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Rakon launches Niku™ semiconductor chip; AI computing product portfolio

- Rakon's latest semiconductor chip, Niku™, is the first in the company's portfolio of products for the AI Hardware market
- Overall generative AI market is predicted to grow to US$1.3 trillion in next 10 years; global AI infrastructure market predicted to reach over US$400 billion in next 6 years
- Rakon is working closely with leading players in AI computing hardware; projects tangible substantial benefits within the next 12-18 months
- The company sees AI computing as an emerging core market, alongside Telecoms, Space and Defence, and Positioning.

Rakon Limited (NZX: RAK), a high technology manufacturer of frequency control and timing solutions, has launched its latest semiconductor chip, Niku™, (first released for customer testing in FY23), designed in-house for the company's Ultra Stable Temperature Compensated Crystal Oscillators (TCXOs).

Rakon Chief Executive, Dr Sinan Altug, says the launch of Niku™ lays the foundations for the company's Artificial intelligence (AI) computing product portfolio, which delivers the performance needed to enable datacentres to meet the additional requirements created by AI workloads.

"AI workloads, including generative AI programs like Google's Bard and OpenAI's ChatGPT, require vast computing resources and put additional workload requirements on datacentres for improved speed and efficiency, which is best achieved through parallel and distributed computing," says Dr Altug.

Parallel computing refers to the use of multiple processors on a single computer to process tasks in parallel. Parallel and distributed computing uses multiple parallel computing devices working together and requires tight synchronisation of the distributed data.

"Rakon's industry-leading technology and products are ideally suited for overcoming the synchronisation challenges that datacentres face with real-time parallel and distributed computing. Our solutions help customers unlock the major performance gains demanded by AI workloads, including high bandwidth availability and ultra-low latency," says Dr Altug.

"With over 50 years' of leadership in developing solutions at the forefront of technology, from 5G and 6G to cloud computing and NewSpace commercial satellites, Rakon is no stranger to pioneering shifts in the tech landscape. As part of our strategy, we're focused on growing our markets and entering into new ones, diversifying our revenue.

"The launch of Niku™ as the first product in our AI computing product portfolio is an exciting first step towards AI computing becoming a brand new core market for Rakon. We expect to introduce more of our next-generation products in the coming year which will add to this AI portfolio."

According to a report by Bloomberg Intelligence the generative AI market is poised to grow to US$1.3 trillion over the next 10 years from a market size of just $40 billion in 2022.[1]

[1] https://www.bloomberg.com/company/press/generative-ai-to-become-a-1-3-trillion-market-by-2032-research-finds/

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Research firm, Data Bridge Market Research, projects spending in the global AI infrastructure market—including data centres, networks and other hardware —to reach US$422.55 billion by 2029, growing at a compound annual rate of 44% over the next six years.[2]

Rakon notes that general market size representations do not precisely reflect its specific sub-segment, which is further complicated by an evolving product portfolio and ever-changing customer requirements that make it challenging to pinpoint projections.

The company is currently working closely with leading players in AI computing hardware, helping to enable the next generation platforms. Progress made through these collaborations, and the Niku™ launch, has allowed Rakon to refine its projections for realising tangible substantial benefits, in terms of design wins, collaborations, and potential revenue growth, to within the next 12-18 months.

All Niku-based oscillators feature Rakon's game-changing XMEMS® manufacturing technology which enables the company to deliver leading product performance in the smallest possible package.

In addition to AI computing, Rakon's Niku-based products also satisfy the requirements for other demanding applications such as 5G, 5G Advanced and 6G infrastructure, data centres, precision positioning, automotive/vehicle-to-everything (V2X) communication, Industry 5.0 and satellite terminals.

The launch of Niku™ is an important milestone for Rakon, aligning with the company's three-year growth strategy. The next product in Rakon's AI computing portfolio, MercuryX™, is scheduled for launch before the end of 2023 and has been released to selected customers for testing.

For more information on the new Niku™ Ultra Stable TCXO specifications and availability, please visit Rakon's website at https://www.rakon.com/niku.

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About Rakon

Rakon is a global high technology company and a world leader in its field. The company designs and manufactures advanced frequency control and timing solutions. Its three core markets are Telecommunications, Positioning and Space and Defence.

Rakon's products are found at the forefront of communications where speed and reliability are paramount. Its products create extremely accurate electric signals which are used to generate radio waves and synchronise time in the most demanding communication applications.

Rakon has three manufacturing plants, six research and development centres, and sixteen customer support offices worldwide. Founded in Auckland in 1967, Rakon is proud of its New Zealand heritage. It is a public company listed on the New Zealand stock exchange, NZX, ticker code RAK.

[2] https://www.wsj.com/articles/ai-ready-data-centers-are-poised-for-fast-growth-fadae952