

Smarter, Simpler, Safer and Super!

# TM AI COBOT S series

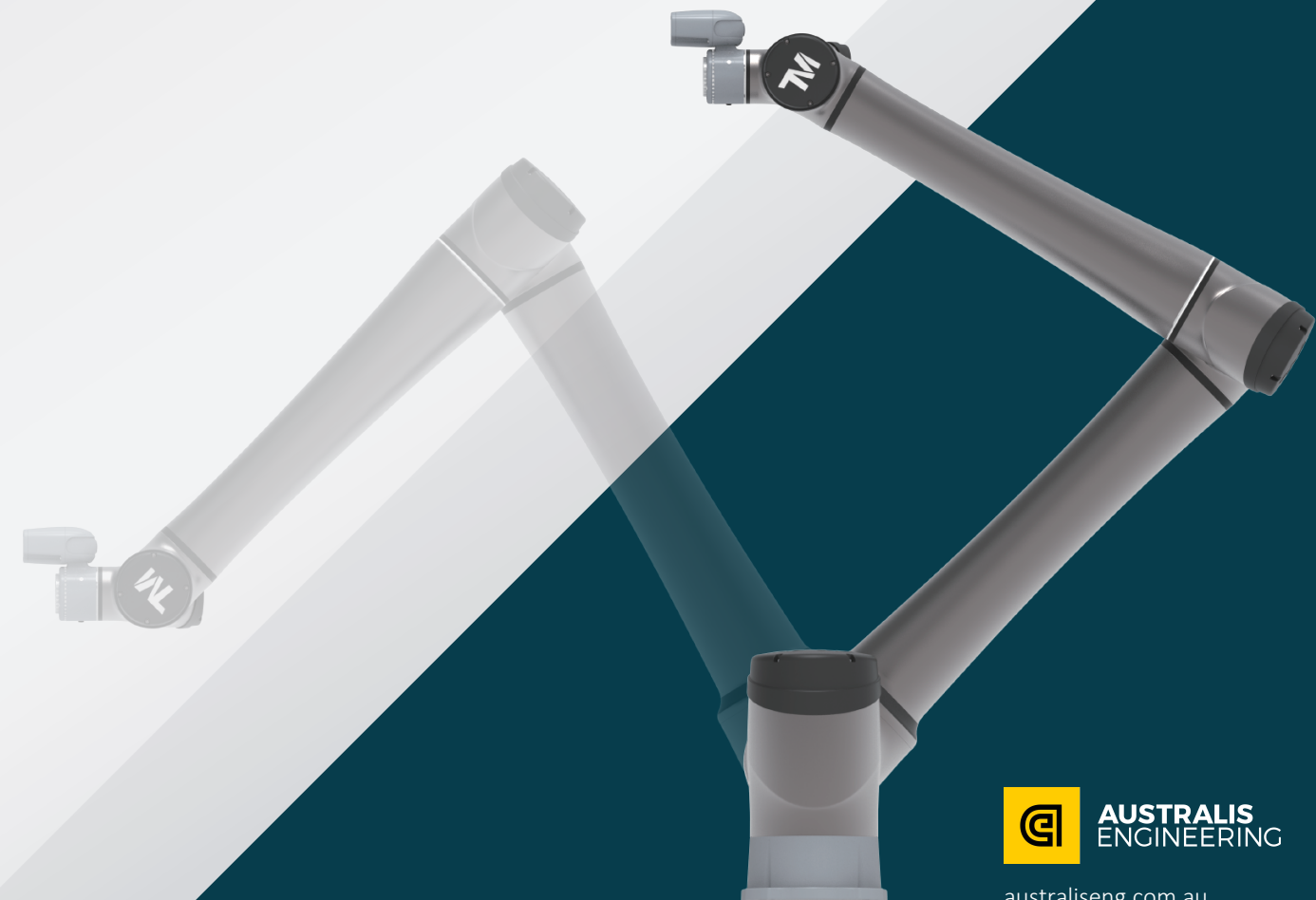
## NEW TM 25S

- High-payload of **25kg**
- Best reach in 25kg payload cobot market\*
- Built-in vision system & AI
- Suitable for machine tool material push stack, automobile industry assembly

\*In compare with the other 25kg cobots in the market

SPECIFICATION					
Model	TM7S	TM5S	TM14S	TM12S	TM25S
Weight	22.9kg	23.9kg	33kg	33.3kg	80.6kg
Maximum Payload	7 kg	5kg	14kg	12kg	25kg
Reach	700mm	900mm	1100mm	1300mm	1902mm
Joint Ranges	J1, J2, J4, J5, J6	+/- 360°			
	J3	+/- 152°	+/- 158°	+/- 163°	+/- 166°
Speed	J1,J2	210°/s		130°/s	100°/s
	J3	210°/s		210°/s	130°/s
	J4	225°/s		225°/s	195°/s
	J5	225°/s		225°/s	210°/s
	J6	450°/s		450°/s	225°/s
Maximum Speed	4m/s		4m/s		5.2m/s
Repeatability	+/- 0.03mm		+/- 0.03mm		+/- 0.05mm
Degrees of freedom	6 rotating joints				
I/O Ports	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 and 24V 1.5A for tool				
IP Classification	IP54 (Robot Arm); IP54 (Control Box)				
Typical Power Consumption	240 watts		400 watts		500 watts
Temperature	The robot can work in a temperature range of 0-50°C				
Cleanroom class	ISO Class 3				
Power Supply	100-240 VAC, 50-60 Hz				
I/O Interface	2×COM, 1×HDMI, 3×LAN, 2×USB2.0, 4×USB3.0				
Communication	RS232, Ethernet, Modbus TCP/RTU(master & slave), PROFINET(Optional), EtherNet/IP(Optional)				
Programming Environment	TMflow, flowchart based, script based				
Certification	CE, SEMI S2 (Option)				
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* <sup>(1)</sup>				
Eye in Hand (Built in)	Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞				
Eye to Hand (Optional)	Support Maximum 2× GigE 2D cameras or 1× GigE 2D Camera + 1× 3D Camera* <sup>(2)</sup>				

\* <sup>(1)</sup> 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.  
\* <sup>(2)</sup> Refer to the official website of TM Plug&Play for camera models compatible to TM Robot.



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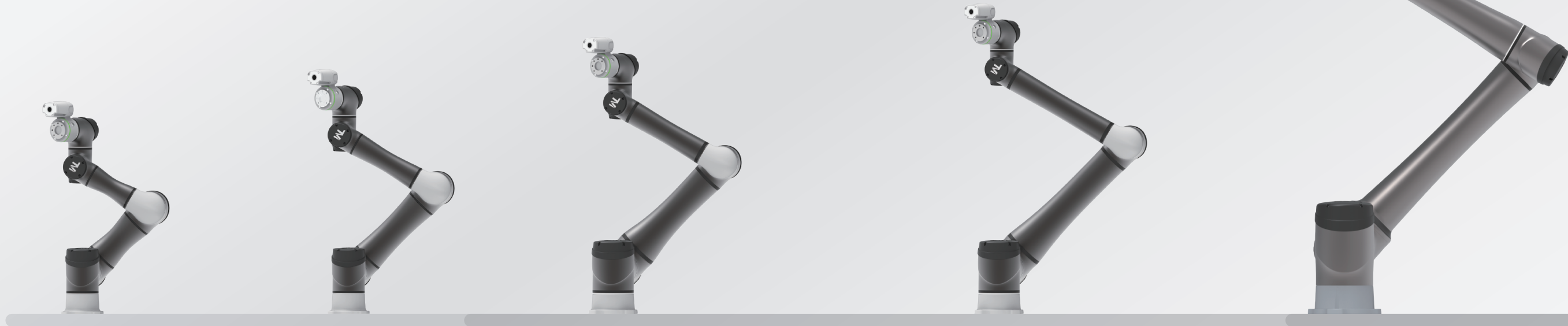
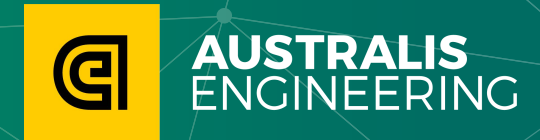
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# New Generation AI Cobot Series

## TM AI Cobot S Series



### TM7S

- Payload: 7 kg
- Reach: 700 mm

### TM5S

- Payload: 5 kg
- Reach: 900 mm

### TM14S

- Payload: 14 kg
- Reach: 1100 mm

### TM12S

- Payload: 12 kg
- Reach: 1300 mm

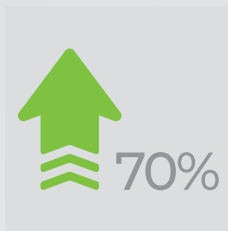
### TM25S

- Payload: 25 kg
- Reach: 1902 mm



#### Enhance motor speed! Cycle time is **25% faster**

- The joint speed of the 6<sup>th</sup> axis is increased from 225°/s to 450°/s
- Improves the cycle time and reduces it by 25%\*



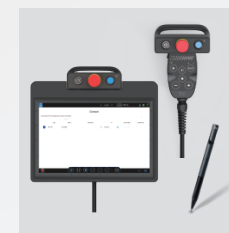
#### Maximum **70%** improvement of repeatability to **0.03 mm**

- Repeatability of TM5S/TM7S/TM12S/TM14S: 0.03mm, maximum 70% improvement!\*



#### Even better! Control box upgrade to **IP54**

- Control box is IP54 rated for harsh environments applications
- Well protect with dust and a level of water resistance



#### Brand new Robot Stick with Enabling Switch and RESET button

- Robot Stick with 3-position Enabling Switch, RESET button for safer operation
- Combine with TM Screen for easy teaching, debugging, and control via teach pendant and TM Pen



#### Up to **31 PL=d, Cat.3 Safety Functions** certified by TÜV

- Safety functions acc. to ISO 13849-1 certified by TÜV. Passed international safety certification ISO 10218-1
- Regional safety certification of UL & CSA for North America, CE for Euro
- Enables easy safety assessments with flexible safety functions that lower the cost of safety control configuration



#### TMflow™ 2 Series: Safe, Easy, and More Intelligent

- Innovative graphical UI with more exclusive software
- Includes dozens of function nodes that are easier to use and yet to close the gap between integration and your application

\* In comparison with the previous version