

# New Products

## U-WAVE®

Measurement Data Wireless Communication System

## U-WAVE-T



## U-WAVE-R



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**Measurement  
Data Management**



# Integrated Solutions

Quality Data Management with **MeasurLink®**

Most of Mitutoyo's electronic instruments can output data via optional connecting cables or wireless transmitters & receivers in the form of the Digimatic code. This signal is designed to go directly into Mitutoyo data processors such as the DP-1VR. The Digimatic code can also be converted into RS-232C format by any of several available interface units. In this way, digital data can be sent to PCs for data acquisition and advanced statistical analysis.

The MeasurLink® Quality Management Software combines real-time data acquisition, on-line statistical analysis, integrated networking, and quality information sharing into a comprehensive quality data management solution. The MeasurLink® family consists of a number of different software modules that allow users to determine the level of depth they want in a quality management system. Starting with a Real-Time package, users can acquire and analyze data in real-time to maximize production and minimize defects.

As a client/server application, MeasurLink® gives you the performance you need through distributed processing.

Combined with a multi-user relational database, MeasurLink® delivers a safe and organized data warehousing system making quality data available for viewing and analysis by any member of the production, engineering, and managerial staff throughout your company. Inspection in the factory produces data for analysis, corrective action, and various reporting needs. As the backbone of your quality efforts, MeasurLink® is guaranteed to reduce your production costs and increase your bottom line.

## Scalable Network

MeasurLink® is capable of linking and managing multiple "islands" of inspection. A common database of part information, statistical data, gage information, processes, etc. information is shared across an entire manufacturing facility.

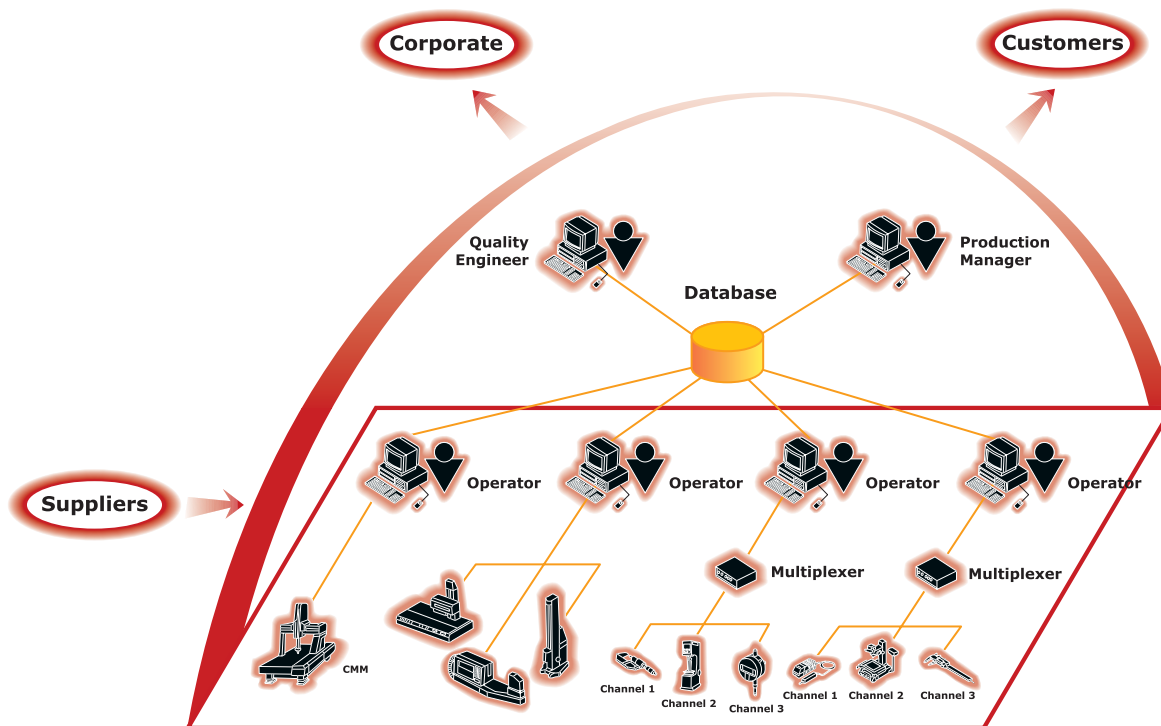
## Relational Database

MeasurLink® is an ODBC compliant application qualified for use with the following database management systems:

- Microsoft® SQL Server / SQL Server Express
- Oracle®
- Sybase® Adaptive Server Anywhere

Please visit [www.measurlink.com](http://www.measurlink.com) for more information

**MeasurLink®**  
Data Management System



The Manufacturing Process with **MeasurLink®**

# MeasurLink®

An Integrated Solution for Quality Data Management

## Versatile. Powerful. Easy-to-Use. That's MeasurLink - A total quality data management solution:

MeasurLink® is an easy-to-use, Windows® - based family of quality data management software applications that will suit your business's quality control needs. SPC Real-Time/SPC Real-Time Plus, SPC Process Manager, SPC Process Analyzer, Gage R&R, and Gage Management combine to form a comprehensive quality management system for your company.

### Easy-to-use SPC

MeasurLink® provides to you the most intuitive interface with complete SPC functionality to help you monitor and manage your manufacturing processes. With MeasurLink®, you can easily manage the quality levels of your parts, identify problem areas and apply corrective action to areas in need of attention.

## SPECIFICATIONS

Order No.	Description
64AAS801D	MeasurLink® SPC Real-Time 6

MeasurLink® SPC Real-Time is a user-friendly, comprehensive SPC data acquisition software

designed to allow immediate measurement data analysis and feedback for variable, attribute and short inspection runs.

MeasurLink® SPC Real-Time enables the QC/Production Manager to easily establish a database of critical part characteristics (including mathematically derived features) in a Feature Library, which includes engineering specifications, revision history, and part pictures.

MeasurLink® SPC Real-Time supports Nelson data tests with e-mail messaging capability for failure notification, process traceability with on-screen traceability filtering, forced assignable cause options with corrective action plans, and random gage input. Collected data is automatically "time stamped". MeasurLink® SPC Real-Time also provides flexible report generation and allows you to create reusable report templates with subgroup, time and traceability filters that will satisfy any customer's report requirements.

MeasurLink® supports the OPC specification as an OPC client /server (OLE for Process Control) MeasurLink® can connect with SCADA and HMI applications. MeasurLink® supports multimedia aids such as video, images, sound, and document attachments.

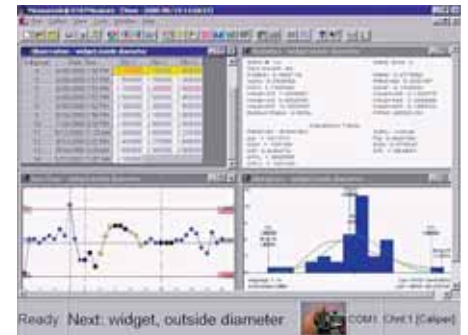


Visual prompting keeps the operator focused on inspection and not on the use of the software. Quality management sets the rules of inspection in the Support Center (i.e. Traceability pick lists, part numbers, feature labels, tolerance information, gage configuration). Flags can be set for serial numbers, subgroup stamps, traceability and out-of-control conditions.

MeasurLink® supports multi-media for visual and audio operator instructions.



Networking Infrastructure Solutions  
Information Worker Solutions  
ISV/Software Solutions  
Mobility Solutions



MeasurLink SPC Real-Time supports both lot based and Just-in-Time manufacturing. Through the use of a unique "Run ID" or identifier companies maintain production traceability. Real-Time supports multiple Inspection Runs to be loaded concurrently. This allows a single computer to support many parts, operations, and operators simultaneously.



Please visit [www.measurlink.com](http://www.measurlink.com) for more information

Note: Upgrade packages are also available.  
Please contact our sales offices for details.

# MeasurLink®

An Integrated Solution for Quality Data Management

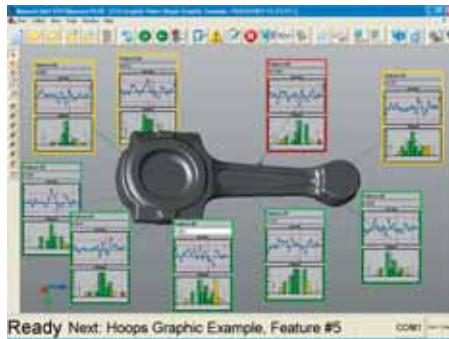
## Real-Time Data

MeasurLink performs as a data acquisition clearinghouse by enabling you to connect and acquire data from virtually any measuring device. It supports the full range of metrology technology, including calipers, micrometers, indicators, CMMs, vision systems and more.

## SPECIFICATIONS

Order No.	Description
64AAS802D	MeasurLink® Real-Time PLUS 6

MeasurLink® SPC Real-Time PLUS is an enhanced version of MeasurLink® SPC Real-Time. It has all of the functionality of our latest SPC data acquisition software. The centerpieces of the MeasurLink® SPC Real-Time PLUS application are



MeasurLink SPC Real-Time PLUS gives the operator a "chart on graphic" display. 2-D and 3-D image files are supported allowing the user to establish perspectives of the part from a CAD file. GD&T Symbology is supported. Each callout border is tolerance color coded.

the "Graphic View" and "3-D Graphic View", which can place text, numeric and graphical "callouts" directly into 2-dimensional and 3-dimensional image files. Intuitive and operator friendly, capable of high volume inspection, MeasurLink® SPC Real-Time PLUS can deliver process capability and part acceptability to inspectors at a glance.

Graphic Views callouts can include the following output:

Part ID, Feature ID, Revision, Current Observation, Cp, Cpk, Max, Min, Defect ratio, Pp, Ppk, Nominal, UTL, LTL, Mean, Average Range, Standard Deviation, Subgroup and Observation numbers, Box-Whisker, Meter chart, Histogram, Indicator bar, Control charts, Run charts, and simple GO/NO-GO display.



The callouts are sizable, positionable, configurable and saveable against whatever graphic image you wish to use. The PLUS application has all of the same basic SPC functionality as the standard Real-Time application.

## SPC Network Monitoring Software for Windows®

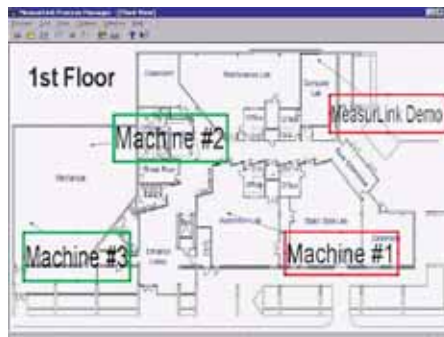
## SPECIFICATIONS

Order No.	Description
64AAS911D	MeasurLink® SPC Process Manager 6

MeasurLink® SPC Process Manager links all shop floor SPC activities onto one screen in a Local Area Network (LAN), providing the QC/Production Manager with a remote overview of shop floor processes in real-time. With SPC Process Manager the QC/Production Manager can respond instantly to what is happening on the production line.

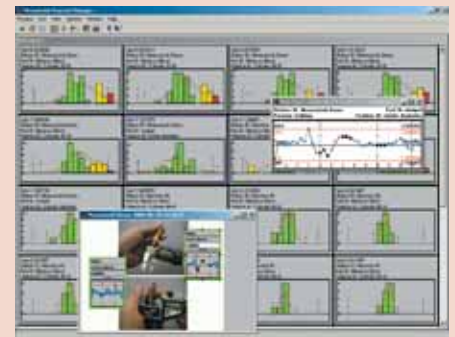
MeasurLink® SPC Process Manager gives the QC/Production Manager the perfect tool to organize and maintain a shop wide quality program at a glance.

Equipped with warning flags and a log file generator, SPC Process Manager keeps you informed with up to the minute process information. Process Manager also supports e-mail and text messaging.



The Plant View gives the production manager the ability to use a floor plan graphic or aerial photograph as a backdrop to callouts that represent inspection areas. The callouts are color coded to indicate problems. Double-clicking on a callout will create a filter of snapshots associated with the inspection station.

Please visit [www.measurlink.com](http://www.measurlink.com) for more information



MeasurLink SPC Process Manager displays snapshot windows of characteristics that are currently being collected in MeasurLink SPC Real-Time and Real-Time PLUS. The data can be sorted by Station, Process, Capability or Timestamp. A number of real-time alarms are available to alert a quality manager to production problems.

Note: Upgrade packages are also available. Please contact our sales offices for details.

# MeasurLink®

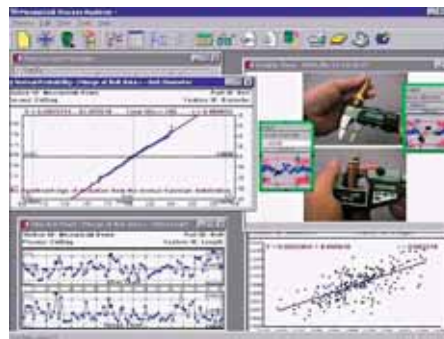
An Integrated Solution for Quality Data Management

## SPC Data Analysis Software for Windows®

### SPECIFICATIONS

Order No.	Description
64AAS921D	MeasurLink® SPC Process Analyzer 6

MeasurLink® SPC Process Analyzer is an invaluable tool for your quality team. It gives you the flexibility to analyze your processes, identify problem areas and take corrective action to improve your product's quality. Inspection runs can be sorted by Inspection Station, Routine or

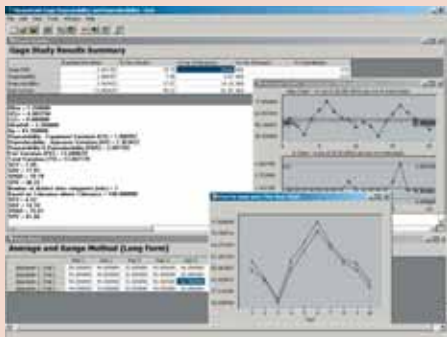


Correlation studies with regression analysis and normality plots are available. A comprehensive spreadsheet display is available that offers the engineer detailed summary reports both within a production run and between multiple runs. This application is ideal for our customers to generate reports for their customers and also to isolate areas for corrective action within their own manufacturing process.

Part, and are displayed with the look and feel of the Windows Explorer. Inspection data can be merged, filtered, grouped, charted and printed in the way you want it. MeasurLink® SPC Process Analyzer gives the QC Engineer a spreadsheet interface option and allows math calculations on inspection data. With the ability to import/export ASCII file data, MeasurLink® SPC Process Analyzer can port to or from other applications with ease. Capability vs. time, capability vs. traceability and "what if" scenarios are all available in Process Analyzer.



Process Analyzer has additional view types to provide more information to the engineer. The multi-variant view super-imposes related characteristics to check for time based correlation. Capability vs. Traceability can be used for machine or operator comparisons. Capability vs. Time can be used for tool wear predictability.



In addition to the standard calculations this software also provides graphical tools for analysis of the measurement system. The Xbar and R chart can show whether there is adequate gage discrimination to record part to part variation in production and if operators are self-consistent. The Part-by-Appraiser plot can show if there is a lack of consistency between operator inspection techniques.

Note: Upgrade packages are also available. Please contact our sales offices for details.

Please visit [www.measurlink.com](http://www.measurlink.com) for more information

## Gage R&R / Measurement Systems Analysis

Measurement systems analysis is used to determine the repeatability and reproducibility, linearity, bias, and stability of inspection systems allowing you to isolate gauging problems.

### SPECIFICATIONS

Order No.	Description
64AAS941D	MeasurLink Gage R&R 6

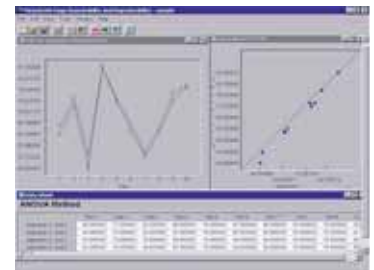
MeasurLink® Gage R&R is a Microsoft® Windows®-based Gage R&R software designed to the AIAG (Automotive Industry Action Group) Measurement System Analysis standard (MSA3) for ISO/ TS16949.

MeasurLink Gage R&R integrates with MeasurLink SPC Real-Time and Real-Time PLUS to provide hands free data entry. In fact, Gage R&R works with virtually any gage or inspection system.

- Supports the following AIAG study methods:
  - 1) Range method.
  - 2) Average and range method.
  - 3) Average and range method including within part variation.
  - 4) Analysis of variance method.
  - 5) Short method for attribute gages.

- 6) Bias study.
  - 7) Linearity study.
  - 8) Stability study.
- Input methods include: keyboard entry, direct gage input, DDE and text import.
  - Builds a gage inventory and records your R&R study efforts.
  - Generates reports that your customers will respect and value.

Provides graphical interpretation of appraiser consistency.



This software supports up to 25 appraisers per study, 25 trials per appraiser and 25 parts per trial. Each study supports a Gage ID, Gage type, Serial Number, Note, etc. A full search engine is available. This product is also integrated with MeasurLink Gage Management for recall and reporting purposes.

Mitutoyo

# MeasurLink®

An Integrated Solution for Quality Data Management

## Gage Inventory and Calibration Control

Gage Management is essential for monitoring the calibration history of a gage. Periodic adjustments may be required to bring a gage into specification.

## SPECIFICATIONS

Order No.	Description
64AAS007D	MeasurLink® Gage Management 6

MeasurLink® Gage Management is a Microsoft® Windows®-based gage calibration tracking software. It is networkable and shares the same database used by the rest of the MeasurLink® software family. This assists users in developing,

maintaining, organizing, and managing information about their gages. Information such as gage in-service dates, calibration recall dates, gage R&R dates and general gage event history is provided in an intuitive interface with complete reporting abilities. MeasurLink® Gage Management also supports the creation of vendor contact and user lists. It comes equipped with a "smart" calendar that allows you to define working days. Calibration procedure setup is easy and incremental response methods help to achieve optimal calibration frequencies. Customized gage label printing is supported.



MeasurLink Gage Management allows customers to build a complete gage (and fixture) inventory. Calibration procedures are established as a sequence of Standards. These procedures are associated with Gage IDs and are used when performing "in-house" calibration.



Calibration is made simply by supporting digital gages. Attribute gage calibration can be performed using any digital gage. Certificates of calibration can be printed for archiving or for distribution by calibration labs. This application is also integrated with the SPC Real-Time and Real-Time PLUS to electronically notify the operator that a gage is becoming overdue for calibration and even prevent the operator from continued data collection if overdue.

## Measur.NET: Browser-based, internal and external data communication.

MeasurLink® data for Web server "publishing": Integrated with security to publish runs at User ID level with specific Password. Active Server Pages set for Login, Published Run display and Data Viewing. ActiveX control developed for "live" data viewing. Employs SSL (secure sockets layer) certificates for privacy.

- Microsoft® SQL Server
- Measur.NET 2.0 real-time web viewer
- 5 user license 64 AASNET

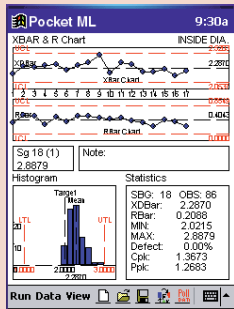


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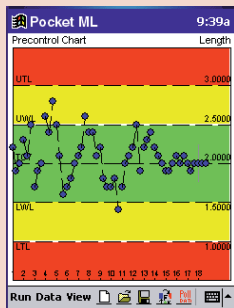
Note: Upgrade packages are also available. Please contact our sales offices for details.

# MeasurLink® Pocket ML

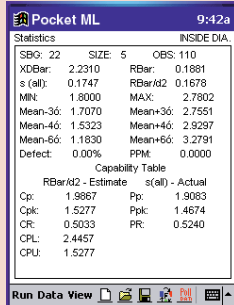
## Untethered Data Acquisition and Monitoring



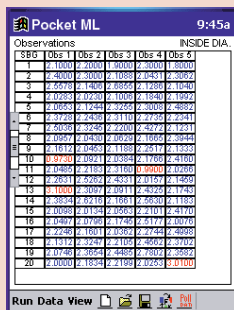
The Pocket ML combined chart is customizable displaying 3 selected charts.



The Pocket ML chart for pre-control provides "Stop Light" colored zones.



The statistics window provides a current view of relevant numerical information.



The observations window displays all captured measurements for a feature.

Pocket ML is an application designed for mobile data collection, powered by the Microsoft Windows for Pocket PC platform.

MeasurLink® Pocket ML is full function SPC data collection software designed for portable data collection and event logging.

Pocket ML collects measurements from a single gage and supports timed input. Inspection data can be imported into MeasurLink® SPC

Real-Time, MeasurLink® SPC Real-Time PLUS, MeasurLink® Process Analyzer and, as a formatted text file, into Microsoft Excel or Word, via the Pocket PC connection cable.

Connect gages with SPC output to the Pocket ML using standard Mitutoyo SPC Cable.

### SPECIFICATIONS

Order No.	Description
982-555B	Pocket ML w/ Pocket PC Package



Picture shown is optional Digimatic caliper and SPC connecting cable.

### TRADEMARKS

Microsoft Windows is a registered trademark of Microsoft Corporation.



Networking Infrastructure Solutions  
Information Worker Solutions  
ISV/Software Solutions  
Mobility Solutions

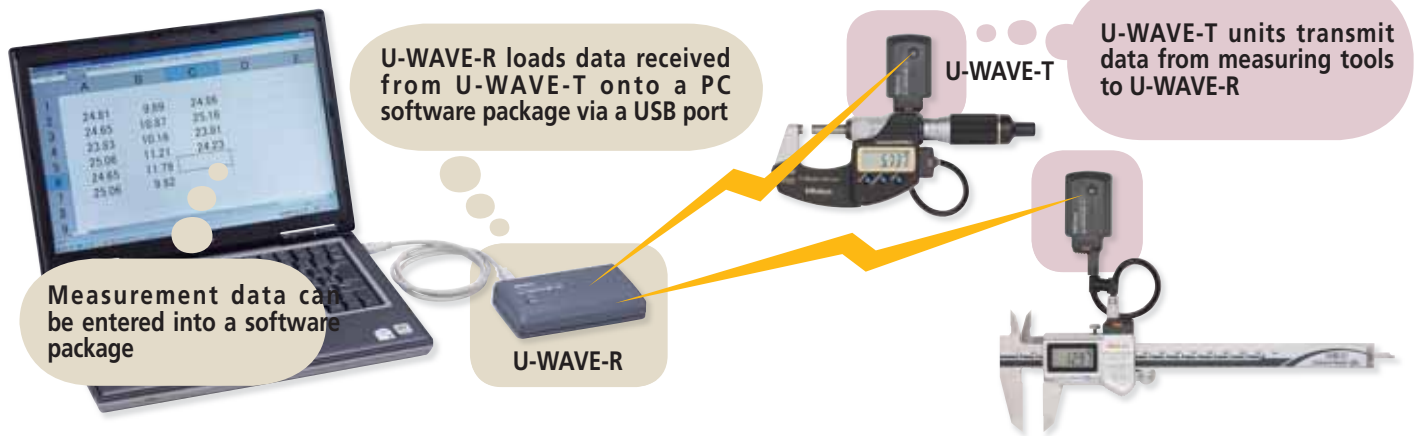
Note: Upgrade packages are also available. Please contact our sales offices for details.

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# U-WAVE

## Measurement Data Wireless Communication System

The **U-WAVE** system enables easy wireless data communication from a measuring tool to a PC using the Digimatic protocol. Measurement efficiency is improved by eliminating the long and cumbersome data cables. The user friendly interface allows data to be loaded into any software product that accepts keyboard input, such as Excel\* or Notepad.



### 1 U-WAVE-R · Registered Design (Japan) Inch/(Metric)

#### Major Specifications of U-WAVE-R

Model	U-WAVE-R
Order No.	02AZD810D*
Power supply	USB bus power system
Number of <b>U-WAVE-R</b> units that can be connected to one PC	Up to 16
Number of <b>U-WAVE-T</b> units that can be connected	Up to 100
External dimensions	5.51" x 3.15" x 1.24" (140 x 80 x 31.6mm)
Mass	.29 lbs (130g)



\*Detailed information on conformity standards of wireless communication specification is given below.



Standard accessory: driver

### 2 U-WAVE-T · Registered Design (Japan)

**U-WAVE-T** sends measurement data to **U-WAVE-R**.

#### Actual size



#### Major specifications of U-WAVE-T

Model	U-WAVE-T (IP67 model)
Order No.	02AZD730D*
Protection Rating	IP67
Data reception indication	LEDs
Power supply	Lithium battery CR2032 $\odot$ 1
Battery life	Approx. 400,000 transmissions
External dimensions	1.73" x 1.17" x .73" (44 x 29.6 x 18.5 mm)
Mass	.05 lbs (23g)

\*Detailed information on conformity standards of wireless communication specification is given below.

## Specifications of wireless communication

Conformity standards	·European conformity standards* EN 50371:2002 EN 300 440-1 V1.3.1 EN 300 440-2 V1.1.2 EN 301 489-01 V1.6.1 EN 301 489-03 V1.4.1
	·U.S.A. conformity standards 47 CFR Part 15.247:(Subpart :C) 47 CFR Part 15,(Subpart :B)
	·Canada conformity standards RSS-210 (Issue 7) RSS-Gen (Issue 2) ICES 003 (Issue 4)

Wireless standards	Conform to IEEE802.15.4
Wireless communication distance	Approx. 60ft (within visible range)
Wireless communication speed	250 kbps
Transmission output	1 mW (0 dBm) or less
Modulation method	DS-SS (direct sequence spread spectrum) Resistant to interfering signal or noise.
Communication frequency	2.4 GHz band (ISM band: universal frequency)
Used band	15 channels (2.405 to 2.475GHz at intervals of 5MHz) The noise search function can avoid interference with other communication devices.

Note: In accordance with wireless regulations the use of this product is permitted in Japan, Europe (a total of 32 countries including 27 EU members, 4 EFTA members and Turkey), U.S.A. and Canada. This product must not be used in other countries or areas.

· This product is not compatible with the conventional Mu-WAVE, for which communication specifications are different.

\* Japan conformity standards: ARIB STD-T66

# U-WAVE

## Measurement Data Wireless Communication System

### List of U-WAVE-T Connecting Cables

Select one from cables **A** to **G**, referring to the part number of connecting cable for wired connection in your measuring tool catalog or manual. If you are unsure which cable is appropriate, check the cable connectors, the shapes of terminal on the measuring tool side, or the codes of compatible measuring tool for cables **A** to **G** below. It is not possible to connect to EF and EH counters.

From seven types of cables (**A** to **G**), select one compatible with your measuring tool.

Fasten the connector to **U-WAVE-T** with two screws.

Cable type	<b>A</b> water-proof model with output button	<b>B</b> water-proof model with output button	<b>C</b> With data-out button type	<b>D</b> 10-pin plain type	<b>E</b> 6-pin round	<b>F</b> Plain type straight	<b>G</b> Plain type straight water-proof model
Order No.	02AZD790A	02AZD790B	02AZD790C	02AZD790D	02AZD790E	02AZD790F	02AZD790G
Connector shape on the measuring tool side							
Socket shape on the measuring tool							
Codes of major compatible measuring tools and instruments	[Digimatic Caliper] CD67-S_PM CD-PMX CD-PM/GM CDC-P_PMX CDN-P_PMX CFC-G/GL/GC/GU [Digimatic Caliper] NTD-PMX [Digimatic Depth Gage] VDS-PMX [Digital Scale and DRO Systems] SD-G	[Digimatic Micrometer] MDE-MJ MDC-MJ/MJT [Digimatic Micrometer] The code suffix is -MJ. BLM-M OMV-M OMP-M PDM-M IMP-M VM-M [Digimatic Micrometer Heads] MHN-M/MJ/MJN [Digimatic Holtest] HTD-R [Digimatic Depth Gage] DMC-M	[Digimatic Caliper] CD-CX/-C CD-S_C CDC-CX/C CDN-CX/C [Digimatic Caliper] NTD-CX/C [Digimatic Depth Gage] VDS-DCX [Digital Scale and DRO Systems] SD-D, SDV-D	[Digimatic Indicator] ID-H/F [Linear Height] QMH-S [Linear Gage/Counter] EB,EC-D [μ-checker] Digital μ-checker [Laser Scan Micrometer] LSM-9506 [Reference Gage] HDM-C [Coating Thickness Gage] DGE-745/755 [Form Measurement] SJ-201/301/401	[Digimatic Micrometer] MDQ-M MDC-M CLM1-QM/DK PDM-QM PMU-DM BD-M [Digimatic Holtest] HTD [Reference Gage] HDM-DM [Hardness Testing Machines] HM-100/200 HV-100 HR-500 HH-411	[Digimatic Caliper] CD, CFC-P/-L/-C/-U [Digimatic Height Gages] HD-AX, HDM-AX HDS-H_C/-C HDM-A HDF-N [Digimatic Indicator] ID-C/_RB/_A/_GB ID-S/U [Digimatic Depth Gage] Digimatic model (ID-C) [Digital Scale and DRO Systems] SD-E, SDV-E SD-F, SDV-F [Portable Hardness Testing Instruments] HH-300	[Digimatic Indicator] ID-N ID-B
Reference Order No. of connecting cable	1m 05CZA624 2m 05CZA625	05CZA662 05CZA663	959149 959150	936937 965014	937387 965013	905338 905409	21EAA194 21EAA190

### Name and Dimensions of Each Part

Unit: mm

#### U-WAVE-T

#### U-WAVE-R

POWER (green LED)  
ERROR (red LED)

### Note on Wireless Communication Environment

Although the communication range for **U-WAVE** is approximately 60ft line-of-sight, performance may be affected by obstacles or environmental factors.

### Items that may cause communication errors

Item	Contents
Concrete wall	Communication is not possible into a room completely enclosed.
Metal partition	Communication speed may drop or communication may be interrupted.
Wireless LAN, communication device such as ZigBee Bluetooth, and microwave oven	Communication speed may drop or communication may be interrupted. Maintain the set frequency and installation distance if at all possible.
Medical instrument	Do not use this product near a medical instrument such as a laser knife or electronic scale.

**Cautions · Safety Caution:** Do not use this device near medical equipment that might malfunction due to radio interference.  
**· Caution on radio law:** This device is certified as a 2.4 GHz band wide-band low-power data communication system based on the Radio Regulations in Japan, Europe, U.S.A. and Canada.  
 It is prohibited by law to disassemble or modify this device or peel off the certification label from it.

# Input Tools

## SERIES 264 — Digimatic Gage/PC Data Input Device

### FEATURES

- The input tool is an interface enabling you to easily input measurement data from a Mitutoyo measuring instrument with the digimatic output feature to your PC.
- An USB keyboard signal conversion input tool, IT-012U converts measurement data to keyboard signals and directly inputs them to cells in off-the-shelf spreadsheet

software such as Excel. An RS-232C communication input tool, IT-007R is also available to input data through RS-232C communication.

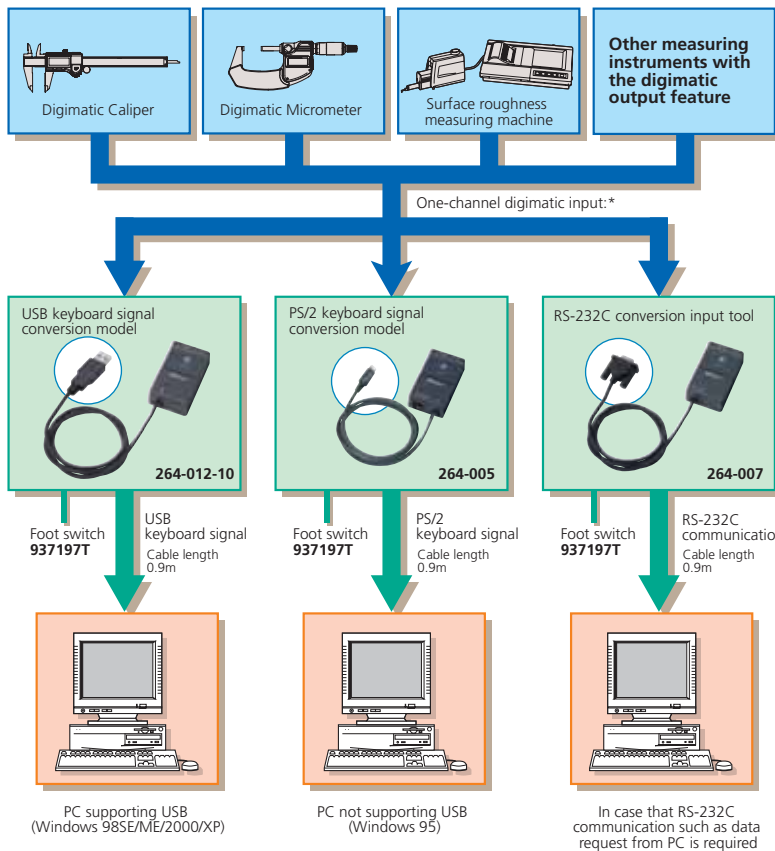
- More accurate measurement is possible using an optional foot switch.

### SPECIFICATIONS

Product Code No.	Input Tool for Keyboard 264-005	Input Tool for RS-232C 264-007	Input Tool for USB 264-012-10
Measuring Tools Required*1	Mitutoyo Digimatic measuring tools with SPC output		
PC Requirement	PC compatible, with PS/2 style keyboard interface*2 (Can be also connected to a laptop computer.) Connects to keyboard port on CPU	PC Compatible, (including laptops) with RS-232C Interface Connects to RS-232C port on CPU (D-sub 9-pin connector)	PC Compatible, (including laptops) with USB 2.0 or 1.1 port
Outside Dimensions HxWxD	2.8" x 1.7" x .9" (72 x 44 x 23.5 mm)		
Mass	2.5oz. (70g)(including cable and connector)	3.2oz. (91g)(including cable and connector)	2.6oz. (74g)

\*1: Connecting cable (optional accessory) is required for a connection to a Digimatic measuring tool.

\*2: Cannot be used for computers that use USB keyboard. When using a IBM Think Pad Series, a commercial keyboard adapter is required. When using AT style keyboard, adapter for conversion is required.



\* When you use an optional gage selector 3 (refer to page 16), you can connect up to three measuring gages and select an input by switching them. When using 264-012, you can connect multiple input tools at the same time with an off-the-shelf USB hub. Simultaneous input, however, is not supported. For cables used to connect each measuring gage and input tool, refer to page A-14.



264-005



264-012-10



264-007

### Optional Accessories

- 937197T: Foot switch
- 939039: Gage selector



# Multiplexers – MIG-2B, MIG-4A

## SERIES 982 — Digimatic/RS-232C Interface Unit

### FEATURES

- A measurement data transfer device, multiplexer MIG-2B and MIG-4A converts digimatic output measurement data to RS-232C and outputs it to an external device such as PC.
- Up to eight/four measuring instruments with the digimatic output feature can be connected.
- Units can be daisy-chained to meet any size needs.
- MIG-4A includes toggle switch for each input.

### Technical Data

Data output: Via RS-232C interface

### Default Configuration

Data length: 8 bits  
 Start bit: 1 bit  
 Stop bit: 1 bit  
 Parity check: None  
 Baud rate: 4800

### Standard Accessory

526688A: AC Adapter  
 RS232C: Cable (1.5m / 6Fz)

### Optional Accessories

937179T: Foot switch

### MIG-4A



982-548-10A  
Front view



982-548-10A  
Back view

### MIG-2B



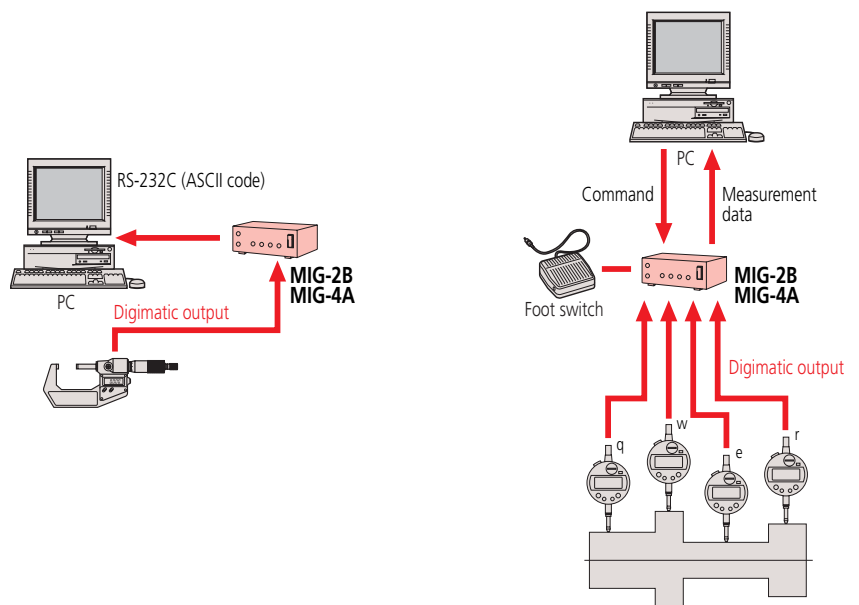
982-547-10A  
Front view



982-547-10A  
Back view

### SPECIFICATIONS

Model No.	MIG-2B	MIG-4A
Order No.	982-547-10A	982-548-10A
Gage Capacity	8	4
Dimension (mm) W x D x H	146 x 150 x 45	146 x 150 x 70
Mass (g)	540	710



# Gage Selector 3

## 3-channel Switching Box for Data Transmission

### FEATURES

- 3 Digimatic gages can be connected.
- You can specify the gage which outputs the data with the channel switch.

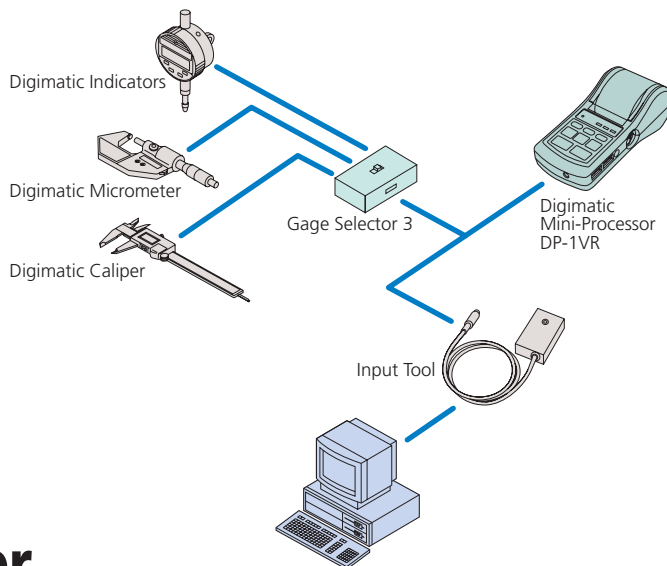
### SPECIFICATIONS

Order No.	Description
939039	Gage Selector 3



939039

### Examples of Connections



# EC Counter

## SERIES 542 — Assembly Type Display Unit

### FEATURES

- Compact panel mounting type and DIN size. It can be easily incorporated into each system.

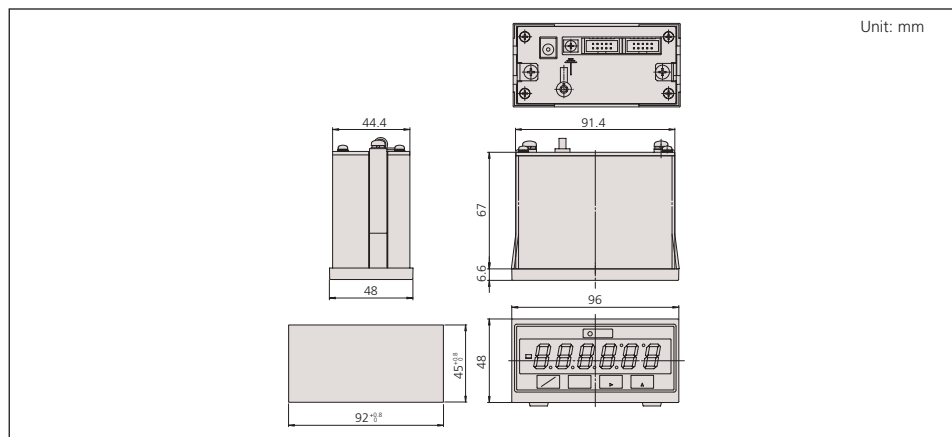
### SPECIFICATIONS

Order No.	Description
542-007A	EC Counter



542-007A

### DIMENSIONS



### Technical Data

Connection: Up to three gages  
 Signal: Digimatic code format  
 Connection: Bidirectional  
 External dimensions (W x D x H): 100 x 70 x 33mm

### Technical Data

Applicable gage: LGD, LGS, All SPC output gages  
 Resolution: 0.001mm, 0.01mm  
 No. of gage input: 1  
 Display: 6-digit LED and a negative [-] sign  
 Function: Preset  
 GO/±NG judgment  
 Output (open-collector): 3-step limit signal, Normal signal  
 External control: Preset, Data hold  
 Power supply: Via AC adaptor  
 Dimensions (W x D x H): 96 x 48 x 84.6mm  
 Mass: 50g

# DP-1VR

## SERIES 264 — Digimatic Mini-Processor

### Technical Data

Printing method: Thermal line printer  
 Printing dot: 384dot (8dot/mm)  
 Printing speed: 6.5mm/s (using AC adapter)  
 Printing paper: 48m  
 Printing line: Approx. 6500 lines for large characters  
 Approx. 12000 lines for normal characters  
 Processing capacity: 9999 data (mode 1/2/3)  
 100000 data (mode 0)  
 Printing data: Measurement data, GO/±NG judgment,  
 No. of data, Max/min value, Range, Average,  
 Standard deviation, No. of defective,  
 Fraction defective, Process capability index,  
 Histogram, D-chart, Control chart generation  
 for Xd-bar and control limit data, date and time  
 Output function: Output the measuring data (RS232C) or  
 GO/±NG judgment  
 Input timer: 0.25s, 1s, 5s, 30s, 1min, 30min, 60min  
 Power: AC adapter 6V  
 Electric battery: LR6 (alkaline), Ni-Mh (AA size)  
 Battery life: 10 years (clock battery), 10000 lines (1600mA  
 1time/5 sec. using the nickel hydrofluoric  
 battery)  
 Dimensions (W x D x H): 94 x 201 x 75.2mm  
 Mass: 390g

### FEATURES

- This is a palm-sized printer used to print measurement data from the digimatic gage or to perform statistical analysis.
- This printer offers excellent functionality. You can use it not only to print measurement data, perform a variety of statistical analyses, and draw a histogram or D chart but also to perform complicated operations for X-R control chart.

- Equipped with RS-232C output and GO/NG judgment output as standard functions, this processor ensures high reliability as an advanced quality inspection machine.
- The line thermal printer enables fast and quiet printing.



264-504-5A

### SPECIFICATIONS

Order No.	Description
264-504-5A	DP - 1VR

**Mode 0:** Record the measurement data and tolerance judgment.

**Mode 1:** Record the measurement data, statistical analysis and histogram.

**Mode 2:** A "D-chart" can be used to describe measurement data displacement visually. It's also possible to record the measurement data, statistical analysis and histogram at the same time.

**Mode 3:** Automatically record the various calculation results to make a X-R control chart.

**Mode 4:** Record the measurement data, statistical analysis and histogram.

### Optional Accessories

09EAA084\*: RS-232C changing cable (1m, 9pin)

965516\*: GO/±NG judgment cable

937179T: Foot switch

\*It is impossible to use the both RS-232C cable and GO/±NG judgment cable at the same time.



# SPC Connecting Cables

- These cables are used to output measurement data from the digimatic gage with the output feature to the digimatic mini processor, digimatic display unit, multiplexer or other device.
- Cables of one or two meters are available.
- Note that the shape of connector differs depending on the model.

Input plug to Data Processor			
Order No.		Applicable gages	
Straight type			
<b>905338:</b> 1m (40") <b>905409:</b> 2m (80") <b>64AAA016:</b> 3m (120") <b>64AAA017:</b> 5m (200")		<b>ALL CALIPERS WITHOUT ABSOLUTE ENCODER</b> Height Gage <b>570-2XX, 192-6XX, 192-67X</b> Indicators <b>575-XXX, 543-6XX, 543-2XX, 543-4XX</b> Depth Gages <b>547-21X, 547-25X, 571-2XX</b> Scale Unit <b>572-XXX</b> Thickness Gages <b>547-3XX, 547-4XX</b>	
Back type			
<b>905689:</b> 1m (40") <b>905690:</b> 2m (80")			
Right type			
<b>905691:</b> 1m (40") <b>905692:</b> 2m (80")			
Left type			
<b>905693:</b> 1m (40") <b>905694:</b> 2m (80")			
With data out switch type			
<b>959149:</b> 1m (40") <b>959150:</b> 2m (80") <b>64AAA074:</b> 3m (120") <b>64AAA075:</b> 5m (200")		<b>ALL DIGIMATIC CALIPERS WITH ABSOLUTE ENCODER</b> Height Gage <b>570-2XX</b> Depth Gages <b>571-2XX</b> Scale Unit <b>572-XXX</b>	
With data out switch type			
<b>05CZA624:</b> 1m (40") <b>05CZA625:</b> 2m (80")		Coolant Proof Caliper <b>500-68X, 500-76X, 500-78X.</b> Coolant Proof Digimatic scale units <b>572-61X.</b>	
With data out switch type			
<b>05CZA662:</b> 1m (40") <b>05CZA663:</b> 2m (80")		<b>Digimatic Micrometer IP65</b>	
6 pins type			
<b>937387:</b> 1m (40") <b>965013:</b> 2m (80") <b>64AAA026:</b> 3m (120") <b>64AAA027:</b> 5m (200")		<b>ALL MICROMETERS</b> Indicators <b>543-11X, 543-13X, 543-14X, 543-18X, 543-17X</b> Holtest <b>468-2XX, 468-9XX</b> Micrometer Head <b>164-162, 164-172, 350-71X, 329-71X</b> Boremetrics <b>568-XXX</b> Others Mikematic, Quickmike Bench Mike <b>121-XXX</b>	
10 pins type			
<b>936937:</b> 1m (40") <b>965014:</b> 2m (80") <b>64AAA020:</b> 3m (120") <b>64AAA021:</b> 5m (200")		Indicators <b>543-5XX</b> MU-Checkers <b>519-4XX, 519-621A</b> MU-Gages <b>179-204, 179-205, 179-206</b> Display <b>542-022-5A, 542-032-5A, 542-036-5A</b> Display <b>572-011A, 572-031A</b> Linear Height <b>518-314A, 518-315A</b> Litematic <b>318-202A, 318-204A</b> Heightmatic <b>57X SERIES.</b> Digi Derm <b>179-7XX</b> Hardness Tester ( <b>Micro Hardness Type</b> )	
Digimatic cable extension adapter 02ADF640			
		<b>DIGIMATIC CABLE EXTENSION ADAPTER</b> Need <b>936937</b> or <b>965014</b> to the Data Processor	