

# Enabling the connected future



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# Agenda

Introduction & company overview

Financial trends

Forward focus

Q+A & close



Dr Sinan Altug (CEO designate)



Anand Rambhai (CFO)



# Introduction & company overview

# Our global operation



- Manufacturing sites
- R&D centres
- Customer support locations
- Quality assurance
- Key manufacturing partners

60+ countries have Rakon customers

6 company and partner manufacturing sites

6 R&D centres of excellence

16 customer support locations

1000+ FTE employees worldwide

40+ nationalities in the Rakon family

# Our purpose

is to enable the connected future and change the way we work, live and play



We develop solutions that are changing the way we live, work and play – right now and into the future

Our mission is to be a world leader in the development of timing and frequency control solutions for the most challenging specifications and environments

By working closely with our customers and industry partners, we solve difficult problems and enable next generation technology to become a reality

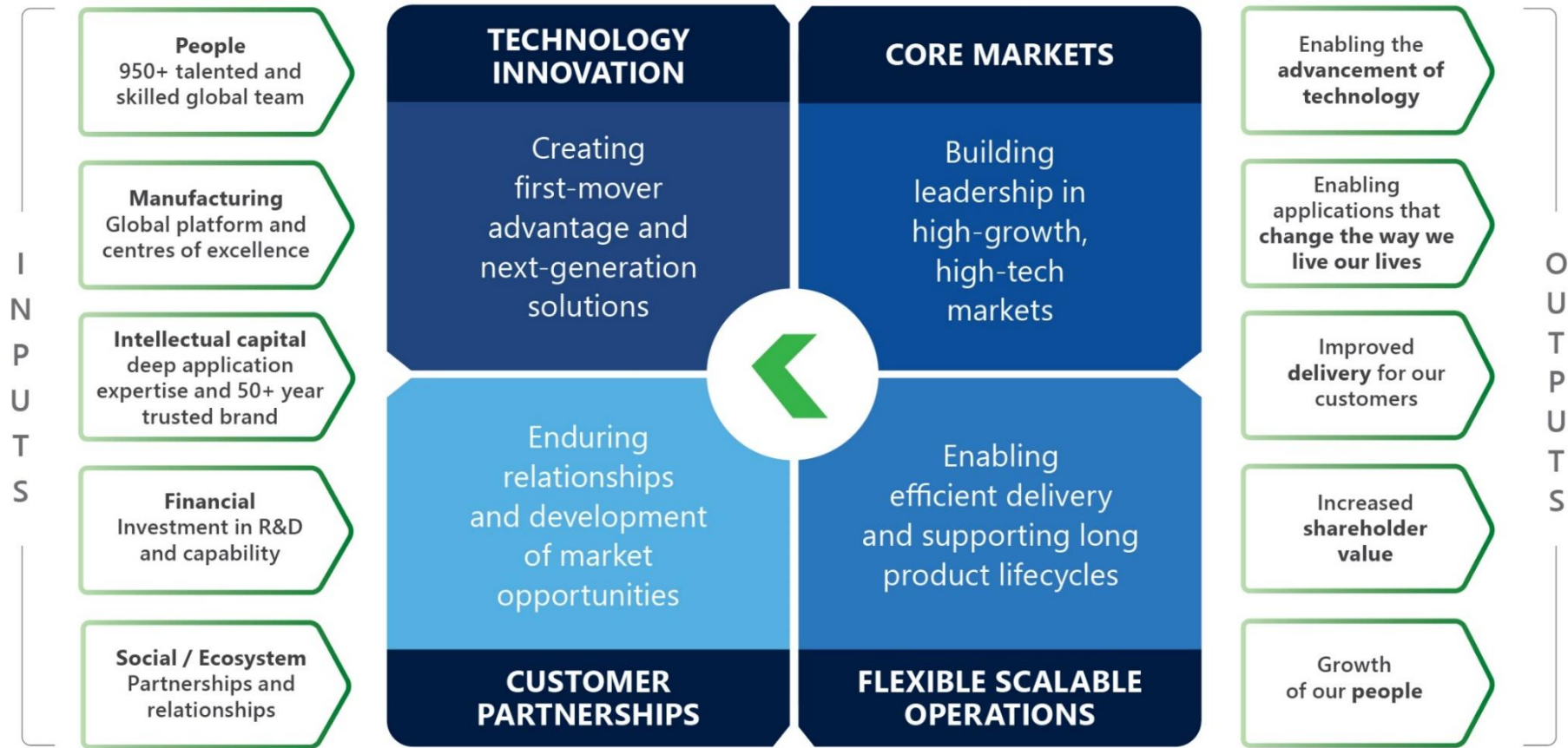
We are enabling infrastructure, networks and applications to perform at ever-greater levels of speed, reliability and capacity, making things that were only ever dreamed of possible



# How we create value



We drive the advancement of precision timing and frequency control solutions in our core markets, and ensure long product lifecycles through operational excellence and enduring customer relationships



## A values-driven culture

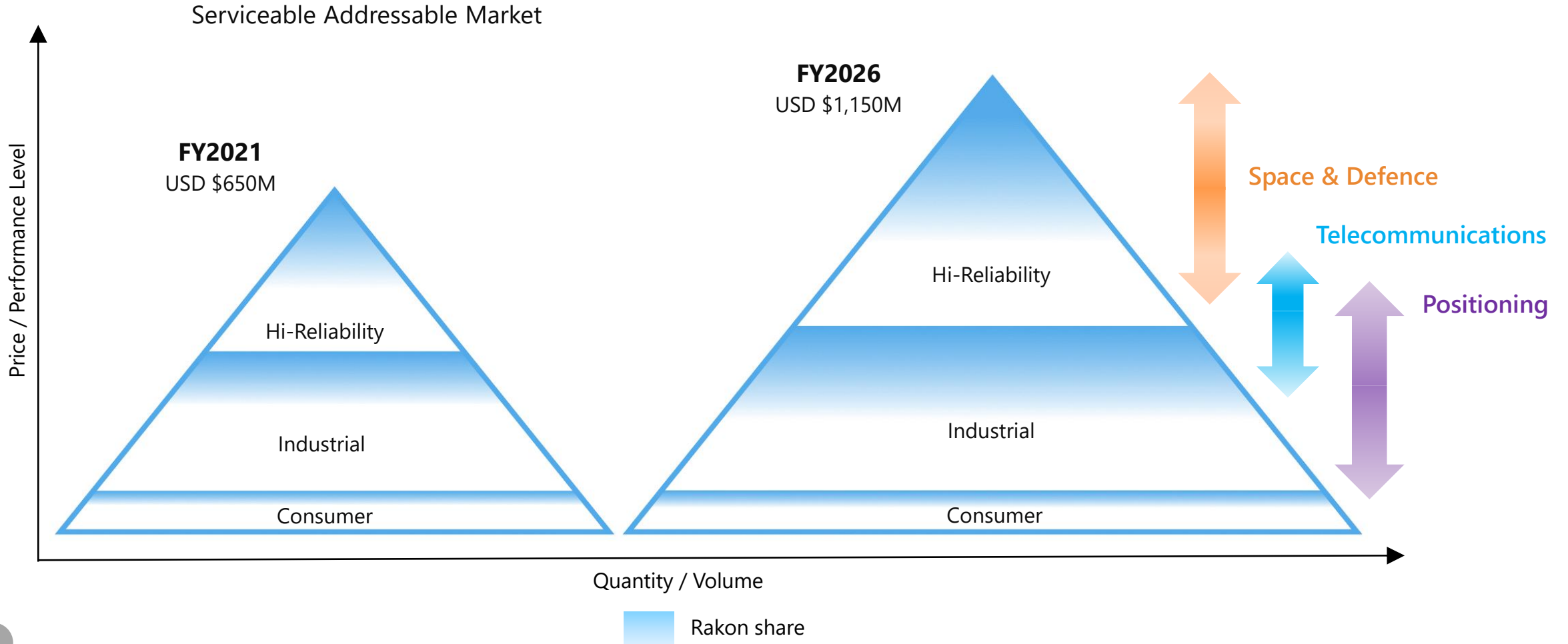
Focuses on how we capture opportunities, manage risk and look after each other, our planet and future generations

**SOLID FOUNDATIONS**

# Our opportunity

Growing our share in high-growth markets

“We play in the parts of the market where solutions are needed for the most challenging specifications and environments”





# Telecommunications

## Growth momentum in 5G infrastructure and cloud computing



### Overview

- Key components at the heart of telecommunications and cloud computing networks
- Telecommunications generates 60% of Rakon's revenue, 3-year CAGR 24%
- Our high-performance products and technologies (Mercury, Pluto) are market leading and we are already developing the next generation of products in partnership with our customers

### Value drivers



#### 5G demand increasing/6G on the horizon

Operators deploying new networks and enhancing existing infrastructure  
Strong contribution from new products (Mercury™)



#### Cloud computing emerging

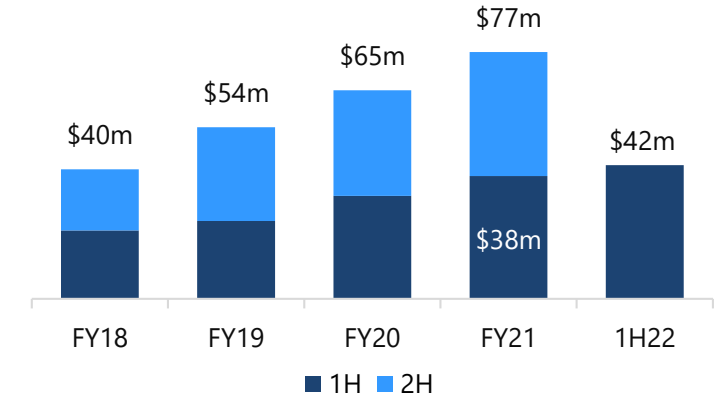
Precise timing requirements for many applications driving strong growth  
Major cloud computing equipment suppliers secured as customers



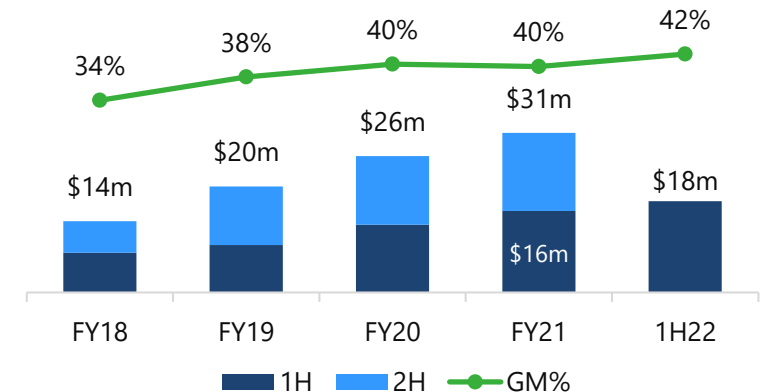
#### Product leadership

Design-in wins for new products enabling 5G millimetre wave capability  
Industry leading ultra low noise product portfolio  
- price, performance and size

### Revenue



### Gross margin



# Space & Defence

## Emerging NewSpace opportunity



### Overview

- Products used in aircraft, satellites and launch vehicles; and defence communications, radar and positioning systems, meeting extreme environmental challenges and demanding performance expectations
- Space & Defence generates 23% of Rakon's revenue, 3 year CAGR growth rate 2.6%

### Future value drivers



#### NewSpace

Emerging NewSpace segment creates a large medium term growth opportunity, driven by increasing demands in satellite internet/communications, earth observation and deep space exploration

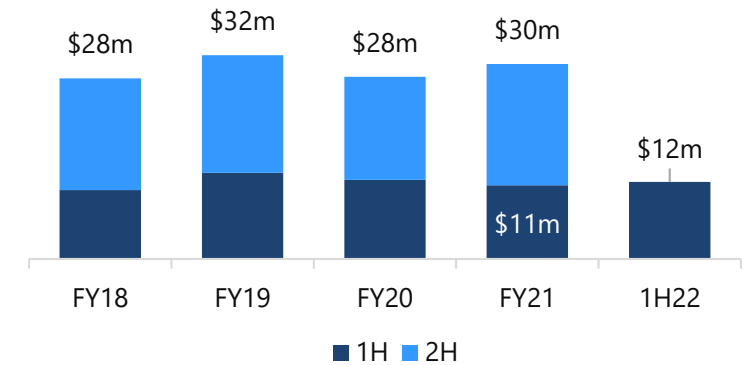


#### Continued innovation leadership

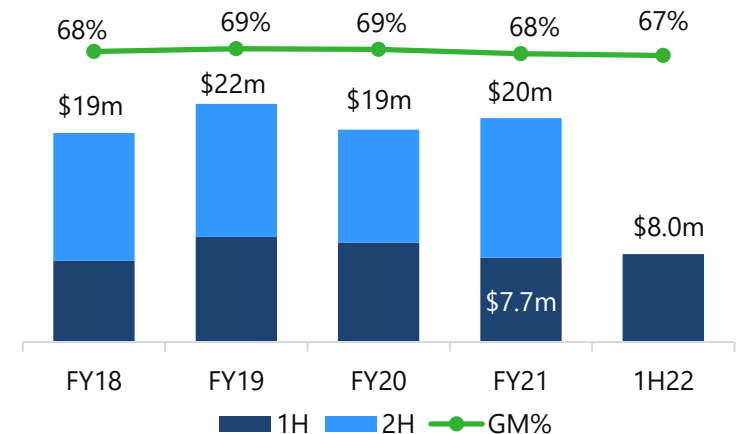
Space and defence is a key source of innovation which is then applied to other market segments

Partnerships with government agencies and commercial programmes worldwide to develop new technologies

### Revenue



### Gross margin

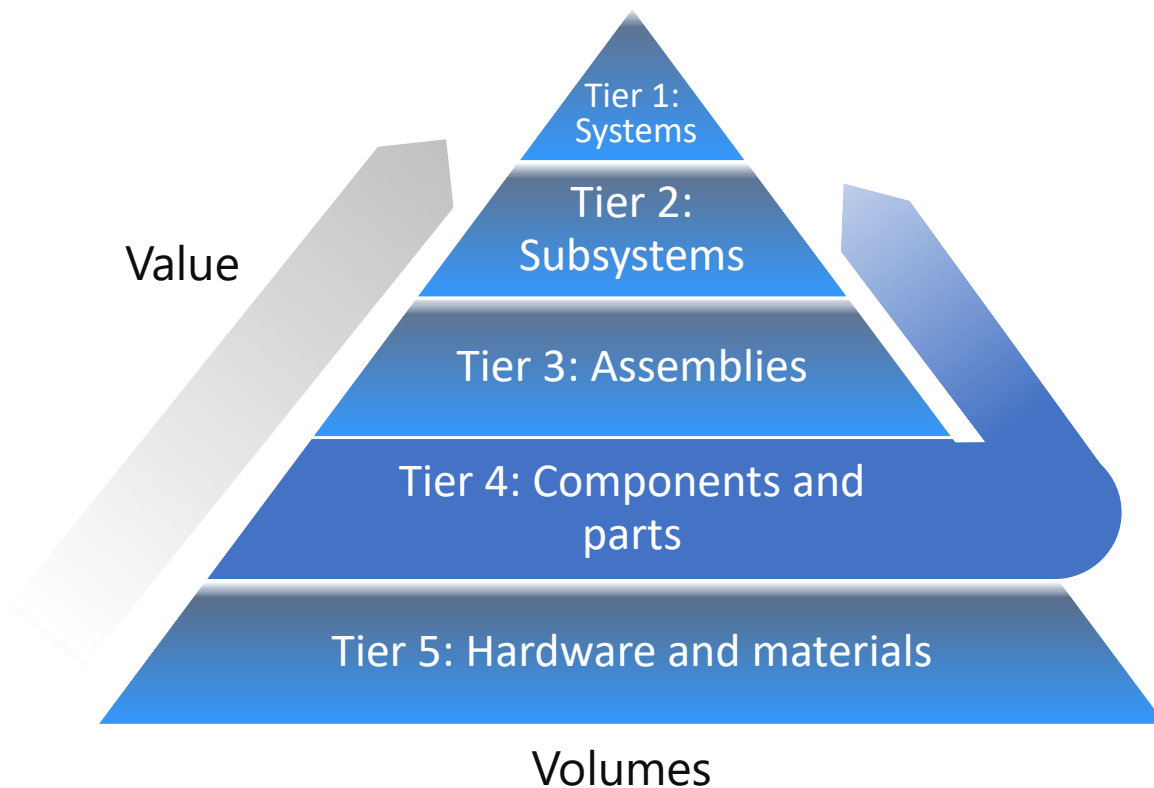


# Rakon NewSpace strategy

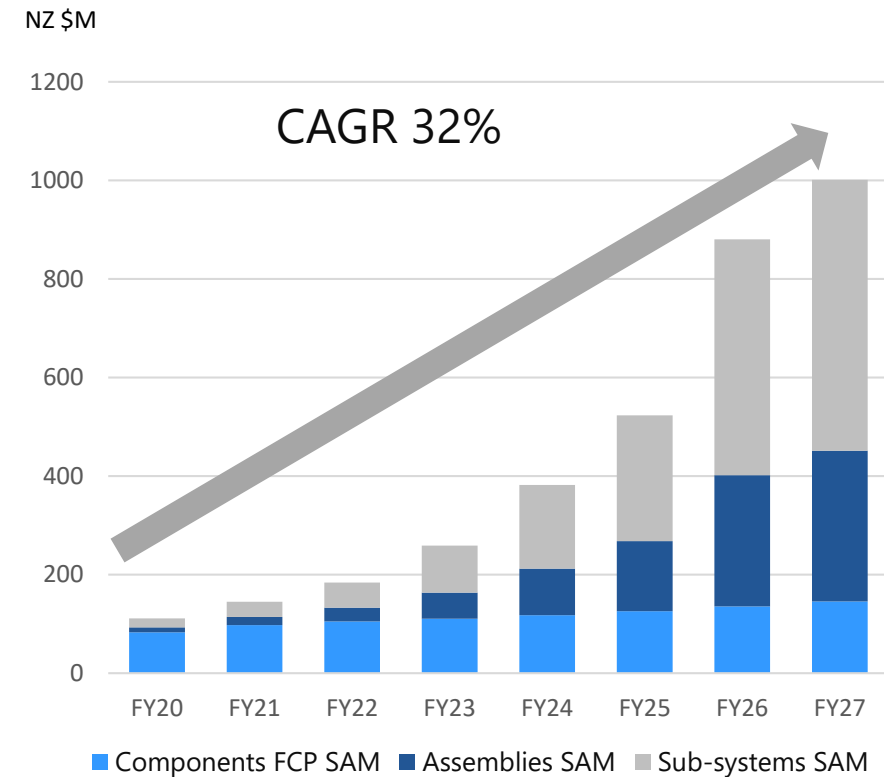
3 – 5 year growth plan



## The supply chain



## Rakon Serviceable Available Market



# Positioning

Growing demand for high precision and high reliability



## Overview

- Products used in Global Navigation Satellite Systems (GNSS) to enable determination of position, velocity and time for applications such as personal navigation devices, emergency beacons and automated vehicles
- 11% of Rakon's revenue, 3 year CAGR -19%
- Over recent years the movement away from commoditised consumer products into higher margin/higher growth industrial markets has reduced revenue but improved gross margin %
- High share of emergency beacon market due to unmatched product specifications

## Future value drivers



### High precision industrial machines

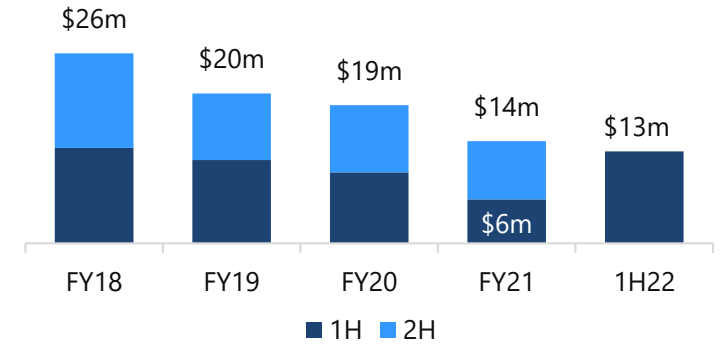
Growth in higher-margin precision industrial applications including growing share of agricultural/mining segments as automation becomes standard



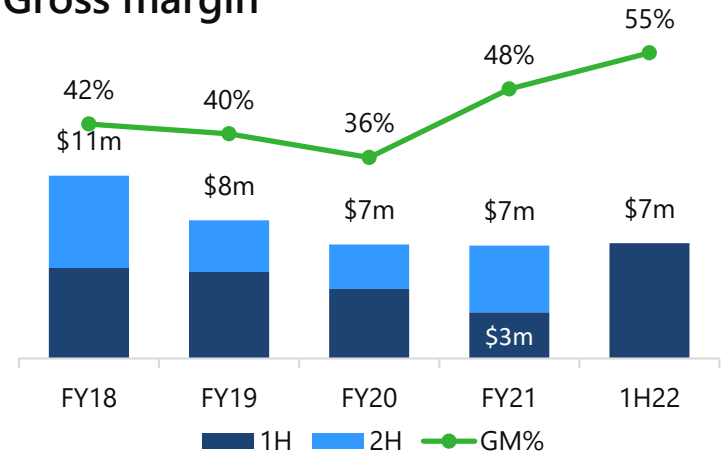
### Autonomous vehicles

Autonomous vehicle industry driving need for higher performance and higher reliability products

## Revenue



## Gross margin



# Customer partnerships

## Long term relationships with industry leaders

### Overview

- Approved supplier to majority of Tier 1 companies in all core markets
- 10–30 year relationships with major customers, international agencies and industry standards organisations key to development of industry-leading technologies
- Top 10 customers contribute 55% of total revenue

### Key strategies

- Manage long-term supply/R&D partnerships to achieve 'preferred' status
  - Develop deep understanding of customer needs and work with them to identify what's possible
  - Establish new technology R&D partnerships
- Securing new partners in emerging segments
- Inclusion of Rakon's products in customer reference designs



Core market players

# Technology innovation

Continuing to raise the bar with ever-smaller form factors

## Overview

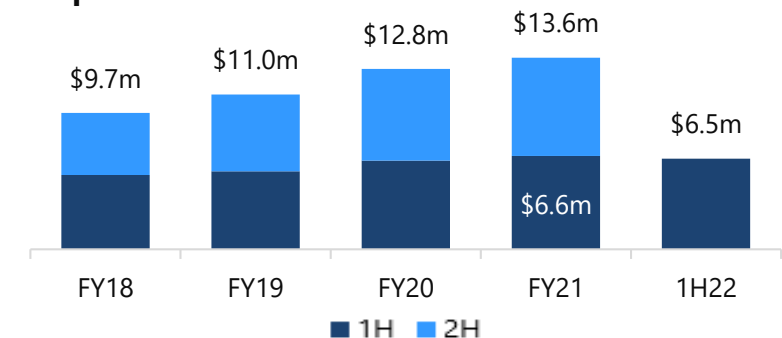
- Strong pioneering culture and history of innovation 'firsts'
- Some key innovations have helped us become a leader in our industry
- We are consistently first-to-market in next-generation designs for core markets
- Portfolio of patented products and technologies provides a competitive moat that protects against commoditisation
- Superior product performance which is difficult to replicate ensures long lifecycles and revenue streams

## Key strategies

- 10–12% of revenue invested in R&D annually
- R&D framework supporting innovation and commercialisation provides a strong pipeline of next-generation products and technologies
- Tight research and innovation partnerships with customers and research organisations
- In-house development of unique, proprietary test equipment enabling higher specification levels
- XMEMS® – release of disruptive XMEMS® based products that can be manufactured at scale



## Research & Development expenditure



# Flexible scalable operations

Robust performance delivering scale, mitigating risk and improving resilience



## Overview

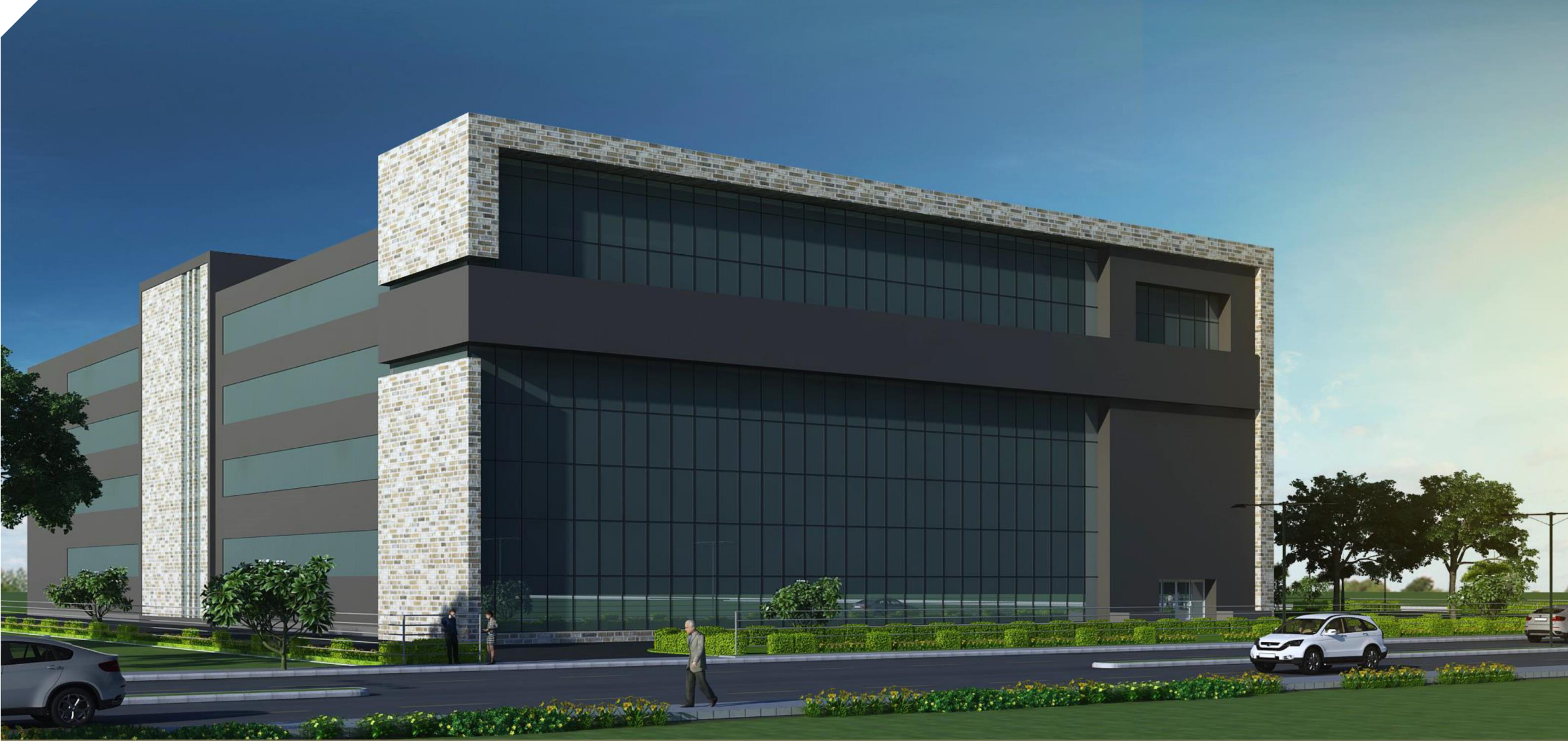
- Global manufacturing facilities and partnerships deliver scale, support long product lifecycles, and mitigate supply chain risk
- Industry requires stringent quality certifications
- Proven ability to scale quickly to meet customer demand

## Key strategies

- Explore-Exploit strategy provides focussed R&D with scalable manufacturing capability using multiple sites
- Continue to increase capacity in India and NZ to meet growing demand
  - New high-tech Indian facility expands existing capacity and allows product life cycles to be extended as products are migrated from France and NZ
- Strong strategic manufacturing partners (Siward, Hana) provides access to specialist cost effective manufacturing capability at scale
- Dual source supply & manufacturing at each global site to mitigate supply chain risk for customers
- Minimise Covid-19 related risks at all manufacturing sites



# New Rakon India facility

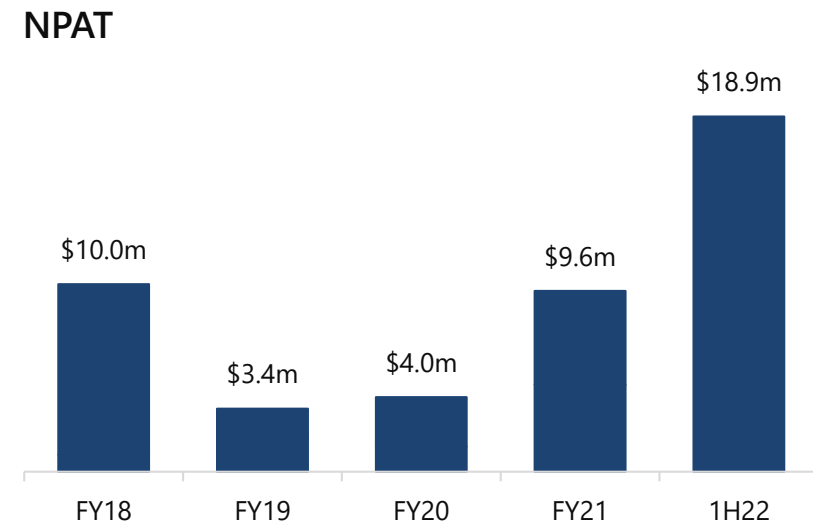
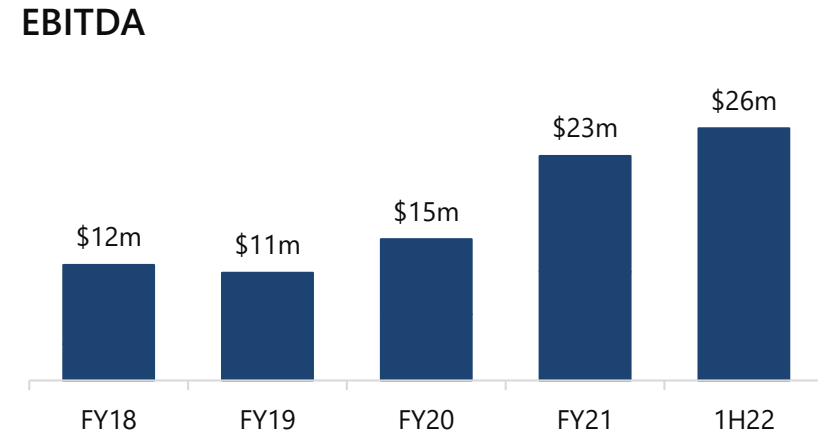
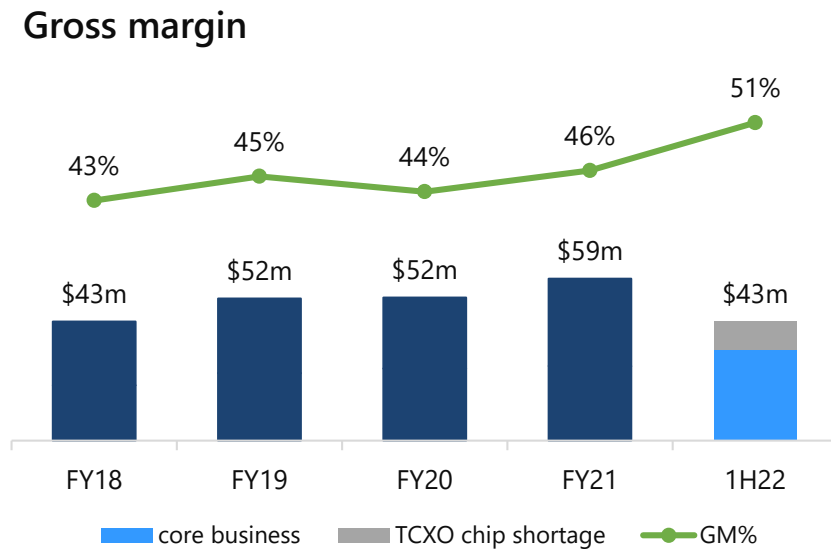
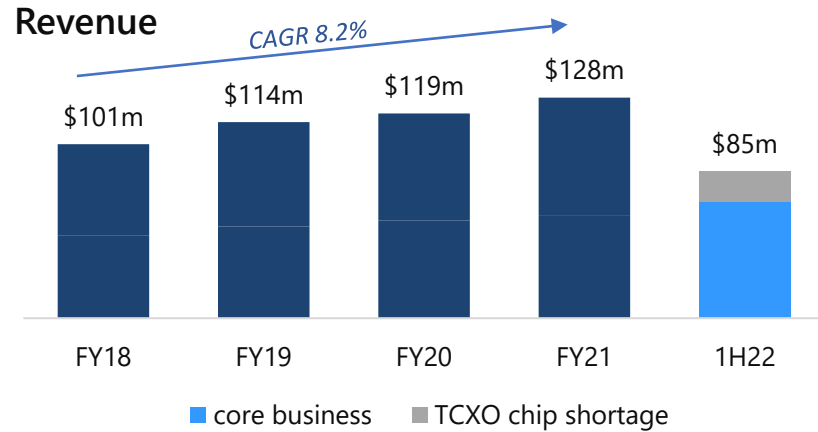






# Financial trends

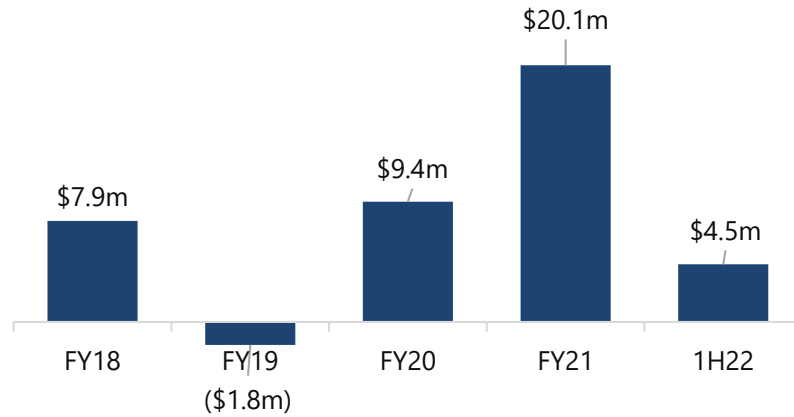
# Revenue and earnings trends



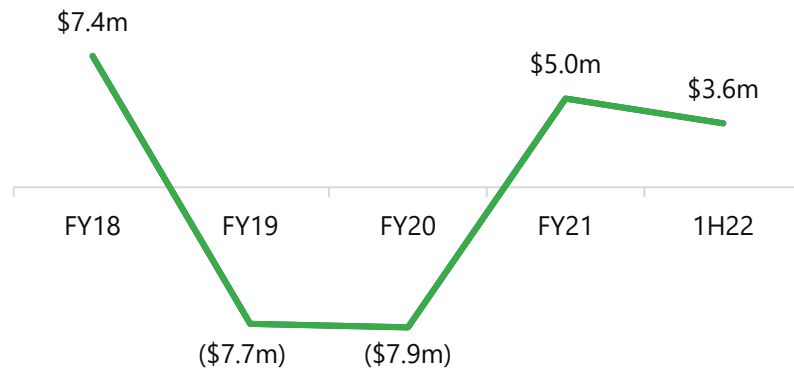
# Strong balance sheet for future growth



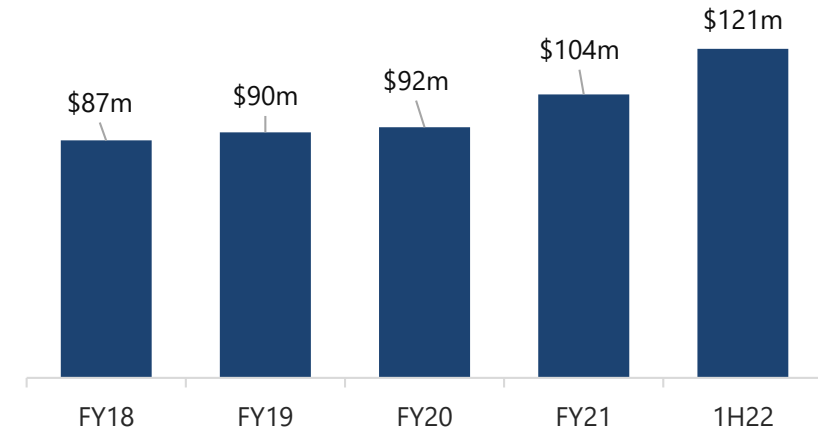
## Operating cash flow



## Net cash/(debt)



## Shareholders funds





Forward focus



# Forward focus

Allocate resources in line with strategy and be bold in areas that matter most



## Continue to win in core market growth opportunities

- 5G networks, Cloud Computing, LEO/NewSpace, Autonomous

## Cutting edge new products and platforms

- Multiple XMEMS® based product families
- Latest proprietary chip 'Niku' for next generation products

## Relentless pursuit of continuous innovative improvement

- Increase R&D spending target from 10% to 10–12% of sales, focus on speed of execution
- Reward innovation and reinforce the culture of innovation

## New Indian facility

- Allow global manufacturing flexibility and plant redundancy across a wide whole spectrum of products
- Continue to increase manufacturing capacity and capability in NZ to support increased demand

## Continue active risk management of supply chain, Covid-19, and cost inflation

## Continue to retain a conservative balance sheet





Q+A





# Appendices

# Appendix 1: Sustainable operation

Looking after each other, our planet and future generations



## ESG framework development under way:

- Review of material ESG issues
- Prioritisation of response and actions
- Alignment of climate change reporting to TCFD
- Focus on governance, strategy, risk management, metrics and targets
- Roadmap

## What we're already doing:

- Environmental
  - EMS ISO14001 certification at manufacturing sites; energy, carbon dioxide and refrigerant use measured and reported via CDP; waste minimisation; developing products which improve environmental footprint (smaller, higher-performing, less power)
- Social
  - Diverse workforce – commitment to internal development and upskilling; emphasis on health, safety and wellness
  - Local community initiatives aimed at improving quality of life for next generations
- Governance
  - Global compliance with all export controls and international trade laws and treaties. Customer due diligence and internal policy and processes
  - Corporate governance framework; policies and codes of conduct; risk framework; legal and regulatory compliance





# Appendix 2: Technology pioneer

Since 1967 we have enabled the next wave of technology



1960s



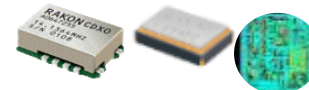
1970s



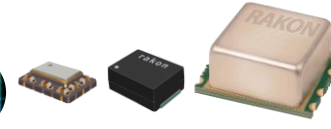
1980s



1990s



2000s



2010s



2020s

HC-48C crystal



SSB radio

UM-1 crystal



Pagers

TXO4080

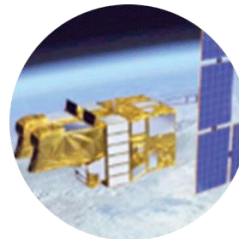


Cellular phones

VTXO500 / USO



GPS navigation



Precision satellite positioning

CDXO / RXT / ASIC



Internet boom



Smartphones

TCXO / OCXO



3G, 4G, 5G networks

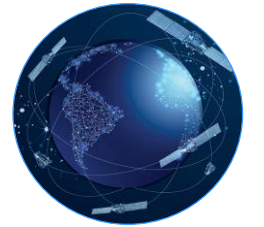


Internet of Things

Space subsystems / XMEMS®



Cloud computing infrastructure



NewSpace

# Glossary



**Cloud computing:** Allows users to have on-demand availability of a remote computer system's resources for improved computing power or data storage (usually located quite far from the user, such as in another country)

**Datacentres:** Usually a building that is used to hold a computer system and other components to backup data

**Design-in:** An opportunity that allows Rakon's product to be used as the reference component for certain customer reference designs (a technical blueprint of a system intended to be used by customers)

**Edge computing:** Allows users to have on-demand availability of a remote computer system's resources for improved computing power or data storage (usually located close to the user, such as within the same city).

**5G:** 5th generation of the telecommunications standard, providing 10 to 1000 times better performance in many different applications

**5G millimetre wave technology:** The equipment that enables higher frequency data transmission in 5G

**New space/ New space LEOs:** Refers to space sector commercialisation, that are mainly low earth orbit (LEO) satellites

**Mercury™ / Mercury+™:** Rakon's proprietary integrated circuit used in OCXOs to achieve clock variations to less than 1 billionth of a second, these enable precision timing in 5G applications

**OCXO:** Oven Controlled Crystal Oscillator. A crystal oscillator that uses a miniaturised oven to keep its internal temperature constant

**O-RAN:** Mobile networks that are more intelligent, open, virtualised and fully interoperable

**Pluto®:** Rakon's proprietary integrated circuit used in TCXOs to achieve clock variations to less than 100 millionth of a second; these enable higher data rates in 5G applications

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

**TCXO:** Temperature Compensated Crystal Oscillator. A crystal oscillator with additional circuitry to remove frequency variations due to temperature change

**Tier 1 customers:** recognised key players within their respective industries, that make up a significant market share

**VCXO:** Voltage Controlled Crystal Oscillator (VCXO). A crystal oscillator with an adjustable output frequency

**XMEMS®:** Crystal Micro-Electro-Mechanical System. Rakon's advanced quartz-based resonator technology. It is made with Rakon's NanoQuartz™ microfabrication process, delivering unprecedented resonator and oscillator performances



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