

rakon

2013 REVIEW




2013

◀ synchronising
connectivity
everywhere






◀ synchronising connectivity everywhere



Rakon is a global high technology company that designs and manufactures world leading frequency control and timing solutions.

We live in a wireless world and Rakon is at the forefront of enabling connectivity, faster with more reliability, so that our customers can provide advanced technology products and services to a connected society.



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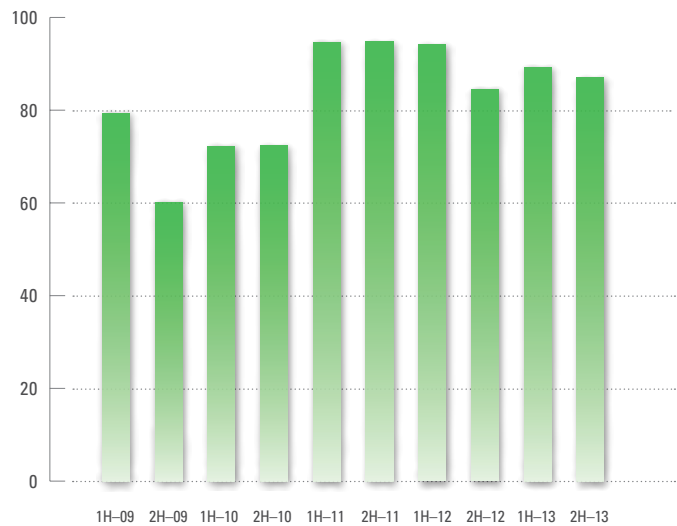


BRYAN MOGRIDGE

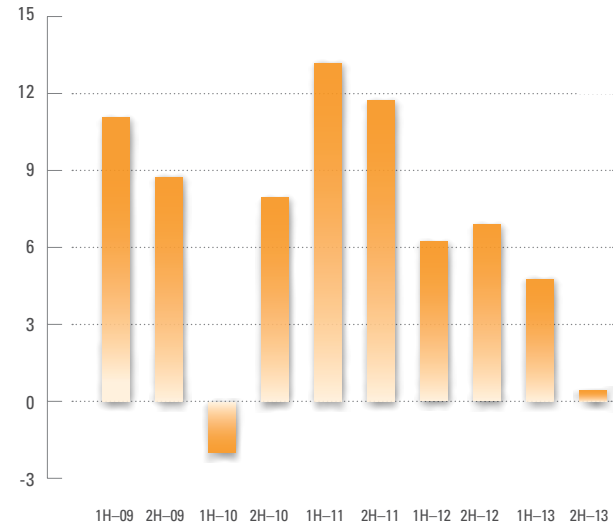
PERFORMANCE AT A GLANCE

Rakon's strength is in our ability to adapt to change

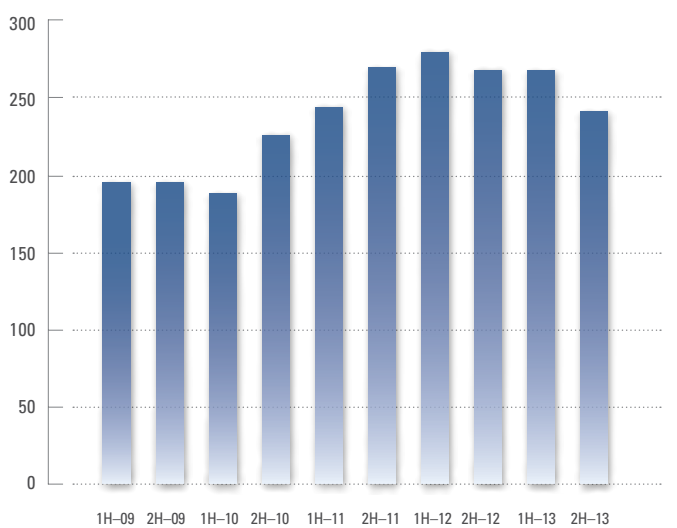
Revenue NZ\$ Million



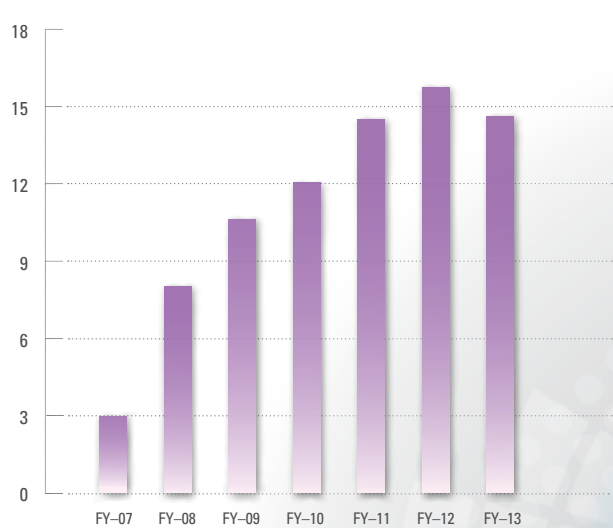
EBITDA NZ\$ Million



Total Assets NZ\$ Million



Research & Development NZ\$ Million



Dear Shareholders,
Welcome to this the eighth annual report of your company Rakon Limited.

This past year has been one of significant review and change for Rakon. As you will read in the Managing Director's report, Rakon has encountered many challenges and faced enhanced volatility within the fast growing Smart Wireless Device (SWD) market. We do not see these challenges abating and consequently this has forced the Board to reconsider our joint venture involvement in the SWD market.

Continuing to support our strong volume growth in the SWD market would have required more capital either from our own balance sheet or outside sources. Consequently, we have decided to form a strategic alliance with ZheJiang East Crystal Electronic Co Ltd (ECEC). While it requires having to write off a large percentage of our investment in Rakon Crystal Chengdu (RCC), this change means Rakon will be exempt from further capital requirements in China for the SWD business, and importantly, allows our team to enhance their focus on the solid growth markets we make good profits from. While the growth in these markets is not as spectacular as the growth in the SWD market, it is a much better fit for a company of Rakon's size. This change in direction should provide more stability for Rakon than previously.

The sale of 80% of RCC to ECEC for US\$18.8m will bring cash into Rakon which will be used to retire debt, this has been the Board's desire for some time. Once the final costs and balance sheet adjustment are made at the conclusion of the transaction (planned for 30th September 2013) the net asset value of Rakon should be around NZ\$123m, i.e. 64 cents per share.

With the new focus and an appropriately sized balance sheet for the markets we are now addressing, the Board will be requiring management to produce results that achieve sound risk weighted returns on the funds employed, with positive cash flows. The goal is for those returns to be steady and support the requests that all shareholders have for Rakon to be consistently profitable and pay a dividend. The timing of such an event will logically depend upon the success of the altered focus, but it is important to note that the Board in its entirety is intent on this occurring as soon as possible.

Results for the year ending 31 March 2013: Naturally we are disappointed to report an after tax loss of NZ\$32.8m for this year but note that NZ\$17.3m of that was a write off of goodwill attributed to the cash generating units China – Timemaker and the New Zealand operations. After stock provisions of NZ\$2.1m, Rakon produced an EBITDA of NZ\$5.1m, just above the bottom end of the guidance range given to the market in February.

It has been a tough year for all involved at Rakon, and on behalf of the Board, I would like to thank our global team for remaining diligent in the face of difficult and volatile market conditions. We have made many unsettling cost reduction changes and along with our major change in direction, post the sale of RCC, we will continue to fine tune the business to ensure efficient and profitable operations everywhere.

To our shareholders our thanks to you for your persistence in a difficult year and I look forward to talking to you at the annual shareholders' meeting in September.

Bryan Mogridge Chairman

BRENT ROBINSON

Innovation will continue to drive Rakon forward



Financial Commentary

For the 2013 financial year, Rakon Limited reported a full year net loss after tax of NZ\$32.8m and EBITDA of NZ\$5.1m. This is clearly a disappointing result and over half of this number results from an impairment charge of NZ\$17.3m recorded against the goodwill of Rakon's China-Timemaker and New Zealand 'cash generating units' (CGU). This impairment charge was driven by recent changes in market prices in the Smart Wireless Device (SWD) segment, when projected forward resulted in a reduction in 'value-in-use' calculations no longer supporting previous valuations for goodwill.

The EBITDA look-through trading was NZ\$7.2m, but adjusted lower to NZ\$5.1m after stock provisions of NZ\$2.1m. The NZ\$5.1m EBITDA was in line with the earnings guidance reported to the market on the 13th February.

Revenue at NZ\$176.3m was down NZ\$2m or 1% on the previous year. The company's underlying revenue is predominantly transacted in US\$ and in US dollar terms revenue was in line with FY2012.

Gross Profit of NZ\$41.4m was down 21% or NZ\$10.7m on the previous year. Margins were down reflecting price sensitivity in the SWD market driven by the devaluation of the Yen over the second half. This resulted in intense price competition coming from Rakon's Japanese based competitors and impacted the underlying product margins which reduced compared to the previous year.

The company's operating cash flow was NZ\$(2.7m). This was made up of NZ\$(2.2m) in the first half and NZ\$(0.5m) for the second half which is reflective of an improvement in working capital through a significant focus on reductions in inventory.

EBITDA from Rakon's India Joint Venture of NZ\$3.6m compares with NZ\$1.9m for the previous year. This improvement reflected expected fourth quarter growth in the telecommunications market where Rakon has a very strong market position and 4G product offering.

Operating costs for the year of NZ\$59.6m are slightly up compared to the previous year (FY2012: \$NZ59.0m), reflecting a full year impact of costs associated with Rakon's JV plant in China.

The reduction in product margins over the second half has further required the Directors and Management to look hard at the underlying cost structure of its global business. Consequently, a project of reorganisation has been initiated at Rakon's operations in France with the outcome of that project to be reported in coming months after consultations with workers councils are completed.

Restructuring Joint Venture investment at manufacturing operations in Chengdu, China

On the 5th July, Rakon announced that ZheJiang East Crystal Electronic Co., Ltd. (ECEC) is to establish a strategic partnership by acquiring from Rakon 80% of the shares in Rakon Crystal (Chengdu) Co. Limited (RCC), for US\$18.8 million. ECEC is a specialised electronic components manufacturer listed on the Shenzhen Stock Exchange and RCC is the owner of the manufacturing facility in Chengdu. The acquisition will result in a new joint venture structure targeting the Smart Wireless Device (SWD) market with Rakon holding 5% and existing joint venture

partner Timemaker continuing to own 15%.

A Cooperation Framework Agreement will see Rakon and ECEC working together in the SWD market in the areas of technology, capital, management and by sharing resources and capabilities.

Rakon has a joint venture in India with Centum that works well and we can see similar benefits being achieved through a partnership with ECEC, who will further fund the expansion of the Chengdu plant enabling the joint venture to achieve greater scale and benefit from having low cost high volume manufacturing expertise and access to Chinese capital markets.

The Chengdu plant is purpose-built with considerable capacity to be expanded, being at the global centre of manufacturing for consumer electronics. The new joint venture partnership will grow the supply of our leading edge SWD products to manufacturers who are significant household names, both in China and worldwide.

We recognise this is a strategic change in direction for our business but it reflects market realities and positions Rakon well to enhance our focus on the high margin markets where we see growth and profit opportunities that can be secured by our significant technical strengths and competitive advantage. Core focus will be the ongoing design, manufacturing and supply of crystal and oscillator components into three major market segments:

- Global telecommunications network infrastructure, targeting the new architectures and the ancillaries required to transport and deliver data that's increasing at exponential rates; to capitalise on the accelerating technology migration from 3G to 4G/LTE
- High reliability and precision products used in the avionics, space and defence industries; and
- Specialised GPS devices sold by global navigation and mapping manufacturers

Rakon has a well-established and highly regarded reputation with customers in these industries which offer higher margins and leverages our core competitive strengths. In the 12 months to 31 March 2013 Rakon's core business (which excludes SWD) accounted for 70% of the company's NZ\$176.3 million sales revenue.

This plan aligns our resources and our balance sheet into areas where we have high market shares while benefitting from a small investment with an established player, ECEC, in the dynamic SWD market.

Details of the Restructuring

Rakon estimates to make a NZ\$32m impairment of assets associated with the partial sale of the Chengdu facility. The final result will be based on results of RCC up to settlement that will be reflected in the accounts for the six months to September 2013.

The reduction of working capital and proceeds from the sale of the shares in RCC will be used to retire debt. Directors had previously announced plans to reduce debt to less than NZ\$15 million by the end of the 2014 financial year. Upon settlement

of this agreement, debt can be reduced both earlier and below the target of plans previously announced. A full update will be provided with the interim result which will be announced in mid-November.

Upon signing the Cooperation Framework Agreement with Rakon, ECEC has expressed an intention to purchase a stake of up to 5% of Rakon's shares on-market.

Both parties will move forward from the Cooperation Framework Agreement to establish a final Sale & Purchase Agreement by 10 September 2013. Settlement is expected to take place on 30 September 2013 following the granting of any required regulatory approvals.

Market Updates

Smart Wireless Devices

While the sophistication of SWDs is increasing on a monthly basis, component pricing, on the other hand, is moving relentlessly downwards. The market segment experienced a rapid price reduction from late 2012 due to the recent and significant YEN devaluation against the US\$ (down 22% in six months to 31 March 2013), enabling Japanese competitors to gain a significant competitive advantage and gain market share. These factors have materially affected Rakon's FY13 financial results.

Telecommunications Infrastructure

The Telecommunications infrastructure sector is undergoing a massive technology migration from 3G to 4G/LTE technology and the required infrastructure upgrades are now accelerating in major markets globally. Long Term Evolution (LTE) is a radio platform technology that will allow operators to achieve high peak data rates in high spectrum bandwidth and is designed to cope with the immense growth in global mobile data traffic which grew 70% in 2012.

Rakon has a high quality reputation and has preferred OXCO vendor status at all major Tier 1 telecommunications equipment manufacturers, and as expected, sales into this market picked up later in FY13 as the industry begins to invest in 4G/LTE infrastructure. Also, Small Cells are beginning to grow at a rapid pace globally as telecommunication operators resolve technical issues integrating Small Cells into their infrastructure creating heterogeneous networks.

High-Reliability (Space, Defence and Aviation markets)

Rakon France has signed four contracts with the Centre National d'Etudes Spatiales (CNES), the French space agency, to provide technological solutions and also signed a strategic contract with the European Space Agency (ESA) for space grade oscillators. Both these deals greatly strengthen Rakon's position in the High-Reliability market which is fuelling a renewed space oscillator product range which will drive revenue growth for Rakon France in FY14.

To support these opportunities and promote operational efficiencies, the project of reorganisation – initiated with workers councils – proposes to streamline our High-Reliability and Space business into the Pont Sainte Marie manufacturing and R&D site.

Rakon's unique ability to manufacture products in Europe, New Zealand and India is a competitive advantage in serving High-Reliability customers with supply chain compliance constraints on where their products can be sourced. We expect growth to be driven from our relationships with market leaders and developing design-in partnerships with major international space programmes and defence companies.

Positioning

The traditional consumer Positioning (GPS) market is rapidly become a mature market as personal navigation device (PND) applications have been integrated into smart phones. However, as GPS continues to be incorporated in to a broader range of devices, new business can be generated in areas where GPS is designed as the primary function i.e. emergency and personal locator beacons, telematics, geo-surveying, agriculture and asset tracking are markets requiring increasing GPS accuracy; while new markets are continually emerging in the sports and fitness sector.

Rakon continues to be recognised as the market leader in XTAL and TCXO products for our Tier 1 customer base, who are developing performance GPS applications. Consequently, because of Rakon's strong customer relationships, opportunities continue to arise to leverage our market position and capture margin.

Closing Message

While our results over FY2013 were disappointing, there are a number of positive aspects which support a brighter mid-range outlook. The growth in 4G/LTE telecommunications infrastructure is finally starting to be realised and this is reflected in the growth of OXCO sales over the period and a stronger financial result coming from Centum Rakon.

Rakon's Board of Directors and management from the business units are working on a number of initiatives to improve our financial results. This will require us to look hard at how we do business today, in what is an ever-competitive global marketplace.

To reiterate, we recognise the announcement about restructuring our joint venture investment in China is a strategic change in direction for our business, but it reflects market realities and realigns Rakon's resources to focus on the high margin markets where we see growth and profit opportunities that can be capitalised on from our significant technical strengths and market position.

However, I believe that the mid-range outlook will improve as our outlined plans are implemented and this will be reflected in improving financial results for Rakon.



Brent Robinson CEO, Managing Director



BOARD OF DIRECTORS

rakon



Bryan Mogridge

ONZM, FNZIOD
Independent Chairman

Age 67
Appointed Chairman in 2005

- Bryan has been a public company Director since 1984.
- Formerly CEO of Corporate Investments and Montana Wines.
- Has chaired the New Zealand Wine Institute, the New Zealand Food and Beverage Exporters Council and the Tourism Board.
- Was also Vice Chairman of UBS New Zealand Limited.

Other Current Directorships:
BUPA Care Services NZ Limited (Chairman), The Starship Foundation (Chairman), Mainfreight Limited (Director), Pyne Gould Corporation Limited (Chairman), Yealands Wine Group Limited (Chairman), Lantern Hotel Group PTY Limited (Chairman), BUPA Australia (Director).



Brent Robinson

Executive Director

Age 54
Appointed to Board in 2005

- 34 years at Rakon which has included establishing a global business.
- 27 years as Managing Director / CEO.
- Under Brent's leadership Rakon has grown into a global and diversified business with revenues increasing from NZ\$1m to NZ\$176m.
- Honorary Fellow of the Institution of Professional Engineers New Zealand.
- Awarded the New Zealand Hi-Tech Trust – Flying Kiwi Award in 2011.



Bruce Irvine

Independent Non-Executive Director

Age 56
Appointed to Board in 2005

- Managing Partner of Deloitte Christchurch from 1995 to 2007.
- Involved in a voluntary capacity as a trustee of: Christchurch Symphony Trust, Christchurch Art Gallery Trust.

Other Current Directorships:
Christchurch City Holdings Limited (Chairman), Heartland New Zealand Limited (Chairman), PGG Wrightson Limited (Director), Godfrey Hirst Limited (Director), House of Travel Holdings Limited (Director), Market Gardeners Limited (Director), Skope Industries Limited (Director), Scenic Hotels Limited (Director).



Sir Peter Maire KNZM

Non-Executive Director

Age 61
Appointed to Board in 2005

- Co-Founder and former President of Navman NZ Limited.
- Principal shareholder of Fusion Electronics Ltd and Fusion Transactive Ltd
- Honorary Fellow of the Institution of Professional Engineers New Zealand.
- Made a Knight Companion of the New Zealand Order of Merit (KNZM) in 2008.

Other Current Directorships:
Callaghan Innovation, Fusion Transactive Limited (Chairman), Fusion Electronics Limited (Chairman).



Darren Robinson

Executive Director

Age 52
Appointed to Board in 2005

- 23 years at Rakon as Sales and Marketing Director.
- Darren has driven sales for Rakon through exploring new markets, applications and establishing business with many top Fortune 500 companies.
- Rakon now has sales revenue of NZ\$176m and a full suite of frequency control solutions.



Peter Springford

Independent Director

Age 59
Appointed to Board in 2012

- Peter was formerly CEO of Carter Holt Harvey and President of IP Asia, based in Hong Kong.
- Former Chairman of: China based Asia Timber Products Limited which has a factory near Chengdu, Malaysia based GS Paper & Packaging Sdn Bhd and Hong Kong based Hung Hing Printing Group Limited.

Other Current Directorships:
The New Zealand Refining Company Limited, Nuplex Industries Limited, McKechnie Aluminium Solutions Limited (Chairman), NZ Wood Products Ltd, NZ Frost Fans Ltd, Trustee of The Graeme Dingle Foundation.



Warren Robinson

Non-Executive Director and Founder

Age 78
Appointed to Board in 2005

- Founded Rakon in 1967 and spent 19 years as Managing Director. Chairman until November 2005.
- A member of the Institute of Electrical and Electronics Engineers.
- A senior member of the New Zealand Electronics Institute.
- A member of The Royal Society of New Zealand.
- Warren has a First Class Certificate in Radio Technology.



Herb Hunt

Independent Director

Age 65
Appointed to Board in 2012

- Over 40 years experience in senior global operational and strategic roles in the technology industry with leading companies including IBM, Siebel Systems and Symphony Group.
- 32 year career with IBM including 12 years at IBM NZ culminating as Chairman and CEO before rising to more senior roles in Australia, Asia, Europe and the USA.
- Currently heads his own company, Transformation Services, in the US which focuses on improving performance in sales, services and product development for international technology companies.

Other Current Directorships:
Wynyard Group

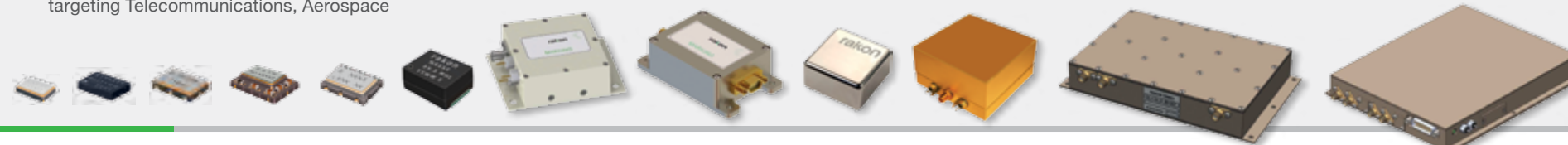


RAKON INNOVATORS IN CRYSTAL TECHNOLOGY

Since 1967 Rakon has been at the vanguard of advanced crystal and oscillator technology. With a product portfolio targeting Telecommunications, Aerospace

and Positioning markets, Rakon's diversified product range comprises of Crystal Oscillators (XO), Voltage Controlled Crystal Oscillators (VCXOs) and crystal products, through

to high volume precision Temperature Compensated Crystal Oscillators (TCXOs), Oven Controlled Crystal Oscillators (OCXOs), Surface Acoustic Wave (SAW) oscillators and specialised products for extreme performance.



Income Statement For the year ended 31 March 2013	2013 (\$000s)	2012 (\$000s)
Revenue	176,259	178,254
EBITDA	5,054	13,086
Depreciation and amortisation	(13,263)	(10,507)
Impairment	(17,331)	–
Adjustment for Associate and joint venture share of interest, tax and depreciation	(2,912)	(2,099)
EBIT	(28,452)	480
Interest	(1,897)	(1,545)
Net profit before tax	(30,349)	(1,065)
Income tax credit / (expense)	(2,472)	645
Net profit after tax	(32,821)	(420)

Statement of Cash Flow For the year ended 31 March 2013	2013 (\$000s)	2012 (\$000s)
Net cash flow		
- Operating activities	(2,670)	7,850
- Investing activities	(11,936)	(29,993)
- Financing activities	6,641	13,500
Net increase/(decrease) in cash and cash equivalents	(7,965)	(8,643)
Foreign currency translation adjustment	(1,179)	(914)
Cash and cash equivalents at the beginning of the period	12,434	21,991
Cash and cash equivalents at the end of the period	3,290	12,434

Balance Sheet As at 31 March 2013	2013 (\$000s)	2012 (\$000s)
Assets		
Current Assets		
Cash and cash equivalents	9,779	15,879
Trade and other receivables	47,725	42,467
Derivatives - held for trading	543	275
Derivatives - cash flow hedges	1,378	843
Inventories	45,786	49,239
Current income tax asset	1	6
Total current assets	105,212	108,709

As at 31 March 2013	2013 (\$000s)	2012 (\$000s)
Non-current assets		
Trade and other receivables	5,871	7,897
Property, plant and equipment	86,540	90,411
Intangible assets	24,623	31,480
Investment in associates	8,248	19,164
Interest in joint venture	5,174	3,744
Deferred tax assets	4,843	6,052
Total non-current assets	135,299	158,748
Total assets	240,511	267,457
Liabilities		
Current liabilities		
Bank overdraft	6,489	3,445
Borrowings	22,633	-
Trade and other payables	35,655	30,762
Derivatives - held for trading	71	-
Derivatives - cash flow hedges	1,236	682
Derivatives - interest rate swaps	119	-
Provisions	202	281
Current income tax liabilities	1,291	1,835
Total current liabilities	67,696	37,005
Non-current liabilities		
Bank borrowings	13,717	33,500
Provisions	2,412	2,685
Total non-current liabilities	16,129	36,185
Total liabilities	83,825	73,190
Net assets	156,686	194,267
Equity		
Share capital	173,881	173,881
Reserves	(29,395)	(24,737)
Retained earnings	8,310	40,154
Minority interest	3,890	4,969
Total equity	156,686	194,267

INDUSTRY RECOGNITION

Huawei awards Rakon with 2012 Supplier Quality Award

SHENZHEN, CHINA - May 2012: Rakon was awarded with Huawei's 2012 Supplier Quality Award. Of its more than 400 suppliers, Huawei select only nine suppliers to receive this award annually. The Huawei quality team mission statement is: "No Quality, No Business", so they take quality very seriously! This award benchmarks Rakon's fundamental product and service excellence through outstanding quality. This is the second time in four years that Rakon has won an award from Huawei!



Rockwell Collins presents Rakon with 2013 RF Crystals Supplier of the Year Award

CEDAR RAPIDS, IOWA, USA - March 2013: Rakon was presented with the 2013 RF-Crystals Supplier of the Year Award during Rockwell Collins' Annual Supplier Conference. The Supplier of the Year award is an acknowledgement of significant contributions made during the year by suppliers and is based upon quality, delivery, total cost of ownership, lead time and customer service.

For Rockwell Collins, working with a strong performing supply base is a critical factor in their ability to deliver high quality solutions to their customers.

Rockwell Collins is a pioneer in the development and deployment of innovative communication and aviation electronic solutions for both commercial and government applications in flight deck avionics, cabin electronics and mission communications.



Centum Rakon R&D Recognised by Government of India

Centum Rakon's in-house R&D unit received recognition by the DSIR (Department of Scientific & Industrial research), Government of India. As a recipient of this recognition, Centum Rakon is entitled to many benefits from the Government for carrying out research and developmental activities in the crystal and oscillator manufacturing fields.

ENVIRONMENTAL UPDATE

As a global company Rakon has environmental responsibilities and in response has engaged in a number of initiatives in 2013 to reduce waste, improve recycling, reduce CO2 emissions and save energy.

Waste Reduction

The New Zealand manufacturing operation has undertaken a waste reduction programme that focuses on reducing waste that goes to landfill. As shown on the graph, Rakon NZ's waste to landfill is reducing every year and it is estimated to be over 20% reduction for 2013. Also there is expected to be around a 50% reduction in grams of waste per unit produced compared to 2012 (noting the big increase in production volumes in 2013!). There are also tangible economic benefits with cost savings made by a reduction in treatment fees charged by waste management companies.

Recycling

Rakon NZ is working to recycle items such as scrap bases, used solder wicks, solder paste and used glue. The items we dispose of are now actually purchased from Rakon and sent to Japan for recycling. So far we have received NZ\$27,000 for our scrap material, which is a bonus for Rakon and means less waste to landfill.

Tape & Reel

Rakon's products are packaged in a tape and reel format (illustrated above) and sent to our customers' around the world. Recently all the leaders and trailers on these reels have been shortened to meet new international standards and we have increased the number of products per reel from 3,000 to 12,000. This is a great initiative that has resulted in using 6 metres less tape per reel and reducing large amounts of inner cardboard boxes, so there will be less going to land fill. Also, there is less weight to ship as airfreight to our customers' and less electricity used per unit as the machines are running slightly more efficiently.

Biodegradable Packaging

Another initiative has been the switching over from Antistatic Bubble Material to Pop Starch Biodegradable Loose Fill which is made from expanded starch. Pop Starch is 100% compostable and biodegradable with no disposal costs, easier handling due to being non static – reducing labour time and having many environmental benefits.



INTERVIEW WITH RAKON BOARD MEMBER HERB HUNT



BUSINESS PROFILE

Herb Hunt was appointed to the Rakon Board in November 2012. Herb's background includes over 40 years' experience in senior global operational and strategic roles in the technology industry with leading companies including IBM, Siebel Systems and Symphony Group. Herb's 30 year tenure with IBM included 12 years in New Zealand rising to Chairman & CEO of IBM NZ before rising to lead more senior roles in Australia, Asia, Europe and the USA. Currently Principal of Transformation Services, a California consulting company.

Do you have other directorships?

Yes I have one other New Zealand directorship, Wynyard Group.

In your 40 years' experience in the technology industry what have been the highlights and what have you enjoyed the most?

That's a tough question, because generally I have enjoyed every minute so far. Being CEO and Chairman of IBM NZ was certainly a great highlight, and a role I enjoyed immensely. I also had the chance with IBM to lead transformations at the highest level which was also challenging and rewarding to see the improvements we made. Equally I had some great highlights at Symphony Technology Group, designing new technology and seeing great success in the market. Now, at Transformation Services I am having the fun of working with companies that are earlier in their life cycle bringing new technology to market which is also very exciting. So, I can honestly say that so far its been a great ride.

In your view what is the biggest driver of change in the technology industry and what does the future look like to you?

Its pretty difficult to single out the biggest driver of change over time because it has changed so frequently. Right now I would say the rapid increase in communications capacity and ubiquity of connection (wired and wireless) put together with the penetration of digitisation (almost everything today has a digital record) are the big drivers. The 'Cloud' is of course a big change in computing delivery too. So, these three are my nominations.

Outside of work, what are you passionate about and how do you enjoy your spare time?

Outside of work passion is my family. We have two wonderful children who were recently married so we spend every minute we can enjoying time with them and their partners. My wife and I also enjoy sailing and traveling, so we try to do all of these together!

Anything you would like to say to Rakon shareholders?

Rakon is a company with great strengths. Like all companies it has had times when things go very well and experienced times when things are more difficult. I joined Rakon because I was confident that it can succeed long term and I felt that there were things I could do to help.

What interests you about Rakon and being on the Board?

Rakon is a real New Zealand success story. It is a world class technology company in a very challenging area. This is an achievement for any company anywhere but it is even more challenging from New Zealand being far from the big markets and customers. For me the real interest is in helping Rakon continue to lead technologically and to find new markets and opportunities for Rakon's products.

What is your particular area of focus and specialist skills that you deploy on the Rakon board?

My background is technical as well as managerial, so my primary interest is in the product, where the opportunities are, what the product needs to win, how it is designed and manufactured and how it competes on the world stage.

What would you like your legacy on Rakon's Board to be?

That I made a contribution that helped Rakon to be a great success story! Rakon has a very talented management team and board. So I am just one of the team.

Your current business, Transformation Services, focuses on helping companies dramatically improve sales, service and product development - can you tell us about this business?

Transformation Services is a speciality consulting company. I work exclusively with technology companies and within those primarily in improving the design, development and delivery of technology. The great thing about the business is that I get to see some very challenging problems and experience the rush of helping companies succeed. This can include everything from detailed product or technology design through changes in development methods and processes and even sales and service approaches.

You were CEO and Chairman of IBM NZ and South Pacific between 1987-1990 and they were very dynamic years in the NZ economy, so how did you find your time in NZ then and do you have many NZ connections now?

Those certainly were dynamic years. Professionally this was perhaps the most rewarding period of my career, working with a very talented team at IBM NZ to transform the company for the future. I still have many NZ connections, starting with my wife who is a Kiwi and my children who were born while we lived there. I continue to have many great friends in New Zealand as well.



Global technology migration to 4G/LTE is driving demand for Rakon's network timing and synchronisation products

TELECOMMUNICATIONS



Rakon's OCXO products designed for network timing and synchronisation applications in the 4G/LTE infrastructure market

Global 4G/LTE Telecommunications infrastructure driving demand for Centum Rakon's OCXOs

The key drivers of the unit and revenue growth has been via the global telecommunications industry going through a technology transition from 3G to 4G/LTE as networks upgrade to next generation infrastructure to cope with exponential data growth, increasing data speeds and optimising quality of service.

All these factors are driving demand for Centum Rakon's OCXO products for base station applications in telecommunications infrastructure market which is being fuelled by new design wins with Tier 1 telecommunication customers. This is augmented with offering leading technology products, broad product range, high quality and reliability, shorter lead-times and Centum Rakon's agility to quickly ramp up production for customer's demand.

In 2008 Rakon formed a 49% joint venture (JV) with Centum Electronics Ltd, based in Bangalore India, to create Centum Rakon. The aim of the JV is to manufacture high value telecommunications infrastructure products and commercialise the R&D programme generated from Rakon's operations in France. The Centum Rakon JV operation is over 3600m² and employs around 400 in manufacturing and R&D.

Since the Centum Rakon JV was formed in 2008 there has been impressive growth in the business, with the customer base broadening significantly in the last few years.

Leveraging the capabilities of Rakon and Centum Electronics

Rakon's division in France has years of experience and world class expertise in the process of designing and testing of OCXO products. Centum's strength lies in operational excellence and in applying various lean manufacturing tools and practices to reduce manufacturing lead-time, improve the supply chain efficiencies, eliminate non value adding activities and to control cost. Also, Centum's expertise to quickly absorb technology; building new process and test systems, the ability to ramp up production in a very short time, are all added strengths to the JV.

The real advantage to the Centum Rakon JV comes from leveraging the expertise and capabilities of both Centum and Rakon. This helps to bring down the product cost and to deliver excellent quality products to customers consistently. Our combined capabilities enable the latest technology products to be launched in the market, at competitive prices and delivered in shorter lead-times – capturing market share for the OCXO business year on year. Strengths in R&D and manufacturing are commercialised by Rakon's worldwide sales and marketing

network, which has access to all major frequency control product customers around the world.

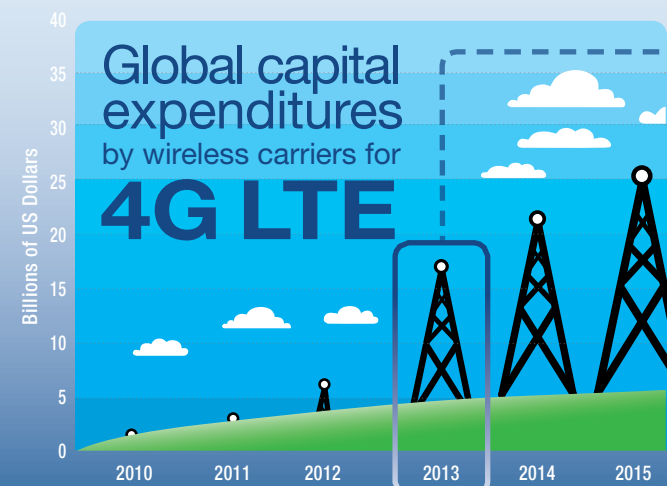
Growing importance of the domestic Indian market for OCXO products

There is good potential for growing the OCXO business in the Indian Space and Defence market segments. Currently OCXO products are being imported from other manufacturers. Centum Rakon's products are already qualified by Indian Space and Defence organisations which will help drive increased market share from customers in these sectors.

CENTUM RAKON KEY MILESTONES

- February 2008:** Joint Venture formed
- September 2010:** Centum Rakon team reaches 300
- October 2010:** Centum Rakon received "High Growth Electronic Hardware company" Award from Software Technology Parks of India (STPI)
- June 2011:** Class 1000 cleanroom completed for high volume crystal manufacturing
- August 2011:** OCXO manufacturing capacity trebled
Received Excellence in Export Award from ELCINA (Electronic Industries Association of India)
- February 2013:** JV partner Centum Electronics Ltd wins the Best Electronics Manufacturer Award from the India Electronics and Semiconductor Association (IESA)

GLOBAL LTE SUBSCRIBER GROWTH* - Fastest ever deployment



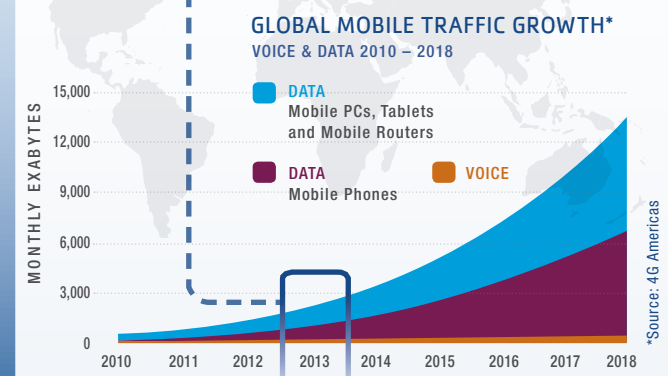
Wireless communications have evolved through four generations of technology to reach a state marketed by the telecommunications industry as '4G', also described as LTE (Long Term Evolution), which is the latest generation of mobile network technology and is the fastest growing standard in telecoms history.

Current 2G and 3G networks are struggling to cope with the demands placed on them due to inherent limitations in their design and will eventually be phased out.

4G/LTE is designed to be the long term standard for all cellular networks; delivering quality of service and meeting the exponential demand for mobile data, driven by video rich content and Cloud data storage.

Ultimately it is telecommunications hardware and software infrastructure that connects you to the rest of the world

4G/LTE INVESTMENT TO MEET EXPONENTIAL DEMAND FOR MOBILE DATA



and without massive capital investment by telecom carriers in wireless infrastructure the demand for data will exceed capacity and the screens on millions of mobile devices will go blank! Globally the industry is now investing heavily in 4G/LTE, and according to research from HIS iSuppli, total global spend on 4G/LTE infrastructure has rapidly accelerated since 2012. Continued market growth will come as the 4G/LTE radio technology pushes more deeply into new markets and countries.

An integral part of 4G/LTE networks will be heterogeneous networks (HetNet) as mobile operators use large numbers Small Cells to increase network capacity and to extend their wireless service coverage as the 'last mile' connections on the edge of the internet become purely wireless. Small Cells are low-powered radio access nodes that have a range of 10m to 2kms and are attached to buildings, traffic lights, stadiums and installed in urban spaces.

SMART WIRELESS DEVICES

- Global smartphone sales are expected to more than double between 2012 and 2017, reaching 1.5 billion units in 2017 driven by large emerging markets in Asia, South America, Middle East and Africa as phone makers launch more affordable 3G handsets
- Hyper-growth of SWD market increasingly attractive to manufacturers of significant scale and financial backing resulting in fierce Japanese competition off the back of a weak Yen
- Next generation technology moves to lower cost frequency control solutions keeping margins low
- While the sophistication of SWDs is increasing on a monthly basis, component pricing, on the other hand, is moving relentlessly downwards

TELECOMMUNICATIONS

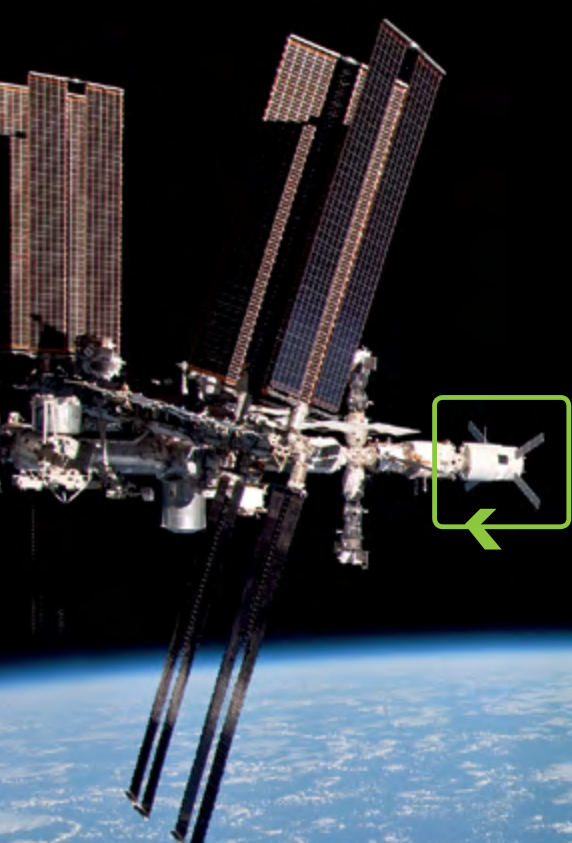
- Global technology migration from 3G to 4G/LTE infrastructure is accelerating as Telcos need to deliver increasing data speeds, optimising quality of service and to cope with massive mobile data traffic growth – up 70% in 2012
- Global roll out of 4G/LTE is the fastest developing mobile system technology ever and 100 LTE networks were commercially launched in the past year. Total of 424 operators in 126 countries are now investing in LTE
Source: Global mobile Suppliers Association (GSA)
- Rakon's OCXO demand increasing for Macro Base Stations as technology transitions to 4G/LTE
- Rakon's expanded product range offering is designed into next generation communication network infrastructure to cover more applications
- Rakon has a high quality reputation and established vendor status at all major Tier 1 OEMs with market share growth fuelled by new design wins and leading technology

POSITIONING

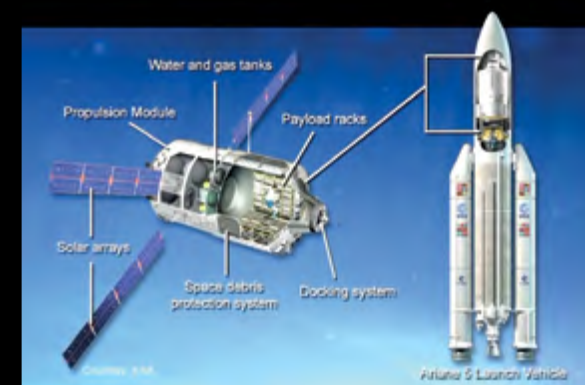
- Rakon recognised as the industry leader with dominant global market share in GPS and with 90% market share in emergency beacons
- Industrial GPS applications that require greater positioning accuracy aligns with Rakon's product strengths in emergency beacons, telematics, geo-surveying, agriculture and asset tracking
- As the market continues to mature, there will be more GPS applications incorporated in to a broader range of consumer devices. New business can be generated in areas where GPS is designed as the primary function e.g. sports and fitness sector and personal locator beacons
- Rakon continues to be recognised as the market leader in XTAL and TCXO products for our Tier 1 customer base who are developing performance GPS applications, so opportunities continue to leverage our market position and capture margin

HIGH RELIABILITY

- Procurement and development of sensors, radar and communication technology is expected to remain strong
- The Space sector is forecast to expand. The Defence sector remains slow due to US and European MoD budget cuts
- Rakon France has been awarded highly sought technology development contracts with the French space agency (CNES)
- Strategic contracts have also been awarded to Rakon France by the European Space Agency (ESA) for space grade oscillators
- To support these opportunities, Rakon is streamlining its High-Reliability and Space business to drive operational efficiencies



June 6, 2013: European Space Agency launched the Albert Einstein Automated Transfer Vehicle into orbit. The Albert Einstein ATV resupply and reboost vehicle is the largest, most advanced and most capable of the vehicles servicing the International Space Station. It delivered 6.6 tonnes of cargo and serves as a storage facility and 'space tug'. The 20 tonne vehicle can navigate on its own and dock automatically with the space station.



Rakon's space grade oscillators are used in the precision guidance systems and for computer timing applications in the European Space Agency's Automated Transfer Vehicle space programme



GLOSSARY

APPLICATIONS



Smart Wireless Device (SWD)

A portable device with added data functionality such as internet access, computing and video capability. Examples include smart phones (such as iPhones, Android phones etc) and tablet PCs (such as iPads).



Positioning

The positioning market includes consumer navigation as well as industry applications for high precision GPS instruments. Applications include; Personal Navigation Devices (PNDs), high precision GPS (surveying, mining, agriculture), rescue beacons and sport and recreation products.



Telecommunications infrastructure

All the electronics hardware that connects you to the rest of the world by global communications networks, both wired and wireless.



Small cell

Small cells are low-powered radio access nodes that have a range of 10m to 2kms. As an integral part of 4G/LTE networks they are an important element of heterogeneous networks (HetNet) as mobile operators use small cells to extend their wireless service coverage and/or increase network capacity. The term "small cells" is frequently used by analysts and the industry as an umbrella to describe the different implementations of femtocells, picocells, and microcells.



High reliability

In some industries reliability and high precision performance are critical. Rakon's high reliability solutions are found in space, defence, aviation and industrial applications which require the most stringent performance criteria.

PRODUCTS



Crystal resonator (XTAL)

At the heart of the XO, VCXO, TCXO and OCXO product is a quartz crystal (X).



Crystal Oscillator (XO)

XOs are quartz crystals combined with basic oscillation circuitry. XOs can offer high frequencies with low performance. They are typically used in telecommunications networks and other broadband applications.



Voltage Controlled Crystal Oscillator (VCXO)

A VCXO is an oscillator designed to have its oscillation frequency changed significantly by a controlled voltage. Customers using high performing OCXOs for base stations and telecommunications infrastructure also use many VCXOs at different frequencies as part of their timing network requirements. VCXOs can offer much higher frequencies as well as low noise performance. They are typically used in telecommunications networks.



High Stability Temperature Compensated Crystal Oscillator

High Stability TCXOs are used in high volume, high performance markets such as mobile phone devices where small oscillator size is important. High Stability TCXOs have a typical performance of 0.5 parts per million (ppm) over wide temperature ranges. They are available in sizes as small as 2.0 x 1.6 mm.



Ultra Stable Temperature Compensated Crystal Oscillator

Many applications demand an even higher level of performance than our high stability TCXOs. Using unique technology, Rakon's Ultra Stable TCXOs can achieve stabilities better than 100 parts per billion (ppb) over temperature. They are used in telecommunications networks and other high precision applications.



Oven Controlled Crystal Oscillator (OCXO)

OCXOs are used in applications where precise reference clocks are needed to secure high volume data traffic. Stabilities can be as tight as, less than 1 part per billion (ppb). OCXOs are generally more complex, more expensive, physically larger and consume a lot more power than a TCXO. Used in telecommunications infrastructure, space and defence applications.



High reliability

In some industries reliability and high precision performance are critical. Rakon's high reliability solutions are found in space, defence, aviation and industrial applications which require the most stringent performance criteria.

HIGH VOLUME

EXTREME PERFORMANCE

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