# **Measurement Data Wireless Communication System**

# Measurement Data Management

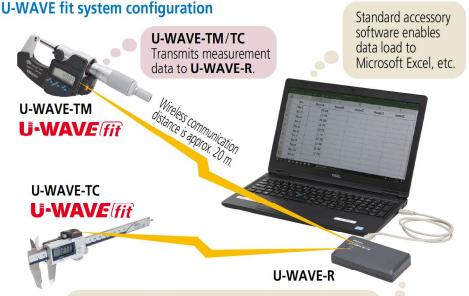
# **Measurement Data Wireless Communication System U-WAVE-TM/TC (U-WAVE fit)**

- The system using our proprietary communication method features stable communication and low power consumption, resulting in improved work efficiency.
- Connecting the **U-WAVE-R** to the PC and starting **U-WAVEPAK** (software), enables data input to spreadsheets such as Excel, memo pad, etc.
- Up to 100 Digimatic gages can be registered to a single **U-WAVE-R**, and wireless communication distance is approx. 20 m. Therefore the measurement data can be managed centrally on the shop floor.
- The wireless system without cabling can keep the workplace tidy and increase workability during measurement.
- Installing the optional USB-ITPAK V3.0/ **V2.1** software enables the use of Excel to improve measurement efficiency. It makes it possible to populate the data from multiple measuring instruments into separate spreadsheets or input the data collectively at the same time.

### U-WAVE-TM/TC (U-WAVE fit) **System Communication Specifications** Wireless communication

Wireless specifications	Original <based (2.4="" ghz)="" ieee802.15.4="" on=""></based>	
Wireless communication distance	Approx. 20 m (line of sight) 250 kbps	
Wireless communication speed		
Transmission output	2.5 mW (4 dBm) or less	
Modulation method	DS-SS (Direct Sequence - Spread Spectrum) Resistant to interfering signals and noise	
Communication frequency	2.405-GHz band (ISM band: Universal frequency)	
Used band	15 channels (2.405 to 2.475 GHz at intervals of 5 MHz) The noise search function avoids interference with other communication devices.	

Note: U-WAVE-TM/TC cannot be used outside the country where they were purchased.



A maximum of 100 Digimatic gages can be connected. Loads the data received from **U-WAVE-TM/TC** to a PC via USB.

### **U-WAVE-R**

Model	U-WAVE-R
Code No.*	02AZD810D/02AZD810E/02AZD810F
Power source	USB bus power system
Number of <b>U-WAVE-R</b> units that can be connected to one PC	Up to 15
Number of <b>U-WAVE-T</b> units that can be connected	Up to 100
External dimensions (mm)	140×80×31.6
Mass (g)	130

\* Code number differs depending on the destination country.

**U-WAVEPAK** software (standard accessory) System Environment: Compatible OS

Windows 2000 Professional (SP4 or later) Windows XP Home Edition (SP2 or later) Windows XP Professional (SP2 or later)\*
Windows Vista\*, Windows 7\*, Windows 8/8.1\* Windows 10\*

Windows 11 Version 1022B or later

- \* 32-bit, 64-bit OS supported <Versions confirmed operational on Windows 10>
- U-WAVEPAK Version1.020 or later

Connectability confirmed for tablet PC

- Microsoft Surface Pro 6 (the version whose operation on Windows 10 Professional is confirmed)
- Required environment: DVD drive (required for installation), USB port ×2 ports or more

**U-WAVE-R** main unit

USB2.0 cable (1 m) attached **U-WAVEPAK** 

Note: Cannot be connected to a device other than a PC (such as DP-1VA LOGGER, sequencer etc.).

U-WAVEPAK software can be downloaded



## Main specifications of U-WAVEPAK

- Setup of dedicated driver software (USB and virtual COM port)
- Initial setting of ID number and frequency selection (required only once for the first time)
- Load data to Microsoft Excel or Notepad through the data interface function







### **Typical applications**



U-WAVE-TM (264-622)



U-WAVE-TC (264-621)

## **Transmission unit**



264-622



264-621



### **SPECIFICATIONS**

IP67 type is resistant to water and dust ingress. Buzzer type notifies data reception by buzzer sound and LED.

Connectable measuring instruments	Micrometer		Caliper	
Code No.	264-622*	264-623*	264-620*	264-621*
Model	<b>U-WAVE-TM</b> (IP67 type)	<b>U-WAVE-TM</b> (Buzzer type)	U-WAVE-TC (IP67 type)	U-WAVE-TC (Buzzer type)
Protection Rating	IP67	N/A	IP67	N/A
Data reception indication	LEDs	Buzzer and LEDs	LEDs	Buzzer and LEDs
Power source	Lithium battery CR2032×1			
Battery life	Approx. 400,000 times continuous data transmission			
External dimensions (mm)	41.9×12.9×38.8		56×11.45×30.4	
Mass (g)	18			

Fixed to transmission unit and inserted into output connector of Digimatic gage.

Code No.	02AZF310	02AZF300	
Protection level	IP67 N/A		
Mass (g)	6		
Connectable transmission unit	U-WAVE-TM/TC (IP67)	U-WAVE-TC (for standard type)	

Note 1: **02AZF310** ensures water-proof performance only when attached to measuring instruments of IP67 type. For information on supported connecting units, please contact your local Mitutoyo sales office.

Note 2: Water-proof performance is ensured only when attached to measuring instruments of IP67 type.

# Compatibility of measuring tool and unit

Digima	tic gage	Assembled appearance (Front/Back)	Connecting unit	Transmission unit
Micrometer	Standard			264-623* U-WAVE-TM (buzzer type)
MICIOITIELEI	Quantu- Mike		02AZF310	<b>264-622* U-WAVE-TM</b> (IP67 type) <b>U-WAVE</b> (Fire
Caliper	Standard		02AZF300	264-621* U-WAVE-TC (buzzer type)
Camper	Coolant- proof type		02AZF310	264-620* U-WAVE-TC (IP67 type)
	ID-C, ID-F Series (new type		0247500	264-623* U-WAVE-TM (buzzer type) U-WAVE (iii)
Digimatic	only)	Type SF connector (for <b>ID-C</b> Series 12.7 mm type)	02AZF700	U-WAVE-TM (IP67 type)
indicator	Others	Connection cable	02AZD880G/H/J* U-WAVE-T (buzzer type)	
		Mounting bracket	02AZD730G/H/J* U-WAVE-T (dust/water-proof type)	

<sup>\*</sup> To use this product, conformity to the applicable radio law in each country is required. Code number differs depending on the destination country. Please contact your nearest Mitutoyo sales office.

