



The Latest Trends in Open Standards SoM Interfaces

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INNOVATIVE TECHNOLOGIES • SUDDEN SERVICE • GLOBAL REACH



ABOUT US

Founded in 1976, Samtec is much more than just another connector company, we put people first with a commitment to exceptional service and quality products. We believe that taking care of our customers and our employees is paramount in how we approach our business. This belief is deeply ingrained throughout Samtec and means that you can expect **exceptional service** coupled with **technologies** that take the industry further faster.

GLOBAL REACH



HEADQUARTERS
NEW ALBANY, IN
USA

40 LOCATIONS

125+ COUNTRIES SERVED

7,500+ EMPLOYEES

PRIVATELY
OWNED COMPANY

SUDDEN SERVICE



MORE THAN 200k PART
NUMBERS SHIP IN 1 DAY



24-HOUR FREE
SAMPLES



2 DAYS TRANSIT TO
ALL MAJOR MARKETS



#1 CONNECTOR
MANUFACTURER

INDUSTRY UPDATE

SALES GROWTH (10-year span)

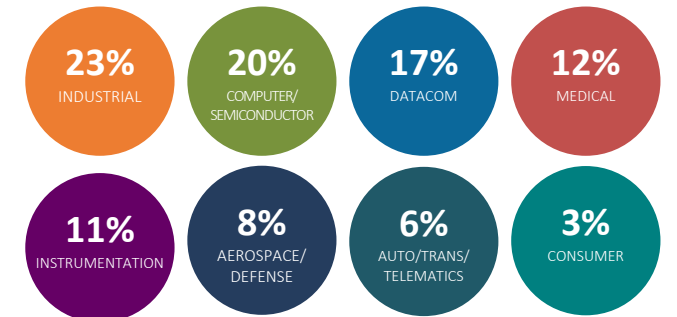
SAMTEC



INDUSTRY

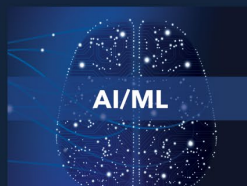


MARKETS SERVED



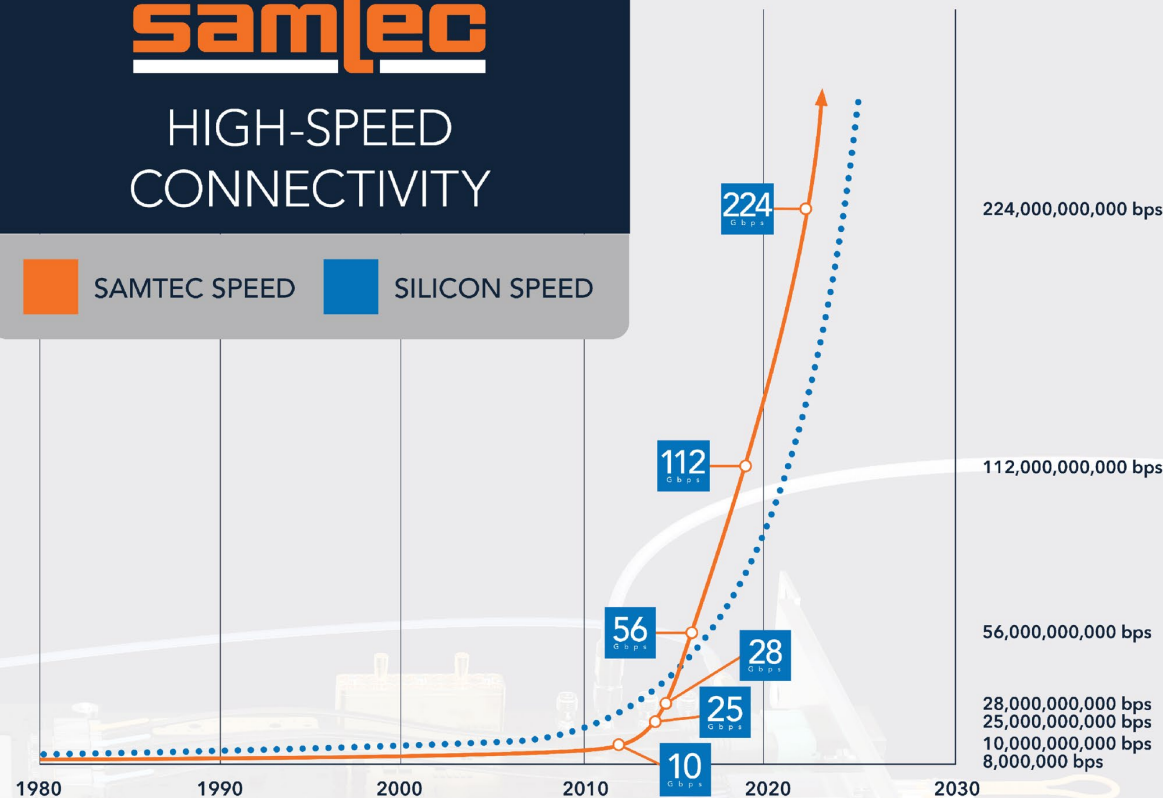
THE TECHNICAL RENAISSANCE IS...

...driven by *progress*, challenged with unprecedented performance *demands*, a catalyst for next level technologies and *innovation*...



samtec
HIGH-SPEED CONNECTIVITY

■ SAMTEC SPEED ■ SILICON SPEED



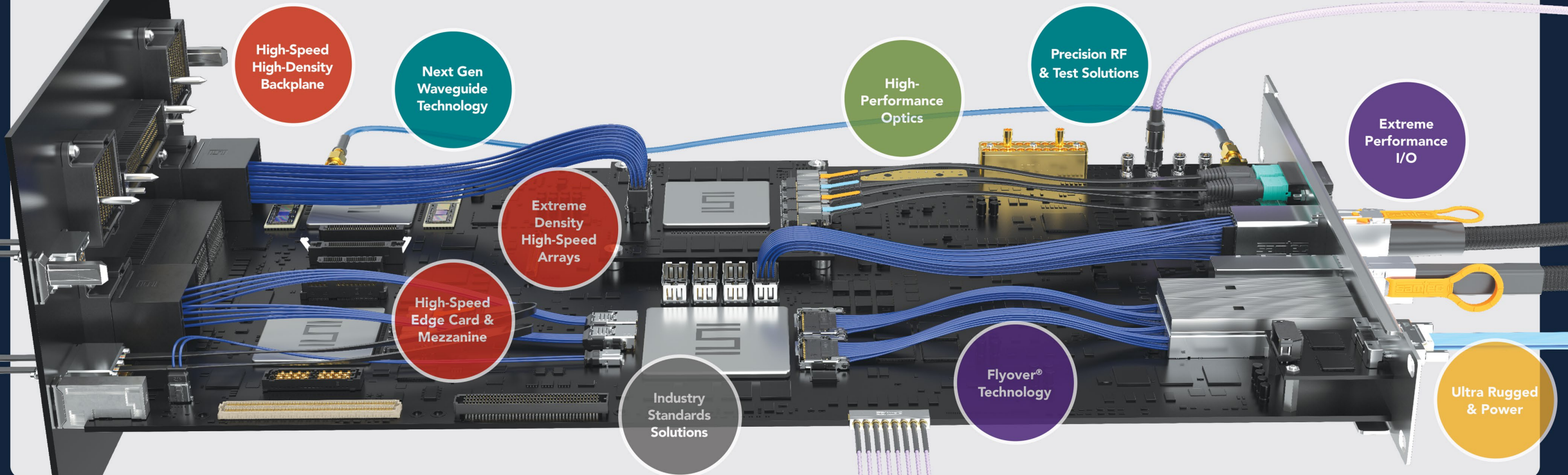
...and enabled by Samtec's

SILICON-TO-SILICON™ SOLUTIONS

SILICON-TO-SILICON™ CONNECTIVITY SOLUTIONS



... INNOVATIVE PRODUCTS & NEXT GEN SYSTEM EXPERTISE
ENABLING FULL CHANNEL OPTIMIZATION



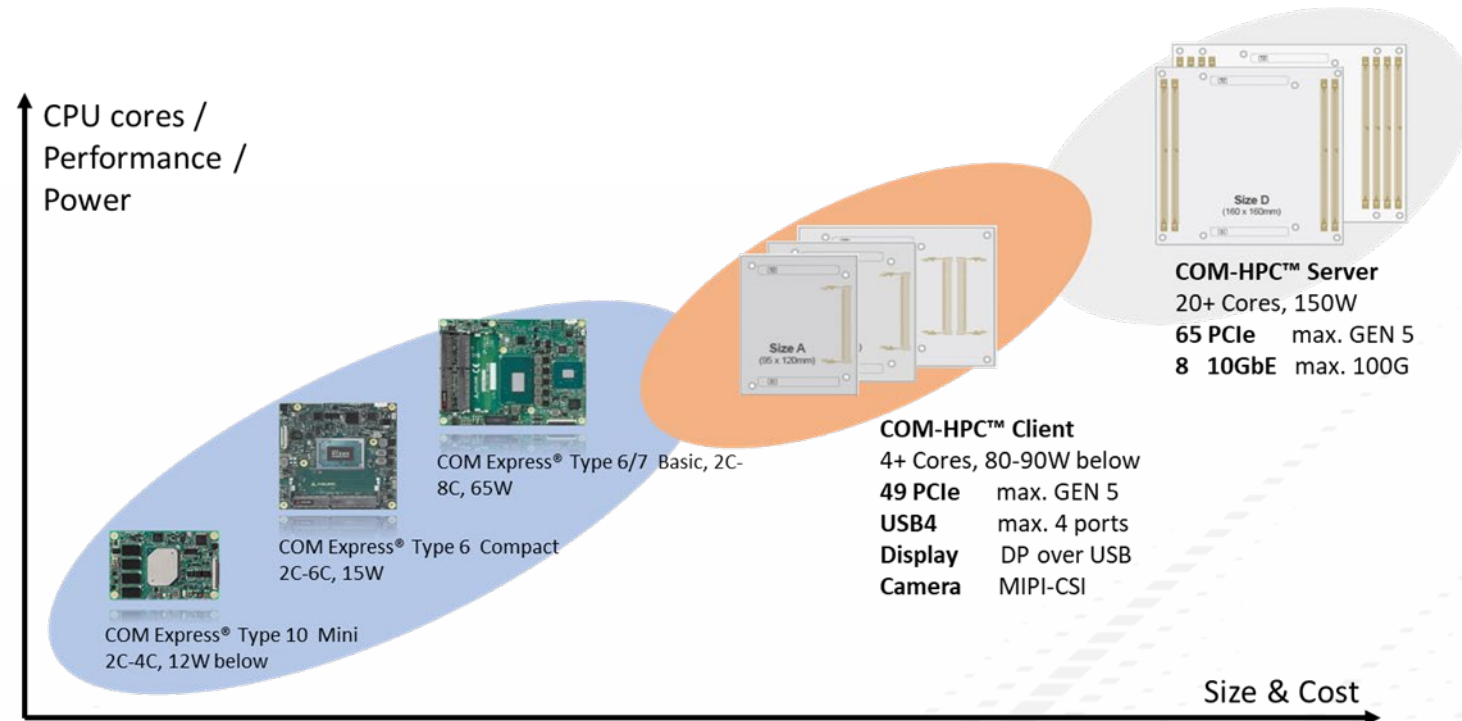
SoM/CoM Evolution

- SoM/CoM Concept

- CPU module with standard compute core functions
- Carrier board with customer specific functions & size

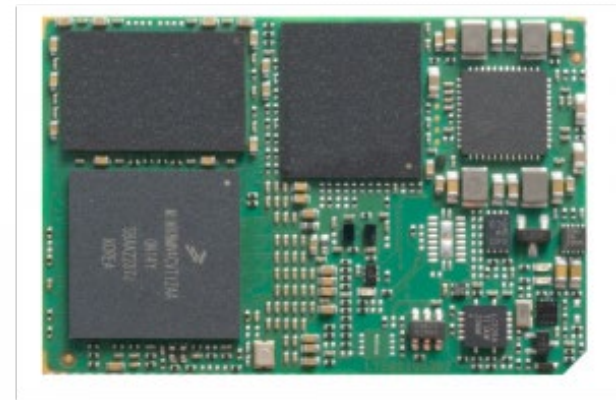
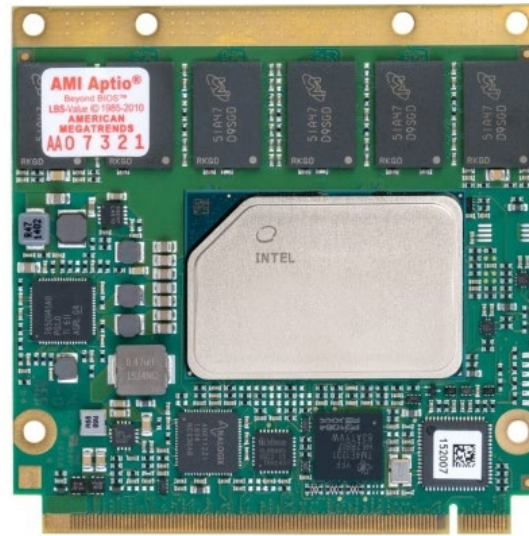
- SoM/CoM Benefits

- Faster time to market
- Reduced development costs
- Scalable product range
- Allows customer focus on system features
- Faster reaction to market trends
- Second source philosophy
- Minimize inventory cost



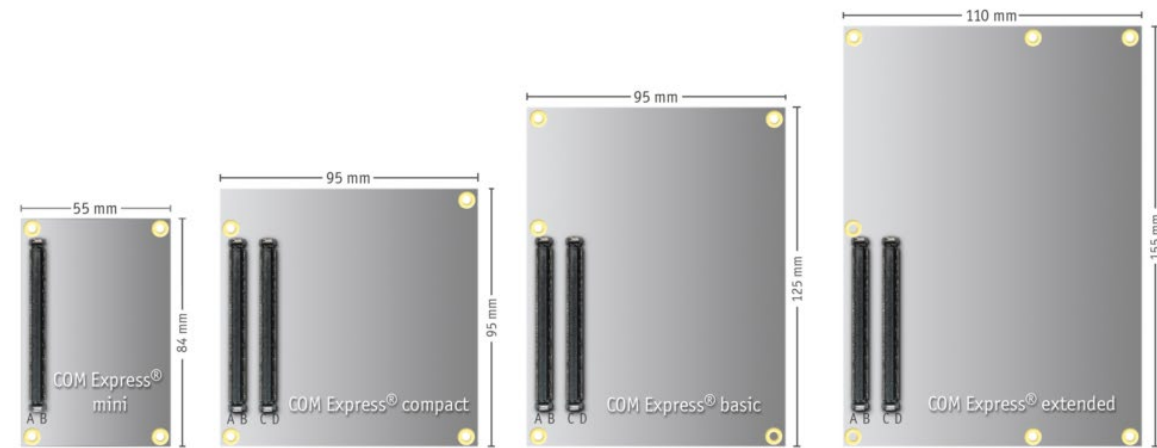


Popular SGET SoM/CoM Solutions



PICMG[®] COM Express[®] Overview

- Family of modular, small form factor CoM specifications for embedded computing
- One of the most popular embedded hardware standards in the world
- Eight different Types
- Four different sizes
- Three major revisions
- **COM Express 3.1 Spec.**
- USB4 support for Type 6 designs
- CEI sideband 10 GbE signaling for Type 7 modules
- PCIe 4.0 (16 Gb/s) support across all module types



PICMG® COM-HPC® Overview



- Why a new standard?
- The COM Express connector is limited
- Max. 32 lanes PCIe 3.0 (8 Gb/s)
- Max. 10 Gb Ethernet per signal pair

- **COM-HPC target**
- Support for PCIe 5.0 (32 Gb/s)
- 64 PCIe Lanes
- Min. 25 Gb Ethernet per signal pair to support 100 Gb Ethernet
- Update of other interfaces

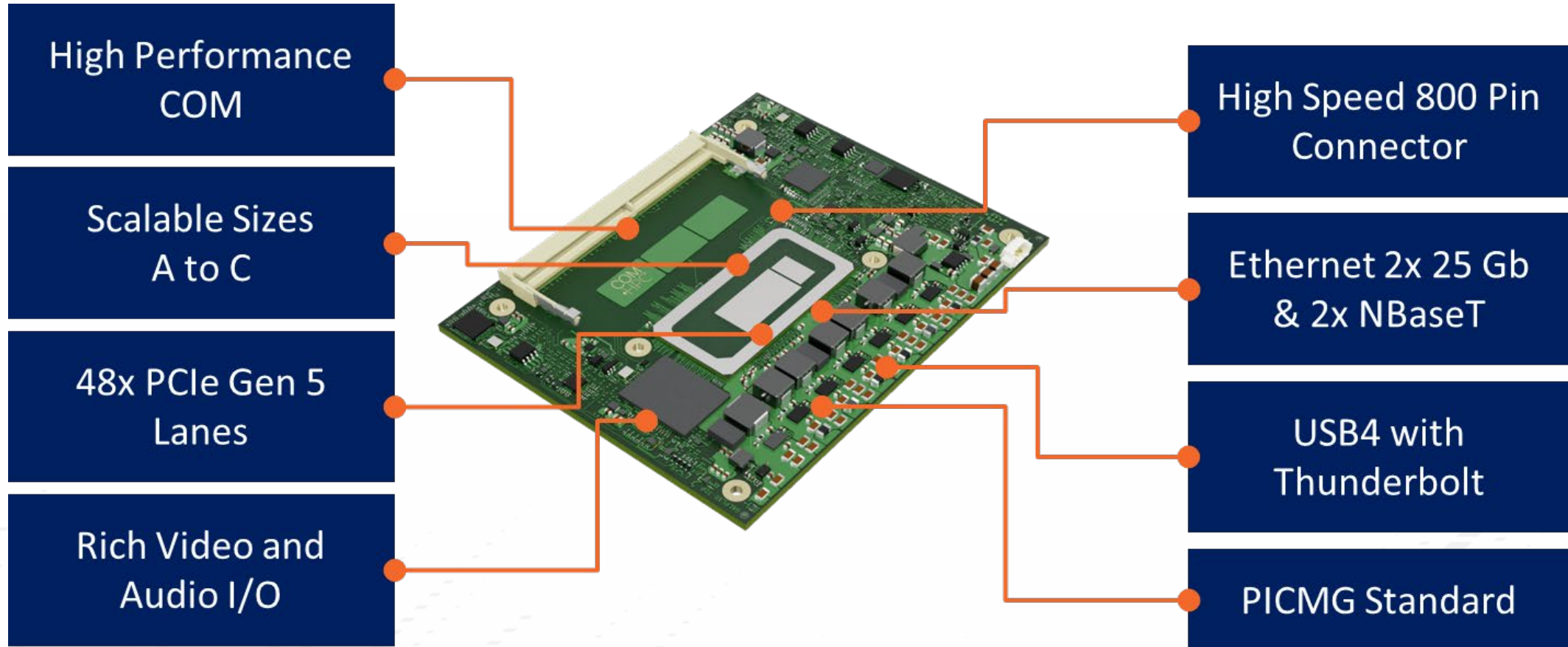
- **COM-HPC will not replace COM Express®**

- It extends the Server-On-Module ideas

Feature	COM-HPC	COM Express
Connector Bandwidth	32 Gbps	10 Gbps
Connector Pins	800	440 max
Full size DIMMS	up to 8	up to 2
SO-DIMM Support	up to 4	up to 2
CPU power support	150W	80W
PCIe	up to 5.0	up to 3.0
PCIe lanes	65	32
10G BASE-T	2	1
Ethernet KR interfaces	8 at up to 25 Gbps	up to 4 at 10 Gbps
USB Support	Up to USB4	Up to USB 3.0
Non x86 CPU Support	Yes	No

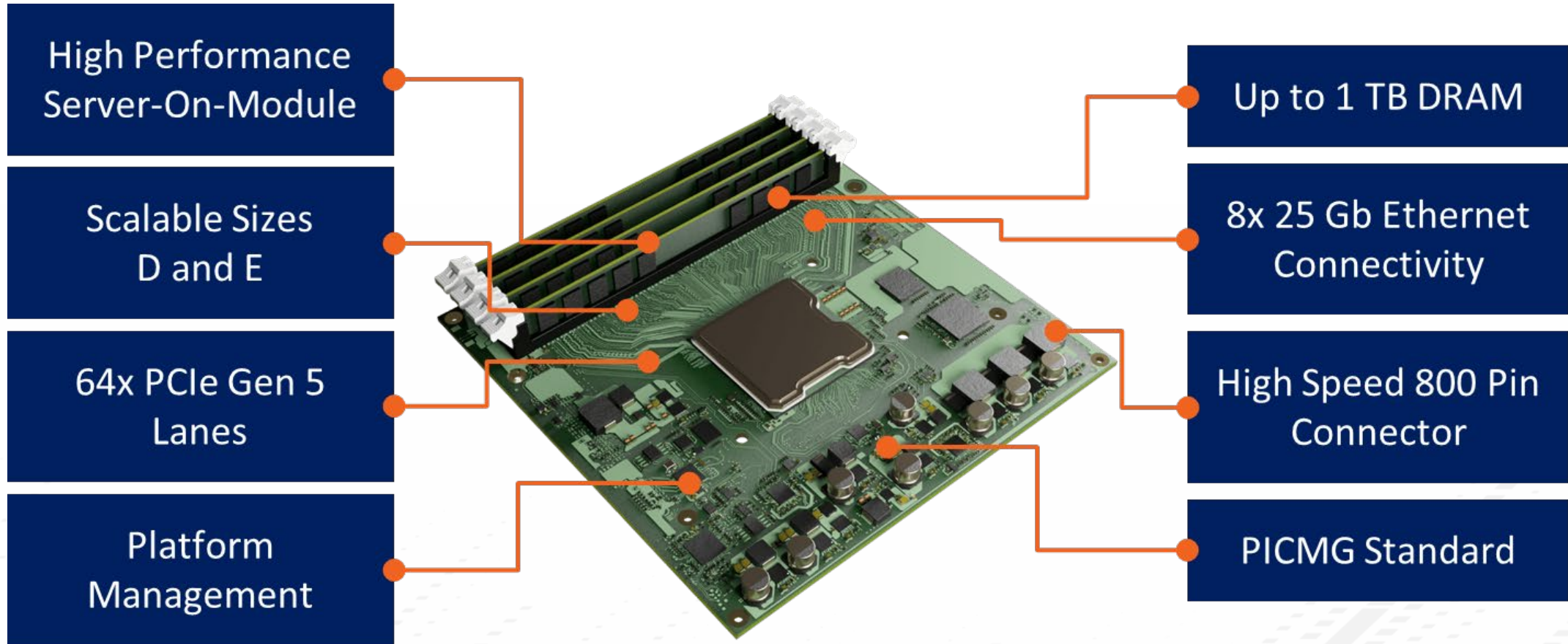


PICMG COM-HPC Client





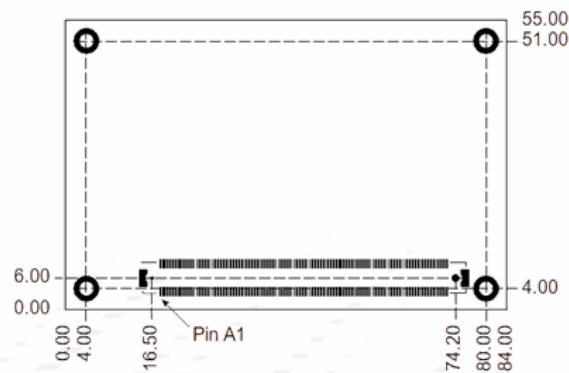
PICMG COM-HPC Server



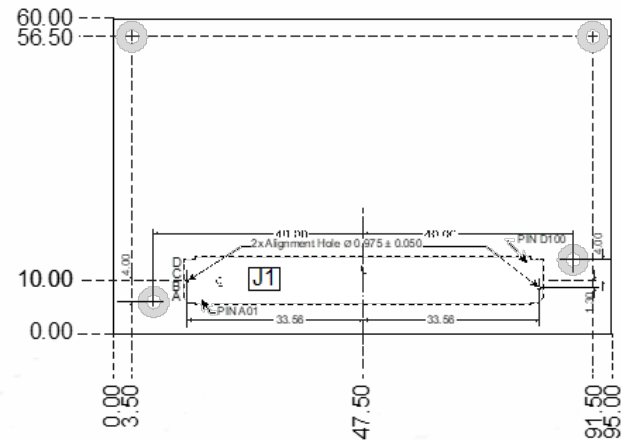
PICMG COM-HPC 1.2 Spec – What’s New?

- COM-HPC “Mini”
- Half size “mini” (95 x 60mm) of a Size A
- Define heat spreader and mounting holes
- Remove J2 for the COM-HPC mini definition
- Update J1 pinout → Supports PCIe 5.0, 25 GbE, USB4 . . .

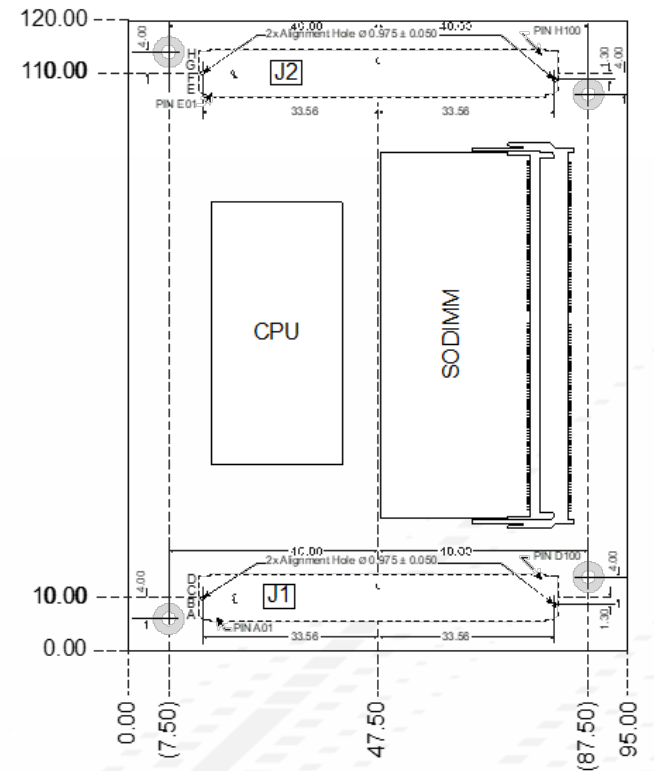
COM Express mini



COM-HPC Size mini

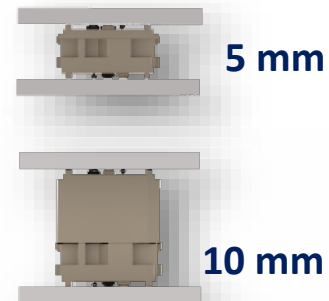


COM-HPC Size A



Samtec COM-HPC Interconnect Solutions

- High-performance, flexible open-pin-field array
- High-speed PCIe 5.0 and 100 Gb Ethernet capable
- 400 pin (4 x 100) BGA mount
- 2.2 / 2.4 / 2.2 mm row pitch
- 0.635 mm pitch
- 5 mm or 10 mm stack heights
- Dimensions: 68.62 mm x 9 mm x stack height
- Up to 360 W at 11.4 – 12.6 Volts



BGA mount increases density and performance



Samtec

SUDDEN SERVICE®