



# TM12 TM14



[www.tm-robot.com](http://www.tm-robot.com)

High payload with  
extended reach



## SMART

Built-in vision system, Masters in robot vision

## SIMPLE

Revolutionary user interface, Easy to deploy

## SAFE

Complies with ISO 10218-1:2011 & ISO/TS 15066:2016

# TM12/TM14

## Class leading payload and reach

The TM12 & TM14 offer class leading payload and reach capabilities. The **TM12 offers 12Kg payload and a 1300mm reach** and the **TM14 offers a 14Kg payload and 1100mm reach**.

Like the TM5 the new increased specification robots are easy to deploy, are highly flexible, are maintenance free and provide a high performance automation solution for manufacturing.

## Built in vision system

TM Robot comes with built in vision hardware and integrated vision software with human machine interface. Functions such as shape matching, barcode & QR code reading, colour recognition, OCR etc are all easily configured from the integral robot design toolbox.

## Applications

- Logistics
- Handling
- De-Burring
- Polishing
- Semiconductor Transportation
- Palletising

# TM12M/TM14M Mobile version series

## The TM-M Series offers solutions for AGV and mobile vehicle integration

The TM-M series are powered by a DC 20-60V supply, making them compatible with most brands of AGV's and mobile vehicles. By utilising the "TM Landmark", the mobile robot can orientate itself within a 3D space, like an auto datum sequence, to multiple machine surfaces. This allows the TM-M robots to operate between two or more locations seamlessly.

# Specification

SEMI S2 ISO 10218-1:2011 ISO/TS 15066:2016 CE

Model	TM12	TM14	TM12M	TM14M	
Weight	33.3Kg	32.6Kg	33.3Kg	32.6Kg	
Payload	12kg	14kg	12kg	14kg	
Reach	1300mm	1100mm	1300mm	1100mm	
Typical Speed	1.3m/s	1.1m/s	1.3m/s	1.1m/s	
Joint ranges	J1	+/- 270°			
	J2,J4,J5	+/- 180°			
	J3	+/- 166°	+/- 163°	+/- 166°	+/- 163°
	J6	+/- 270°			
Speed	J1~J2	120°/s			
	J3	180°/s			
	J4~J5	180°/s	150°/s	180°/s	150°/s
	J6	180°/s			
Repeatability	+/- 0.1 mm				
Degrees of freedom	6 rotating joints				
I/O ports	Control box		Tool conn.		
	Digital in	16	4		
	Digital out	16	4		
	Analog in	2	1		
Analog out	1	0			
I/O power supply	24V 1.5A for control box and 24V 1.5A for tool				
IP classification	IP54 (Robot Arm); IP32 (Control Box)				
Power Consumption	Typical 300 watts				
Temperature	The robot can work in a temperature range of 0-50°C				
Power supply	100-240 VAC, 50-60 Hz		DC 22V~60V		
I/O Interface	3×COM, 1×HDMI, 3×LAN, 4×USB2.0, 2×USB3.0				
Communication	RS232, Ethernet, Modbus TCP/RTU (master & slave)				
Programming Environment	TMflow, flowchart based				
Certification	CE, SEMI S2 (Option)				
Variation Models	X: without hand eye camera, SEMI: SEMI S2 certified				
Robot Vision					
Eye in Hand (Built in)	1.2M/5M pixels, color camera				
Eye to Hand (Optional)	Support Maximum 2 GigE cameras				



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