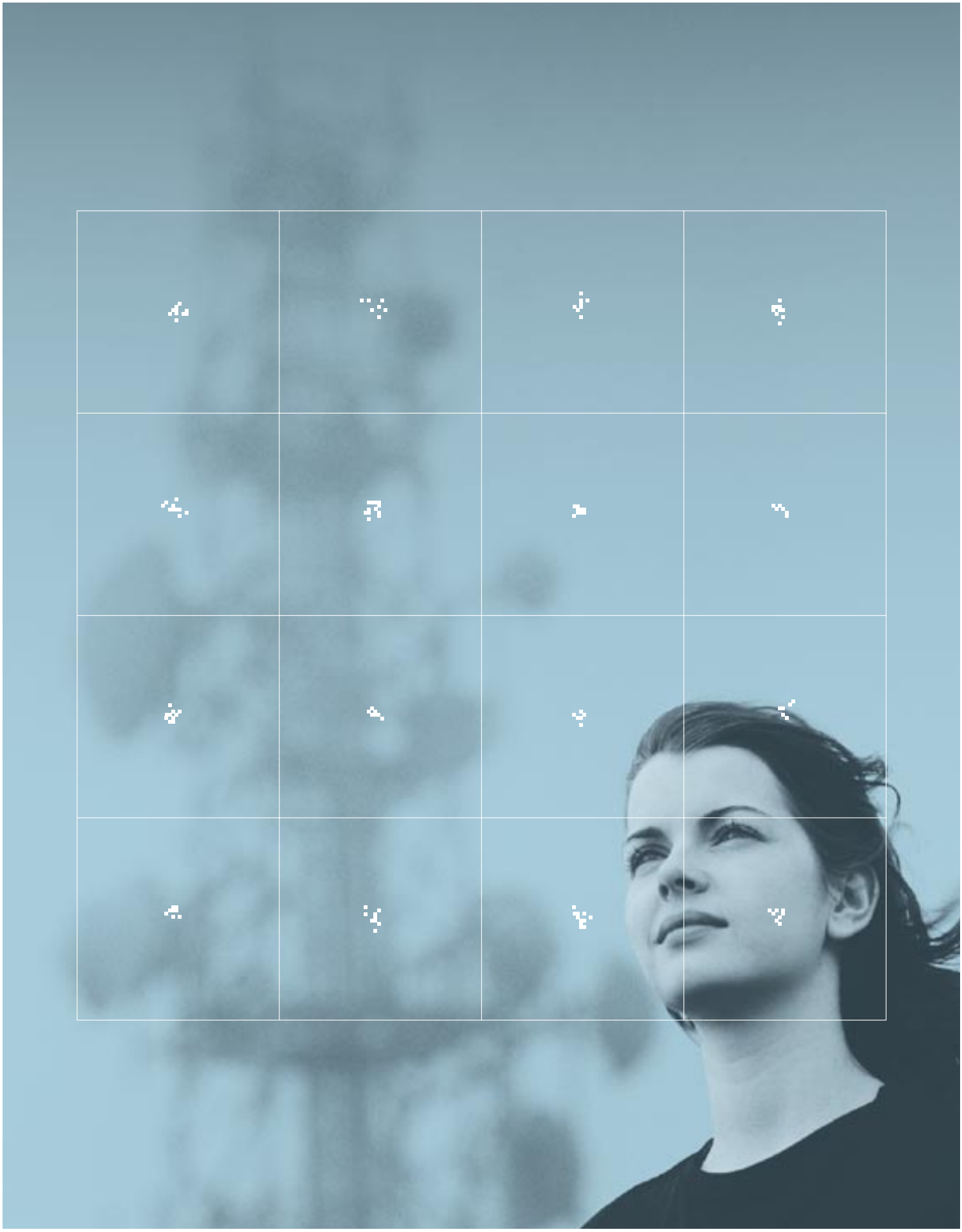


ADVANCED POINT-TO-POINT WIRELESS SOLUTIONS

4RF

VALUE OPPORTUNITIES IN A WIRELESS

Wherever in the world you find a **4RF COMMUNICATIONS** wireless solution, you will recognize the strength of our design philosophy. ——— This philosophy, formed by the desire to help engineer the world's best wireless networks, is to deliver solutions to customers that combine superior spectral performance with customizable interfaces and simplified network integration. ——— Our Aprisa™ point-to-point digital access radios are delivering greater control and enhanced operational independence for networks around the globe: they are a catalyst for creating competitive advantage and building value opportunities in today's wireless world.

OUR FOCUS

DELIVERING WIRELESS SOLUTIONS
WITH SUPERIOR SPECTRAL PERFORMANCE,
CUSTOMIZABLE INTERFACES
AND SIMPLIFIED INTEGRATION.

WORLD

IN AN INCREASINGLY CONNECTED AND COMPETITIVE WORLD, access to infrastructure, especially the Internet, is an imperative. There is an ever-growing demand for connectivity and access, and wireless is answering the call with ever more spectrally efficient solutions that optimize licensed frequencies and integrate seamlessly within existing infrastructure.

4RF WIRELESS SOLUTIONS are deployed by carriers, utilities and energy companies, mobile phone operators, the military, emergency services organizations, and other enterprises that seek high-performance transport solutions for Internet, voice and data communication.

APRISA IS HERE

POLAND TRANSPORTING INTELLIGENCE INFORMATION IN AN EMERGENCY SERVICES PRIVATE NETWORK.

APRISA IS HERE

THAILAND EXPANDING FIXED TELECOMMUNICATION INFRASTRUCTURE, BRINGING ACCESS TO RURAL AREAS.

APPLICATIONS

Rural fixed telecommunications where our solutions cost-effectively deliver reliable, high-quality Internet, voice and data connectivity to areas with a low subscriber density, or customers in remote, challenging locations.

Linking and transmission deep within fixed and mobile telecommunications infrastructure, where our flexible interface architecture enables traffic between PSTN, base stations, mobile switching centres, and within trunked wireless networks.

Private networks utilize our solutions to optimize licensed frequency resources and seamlessly interface and integrate with a wide range of network elements to solve complex communication challenges.

Emergency services organizations where the Aprisa solution's reliable and robust linking performance in challenging environmental conditions is the foundation for safe, efficient communication and service delivery.

Transporting telemetry data for electricity, oil and gas utilities' remote monitoring, SCADA, and teleprotection applications where our solutions help secure the investment in infrastructure and protect resources.

ABOUT 4RF COMMUNICATIONS

INTELLECTUAL PROPERTY 4RF is building its intellectual property and supporting its technology with ongoing development. We are committed to substantial ongoing investment in research and development, and in engineering expertise to facilitate the delivery and support of leading-edge solutions well into the future.

Consistent with our design philosophy, we resource our products with our own intellectual property so we can engineer more reliable, more flexible solutions resonant with customer needs. Developing and integrating the intellectual property frees our customers from the risks and constraints associated with external suppliers, ensures product longevity for our customers, and minimizes spares and obsolescence issues.

PEOPLE Internationally recognized engineering and technical professionals have chosen to align their skills and careers with 4RF. Their expertise is available to assist customers to optimize their networks — our contribution to securing successful project outcomes, and a valuable part of our support programs.

MANUFACTURING AND BUILD QUALITY, international compliance testing and in-market support are fundamental to our product's performance in the field. New Zealand's world-renowned engineering expertise and low cost-base have enabled 4RF to invest in high-quality testing and manufacturing resources. This combination creates opportunities for our ISO 9000-certified electronics manufacturers to produce world-leading products at a highly competitive price.

APRISA IS HERE

NEW ZEALAND TRANSPORTING TELEPROTECTION DATA IN REAL TIME FOR THE ENERGY UTILITY MANAGING THE ELECTRICITY GRID.

APRISA IS HERE

ITALY DELIVERING PRECISE MILITARY METEOROLOGICAL DATA FROM MONITORING STATIONS TO BASE.

THE 4RF DESIGN PHILOSOPHY

FEATURES	BENEFITS	OUTCOME
SUPERIOR PERFORMANCE AND SPECTRAL EFFICIENCY	REDUCED COST OF RADIO SPECTRUM	LOWER TOTAL COST OF OWNERSHIP
INTEGRATED CUSTOMIZABLE INTERFACES	SIMPLIFIED INTEGRATION TO A BROAD RANGE OF NETWORK ELEMENTS	
EASE OF USE	REDUCED ONGOING SUPPORT COSTS	

PRODUCT SUPPORT is integral to undertaking successful network deployment throughout the world. Many of our network customers avail themselves of our pre-sale consultancy and assistance with the preparation of business cases, network design and path planning. We have built a comprehensive post-sale product support infrastructure with international training, technical and engineering support, and web-based support programs. Customers can select from several tailored guarantee and warranty programs best suited to their environmental requirements and technical resources.

DOING BUSINESS WITH US is straightforward. We're engineers. New Zealand has a safe and secure political and financial environment, and we manage our company based on international best practice. 4RF has an internationally experienced Board and senior management team with a proven track record in the development, marketing and implementation of advanced microwave technologies. Their experience is the platform for our strong professional relationships in the marketplace. We have a worldwide distributor and support infrastructure providing prompt, relevant communication and technical support to our customers.

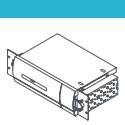
OUR STRATEGIC ALLIANCES AND PARTNERS are an important component of our international relationships and assist customers to optimize their networks. For example, Tait Electronics, world-leaders in the design and manufacture of professional wireless communication solutions, have certified the Aprisa SE as an *Approved Network Solution* for deployment with their trunked mobile network products. We have business relationships with international consulting engineers, and are an accredited IBM Australasian Business Partner.

APRISA IS HERE

SOUTH PACIFIC PROVIDING INTERNET, VOICE AND DATA ACCESS UP TO 75 KILOMETRES OFFSHORE TO REMOTE ISLAND RESORTS.

INDONESIA A COMPREHENSIVE SOLUTION DISTRIBUTING A DIVERSE RANGE OF DIGITAL AND ANALOG DATA FOR A NATIONAL RAILWAY UTILITY.

APRISA IS HERE



Aprisa™ SE

The Aprisa SE digital radio is a simply integrated, standalone wireless access solution designed and engineered for up to 1200 kbps point-to-point linking applications. The optimised, compact design incorporates a customer interface card (CIC) available in options that include a mixture of fractional E1, Ethernet, analog voice and digital data circuits.

APRISA™ DIGITAL RADIO

ANSWERING THE CALL — OUR APRISA PRODUCT FAMILY Our design philosophy has guided the development of our new, higher capacity, customizable Aprisa XE point-to-point radio and heralded the release of an expanded Aprisa product family at ITU Telecom World in October 2003. Aprisa solutions operate in the UHF, 698–960 MHz, 1350–1550 MHz and 1.9–2.7 GHz frequency bands over ranges up to 100 kilometres carrying Internet, voice and data traffic, and are engineered with a wide range of high-performance characteristics and operating features.

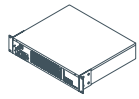
SPECIFICATION	APRISA SE	APRISA XE
RF	330–400, 400–470, 1350–1550 MHz	330–470, 698–960, 1350–1550 MHz; 1.9–2.7 GHz
CHANNELS	25, 50, 75, 150, 250 kHz	200, 250, 500 kHz; 1, 1.75, 3.5 MHz
MODULATION	QPSK, 16/32/64 QAM	QPSK, 16/32/64 QAM
CAPACITY	64 kbps –1200 kbps	312 kbps –17 Mbps
RF POWER	+29 dBm (64 QAM) +30 dBm (32 QAM) +31 dBm (16 QAM) +33 TO +35 dBm (QPSK)	+29 dBm (64 QAM) +30 dBm (32 QAM) +31 dBm (16 QAM) +34 TO +35 dBm (QPSK)
INTERFACE OPTIONS	CIC 2: 2 x 4-WIRE E&M, V.24, 10Base-T CIC 3: FRACTIONAL E1, 10Base-T CIC 4: 2 x 2-WIRE FXO, V.24, 10Base-T CIC 5: 2 x 2-WIRE FXS, V.24, 10Base-T CIC 6: 6 x 4-WIRE VF, V.24 CIC 7: 2 x FRACTIONAL E1, V.24, 10/100Base-T CIC 8: 4 x 4-WIRE E&M CIC 9: FRACTIONAL E1, 4 x 4-WIRE VF, V.24 CIC 10: 2 x FRACTIONAL E1, HSS SERIAL 10/100Base-T	INTEGRATED 4-PORT HUB 10/100Base-T INTERFACE CARDS QJET: QUAD JET (J1, E1, T1) DFXO: DUAL 2-WIRE FXO DFXS: DUAL 2-WIRE FXS Q4EM: QUAD 4-WIRE E&M QV24: QUAD V.24 HSS: HIGH-SPEED SYNCHRONOUS SERIAL

APRISA IS HERE

NEW ZEALAND EXPANSION OF A WIDE-AREA EDACS PRIVATE MOBILE RADIO NETWORK OVER SOME OF THE WORLD'S MOST CHALLENGING LANDSCAPES.

KUWAIT CARRYING VITAL COMMUNICATIONS FOR THE MINISTRY OF INFORMATION IN TEMPERATURES UP TO 45 DEGREES.

APRISA IS HERE



Aprisa™ XE

The Aprisa XE digital radio has been engineered with eight interface slots and up to 17 Mbps of capacity for larger scale, low and medium-capacity linking applications. The interface options installed within the radio platform are configured using the embedded management application from any web-browser enabled PC or laptop for ease of integration.

4RF.COM

We invite you to tell us about your network and what you would like to achieve. We'd be pleased to call and present our credentials, help you prepare a network design plan, table our reference sites and testimonials, and demonstrate our solutions.

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