# Example of Measurement Data Management System Design

A system for recording and analyzing measurement results from various Mitutoyo measuring instruments for quality assurance purposes.

## STEP1
## Recording measurement results

### No more transcribing

Equipped with the data logger function, it allows batch transfer of stored data to a PC with a USB cable.

**DP-1VA LOGGER** ............................................ **09-20**

### Direct data input to a PC

Connection cable-integrated **USB-ITN**

1ch → USB

**USB Input Tool Direct** .................................... **09-5**

Lineup of two models with different output specifications
**IT-020U/IT-007R**

1ch → USB RS-232C

**Input Tool SERIES** ......................................... **09-6**

Connect to a RS-232C interface PC with 4 channels and a sequencer

4ch → RS-232C
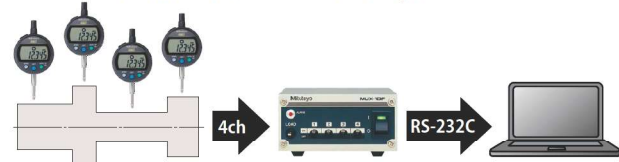
**Multiplexer MUX-10F** ..................................... **09-21**

### Wireless

For Digimatic micrometers
**U-WAVE-TMB**

For Digimatic calipers
**U-WAVE-TCB**

......................... **09-8**

**U-WAVE-T**

**U-WAVE-TM/TC**        **U-WAVE-R**        USB

Digimatic indicator
**U-WAVE-TM / TMB**
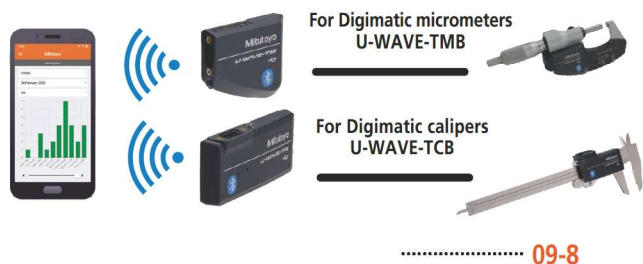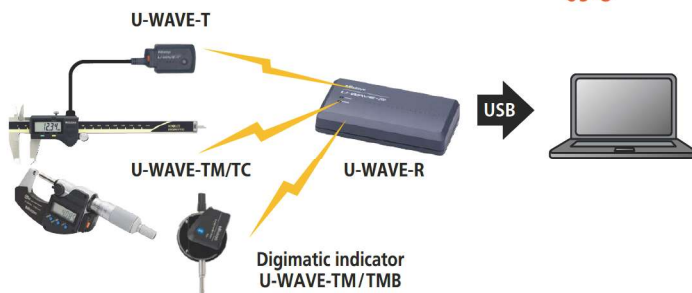
**U-WAVE** ......................................................... **09-9**
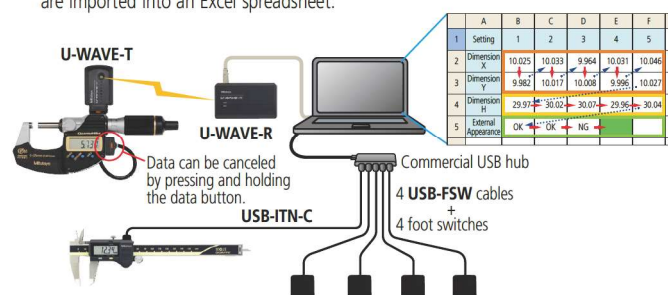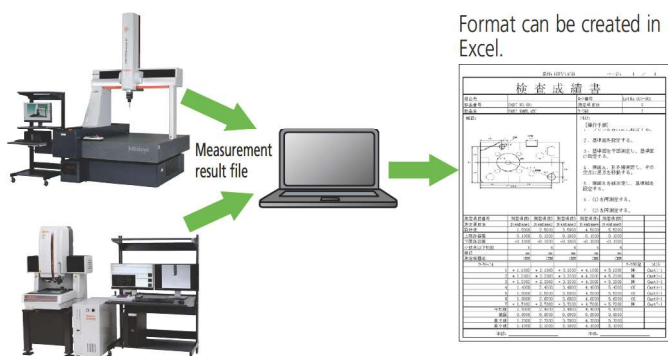
## STEP2
## Software dedicated to inspection and quality control

### Inspection certificate creation

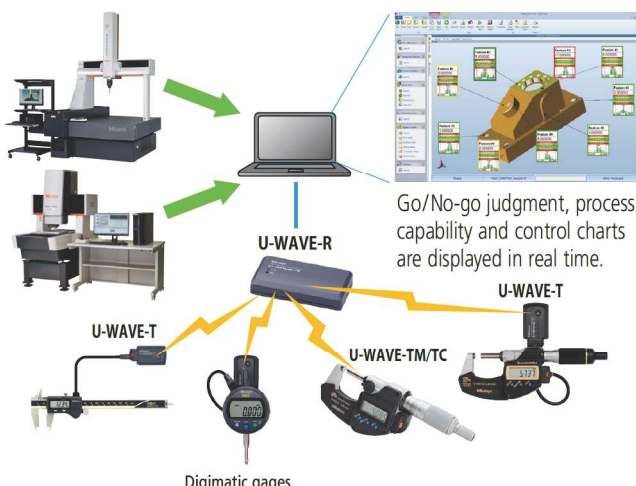Measurement data from calipers and micrometers are imported into an Excel spreadsheet.

**U-WAVE-T**

**U-WAVE-R**

Data can be canceled by pressing and holding the data button.

Commercial USB hub

**USB-ITN-C**

4 **USB-FSW** cables
+
4 foot switches

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | Setting | 1 | 2 | 3 | 4 | 5 |
| 2 | Dimension X | 10.025 | 10.033 | 9.964 | 10.031 | 10.046 |
| 3 | Dimension Y | 9.982 | 10.017 | 10.008 | 9.996 | 10.027 |
| 4 | Dimension H | 29.97 | 30.02 | 30.07 | 29.96 | 30.04 |
| 5 | External Appearance | OK | OK | NG | | |

**USB-ITPAK** .................................................... **09-15**

Format can be created in Excel.

Measurement result file

検査成績書

**MeasureReport** .............................................. **09-19**

### Statistical Process Control

**U-WAVE-R**

**U-WAVE-T**

**U-WAVE-T**

**U-WAVE-TM/TC**

Digimatic gages

Go/No-go judgment, process capability and control charts are displayed in real time.

**MeasurLink®** .................................................. **09-25**
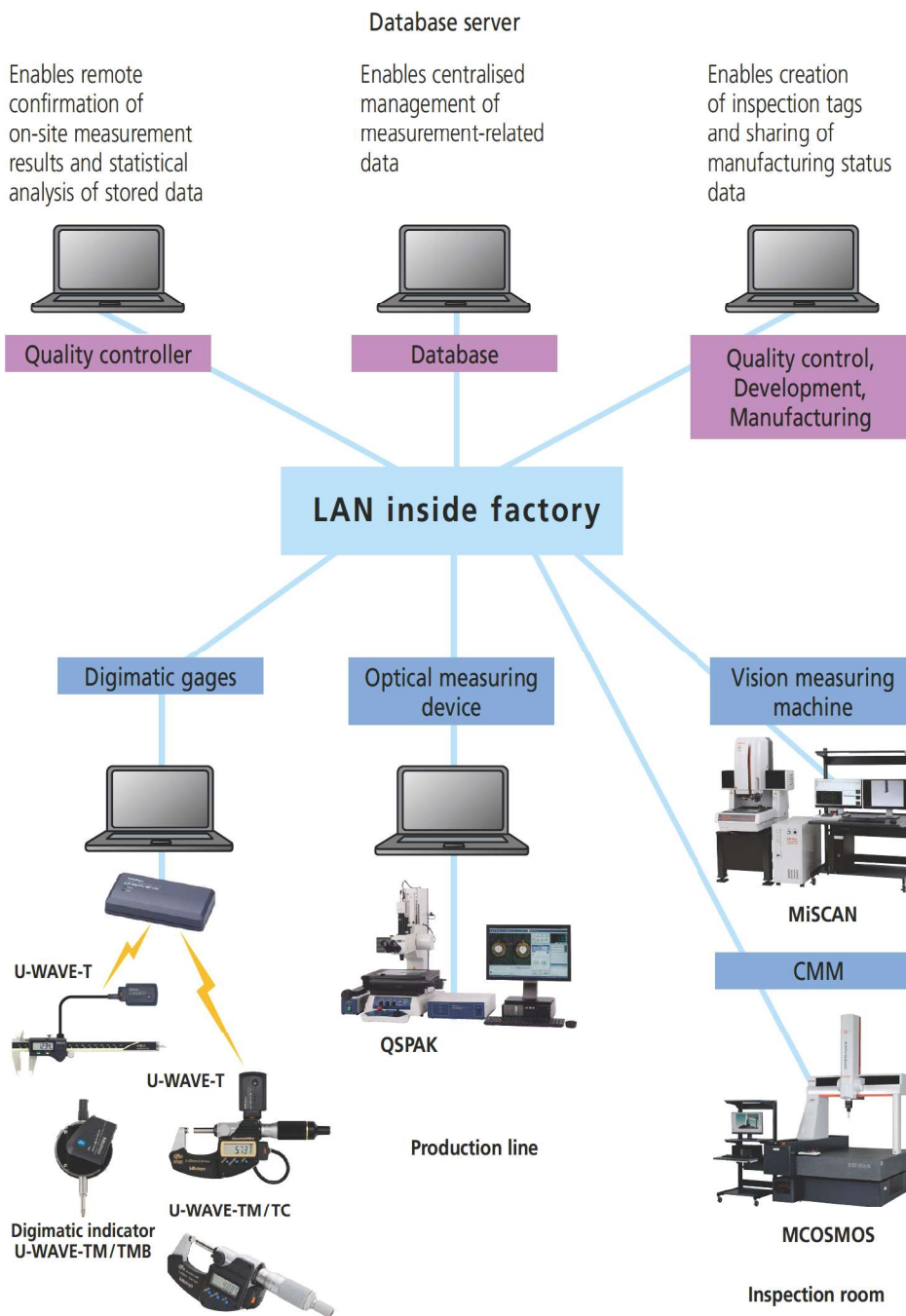
# STEP3
## Network the quality control information of whole the factory

### Unify and control the measurement results through the network

Database server

Enables remote confirmation of on-site measurement results and statistical analysis of stored data

Enables centralised management of measurement-related data

Enables creation of inspection tags and sharing of manufacturing status data

**Quality controller**

**Database**

**Quality control, Development, Manufacturing**

## LAN inside factory

**Digimatic gages**

**Optical measuring device**

**Vision measuring machine**

MiSCAN

**CMM**

U-WAVE-T

U-WAVE-T

QSPAK

U-WAVE-TM/TC

Digimatic indicator
U-WAVE-TM/TMB

**Production line**

MCOSMOS

**Inspection room**

MeasurLink® ·········································· **09-25**

## Other peripheral devices and software

### Condition Monitor

Conduct preventive maintenance through CMM status monitoring

### Status Monitor

Can remotely monitor measuring machines

Note: For details on the above, contact your local Mitutoyo sales office.

**Mitutoyo**