

Fact Sheet

Connectivity, anytime, anywhere

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. Precise timing is required for demanding applications within Rakon's three core markets of Telecommunications, Space & Defence and Positioning.

All communication and location systems require a precise electronic 'heart beat' or frequency reference. Rakon's advanced clocking solutions provide extremely accurate electrical signals, which are then used to generate precise electrical, radio or optical signals in systems and extreme environments everywhere.

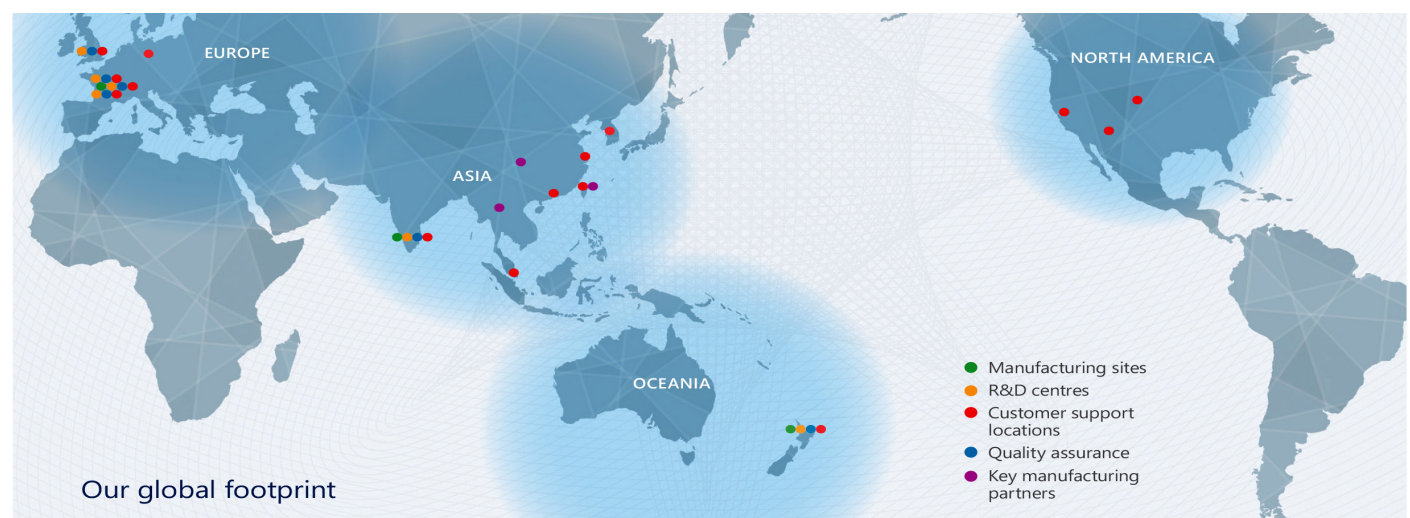
Rakon's products help set the frequency that all communications transmit and receive on. They also hold time and provide a stable timing reference for electronic equipment around the world. This enables synchronised time globally, and the efficient and reliable transfer of data at ever-increasing precision and speed.

Rakon was founded in Auckland in 1967. It is a public company listed on the New Zealand stock exchange, NZSX ticker code RAK.

Three year performance snapshot

NZ\$ Millions	FY20	FY21	FY22
Revenue	119.0	128.3	172.0
Underlying EBITDA ¹	14.8	23.5	54.4
Net profit/(loss) after tax	4.0	9.6	33.1
Earnings per share (cents)	1.8	4.2	14.6
Operating cash flow	9.4	20.1	30.2
Capital expenditure	4.6	5.1	10.1
Net cash/(debt)	(7.9)	5.0	23.2

Our global footprint



70
countries with
Rakon customers

6
company and partner
manufacturing sites

6
R&D centres of
excellence

15
customer support
locations

~1000
full-time equivalent
employees worldwide

40+
nationalities in the
Rakon family

¹ Definition of Underlying EBITDA: Rakon has used 'Underlying EBITDA' as a non-gap financial measure in this document. Underlying EBITDA is defined as 'Earnings before interest, tax, depreciation, amortisation, impairment, employee share schemes, non-controlling interests, adjustments for associate's share of interest, tax and depreciation, loss on disposal of assets and other cash and non-cash items'. Refer to note 5 of the Financial statements section of the Annual Report 2022 for additional information including a reconciliation to Net Profit After Tax (NPAT).

Delivering against our strategy

Our four strategic pillars – technology innovation, core markets, customer partnerships and flexible, scalable operations – drive what we do at Rakon.

They underpin our planning, activities and how we measure performance. They are critical to the creation of long-term value, while providing the flexibility to explore emerging opportunities and thrive.

Financial year 2022

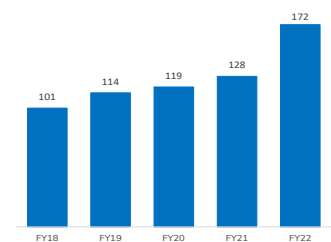
12 months ended 31 March 2022.

All amounts in this document are in NZ\$ unless otherwise specified.

Revenue \$m

\$172.0m

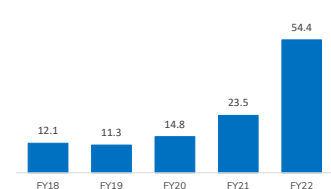
▲ 43.7m +34%



Underlying EBITDA¹ \$m

\$54.4m

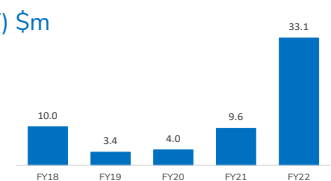
▲ 30.9m +132%



Net Profit After Tax (NPAT) \$m

\$33.1m

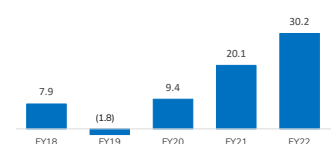
▲ 23.5m +244%







Operating cash flow \$m

\$30.2m

▲ 10.2m +51%



Markets and products

CORE MARKETS (SHARE OF REVENUE FY22)	 <p>Telecommunications (50%)</p>	 <p>Space & Defence (15%)</p>	 <p>Positioning (16%)</p>	 <p>IoT, Emerging & Other (19%)</p>
MARKET DEFINITION	<p>The telecommunications infrastructure market encompasses the equipment that enables communications networks to operate. This includes 4G/5G small cells, mobile base stations, microwave, backhaul networks as well as data centres (e.g. cloud computing), transport switches, routers and optical transmission equipment.</p>	<p>From traditional satellites, NewSpace², deep space exploration, avionics to radar, our products go into applications where high-reliability, precision and performance are all critical.</p> <p>² NewSpace refers to a globally emerging private / commercial spaceflight industry. This includes aerospace companies and ventures working to develop faster, better and cheaper access to space and space technologies. It includes Low Earth Orbit satellites.</p>	<p>Our products provide the accuracy required for applications including Global Navigation Satellite System (GNSS) equipment, high precision positioning (surveying, mining and agriculture), emergency locator beacons, aviation, drones, automotive, asset tracking and sport and recreation products.</p>	<p>We also supply into other applications such as wireless control, test and measurement, the Internet of Things (IoT) including Machine-to-Machine (M2M), smart grids and metering, as well as other emerging markets.</p>
PRODUCTS	OCXOs, TCXOs, VCXOs, XO and Crystals.	System Solutions, USOs, OCSOs, OCXOs, TCXOs, VCSOs, VCXOs, XOs, VCOs, Crystal Filters and Crystals.	OCXOs, TCXOs, VCXOs, XO and Crystals.	OCXOs, TCXOs, VCXOs, XO and Crystals.
KEY POINTS FROM FY22	<p>Strong 5G growth and improved market share</p> <ul style="list-style-type: none"> The telecommunications segment represents 50% of our total revenue, and revenue has doubled in five years, with a compound annual growth rate of 21%. Revenue was up 12% on FY21, driven by increased Tier 1 customer share and the continued rollout of 5G networks. <p>While growth momentum remained strong, delivery was constrained by component shortages and capacity limitations, particularly in India. This has resulted in a strong order book for FY23, with further measures underway to improve capacity and pace of delivery in NZ and India.</p> <ul style="list-style-type: none"> Gross margin % increased to 44% from last year's 40% from an improved product mix. This is primarily due to our ability to command higher margins for our newer and more advanced products. We experienced a substantial uptake of new products over the year, used in 5G radio heads and small cells using major semiconductor reference designs. We were pleased to enter three new strategic partnerships with important players in 5G and O-RAN networks. 	<p>New LEO satellite (NewSpace products) announced</p> <ul style="list-style-type: none"> We announced a new suite of Low Earth Orbit satellite products in the second half of the year, and now offer the broadest range of frequency generation, communications and positioning products in the sector. We continued with the transformation of our Space customer base with more of the Space revenue emanating from NewSpace customers. Revenue 13% lower, primarily due to delayed investment in US Defence programme spending from the prior year. After a steady first half, second half revenue was impacted by reduced US government investment in defence and a subsequent decrease in product demand. Defence represents 60% of this segment and 9% of Rakon's total revenue. The gross margin percentage remained relatively consistent. 	<p>Strong underlying growth in industrial, automotive and precision</p> <ul style="list-style-type: none"> Revenue was 94% higher from FY21, driven by industrial applications and the successful capture of opportunities stemming from global TCXO chip shortages. A significantly improved mix of higher margin products resulted in the average gross margin increasing from 48% to 56%. 35% growth occurred in underlying industrial, automotive and precision segments. We are seeing demonstrable benefits from our strategic pivot to industrial and precision applications such as autonomous agricultural, mining and industrial machinery. Existing customer relationships were leveraged leading to increased share of business. The TCXO shortage opportunities enabled us to build new customer relationships and develop some longer-term business. 	<p>Worldwide chip shortage opportunity captured</p> <ul style="list-style-type: none"> Extraordinary revenue growth (up 363%) and gross margin percentage was achieved, arising from orders secured due to the global TCXO shortages for consumer IoT devices. The opportunity was captured due to Rakon's ability to design a solution and quickly scale up for production, with manufacturing commencing three months after securing the order. 80% of TCXO chip shortage orders were delivered with the remaining 20% to be delivered in the first half of FY23.
FY23 FOCUS	<ul style="list-style-type: none"> 5G: strong order book continues for our products in 5G base stations, distribution units and radio heads. <ul style="list-style-type: none"> Ongoing delivery risk management in NZ and India, including materials availability and India factory move. New products are planned for release – enabling greater speed, reliability, stability & resilience. Datacentres: we look to build new customer relationships as datacentres move to become communication service providers, and the need for tighter/better synchronisation evolves. Ongoing involvement continues in industry bodies developing 6G standards. 	<ul style="list-style-type: none"> Our Space order book is strong with focus on delivery. NewSpace business development: <ul style="list-style-type: none"> Bid participation/success in new mega satellite constellation contracts. Establish credibility as a key subsystem equipment provider in the ecosystem. We continue to watch defence developments closely with our US and European partners working within Rakon Trade Compliance policy and all export controls. 	<ul style="list-style-type: none"> Capture opportunities in the growing industrial positioning market. Retain and expand strategic new business in industrial, automotive, safety and tracking applications. Autonomous vehicles and industry standards are evolving – focus is on growing existing business and new opportunities where our products meet these technology roadmaps. 	<ul style="list-style-type: none"> Pursue ongoing customer requirements. Investigating new markets for business development opportunities.

Governance and leadership

Lorraine Witten
Chair and Independent Director
BMS (Hons); CFInstD; FCA

Appointed 2017

Lorraine is a professional director with extensive experience in technology and Information Communications Technology (ICT) sectors, as well as strategy and entrepreneurship.

She is Chair of Move Logistics and a director of Pushpay Holdings, Horizon Energy Group and vWork.

Lorraine is a Chartered Fellow of the New Zealand Institute of Directors and a fellow of Chartered Accountants Australia and New Zealand (CAANZ).

Board of Directors

Lorraine Witten (Chair and Independent Director), Brent Robinson (Executive Director), Yin Tang Tseng (Non-independent Director), Keith Oliver (Independent Director), Keith Watson (Independent Director), Steve Tucker (Independent Director) and Sinead Horgan (Independent Director).

Dr. Sinan Altug
Executive Director (Managing Director and CEO)
PhD (EE); MBA; MSc (EE); BSc(EE)

Sinan joined Rakon in 2002 and became CEO in April 2022. Prior to this, he was COO where he led the company's global operations to sustainably and profitably meet increasing customer demand, delivery and quality requirements. Sinan has previously been Managing Director of Rakon's European businesses based in France, and Global Business Development Director based in the US. Prior to joining Rakon Sinan held various management positions in the frequency control product industry, including Director of European Operations for Champion Technologies.

Brent Robinson
Chief Technology Officer
Hon FIPENZ

Brent has been with Rakon since 1979. As Chief Technology Officer, Brent oversees Rakon's technology development and innovation. He has 42 years' experience in the design and manufacture of crystals and oscillators, and has included leading the development of Rakon's leading products and technologies. Brent was Managing Director and Chief Executive Officer for almost 36 years, until April 2022. Under Brent's leadership, Rakon has grown into a global company and recognised leader in the frequency control product industry.

Anand Rambhai
Chief Financial Officer
CA, BCom

Anand joined Rakon in January 2012 and was appointed CFO in November 2018. He brings strong leadership, commercial skills and in-depth business knowledge to the company. As CFO he is responsible for Rakon's finance, information systems and investor relations functions. Anand's previous experience includes financial and management roles with organisations including Sony, British Telecom and Deloitte. Anand is a member of Chartered Accountants Australia and New Zealand (CAANZ).

Group Executive

Dr. Sinan Altug (Chief Executive Officer); Brent Robinson (Chief Technology Officer); Darren Robinson (Chief Marketing Officer); Anand Rambhai (Chief Financial Officer); Margo Thomas (General Manager, Global People and Capability); Scott Stemper (Global Quality Manager); Dr. Roy Cann (Head of Global Engineering), Maureen Shaddick (Company Secretary); Borja Thomas (Thomas) Schuhmacher (Head of Global Product Management) and Arun Parasnis (Managing Director, Rakon India).

Rakon share price



Data shown is in New Zealand currency.

Source: <https://nz.finance.yahoo.com/quote/RAK.NZ/history>

Financial calendar

Date	Event
11 August 2022	Annual Shareholders' Meeting
30 September 2022	Final Half Year-end (1H23)
22 November 2022	1H23 results
31 March 2023	Final year-end (FY2023)
May 2023	FY23 results
June 2023	FY23 Annual Report and Review available

Dividend policy

Rakon introduced a new dividend policy in May 2022. The policy articulates Rakon's aspirations as a growth company and confirms its intentions to maintain a strong balance sheet to ensure opportunities can be captured while risks are managed.

Under the policy, Directors will determine at least annually whether to declare a dividend, having regard to all relevant information including Rakon's current and expected operating results, its near and medium-term operational cash requirements, its plans for organic and strategic investment in growth and expansion, current and foreseeable debt levels, interest rates, market and economic conditions and any applicable funding or banking requirements.

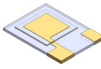
Rakon's dividend policy is available on our website: [Corporate Governance | Rakon](#)

Glossary



Crystal Filter

A filter that allows only the desired frequency to pass through to the output.



Crystal Micro-Electro-Mechanical System (XMEMS®)

Rakon's advanced quartz-based resonator technology. It is made using Rakon's NanoQuartz™ micro fabrication process, delivering unprecedented resonator and oscillator performance.



Crystal Oscillator (XO)

A quartz resonator combined with appropriate circuitry to generate a variety of repeating electrical signal waveforms (e.g. CMOS / square wave).



Crystal Resonator (Xtal)

At the heart of XOs, VCXOs, TCXOs and OCXOs are quartz crystal resonators, which naturally oscillate at a certain frequency with electrical stimulation. This frequency is based off their width and the piezoelectric effect.



Oscillator

A circuit or device that generates a fixed frequency signal and consists of a resonator and electronic components.



Oven Controlled Crystal Oscillator (OCXO)

A crystal oscillator that uses a miniaturised oven to keep its internal temperature constant.



Oven Controlled SAW Oscillator (OCSO)

An oven controlled oscillator using Surface Acoustic Wave (SAW) technology.



Surface Acoustic Wave (SAW) Resonator

At the heart of SAW oscillators are SAW resonators. This is a special type of crystal resonator that has the piezoelectric effect occurring on the resonator's surface, compared to traditional resonators which are through the bulk of the crystal resonator.



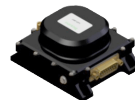
System Solutions

Refers to Rakon's solutions that include high performance products, equipment and consulting services for Space & Defence.



Temperature Compensated Crystal Oscillator (TCXO)

A crystal oscillator with additional circuitry to remove frequency variations due to temperature change.



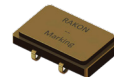
Ultra Stable Oscillator (USO)

An extremely stable oscillator used in high-end space and instrumentation applications.



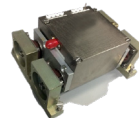
Ultra Stable TCXO

Using unique technology these TCXOs can achieve stabilities of 50 parts per billion (ppb) over temperature.



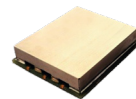
Voltage Controlled Crystal Oscillator (VCXO)

A VCXO is an XO that allows the user to manually adjust a control voltage; it helps to compensate for instabilities in the output frequency. It is mainly used to bring the oscillator back to frequency after being impacted by instabilities (e.g. long term stability).



Voltage Controlled Oscillator (VCO)

A purely electronic oscillator circuit with an adjustable output frequency, without the use of a crystal or SAW resonator.



Voltage Controlled SAW Oscillator (VCSO)

Similar to the VCXO, but uses a SAW resonator instead of a traditional crystal resonator.

Highlights

◀ Innovating since 1967

A proud history of delivering industry 'firsts' including: High-reliability Space USO, miniature GNSS TCXO, stratum 3 TCXO, high g-shock TCXO and lowest g-sensitivity Surface Mount Device (SMD) TCXO, emergency beacon TCXO, Long Term Evolution (LTE) small cell TCXO, Application Specific Integrated Circuit (ASIC) based OCXO & world's smallest, NewSpace USO and Smart PPS Disciplined OCXO.

◀ In-house ASIC and test equipment teams

– key differentiator

Rakon designs its own oscillator ASICs and develops its own production test equipment. This is a unique capability in the Frequency Control Product (FCP) domain – enabling next generation technologies.

◀ High performance and competitive pricing

Six Rakon R&D centres worldwide with a 50+ year history. Rakon's experience and in-depth knowledge of system requirements, enables the development of innovative solutions, tailored to suit its customers' ecosystems. Rakon has manufacturing operations in New Zealand, India and France. It also has manufacturing partners in Thailand and Taiwan.

◀ Winner of prestigious industry awards

Awards include the coveted 'Queen's Award for Enterprise – International Trade', New Zealand's 'Hi-Tech Company of the Year' and 'Hi-Tech Company of the Decade', 'Hi-Tech Exporter of the Year Award', 'Supreme Winner', as well as a number of supplier awards.

Company information

Share Listing

Listed on NZX Main Board (NZSX)
Code: RAK
Share price as at 17 June 2022: \$1.20
Shares on issue as at 17 June 2022: 229,055,272
Market capitalisation: \$274,866,000
Financial year end: 31 March

Share Registry

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New Zealand
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enquiry@computershare.co.nz
www.computershare.co.nz

Company Advisers

Auditors: PricewaterhouseCoopers
Principal Lawyers: Bell Gully
Bankers: ASB Bank

Company Information

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