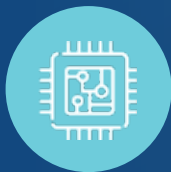
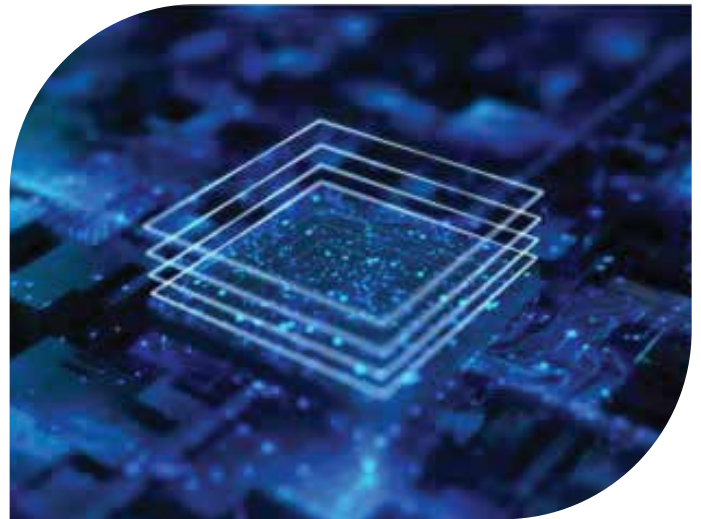




# ALPHAWAVE SEMI

## Leading the World in High-speed Connectivity Solutions

Alphawave Semi is a global leader in high-speed connectivity for the world's technology infrastructure. Our IP and silicon solutions therefore meet the needs of global tier-one customers in data centers, cloud computing, artificial intelligence, telecom/5G wireless, and solid state storage. Our mission is to focus on the harest-to-solve connectivity challenges.



### High Performance Connectivity IP

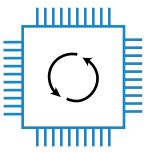
1-224Gbps PAM4/NRZ SerDes  
PCI-Express® 1.0 to 6.0 and CXL 3.0  
Ethernet 400G/800G MAC  
HBM3/2E  
DDR5 and LPDDR5  
UCle Die to Die



### Custom Silicon Solutions

Spec to Silicon  
Custom Chiplets  
Advanced Packaging  
TSMC VCA Partner

# Portfolio



## Silicon IP

High Performance  
Connectivity IP Portfolio

- ▶ PCIe®/CXL
- ▶ Ethernet
- ▶ DDR/HBM/LPDDR

**PipeCORE PCIe® and CXL**  
1-64Gbps DSP PHY

**PiCORE PCIe Controller**  
Supports PCIe 6.0 spec

**KappaCORE CXL Controller**  
Supports CXL 3.0 base spec

**AthenaCORE LR MSS**  
1-224Gbps DSP PHY

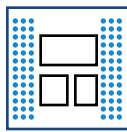
**ZeusCORE XLR MSS**  
1-112Gbps DSP PHY

**AlphaCORE LR MSS**  
1-112Gbps DSP PHY

**ApolloCORE MR/VSR MSS**  
10-112Gbps Low Power PHY

**OmegaCORE 1.6T/800G/400G  
Multi-protocol Controller**  
1.6T/800G/400G Ethernet MAC/PCS/FEC

**MidasCORE HBM3/2E PHY**  
**DemeterCORE DDR5**  
**DemeterCORE LPDDR5**



## Chiplets

Low power, Low Latency  
Supports UCIe

- ▶ IO Chiplet
- ▶ Memory Chiplet
- ▶ Compute Chiplet

**AresCORE 16Gbps and 24Gbps  
UCIe D2D PHY**

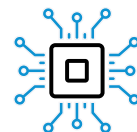
Supports advanced packaging for maximum density, and organic substrates for the most cost-effective solution covering all market segments.

- Chip-on-Wafer-on-Substrate (CoWoS)
- Integrated-Fan-Out (InFO)

**GammaCORE UCIe D2D  
Controller Streaming Protocol**  
AXI, CXS, CHI

We Focus on the Hardest to  
Solve Connectivity Challenges.

To find out more about  
Alphawave Semi™,  
visit: [www.awavesemi.com](http://www.awavesemi.com)



## Custom Silicon

Optimized for power,  
performance and area

Provide greater design  
flexibility and a  
competitive edge

When standard products  
don't meet your business  
or technical requirements

Front-end Design,  
Integration, and  
Verification

IP Development  
Physical Design  
Wafer Manufacturing

Package and Assembly  
Test, Quality and Supply  
Chain Management



Faster Speed



Lower Power



Lower Cost