

# Anritsu Businesses

## Test and Measurement business

As part of the Company's vision of being a leading company supporting the 5G/IoT society, the Test and Measurement business offers measurement solutions in the fields of mobile devices, network infrastructure, and a variety of wireless communications devices.

Fifth generation mobile communications systems (5G) will expand communications in a number of new areas. One example of this is the automobile industry, which is making great strides in efforts aimed at autonomous driving, including for trucks travelling on expressways. In the construction industry, 5G can assist in the real-time transmission of 4K images when remotely operating heavy machinery.

The current challenge is how to ensure reliability in communications. For example, a break in communication in autonomous driving could put a passenger or pedestrian's life in danger. Anritsu has provided measurement solutions since the dawn of the communications era and has contributed to the spread of 3G and LTE. With our customers as partners, we are playing a key role in the early commercialization of reliably connected 5G services.

### ■ Qualcomm Technologies adopts our MT 8000A device for 5G measuring

Qualcomm Technologies (based in the United States) is using the Anritsu MT 8000A radio communications test station for use as measuring equipment in the development of 5G devices.

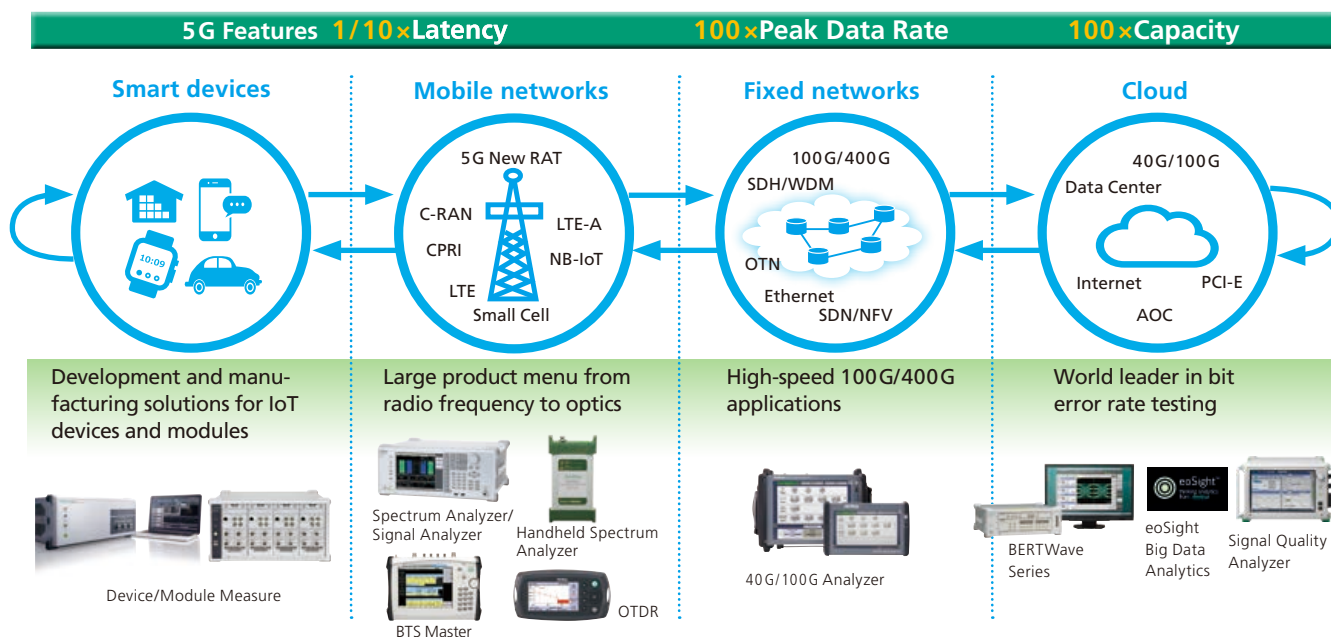
The MT 8000A device has a 5G base station emulation function and can verify function and performance of 5G devices under a variety of communications environments. In addition to being compatible with the sub-6 GHz and millimeter wave bands used by 5G, the MT 8000A device has been adopted based on its ability to easily comply with new testing requirements for 5G systems, including a high degree of reliability, a low delay rate, and multiple simultaneous connections.

### ■ Samsung Electronics adopts our MS 2850 A analyzer for 5G measuring

Samsung Electronics is using the Anritsu MS 2850 A signal analyzer for 5G measuring.

The MS 2850 A signal analyzer is used in the development and manufacture of 5G compatible wireless communications devices. The Anritsu MS 2850 A signal analyzer was chosen based on its ability to bolster productivity thanks to being able to receive and analyze up to eight multi-carrier signals at once.

## Anritsu 5G network solutions



## Product Quality Assurance (PAQ) business

Amid an ongoing increase in the global population, the international community is working to overcome various challenges in order to realize a sustainable society in which everyone can live in a safe and secure environment.

For food and pharmaceuticals companies, where quality-related incidents can lead to a brand's collapse, the stable supply of safe and secure products as promised is considered part of the social mission, and quality assurance is given as the single greatest contributor to improved corporate value. With the goal of making maximum use of limited food resources, we are focused on accelerating measures aimed at reducing food loss, including developing packaging technologies allowing the long-term storage of food, and eliminating foods that are discarded without being eaten due to quality defects, including foreign contaminants.

The environment for production in the food processing industry is becoming increasingly severe due to rising food and energy prices, the aging of societies in developed economies, and higher personnel costs in developing economies. Amid such an environment, the industry is increasingly moving toward automated production lines as a means to reduce costs and improve productivity as it actively works to promote quality assurance.

The Japanese market, which has always placed an emphasis on safety and security in food and pharmaceuticals, is accelerating the shift to automation in the inspection process, which used to be dependent on human beings. Accordingly, demand has been increasing for automatic X-ray inspection equipment, including for the detection of hard contaminants such as glass or plastics in raw materials, bones still present in meat products, or sealing failures in the packaging process.

### ■ X-ray equipment able to detect sealing failures in the packaging process

Recent advancements in the development of packaging technologies have contributed to reduced food loss by extending the shelf life of processed food products. Film packaging, which is often used for sliced ham, retort (sealed pouch) products, and confectioneries, can maintain quality and ensure airtightness by sealing the package opening. Packaging is automated, but since it is done at a high speed, there are times in which the content can get stuck in the sealing, compromising airtightness.

In recent years, X-ray inspection equipment has been used to detect defects in packaging seals. The KXE 7510 DGEKE X-ray inspection equipment, launched in fiscal 2017, utilizes the Anritsu technology acquired over years of experience to allow the high-speed and high-precision inspection of products for defective packaging seals.

In addition to being used for food products, the equipment is also used in areas such as cosmetics (face masks) and pharmaceuticals (skin patches).



### ■ Metal detectors that dramatically improve performance

Metal detectors that use magnetic fields to detect foreign matter mixed in with foods without coming into actual contact with the food are widely used to detect foreign substance contamination in food production lines, and demand is continuing to increase.

Given the potential for metal detection performance to waver due to electromagnetic noise coming from an external source of the object itself, stability in detection has to date been an issue.

The M6-h series of metal detectors launched by Anritsu in fiscal 2017 use newly developed signal processing circuits and algorithms to provide enhanced detection sensitivity and stability in a variety of operating environments. The detectors offer not only improved basic performance, but also quality assurance functions, including a smart guide function to prevent misconfiguration, a function to verify the soundness of the inspection, and a diagnostic function, which all contribute to advance quality assurance and improve productivity on food production lines.



### ■ Streamlining engineering services through the creation of a retrievable design information database

Inspection equipment operating as part of a customer's production line requires engineering expertise to remodel the general-purpose inspection equipment to specific operating environments as well as the products targeted for inspection.

Anritsu Infivis has been responding to the needs of varying operating environments for more than 50 years, accumulating the production line engineering know-how that allows the company to provide the highest-quality inspection equipment for its customers.

In fiscal 2017, the company created an information retrieval system that can quickly find the required information it needs from the company's ample library of design assets and provide to customers' proposals and engineering solutions, thus accelerating and streamlining engineering services.

### Devices business

In line with the Company's vision aimed at contributing to a safe and secure society and making life more comfortable by providing to the world a variety of devices, mainly for industrial applications, the devices business focuses on providing high-quality optical and high-speed electronic devices. With an ever-expanding volume of data being transmitted, the issue now is how to further accelerate transmission speed in network equipment and servers used at data centers and how to accelerate communication between data centers. To solve this issue, Anritsu offers optical devices and high-speed electronic devices that are compatible with super high-speed transmission systems, including 100 GbE, 200 GbE, and 400 GbE systems. Our recently developed light source (LD module) has achieved a world-beating 650mW output for a fiber amplification. It features excellent environmental performance and low power consumption, with total power consumption of below 15.5W.

Moreover, the wavelength sweep light source was designed based on technology in highly reliable communications devices developed over many years and can be used in eye and internal organ imaging equipment and disaster prevention systems.



### Information and communications business

Anritsu is developing its information and communications business with a focus on video surveillance systems and remote-control monitoring equipment (telemetry equipment). This business operates under the concept of "connecting." Japan faces a number of natural disasters, including earthquakes and typhoons, and making enhanced surveillance systems that can contribute to disaster prevention and mitigation is a national concern. The Anritsu SightVisor series of equipment can collect and display video from a substantial number of cameras in one device, bolstering a surveillance system covering a wide area at a low cost. The series contributes to the creation of a response system providing accurate information quickly and is already being used by the Ministry of Land, Infrastructure, Transport and Tourism, as well as several municipalities.

The increased use and reach of the Internet and cloud storage have contributed to the need to secure quality in communication. Mission critical communication is especially important in financial networks. In this area, Anritsu provides high-precision bandwidth control devices.

Guaranteeing a certain bandwidth to communications critical to business and providing real-time communication for video distribution and conferencing, these devices prevent packet loss and fluctuations, contributing to an overall improvement in the quality of communications.

