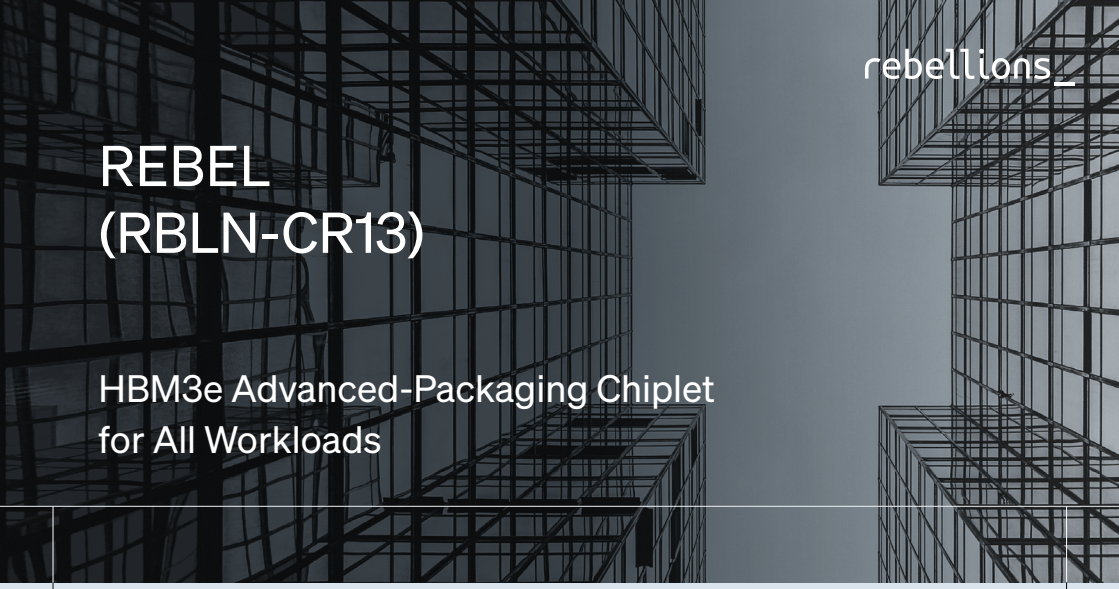


rebellions_

REBEL (RBLN-CR13)

HBM3e Advanced-Packaging Chiplet for All Workloads

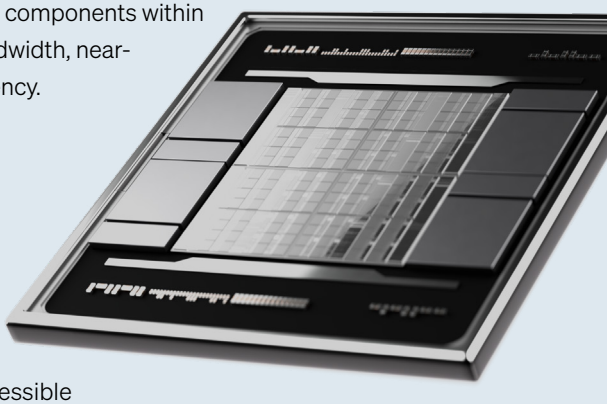
REBEL(RBLN-CR13) is Rebellions' high-grade chiplet-based AI accelerator engineered specifically for data center-scale workloads. Designed from the ground up for exceptional efficiency, high hardware utilization, low latency, and seamless scalability, **RBLN-CR13** sets a new standard in AI performance. Equipped with 144GB of HBM3e memory, it delivers an impressive 1 PFLOPS of FP16 compute power within a 350W power envelope. **RBLN-CR13** also leverages the UCIe-Advanced specification for ultra-high bandwidth density, near-zero latency, and remarkable energy efficiency.

RBLN-CR13	
Process Node	Samsung 4nm
FP16	1,024 TFLOPS
FP8, FP4	2,048 TFLOPS
External Memory Capacity	144 GB
External Memory Bandwidth	4,912 GB/s
TDP	350 Watts
Host/Chip Interface	PCIe Gen5 (128 GB/s)
UCIe Interconnect Bandwidth	1-1.5 TB/s
Availability	June, 2025

- Ultra-low Latency
- Energy Efficiency
- Scalability
- Large Workloads in Data-Centers
- Reliable through RAS Support

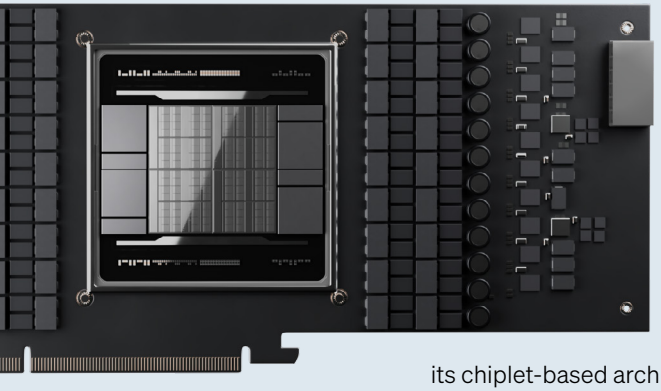
UCIe Die-to-Die Interconnect

RBLN-CR13 leverages the UCIe-Advanced specification die-to-die interconnect to support its flexible, scalable and power-efficient chiplet architecture. The UCIe provides a standardized connection, enabling efficient communication between different components within a single package. It enables ultra-high bandwidth, near-zero latency, and remarkable energy efficiency.



HBM3e

RBLN-CR13 integrates four advanced HBM3e modules, delivering a substantial 144GB of memory capacity and a high bandwidth of 4.8TB/s, fully accessible through an on-chip dense mesh fabric. With the HBM3 controller and PHY embedded within its Neural Engine Clusters, **RBLN-CR13** is equipped to meet future bandwidth demands, ensuring optimal performance for next-generation AI workloads. This seamless HBM3e integration, coupled with fast, high-capacity memory, enables **RBLN-CR13** to efficiently handle large models and complex data streams.



Heterogeneous Integration

Thanks to the scalable chiplet architecture, Rebellions has a roadmap of advanced derivatives that leverage its chiplet-based architecture for seamless heterogeneous integration. These solutions add I/O dies, enhanced memory capacity, and integrated CPU functionality, further extending the **RBLN-CR13** architecture with specialized options for diverse AI infrastructure needs.

Discover More
rebellions.ai

rebellions_