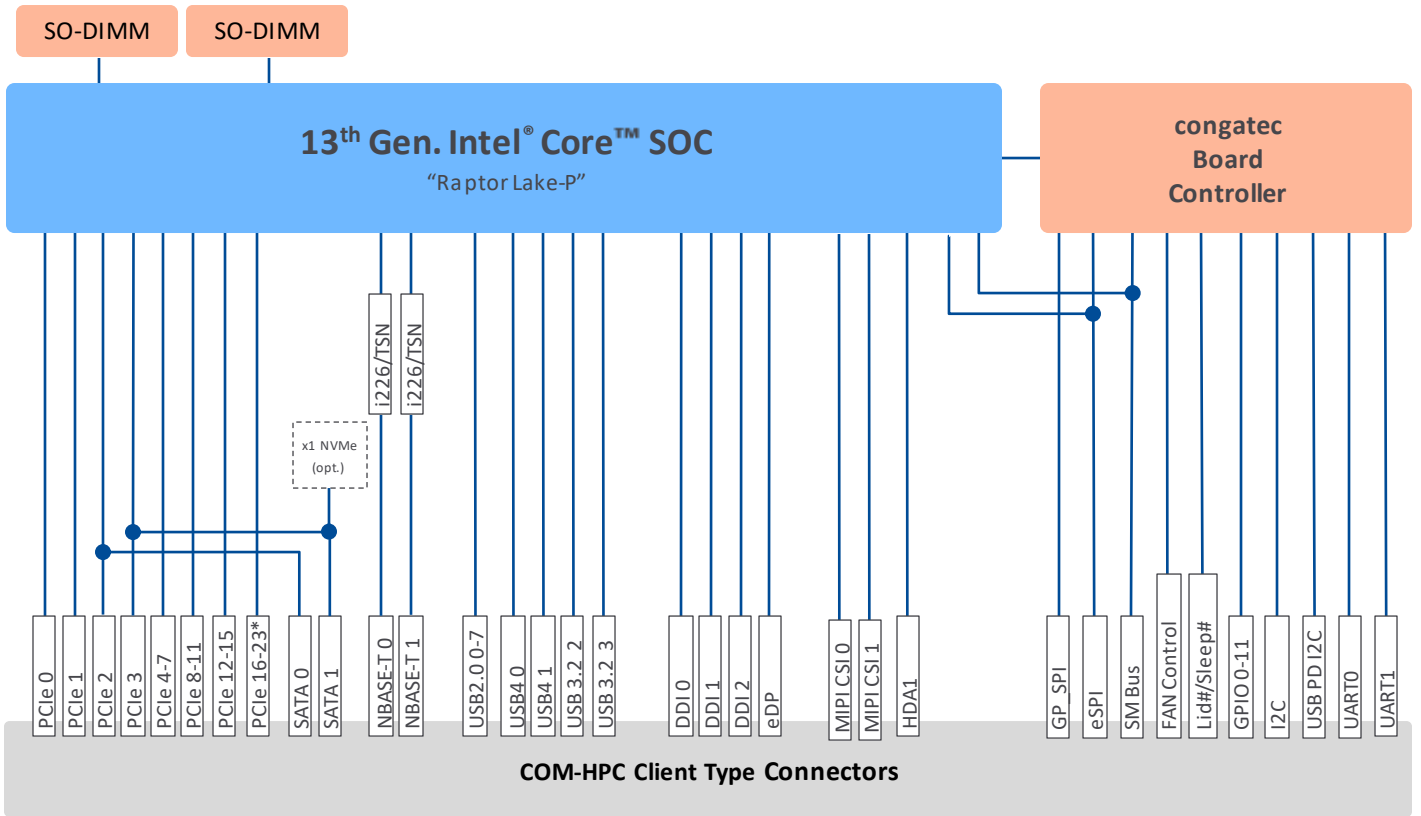|	
Hypervisor	RTS Real-Time Hypervisor, pre-configured
Partitioning	2x virtual machines (VM), 1x Real-Time, 1x General Purpose
Real-Time VM	Running on 2 P-Cores with fixed frequency Physical device access: NVMe SSD partition, 1x UART, 1x ethernet. Access to other integrated or external devices configurable
General-Purpose VM	Running on 2 P-Cores and 8 E-Cores Physical device access: NVMe SSD partition, 1x UART, 1x ethernet, integrated and external devices

Hardware

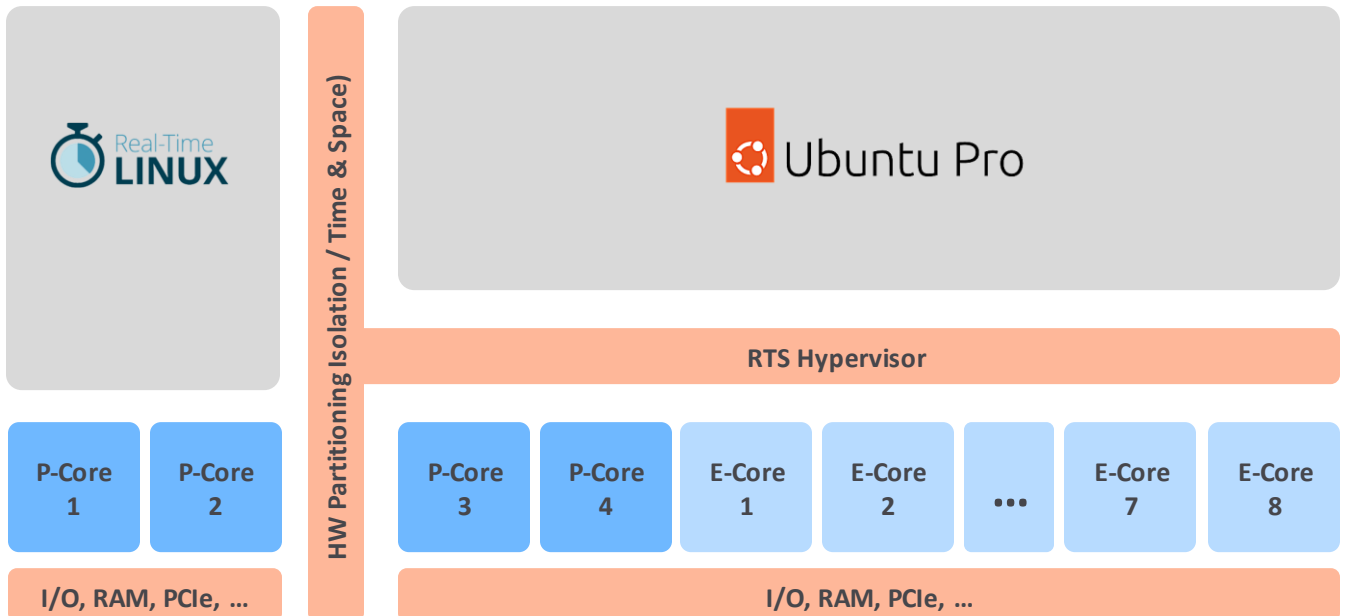|	
Form factor	COM-HPC Client 120 mm x 95 mm
Processor	Intel® Core™ i5-1340PE Processor with 4 P-Cores
Graphics	Intel® Iris® Xᵉ Graphics architecture	Supports up to 4 independent displays
Memory	16 GB DDR5 4800 MT/s DRAM
Mass Storage	128 GB NVMe SSD connected via PCIe (soldered)
Temperature	Humidity	0 °C to 60 °C	10% to 90% r. H. non cond.
Interfaces	8 x PCIe Gen5; 2 x4 PCIe Gen4; up to 8 PCIe Gen3 2x USB4; 2 x USB 3.2 Gen2x1; 8 x USB 2.0 up to 2x SATA	2 x UART	2 x MIPI-CSI * For all interfaces please see Datasheet conga-HPC/cRLP

conga-aCOM/cRLP | Block Diagram

SO-DIMM   SO-DIMM

13ᵗʰ Gen. Intel® Core™ SOC
"Raptor Lake-P"

congatec Board Controller

i226/TSN
i226/TSN

x1 NVMe (opt.)

| PCIe 0 | PCIe 1 | PCIe 2 | PCIe 3 | PCIe 4-7 | PCIe 8-11 | PCIe 12-15 | PCIe 16-23* | SATA 0 | SATA 1 | NBASE-T 0 | NBASE-T 1 | USB2.0 0-7 | USB4 0 | USB4 1 | USB 3.2 2 | USB 3.2 3 | DDI 0 | DDI 1 | DDI 2 | eDP | MIPI CSI 0 | MIPI CSI 1 | HDA 1 | GP SPI | eSPI | SM Bus | FAN Control | Lid#/Sleep# | GPIO 0-11 | I2C | USB PD I2C | UART0 | UART1 |

COM-HPC Client Type Connectors

conga-aCOM/cRLP | System Consolidation

Real-Time LINUX

HW Partitioning Isolation / Time & Space)

Ubuntu Pro

RTS Hypervisor

| P-Core 1 | P-Core 2 | | P-Core 3 | P-Core 4 | E-Core 1 | E-Core 2 | ••• | E-Core 7 | E-Core 8 |

I/O, RAM, PCIe, …   **I/O, RAM, PCIe, …**

congatec

Article	PN	Description
conga-aCOM/cRLP	320000	a Ready.COM including COM-HPC Size A module based on Intel® Core™ i5-1340PE processor with 4 P-cores 1.8GHz up to 4.5GHz Turbo and 8 E-cores 1.3GHz up to 3.3GHz Turbo | 16GB Dual channel DDR5 4800 MT/s | 128 GB NVMe SSD | Active cooling solution (bore hole) Pre-installed Software: RTS Hypervisor (including evaluation license) | Real-Time Linux | Ubuntu Pro Desktop
conga-HPC/EVAL-Client	065600	Evaluation Carrier Board for COM-HPC Client type Modules.