/Anritsu

Overall Quality Management and Control System

QuiCCA

KSA9003A

The production line in

All your production

QUIC

**Real-time production, system and event monitoring for complete line optimization.**

Record production data automatically

Data recorded includes operational history, in chronological order, of all inspection systems in one centralized location. Eliminate the inaccuracies and effort of manual data sampling.

Monitor production lines in real-time

Current production line status is easily viewable ensuring line efficiencies are met. Remote line changes enable the user to quickly adjust basic settings without physically having to go to the lines. Error massages can be sent to the user's mobile phone for instant notification.
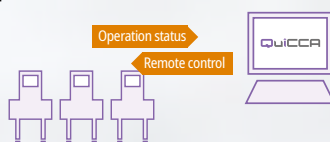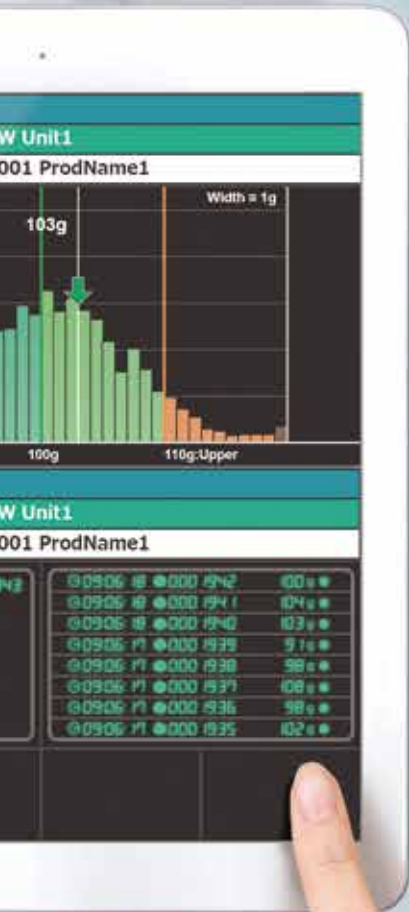
Analyze production performance

Generate and view production status reports. Production trending and variances are available for analysis.
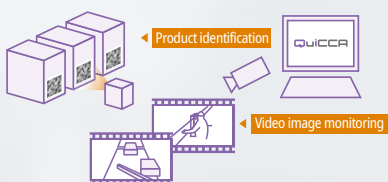
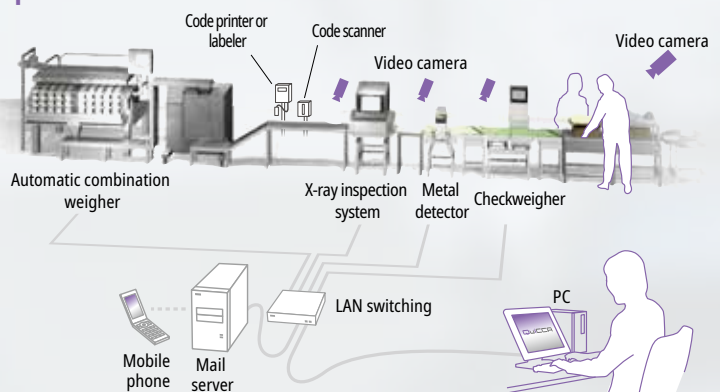# the palm of your hand.

data - anywhere, anytime

CA 3

Product identification & Video recording

Each individual pack can be tracked by its unique bar or 2D code. Video recording, optional, can also be associated to each unique package providing a complete inspection record of each products.

Product identification

QuiCCA

Video image monitoring

● Example

Code printer or labeler

Code scanner

Video camera

Video camera

Automatic combination weigher

X-ray inspection system

Metal detector

Checkweigher

Mobile phone

Mail server

LAN switching

PC

Information, Decision, Future - Link together with QUICCA 3

There is a concern about whether rejected products (NG) are being processed properly or not.

CCP management ⇒page 11

Video recording function ⇒page 12

Check inspection record instantly to handle inquiries promptly.

QUICCA web ⇒ page 6

Quality analysis ⇒ page 10

Product traceability ⇒ page 12

Quickly confirm any impact on the quality of products.

QUICCA web ⇒ page 6

CCP management ⇒page 11

There is a concern about whether control value and sensitivity setting for equipment is appropriate or not.

QUICCA monitor ⇒ page 7

Quality analysis ⇒ page 10

Quality control manager

Protect quality and credibility

Production manager

Achieve production targets

It is difficult to physically go to the lines every time to monitor production progress.

QUICCA monitor ⇒ page 7

Production progress monitor ⇒ page 8

Minimize rejected products and waste of raw materials.

QUICCA web ⇒ page 6

QUICCA monitor ⇒ page 7

Identify the cause of decline in productivity on a production line.

OEE monitor ⇒ Page 9

Increase profit by using existing equipment proficiently.

Production progress monitor ⇒ page 8

OEE monitor ⇒ Page 9

Eliminate waste of raw materials and reduce costs.

QUICCA monitor ⇒ page 7

Production progress monitor ⇒ page 8

Plant manager

Enhance profitability

Improve working environment to increase the retention rate of workers.

QUICCA web ⇒ page 6

Production progress monitor ⇒ page 8

Section leader on site

Complete operation certainly

Share information with relevant divisions smoothly.

QUICCA monitor ⇒ page 7

Production progress monitor ⇒ page 8

I want to fill out reports automatically because I'm too busy to do it manually.

QUICCA web ⇒ page 6

Production progress monitor ⇒ page 8

CCP management ⇒page 11

QUICCA Web
—— Basic screen ——

Displays historical and current production status (KSA9003A)

Production status can be checked from multiple locations anytime, eliminating the need for walking around the site.

【Functions】

1. Automatic report creation reduces the burden of operator and manager.
2. View the current status of each line and the number of NG products.

【Results】

1. The paper-less report reduces the working hours and allows operator/manger to correspond promptly.
2. Errors on production line can be identified instantly, reducing the time to handle errors.
   Unnecessary rejection will be avoided and productivity will be increased.

Check status of all inspection systems at a glance

Simple navigation menu

● Flexible search by line or time period

The electronic report of production condition can be generated automatically by searching specific data such as date, inspection equipment, lot number, product name, etc.

Production results summary

Inspection system statistical reports

Reject history

QUICCA Monitor
—— Detail screen ——

## Displays real-time details for each machine

With QUICCA Monitor, individual users can customize the display with information they require, enabling quick data analysis for fast, accurate decisions.

【Functions】
1. View production status, the number of NG products, mass value histogram from multi locations.
2. Check setting conditions of weight management, the weight variation and the occurrence of errors.

【Results】
1. Real-time details can be checked from anywhere, eliminating the need of going to the production line.
2. Production status can be checked anytime, anywhere, allowing quick action on problems in the upstream production process to reduce the products with excessive weight.
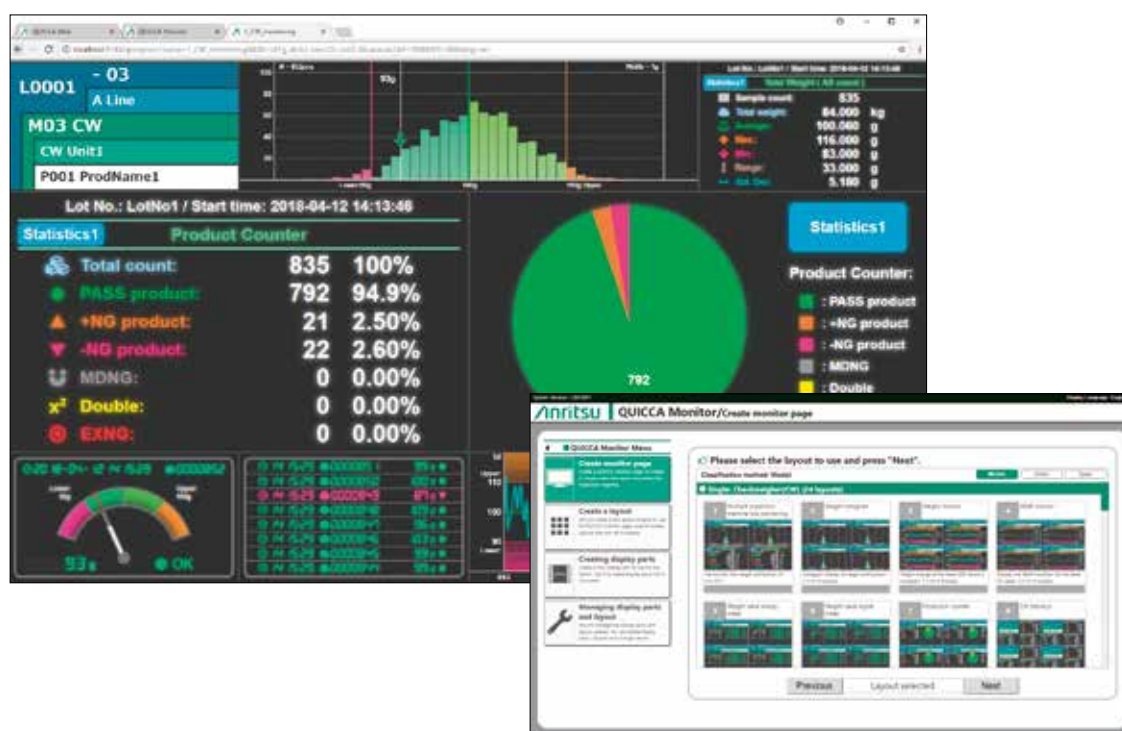
● Easily create your own view with preset templates.

Access QUICCA from the plant floor, offices, and meeting rooms.

- Plant manager has access to plant data any time, real-time and informed communication is possible.
- Quality control manger can check threshold values of inspection systems anytime, the occurrence of defective products (NG) can be easily confirmed.
- Production manager can check current production status and statistical data anytime, the management of production status at the plant floor can be easily managed and proper instructions can be given.
- Section leader on production site can check how the production is going on every line. Problems can be handled promptly and smooth communication can be achieved with other section leaders.
- Each production line is visualized on a large monitor, all operators can share the line information.

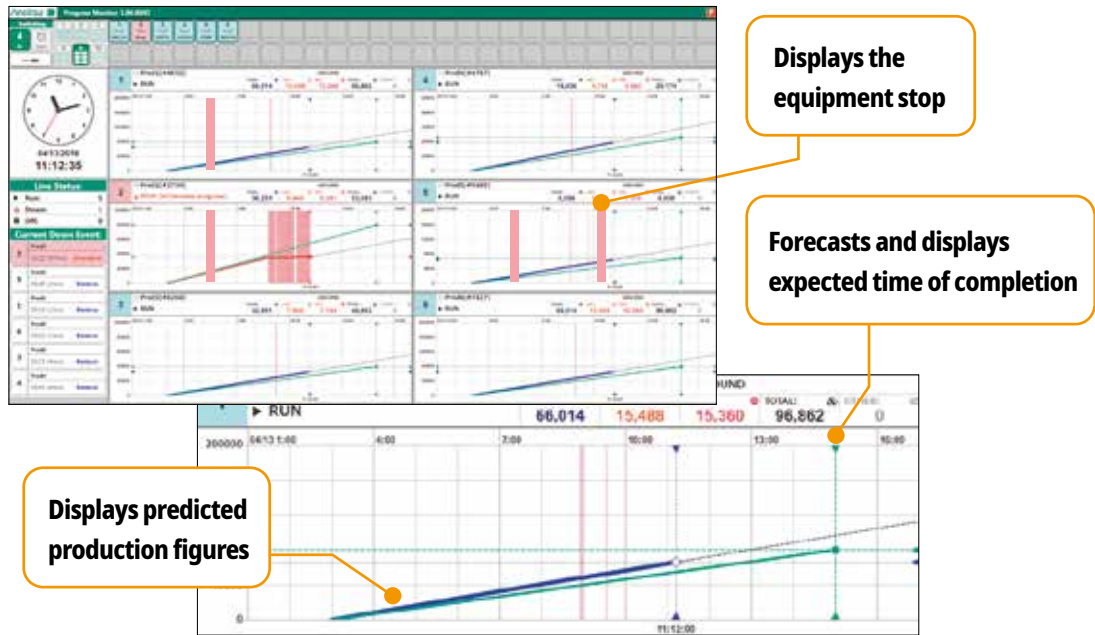| Production Progress Monitor	View production line status, trends, and events at a glance. (KSU9003PA)

Monitor current production vs target levels and plan completion times based on actual production rates.

【Functions】

1. View the output based on the production plan, the presence of delay, and the number of NG products.
2. The presence of equipment downtime can be checked at glance and the ending time of production can be checked in advance.
3. Production results can be recorded in daily, weekly, and monthly reports.

【Results】

1. Production status of each line can be checked from anywhere, eliminating the need for going to the production floor.
2. The stop condition of machine can be distinguish at a glance, enabling a prompt handling of error. Knowing the completion
   time of operation helps proceed finishing work efficiently and reduces the product cost.
3. Electronic production report improves work efficiency of employees involved in production both directly and indirectly.

Displays the equipment stop

Forecasts and displays expected time of completion

Displays predicted production figures

Create reports automatically by day, week, or month to provide insights on efficiency and yield of production.
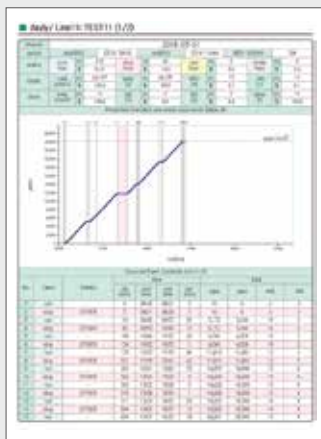
Daily report (production status)
Analyze production trends and any line stoppages.

Weekly report (operating report)
Comparing daily operating efficiencies helps spotlight improvement opportunities.

Monthly report (yield rate)
Comparing monthly operating efficiencies helps spotlight improvement opportunities.

OEE Monitor

Displays operating ratio, performance and quality indicators, and Overall Equipment Effectiveness (OEE).
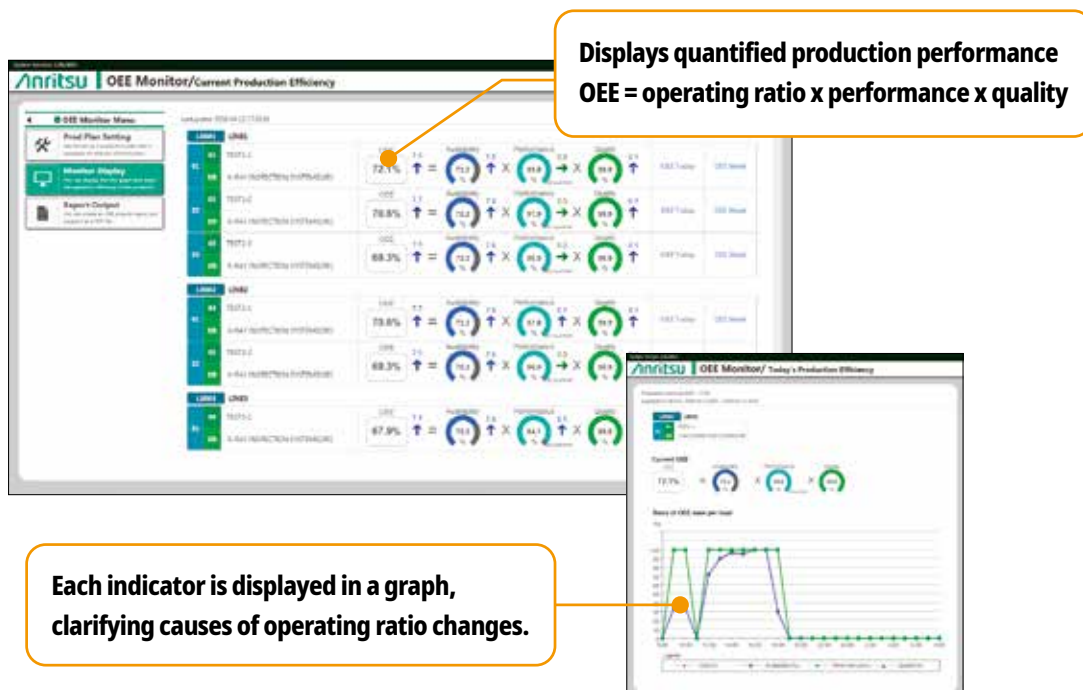
Gain an accurate understanding of overall production efficiency and the details behind the numbers
so you can focus resources and attention where they are needed most.

【Functions】
1. Displays quantified production performance on each production line with the absolute value that are multiplied with operating ratio, performance, and quality.
2. Display each index value of quantified production performance in a graph with the lapse of time

【Results】
1. Anyone can understand overall production efficiency and the number for the improvement of activity.
2. Trends in each indicator of OEE can be compared with the lapse of time. It helps narrow down the improvement measures.
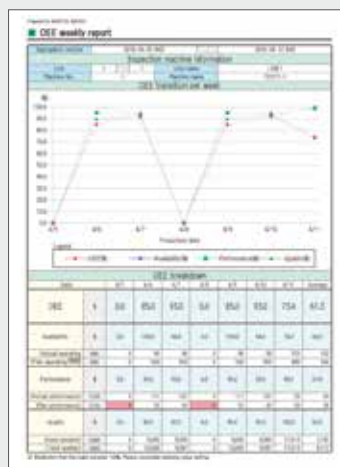

Displays quantified production performance
OEE = operating ratio x performance x quality

Each indicator is displayed in a graph, clarifying causes of operating ratio changes.

View OEE reports in daily and weekly formats.
It is useful for the improvement of production efficiency and the effective use of production facilities.
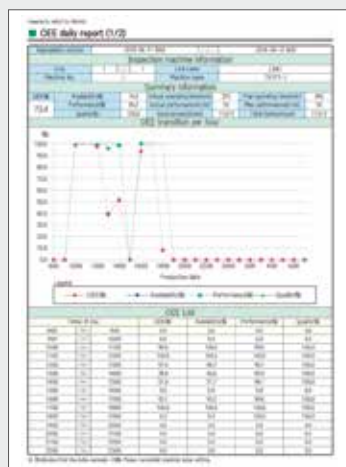
OEE daily report

OEE weekly report

X-ray Inspection System Quality Analysis Tool	**Reject rate alarms and image analysis to best prevent defects from reaching your consumers**

Reducing risk through:

- Rejected product images are automatically extracted for final check prior to shipment.
- Detection limit for PASS and NG can be easily checked and criteria for threshold can be easily changed.
- View images both before and after rejected products to confirm all contaminants are removed.

【Functions】

1. X-ray transmission images of products can be saved. The NG image can be extracted by specifying the date and production line.
2. Detection value and threshold associated with x-ray image data can be searched easily.

【Results】

1. Specific information regarding the product can be checked when a concern for contaminants arise after the production, or when receiving complaints from consumers.
2. Detection limit and threshold associated with PASS and NG evaluation can be checked instantly.

Extracted rejected images (NG) can be easily reviewed.

Filter results by effect value and NG type

Specify the date and production line for the NG images.

Lookout functions	**QUICCA actively ensures that the line and products are meeting your quality goals.**

Reduces risk of production line stoppage

Monitors errors and alarms of all inspection systems - warnings provided if/when suitable conditions are exceeded.

Reduces risk of data recording stoppage

Monitors available space in HDD and notify before taking up the space.

Stop excess rejects

Monitors and counts NG instances and gives a warning if preset threshold is approached.

CCP Management

Automatically record operation checks and the associated product, time/data and the operator ID who performed the check. (optional)

Daily operation checks become more reliable.
The automatic data collection eliminated possible recording omissions or recording errors. QUICCA halts system operation thereby ensuring operation is only allowed if the checks are completed.

【Functions】
1. Easily check the inspection data such as the number of PASS product, defective product (NG), the operator name, type of test pieces and inspection time soon after the inspection by a metal detector is performed.
2. The number of PASS, NG products, the inspector name, etc. can be saved automatically in a electronic daily report.
3. Automatically save reports regarding the handling of NG product, the cause of the problem and preventive measures.

【Results】
1. Inspection status of metal detector by each product can be checked from anywhere.
2. Inspection recording data can be changed to an electronic report from a handwritten report, minimizing the time of creating a report.
3. Utilizing the corrective action table for the prevention of recurrence ensures defective products do not reach the retail shelf.
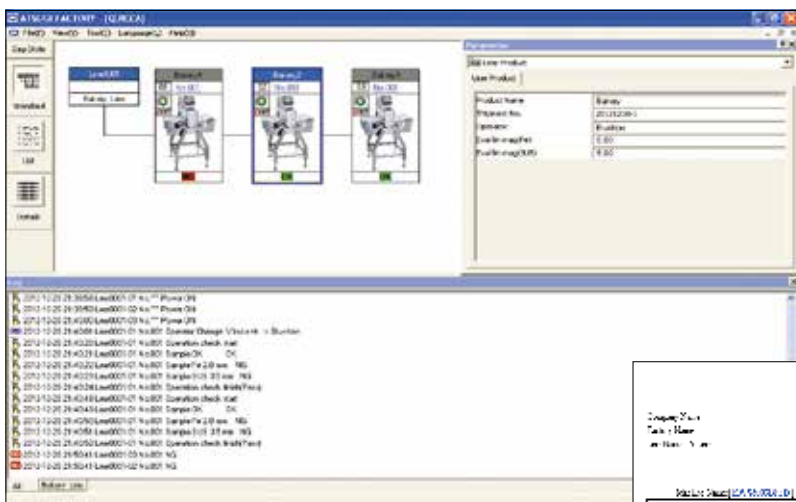
● Create CCP monitoring report
● Provide product inspection report
● Quickly search inspection data
● Read ID and identify the inspector and access level.

Provide product inspection report

The system provides a report to HACCP requirements that a product has been inspected with a fully complaint inspection system.
You can show your clients that your manufacturing process uses and follows stringent quality control processes and can increase our company's credibility. The format can be customized; however, the inspection records cannot be modified.

*Anritsu is not responsible for the inspection results by this documentation.

Product Traceability

Ensure fast and reliable response to product quality complaints

The inspection data and operation history of all inspection systems are automatically recorded, in chronological order, in one centralized location. When receiving complaints from consumers or retailers, the desired inspection data can be extracted via the data output wizard to confirm there were no process problems.

● Traceability function

Connected to a code reader via an X-ray inspection system, QUICCA associates product information and lot numbers with inspection data, providing a complete inspection record of each product QUICCA can identify the product instantly when accurate information is required.

【Function】

Quickly search inspection data by individual identification code printed on each product.

【Result】

All inspection data can be referenced by the product's identification code, allowing the inspection history to be found accurately.

Code printer/labeler

Code reader

● Video recording function

QUICCA associates a product with its camera image.

【Function】

Recorded video image can be used to verify that a defective product is rejected properly.

【Result】

When contaminated product is suspected in a plant, processing status of the product can be checked by the date.
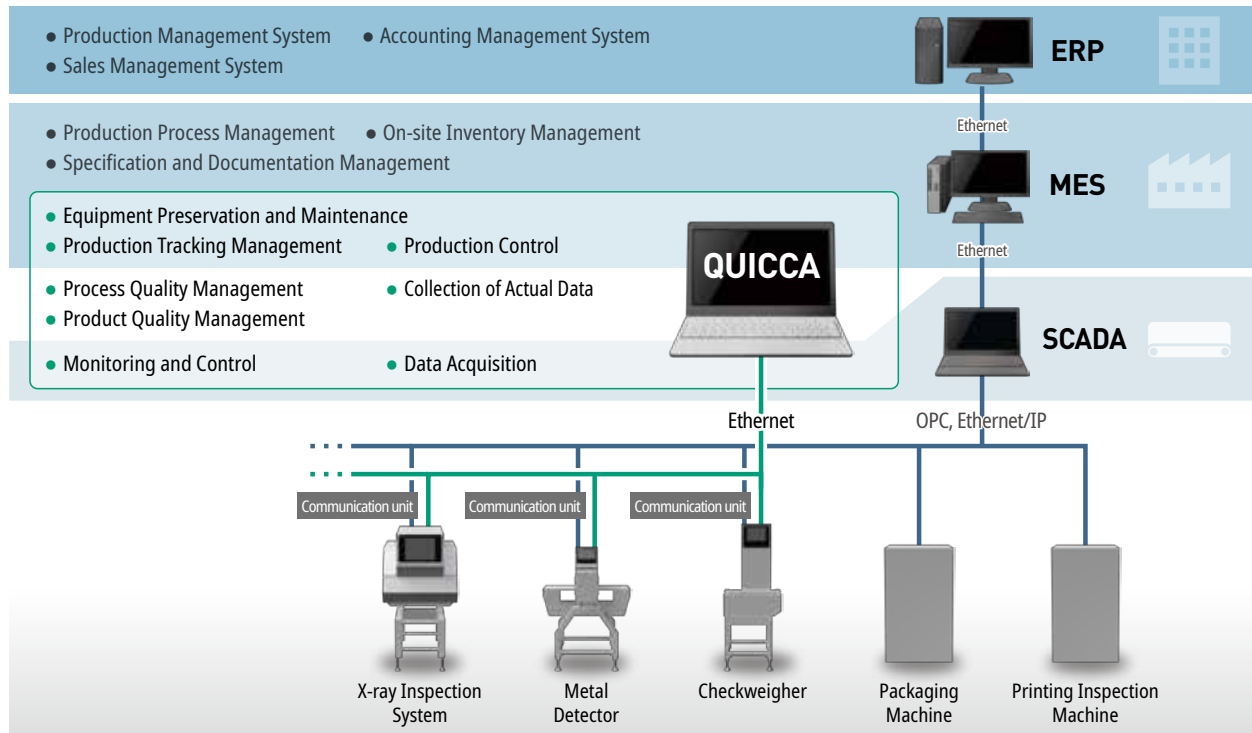

Video camera (line monitoring)

XR Evaluation Result

Construction of plant network

QUICCA provides visualization of inspection system status, production data, and quality analysis. Installation is simple and inexpensive. Detailed quality analysis is difficult to manage with enterprise resource planning (ERP) and manufacturing execution systems (MES). Even if ERP and MES are already in place, QUICCA can achieve a higher degree of quality assurance.
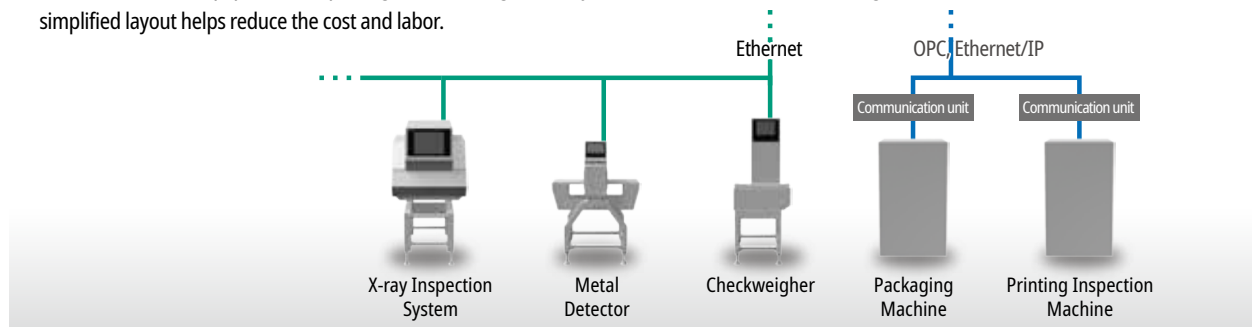
Connection pattern 1 Directly connect to SCADA from equipment.

By adopting international communication standards, data coordination with the upper system can be easily performed.

- Production Management System
- Accounting Management System
- Sales Management System

ERP

Ethernet

- Production Process Management
- On-site Inventory Management
- Specification and Documentation Management

MES

Ethernet

- Equipment Preservation and Maintenance
- Production Tracking Management
- Production Control
- Process Quality Management
- Collection of Actual Data
- Product Quality Management
- Monitoring and Control
- Data Acquisition

QUICCA

SCADA

Ethernet   OPC, Ethernet/IP

Communication unit   Communication unit   Communication unit

X-ray Inspection System | Metal Detector | Checkweigher | Packaging Machine | Printing Inspection Machine

Connection pattern 2 Send data to MES from QUICCA

Data from several equipment are put together and organized by QUICCA to send MES, eliminating the need for a communication unit. A simplified layout helps reduce the cost and labor.

Ethernet   OPC, Ethernet/IP

Communication unit   Communication unit

X-ray Inspection System | Metal Detector | Checkweigher | Packaging Machine | Printing Inspection Machine

System requirements

Item	Notes	Form supplied
PC (PC, server)	PC for QUICCA installation	USER
LAN cable	Category 5e or higher. Gigabyte and Ethernet compatible products recommended.	
LAN switch (switching hub)	Required when connecting multiple equipment. Gigabyte and Ethernet compatible products recommended.	
Cable installation and wiring work	Required for connecting PC, LAN switch, etc.	
HDD for back-up (NAS, USB-HDD)	Required when performing data back-up.	
External HDD for expansion* (NAS, USB-HDD)	Required when PC HDD capacity is insufficient. USB3.0 connection compatible products recommended.	
KSA9003A QUICCA	Includes QUICCA license. Separate connection licenses are required according to the number of machines connected.	ANRITSU
Ethernet unit	Required depending on equipment to be connected.	
Equipment	X-ray inspection system, metal detector, checkweigher, automatic combination weigher	

*HDD (hard disk) is a consumable product. Subscription to manufacturer long-term warranty and on-site maintenance is recommended.

Specifications

■ QUICCA

Maximum number of connectable machines *	99 Machines can be connected within the limit of maximum recording capacity
Maximum recording capacity*	3000 products/min (all lines) 1,500 items/min (when only X-ray inspection system is connected for recording of transmitted images) When only X-ray inspection system is connected for recording of transmitted images, storage capacity for the X-ray machine is calculated as double.
Maximum number of recordable data	Depends on free disk space on PC. Maximum 4 million data/day 1 million to 4 million data/1 GB (Individual data, Statistics data, History data) 10,000 to 30,000 data/1 GB (image data) Data can be saved on multiple hard drives such as NAS

*Depending on software version of machines or devices connected to QUICCA, a part of functions may be limited.
*The number of maximum storage data varies according to disk space, equipment to be connected, and data to be recorded.
*The number of image recording data varies according to the size of product and image format, etc.
*Old recording data will not be deleted automatically. It can be deleted manually by specifying the range of date or it can be deleted automatically by setting the data holding period.

■ Computer operating environment

Server

OS	Windows 7/SP1 (Professional/Ultimate/Enterprise) (64bit) Windows Server 2012/R2 (Standard/Datacenter/Essentials/Foundation) Windows 10 (Pro/Enterprise) Windows Server 2016 (Standard/Datacenter/Essentials) Windoes Server 2019 (Standard/Datacenter/Essentials)
CPU	Intel Core i3 Processor 2.80 GHz or higher
Memory	8 GB or higher
HDD	1 GB or more free disk space for installation in addition to that required for data saving When using external HDD for continuous recording, HDD with USB 3.0 is recommended.
Display	1024 × 768 or higher
LAN	Ethernet (100BASE-TX, 1000BASE-T) Category 5e or higher is recommended
Required browser	Google Chrome, Microsoft Internet Explorer

*When displaying and recording all of the images taken by an x-ray inspection system, processing capacity of image recording vary depending on the operating system. Server OS is recommended when more than four x-ray systems are connected to a PC. Please contact Anritsu sales representatives for latest supported operating system.

Client

OS	Windows 7/SP1 (Professional/Ultimate/Enterprise) (32bit/64bit) Windows 10 (Pro/Enterprise) *Server OS is not supported since it has the operating environment to run Viewer.
CPU	Intel Core i3 Processor 2.80 GHz or higher
Memory	4 GB or higher
HDD	Depends on functions used. 100 MB or more available capacity for installation
Display	1024 × 768 or higher
LAN	Ethernet (100BASE-TX, 1000BASE-T) or wireless LAN connection
Required browser	Google Chrome

*When a server PC satisfies the operating environment, up to three PCs can be connected from clients.

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Anritsu envision : ensure

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• Some products shown in this catalog may not be available in your country or region. Contact our sales representatives for details.

• To ensure proper operation, read the Operation Manual before using the machine.

• In addition to daily inspection, a full maintenance inspection should be completed annually.

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