

Specification						
Model	TM5S	TM7S	TM5S-M	TM7S-M	TM5S-X	TM7S-X
Weight	23.9 kg	22.9 kg	23.9 kg	22.9 kg	23.6 kg	22.6 kg
Maximum Payload	5kg	7kg	5kg	7kg	5kg	7kg
Reach	946mm	758mm	946mm	758mm	946mm	758mm
Joint ranges	J1, J2, J4, J5, J6	+/- 360°				
	J3	+/- 158°	+/- 152°	+/- 158°	+/- 152°	+/- 158°
Speed	J1, J2, J3	210°/s				
	J4, J5	225°/s				
	J6	450°/s				
Max. Speed	4.5m/s					
Repeatability	+/- 0.03 mm					
Degree Of Freedom	6 rotating joints					
I/O	Control box	Digital In: 16 / Digital Out: 16				
		Analog In: 2 / Analog Out: 2				
	Tool Conn.	Digital In: 3 / Digital Out: 3				
I/O Power Supply	24V 2.0A for control box; 24V 1.5A for tool					
IP Classification	IP54 (Robot Arm); IP54 (Control Box)		IP54 (Robot Arm)		IP54 (Robot Arm); IP54 (Control Box)	
Typical Power Consumption	240 watts					
Temperature	0~50°C					
Cleanliness	ISO Class 3					
Power Supply	100~240 VAC, 50~60 Hz		24~60 VDC		100~240 VAC, 50~60 Hz	
I/O Interface	3xCOM · 1xHDMI · 3xLAN · 4xUSB2.0 · 2xUSB3.0					
Communication	RS-232/RS-422/RS-485, Ethernet, Modbus TCP/RTU (master & slave)					
	PROFINET (optional), EtherNet/IP (optional)					
Programming Environment	TMflow (flowchart/script based)					
Certification	CE, SEMI S2 (optional)					
AI & Robot Vision						N/A
AI Function	Classification, Object Detection, Segmentation, Anomaly Detection, AI OCR					
Application	Positioning, 1D/2D Barcode Reading, OCR, Defect Detection, Measurement, Assembly Check					
Positioning Accuracy	2D Positioning: 0.1 mm* ⁽¹⁾					
Eye in Hand (Built in)	Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞					
Eye to Hand (Optional)	Support Maximum 2x GigE 2D cameras or 1x GigE 2D Camera + 1x 3D Camera* ⁽²⁾					
* ⁽¹⁾ The data in this table are measured by TM laboratory and the working distance is 100mm. It should be noted that in practical applications, the relevant values may be different due to factors such as the on-site ambient light source, object characteristics, and vision programming methods that will affect the change in accuracy.						
* ⁽²⁾ Refer to the official website of TM Plug&Play for camera models compatible to TM Robot.						

Specification										
Model	TM12S	TM14S	TM25S	TM12S-M	TM14S-M	TM25S-M	TM12S-X	TM14S-X	TM25S-X	
Weight	33.3 kg	33 kg	80.6Kg	33.3 kg	33 kg	80.6 Kg	33 kg	32.7 kg	80.3 Kg	
Maximum Payload	12kg	14kg	25kg	12kg	14kg	25kg	12kg	14kg	25kg	
Reach	1300mm	1100mm	1902mm	1300mm	1100mm	1902mm	1300mm	1100mm	1902mm	
Joint ranges	J1, J2, J4, J5, J6	+/- 360°								
	J3	+/- 162°	+/- 159°	+/- 166°	+/- 162°	+/- 159°	+/- 166°	+/- 162°	+/- 159°	+/- 166°
Speed	J1, J2	130°/s		100°/s		130°/s		100°/s		
	J3	210°/s		130°/s		210°/s		130°/s		
	J4	225°/s		195°/s		225°/s		195°/s		
	J5	225°/s		210°/s		225°/s		210°/s		
	J6	450°/s		225°/s		450°/s		225°/s		
Max. Speed	4.5m/s		5.2m/s		4.5m/s		5.2m/s		5.2m/s	
Repeatability	+/- 0.03 mm		+/- 0.05 mm		+/- 0.03 mm		+/- 0.05 mm		+/- 0.05 mm	
Degree Of Freedom	6 rotating joints									
I/O	Control box	Digital In: 16 / Digital Out: 16								
		Analog In: 2 / Analog Out: 2								
	Tool Conn.	Digital In: 3 / Digital Out: 3								
DO_0 (DO-0/AI) / DO_1 (DO-1/RS485-) / DO_2 (DO-2/RS485+)										
I/O Power Supply	24V 2.0A for control box; 24V 1.5A for tool									
IP Classification	IP54 (Robot Arm); IP54 (Control Box)			IP54 (Robot Arm)			IP54 (Robot Arm); IP54 (Control Box)			
Typical Power Consumption	400W		600W		400W		600W		600W	
Temperature	0~50°C									
Cleanliness	ISO Class 3									
Power Supply	100~240 VAC, 50~60 Hz	200~240 VAC, 50~60 Hz		24~60 VDC		48~60 VDC		100~240 VAC, 50~60 Hz	200~240 VAC, 50~60 Hz	
I/O Interface	2xCOM、1xHDMI、3xLAN、2xUSB2.0、4xUSB3.0									
Communication	RS-232/RS-422/RS-485、Ethernet、Modbus TCP/RTU(master & slave)									
	PROFINET (optional), EtherNet/IP (optional)									
Programming Environment	TMflow (flowchart/script based)									
Certification	CE, SEMI S2 (optional)									
AI & Robot Vision										
AI Function	Classification, Object Detection, Segmentation, Anomaly Detection, AI OCR									
Application	Positioning, 1D/2D Barcode Reading, OCR, Defect Detection, Measurement, Assembly Check									
Positioning Accuracy	2D Positioning: 0.1 mm* ⁽¹⁾									
Eye in Hand (Built in)	Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞									
Eye to Hand (Optional)	Support Maximum 2x GigE 2D cameras or 1x GigE 2D Camera + 1x 3D Camera* ⁽²⁾									
N/A										
* ⁽¹⁾ The data in this table are measured by TM laboratory and the working distance is 100mm. It should be noted that in practical applications, the relevant values may be different due to factors such as the on-site ambient light source, object characteristics, and vision programming methods that will affect the change in accuracy.										
* ⁽²⁾ Refer to the official website of TM Plug&Play for camera models compatible to TM Robot.										