

# MARPOSS

## MUPS

ULTRA WIDEBAND TRANSMISSION  
TOUCH PROBING SYSTEM



# MUPS

## SYSTEM DESCRIPTION

MARPOSS ULTRA PROBING SYSTEM IS A TOUCH PROBING SYSTEM DESIGNED FOR USE ON CUTTING MACHINE TOOLS.

It features a wireless transmission based on Ultra Wideband technology with a working frequency between 6.2 and 8.3 GHz and an operating range of 15 m.

The system consists of a transmitter (UWP) and a receiver (ANCHOR) connected to an interface (BASE STATION) mounted on the machine cabinet. With Ultra Wideband technology the system offers an unrivaled immunity to the most common radio interferences and the capability to install a huge number of units in the same plant

MUPS is a highly flexible system that can be use in the most of the application.

The main features are

- ▶ Multichannel system: each application can support up to 8 probes.
- ▶ Double spindle application, two probe can be simultaneously managed with just one receiver.
- ▶ Twin application allows you to check the work piece and the tool using the same receiver.

## ADVANTAGES

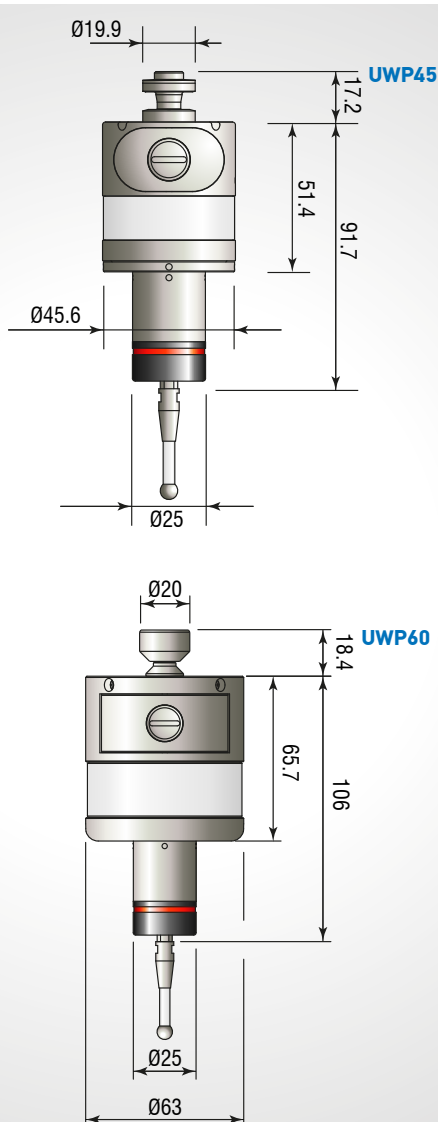
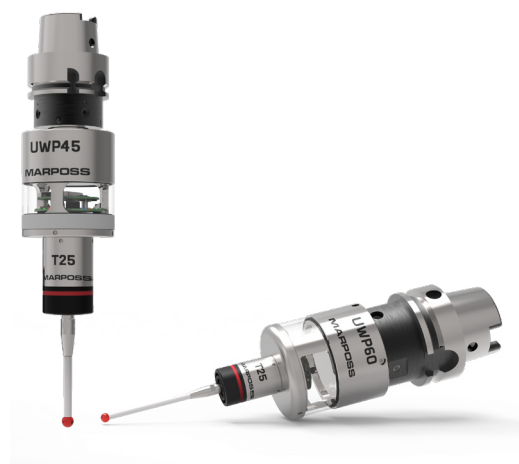
- Reduced quantity of rejects and immediate savings
- Automatic management of a great number of probes in the same plant
- Totally immune to interference from common wireless systems (WiFi, Bluetooth, 4G/5G)
- A robust design that is capable of withstanding the most demanding machining environments
- Enhanced battery life
- Easy and quick set up through the MUPS APP



# UWP45 - UWP60 WITH STANDARD ACCURACY PROBES

UWP45 used with Marposs T25, TT25 and TT30 probes, is ideal for use on multi-axis milling machines, machining centers and on lathe, as it combines reduced size with Ultra Wideband transmission, which offers an important advantage in applications where the line of sight between the transmitter and receiver is not guaranteed.

UWP60 is ideal for use on large scale machining centers and vertical lathes. The probe unites an extremely robust build with extended operating autonomy. It can be configured for use with Marposs T25 and T25 probes and with extensions up to one metre in length.



	T25 version		TT25 version TT30 (Only for UWP45)	
UNIDIRECTIONAL REPEATABILITY (2σ)	0,5 μm		1 μm	
MEASUREMENT FORCE*	2 N XY Plane	12 N Z Dir.	0,5÷0,98 N XY Plan	5,8 N Z Dir.
OVERTRAVEL *	11,2 mm XY Plane	4 mm Z Dir	11,6 mm XY Plane	4 mm Z Dir
TRANSMISSION TYPE	6.2 - 8.3 GHz			
TRANSMISSION ACTIVATION/ DEACTIVATION DISTANCE	15 m			
NUMBER OF AVAILABLE CHANNELS	Automatic channel selection			
TRANSMISSION ACTIVATION	Machine M code			
TRANSMISSION DEACTIVATION	Manual: Automatic:		Machine M code Programmable timer	
PROTECTION RATING (Standard IEC 60529)	IP66 - IP68			
WORKING TEMPERATURE	+5°C - +60°C			

(\*) = With standard 35 mm finger at a speed of 600 mm/min

## UWP45 WITH STANDARD ACCURACY PROBES

BATTERY TYPE	2 CR2 type lithium batteries	
	Stand-by	1 year
BATTERY LIFE**	Usage 5%	290 days
	Continuous usage:	1000 hours

## UWP60 WITH STANDARD ACCURACY PROBES

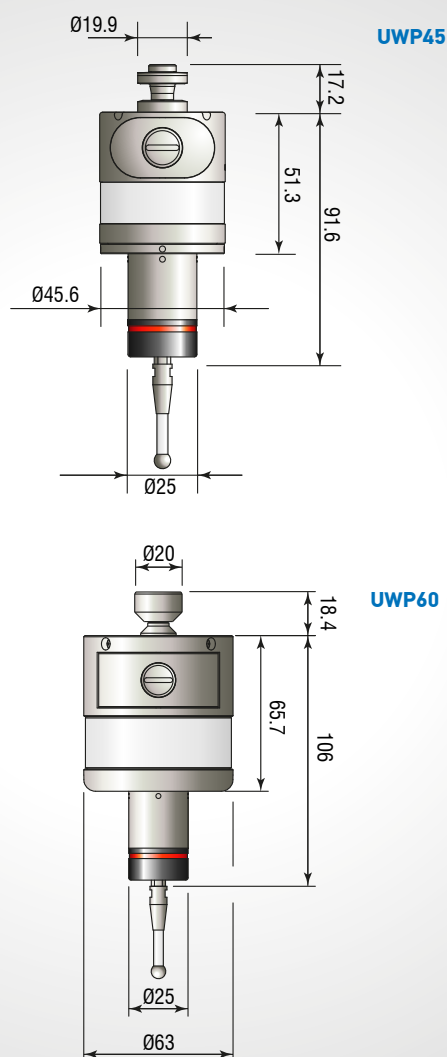
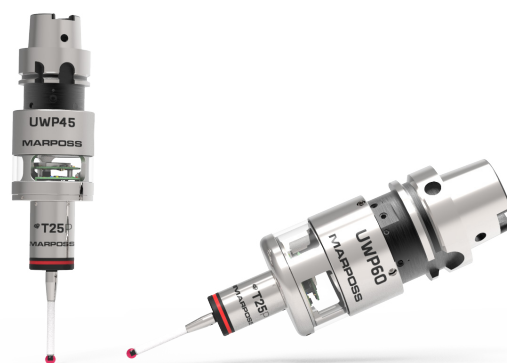
BATTERY TYPE	2 CR2 type lithium batteries	
	Stand-by	1,5 year
BATTERY LIFE**	Usage 5%	470 days
	Continuous usage:	1000 hours

(\*\*) = Typical performance values, may vary depending on programming mode

# UWP45 - UWP60 WITH HIGH ACCURACY PROBES

UWP45 and UWP60 used high accuracy T25P probe are the right solution for 5 axes machining centers and milling machines which addresses industries where precision requirements are daily pushed to the limits like die and mold, aerospace, aeronautics and biomedical. Based on piezo-electric technology, T25P reaches excellent measurement performances on 3D surfaces.

The two solution differ in dimensions and modular design of WRP60P able to be customized with extension up to 1 meter.



	T25 version		TT25 version TT30 (Only for UWP45)	
UNIDIRECTIONAL REPEATABILITY (2σ)	0,5 μm		1 μm	
MEASUREMENT FORCE*	2 N XY Plane	12 N Z Dir.	0,5÷0,98 N XY Plan	5,8 N Z Dir.
OVERTRAVEL *	11,2 mm XY Plane	4 mm Z Dir	11,6 mm XY Plane	4 mm Z Dir
TRANSMISSION TYPE	6.2 - 8.3 GHz			
TRANSMISSION ACTIVATION/ DEACTIVATION DISTANCE	15 m			
NUMBER OF AVAILABLE CHANNELS	Automatic channel selection			
TRANSMISSION ACTIVATION	Machine M code			
TRANSMISSION DEACTIVATION	Manual: Automatic:		Machine M code Programmable timer	
PROTECTION RATING (Standard IEC 60529)	IP66 - IP68			
WORKING TEMPERATURE	+5°C - +60°C			

(\*) = With standard 35 mm finger at a speed of 600 mm/min

UWP45 WITH STANDARD ACCURACY PROBES		
BATTERY TYPE	2 CR2 type lithium batteries	
	Stand-by	1 year
BATTERY LIFE**	Usage 5%	285 days
	Continuous usage:	400 hours
UWP60 WITH STANDARD ACCURACY PROBES		
BATTERY TYPE	2 CR2 type lithium batteries	
	Stand-by	1,5 year
BATTERY LIFE**	Usage 5%	470 days
	Continuous usage:	650 hours

(\*\*) = Typical performance values, may vary depending on programming mode

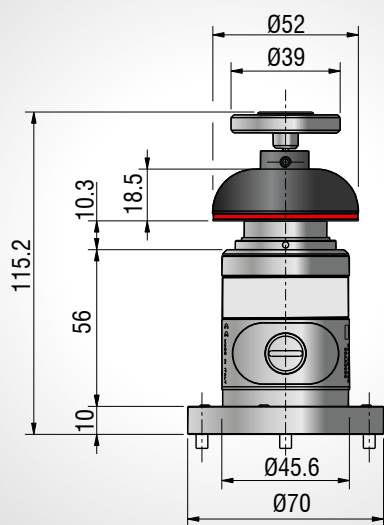


## UWT TOOL SETTER PROBE

UTS probe can be used on machining centers for tool presetting (length and diameter measurements) tool integrity controls and tool wear compensation.

Together with a UWP probe it is possible to make a TWIN application: workpiece and tool controls managed by just one Anchor receiver.

UTS is completed with a special bracket to fix it directly on the machine table, the installation is very quick and simple.

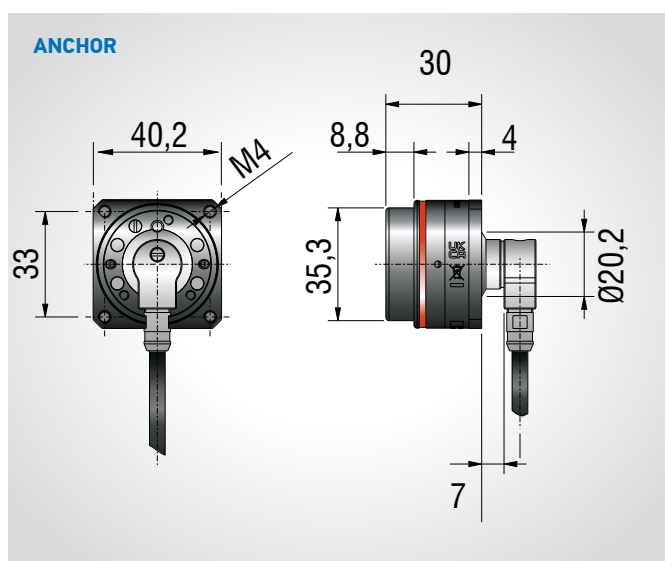


UNIDIRECTIONAL REPEATABILITY (2σ)	0,5 μm	
MEASUREMENT FORCE*	1 - 2 N XY Plane	6 N Direction Z
OVERTRAVEL *	8 mm XY Plane	3,5 mm Direction Z
TRANSMISSION TYPE	6.2 - 8.3 GHz	
NUMBER OF AVAILABLE CHANNELS	Automatic channel selection	
TRANSMISSION ACTIVATION	Machine M code	
TRANSMISSION DEACTIVATION	Manual: Automatic:	Machine M code Programmable timer
BATTERY TYPE	2 CR2 type lithium batteries	
BATTERY LIFE	Standby: 5% usage: Continuous usage	1 y 290 d 1000 h
PROTECTION RATING (Standard IEC 60529)	IP66 - IP68	
WORKING TEMPERATURE	+5°C - +60°C	

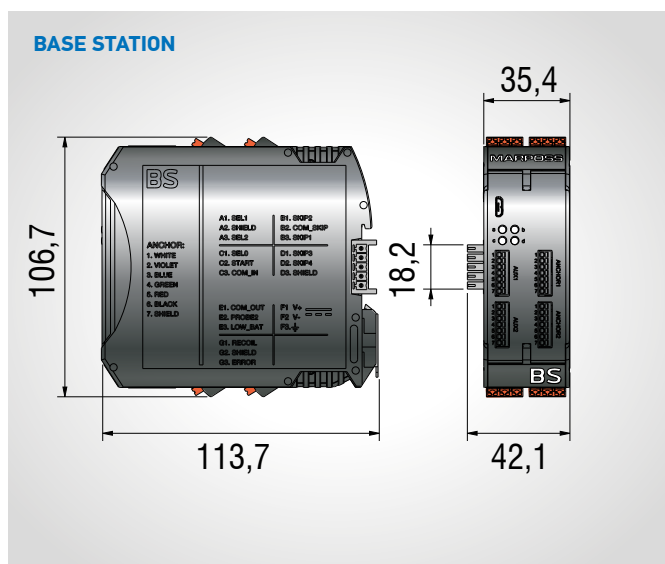
(\*) = Typical performance values, may vary depending on programming mode

## RECEIVER AND INTERFACE

Ultra-compact dimensions and an extreme level of water tightness characterize the receiver. The unit has to be mounted inside the machining area and it manages the communication to the machine PLC through an interface installed in the machine cabinet. There are 4 connectors on the front panel, and each connector has 8 pins, which are assigned the indicated function.



POWER SUPPLY	< 1W wireless power with WLC.
INTERFACE	IP68 and opto-isolated with WLC
VISUAL INDICATORS	LED for the probes status, battery status and connection status
MAX. CABLE LENGTH	30 m
PROTECTION DEGREE (Standard IEC 60529)	IP66 - IP68

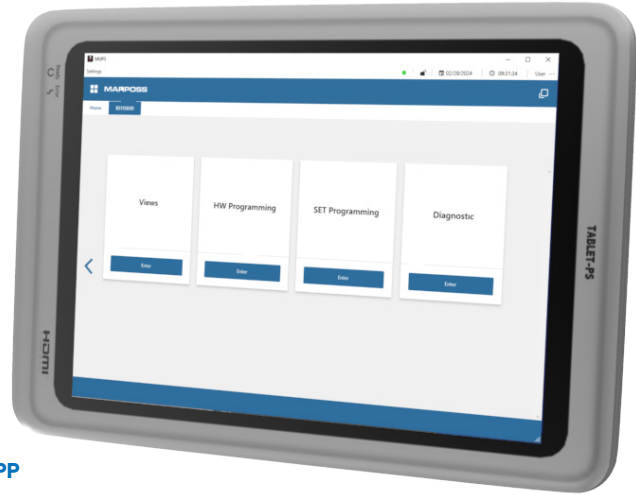


POWER SUPPLY	24V S.E.L.V.
INTERFACE	<ul style="list-style-type: none"> <li>• 2 x proprietary WLC to Receiver units</li> <li>• 2 x RS422 for external communication</li> <li>• 1 x T-BUS for GEMCPU connection</li> <li>• 1 x Micro-USB for programming/service</li> </ul>
VISUAL INDICATORS	Probe state, battery state and link state.
PROTECTION DEGREE (Standard IEC 60529)	IP20

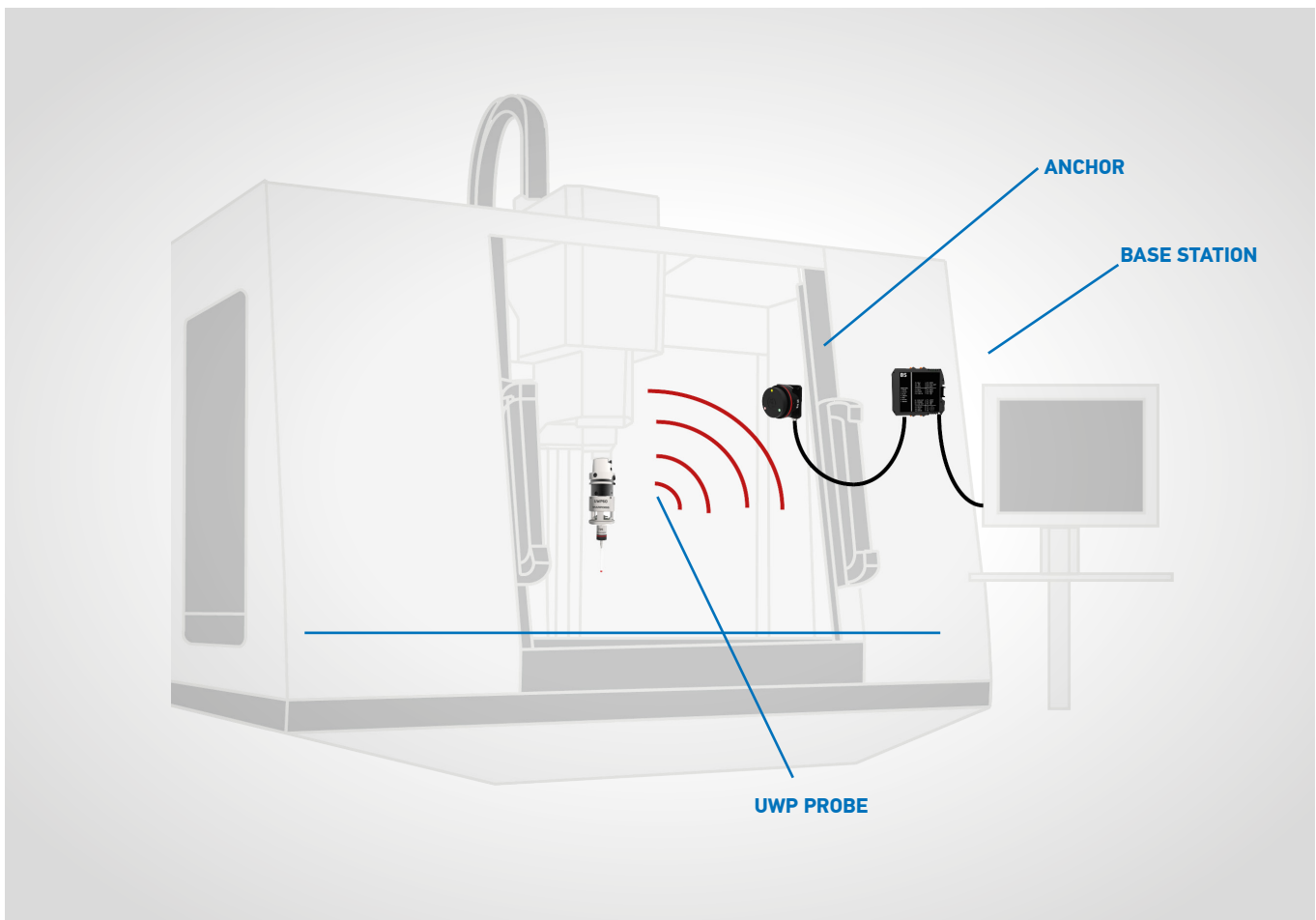


## MUPS APP

To complete the system is also available a MUPS APP through which is possible made system programming, diagnostic and service intervention features and real time check of the system status. It has been designed for android, iOS and windows based pc.



PROGRAMMING VIA APP






**MARPOSS**

**marposs.com**



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