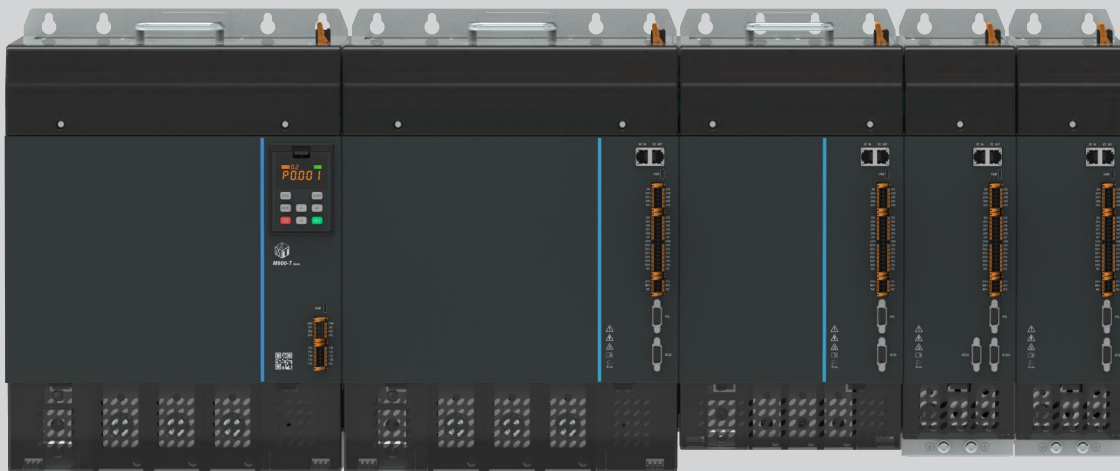


Higher Power, More Scenarios Take Multi-Axis Modularization Through to the End

Product Selection Guide

EtherCAT[®]  



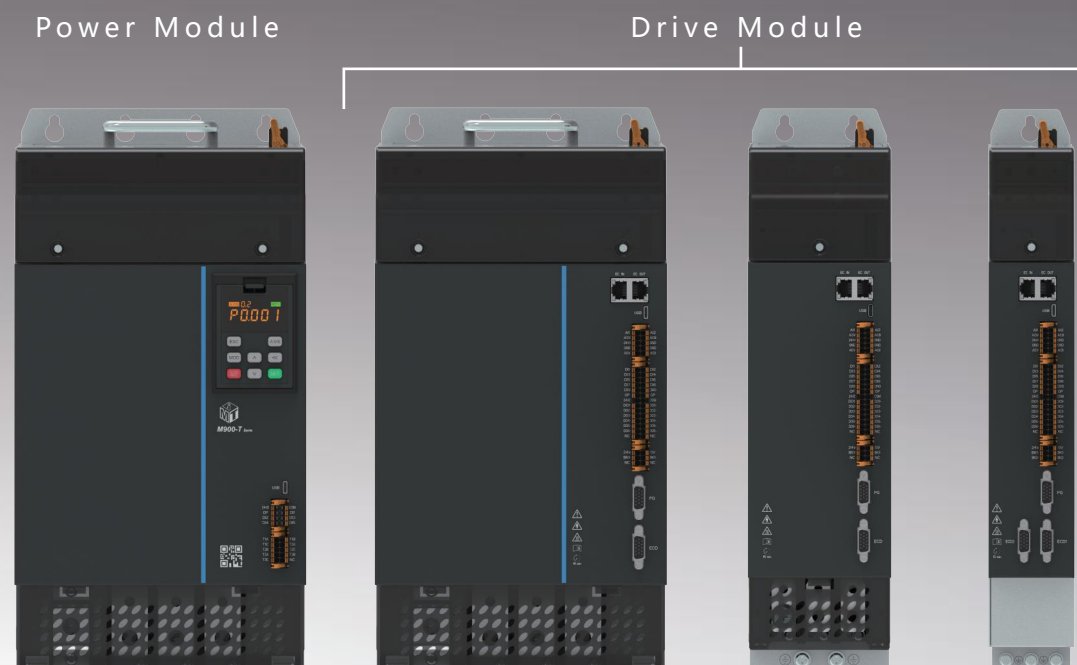
M900-T Series Medium & High Power Modular Bus Servo System
(380V)

M900 - T Series

Medium & High Power Modular Bus Servo System

The M900-T Series is a high-performance platform product developed by MT-Drive to meet the demand for medium and high-power multi-drive servo systems. It provides efficient and reliable solutions for a wide range of industrial applications, including multi-wire cutting, powder metallurgy, die cutting, all-electric injection molding machines, die casting machines, all-electric press brakes, large robotic arms, forging presses, servo turret punch presses, steel plate cutting, and material handling machinery.

The product features high reliability and high power density, with continuous optimizations in installation deployment, power distribution, wiring, and maintenance convenience, significantly enhancing the user experience.



Break Through Technical Barriers Drive Performance Innovation for Multi-Drive High-Power Systems

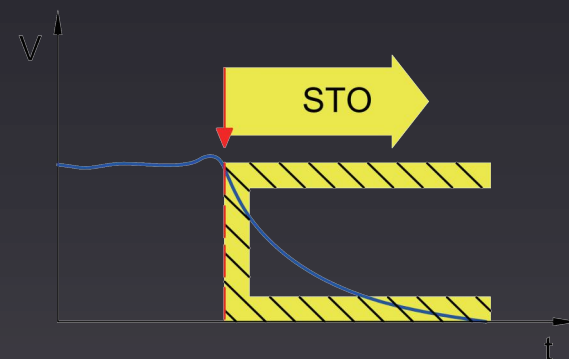
- Power range: 0.4-135kW
- 400MHz high-speed data sharing between modules

Outstanding Performance, Safe and Stable

- 125μs communication refresh cycle
- 3.8kHz velocity loop bandwidth
- IEC Class A EMC compliance
- Supports gantry synchronization, full closed-loop control of pressure, tension and position

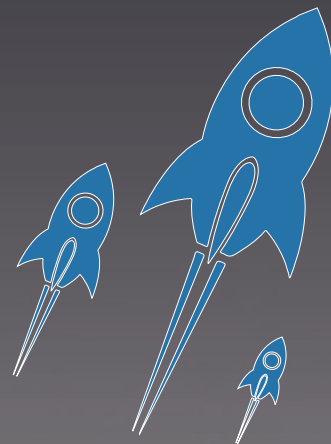
Safe and Reliable

- Compliant with EU CE and RoHS Environmental Directives
- Unique DC Bus Architecture completely eliminates crosstalk between conventional single-axis servos
- Integrated STO (Safe Torque Off) Safety Function
- Equipped with multi-axis safety interlock emergency stop mechanism and IP25 protection rating as standard



Multiple Control Algorithms

- Built-in Gantry Synchronization (62.5μs Control Cycle)
- Pressure Closed-Loop, Tension Closed-Loop, Full Position Closed-Loop
- Multi-Axis Coordination (400MHz High-Speed Data Sharing Between Modules)



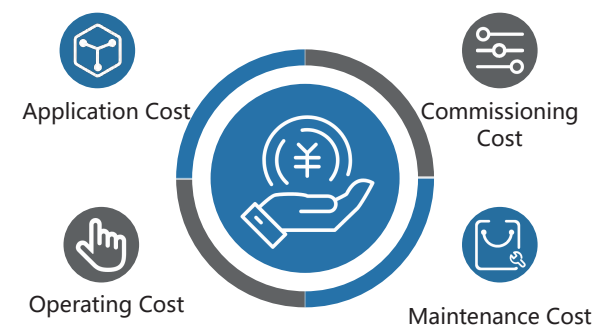
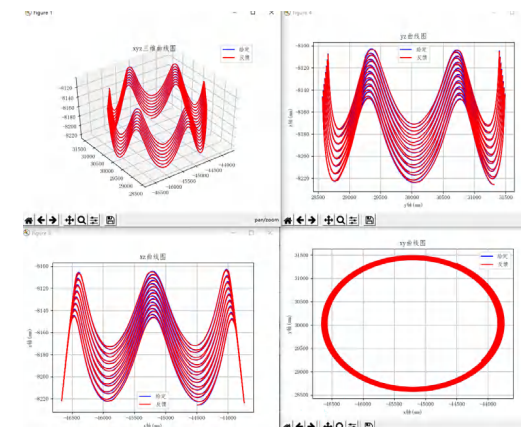
High Efficiency & Energy Saving

- Common DC Bus Architecture reduces average energy consumption by approximately 30%
Example:
All-Electric Injection Molding Industry: Energy saving of approximately 40%~60%
Printing Scenarios: Energy saving of approximately 30%~40%
- Ultra-low braking rate significantly lowers the temperature inside the electrical cabinet and reduces the failure rate of electrical components within the cabinet.



Easy Commissioning

- Multiple commissioning tools, supporting three commissioning methods: upper computer, keypad, and master station network
- Single USB (Type-C) port for one-click copying and downloading of multi-axis parameters, enabling batch replication
- Minimalist and efficient upper computer software can generate multi-axis surfaces, quickly locating process issues and control cycles



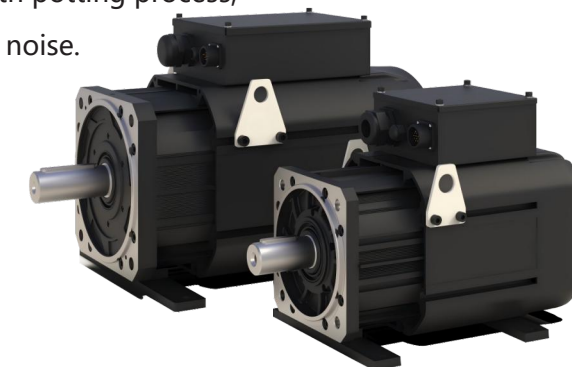
Significantly Reduce Overall Cost

Cost Savings

- Space Cost: Saves 30%~50% of cabinet space, improving space utilization.
- Maintenance Cost: The black box function accurately locates intermittent faults, reducing troubleshooting time and down-time losses, and significantly lowering maintenance costs in unattended scenarios.
- Operating Cost: Achieves an average energy saving rate of approximately 30%, reducing costs and increasing efficiency for end users.

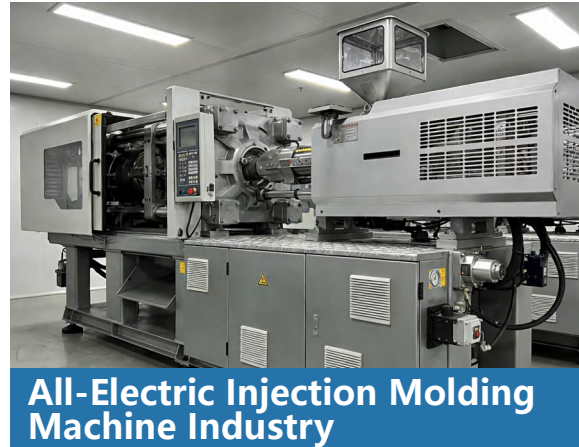
Motor

- Self-developed 25-bit optical absolute value encoder with potting process,
- featuring low temperature rise and low electromagnetic noise.
IP65 high protection rating.



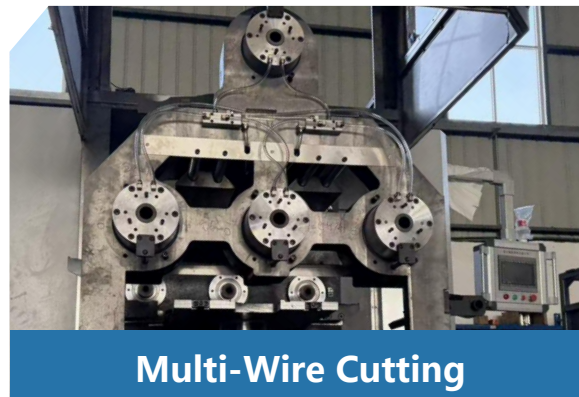
Application Industry (All-Electric Injection Molding)

- Injection speed: 0~1200mm/s, Clamping force: 20 ~ 1800 tons
- Control accuracy: Position accuracy better than 0.01mm, Pressure accuracy 1 bar
- Built-in pressure and backpressure closed-loop algorithms for higher response and accuracy
Built-in synchronous injection process algorithms for large-tonnage multi-servo motors.



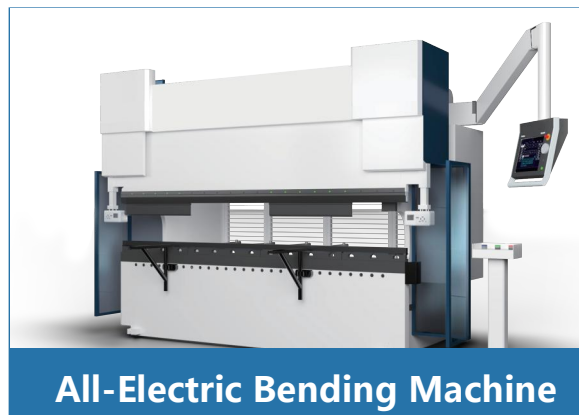
All-Electric Injection Molding Machine Industry

- Linear speed up to 2600 m/min, Spindle motor speed up to 6000 RPM.
- Tension control fluctuation: Built-in tension regulation in the drive, achieving a tension fluctuation of $\pm 0.35\text{N}$ during motion.
- Power-off protection: Equipped with power-down protection function during high-speed operation, ensuring safe shutdown and reducing abnormal downtime losses.
- Environmental durability: Supports wall-penetrating installation, enabling long-term and reliable operation in water mist and dust environments.



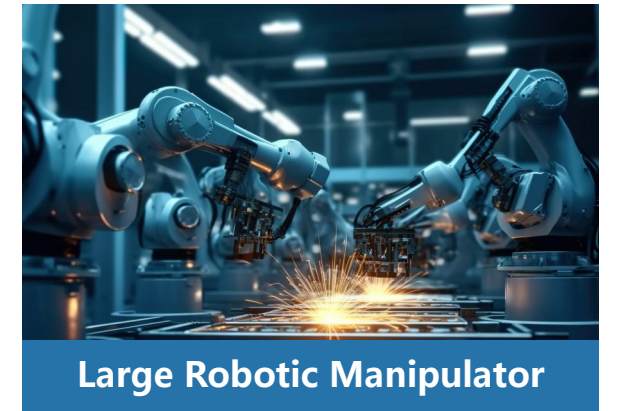
Multi-Wire Cutting

- Positioning accuracy of $\pm 0.005\text{mm}$, with full closed-loop control support.
- Common DC bus architecture, reducing energy consumption by approximately 25~40%.
- Supports wall-penetrating installation, delivering higher protection rating and longer service life.
- Supports multi-axis gantry synchronization, delivering superior synchronous performance for wide-format, large-tonnage bending with multiple motors.



All-Electric Bending Machine

- Modular expansion of workstation additional axes for greater flexibility.
- Optional external dynamic brake provides an extra layer of protection in case of power outage during high-speed operation or alarm conditions.
- Built-in robot algorithms eliminate issues such as nodding, end-effector vibration, and quadrant glitches.
- Built-in multi-axis synchronization algorithms support heavy-duty industrial robots, featuring multi-motor synchronous drive for single RV reducer.



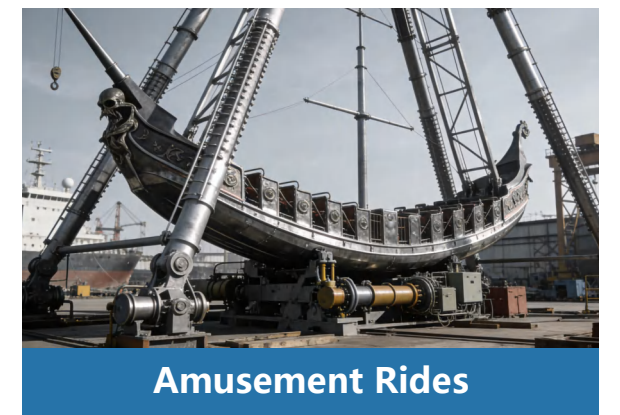
Large Robotic Manipulator

- Register accuracy: Positioning error of $\pm 0.05\text{mm}$ in constant speed state, and $\pm 0.1\text{mm}$ in acceleration/deceleration state, reflecting the precision of color alignment.
- Color mark detection accuracy: Error of $\pm 0.01\text{mm}$, ensuring the accuracy of color mark recognition during printing.
- Compatible printing speed: Supports a maximum speed of 1000 meters per minute, demonstrating the high-speed operation capability of the equipment.
- Power-off protection: Prevents web breakage in case of unexpected power failure, reducing material loss caused by malfunctions.



Printing Equipment

- High overloading capability: Hardware supports 4 times overload.
- Supports frequent start-stop cycles without overheating or performance degradation.
- Built-in Safe Torque Off (STO) function.
- Design life of ≥ 11 years.
- Supports wall-penetrating installation for enhanced environmental durability.



Amusement Rides

Power Supply Module Naming Convention

M900-TPU200□

Identifier	Product Description
M900	M900 Common DC Bus Series

Identifier	Voltage Level
T	AC 380V

Identifier	Max Continuous Operating Current
100	DC 100A
200	DC 200A
450	DC 450A
700	DC 700A

Identifier	Product Type
PU	Power Module

Drive Module Naming Convention

M900P-TDU2020□

Identifier	Product Description
M900	M900 Common DC Bus Series

Identifier	Communication Type
(Default)	EtherCAT
P	PROFINET

Identifier	Voltage Level
T	DC540V

Identifier	Rated Output Current per Axis
0606	Dual-axis, 6A per axis
0808	Dual-axis, 8.5A per axis
1212	Dual-axis, 12A per axis
2020	Dual-axis, 20A per axis
2525	Dual-axis, 25A per axis
3535	Dual-axis, 35A per axis
55	Single-axis, 55A
70	Single-axis, 70A
105	Single-axis, 105A
155	Single-axis, 155A
200	Single-axis, 200A
240	Single-axis, 240A

Identifier	Product Type
DU	Driver Module

Electrical Specifications of Power Supply Module

Structure Type	Structure Width (mm)	Power Module	Maximum Continuous Operating Current DC (A)
Size-A	60	M900-TPU110	100
Size-A	60	M900-TPU200	200
Size-C	200	M900-TPU450	450
Size-D	300	M900-TPU700	700

Drive Module Electrical Specifications

Structure Type	Structure Width (mm)	Drive Module	Rated Current (A)	Maximum Current (A)
Size-A	60 (Dual-axis)	M900-TDU06/06	6	18
		M900-TDU08/08	8.5	25.5
		M900-TDU12/12	12	36
Size-B	100 (Dual-axis)	M900-TDU20/20	20	60
		M900-TDU25/25	25	75
		M900-TDU35/35	35	105
	100	M900-TDU55	55	110
Size-C	200	M900-TDU70	70	140
		M900-TDU105	105	210
Size-D	300	M900-TDU155	155	310
		M900-TDU200	200	400
		M900-TDU240	240	410

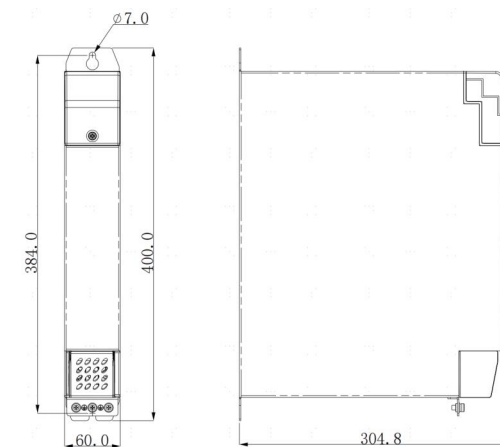
Technical Specifications

	Technical Specifications
Power Supply Voltage	Three-phase AC 380V ~ 480V (-15% ~ +10%)
Control Voltage	DC24V±10%
Power Range	Power module: 22~180kW; Drive module: 0.4~135kW
Control Method	EtherCAT: Minimum communication cycle 125μs, transmission cable length up to 100m, supports 100Mbps full-duplex operation PROFINET: Maximum 100Mbps rate, maximum distance 100m
Commissioning Software	IMOTO_Stuio
Encoder Port	Absolute encoder; Full-closed loop interface supports absolute encoder and ABZ encoder
Commissioning Interface	Single USB port
DI / DO	10-channel DI / 6-channel DO (DO supports NPN and PNP wiring), supports EtherCAT bus call
AI / AO	3-channel AI (AI3 is 16-bit high-precision AI, supports voltage-type and current-type input) 2-channel AO (one voltage-type output, one current-type output)
Brake	Built-in brake relay
STO Interface + Safety Circuit	2 channels (Safe Torque Off)
Installation	Common DC bus installation, optional wall-mounted installation kit
Cooling Method	Forced air cooling
Operating Temperature Ambient	-10°C~45°C
Humidity	10%~90%RH (no condensation)
Storage Temperature	-20°C~65°C
Storage Humidity	10%~90%RH (no condensation)
Altitude	Below 1000m
Protection Class	Drive body IP20, IP54 after cabinet protection
Certification	CE, ROHS

Dimensions and Mounting

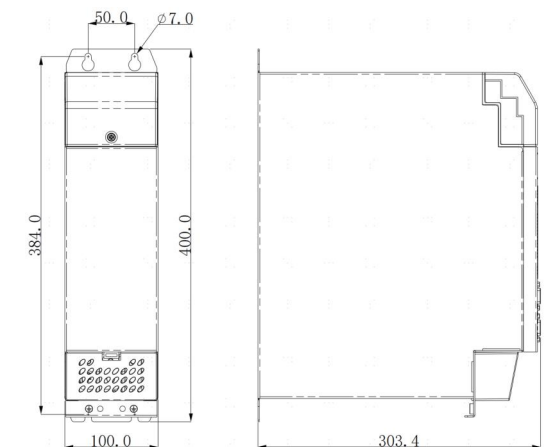
Size-A

60mm Width Model



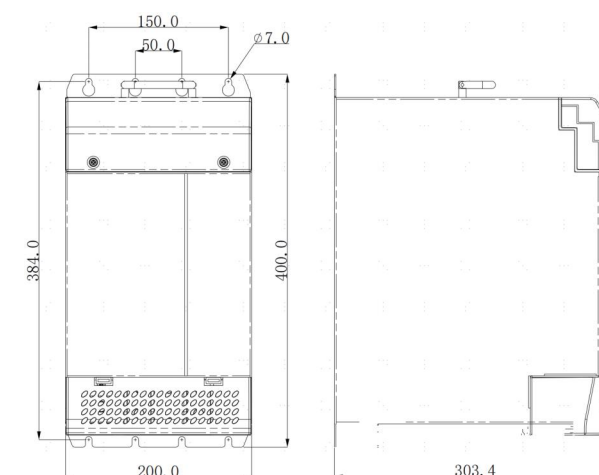
Size-B

100mm Width Model



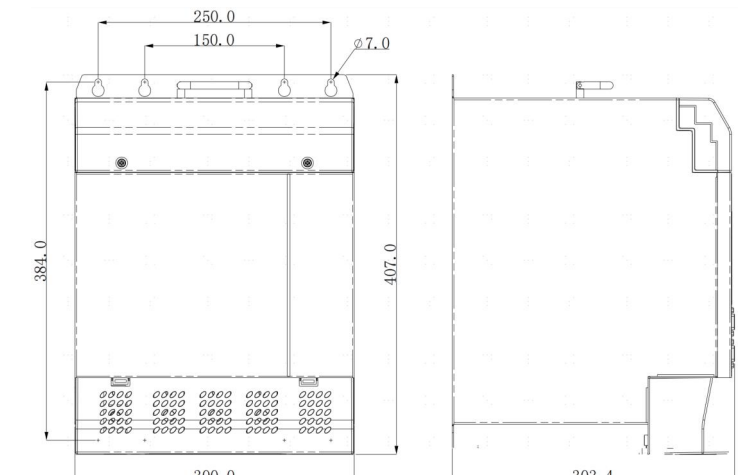
Size-C

200mm Width Model



Size-D

300mm Width Model



About Us

MT Drive & Control (Shenzhen) Co., Ltd. We are a national high-tech enterprise focusing on core components and turnkey complete solutions for advanced manufacturing. Upholding the core values of Focus, Innovation, Leadership, we have built a three-tier industrial product architecture covering control, servo and sensors. We are committed to delivering more advanced, reliable, efficient and competitive full-set industry solutions.

Headquartered in Shenzhen, China's innovation hub, the company operates a R&D Center, Quality Center, Production Center, Administration Center, Marketing Center and a Suzhou Sales Branch. As a pioneer and leader in multi-axis transmission technology, our product portfolio includes motion PLCs, servo systems, integrated drive-control systems, remote I/O modules and other core components.

Our products support mainstream industrial fieldbus protocols including PROFINET, EtherCAT and EtherNet/IP. With proprietary technical architecture and outstanding performance, they are widely applied in photovoltaic, lithium battery, robotics, CNC & metalworking/woodworking/glass/semiconductor processing, logistics warehousing, 3C, automotive manufacturing, printing & packaging, tobacco and other industries.

Adhering to long-term value-oriented development, MT-Drive synchronously develops core industrial components and customized industry turnkey solutions. As our product lineup continues to expand, we provide all-round industrial services and actively drive the development of the manufacturing sector.



- We have obtained over 85+ intellectual property rights.
- We have passed product certifications such as CE, UL, RoHS, and FCC.
- We have obtained the ISO9001 quality management system certification.

MT-Drive & Control Product Portfolio

Control Layer

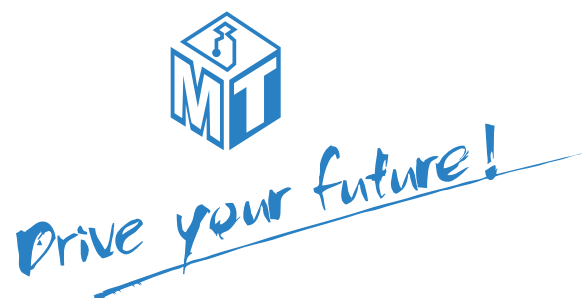


Drive Layer



Actuation/-Sensing Layer





MT Drive & Control (Shenzhen) Co.,Ltd.

5th Floor, Building D, Suojia Science Park, Sanwei Community,
Hangcheng Subdistrict, Bao'an District, Shenzhen City

TEL: 0755-23217829

FAX: 0755-23217829

Email: sales@mt-drive.com.cn

www.mt-drive.com.cn



QR Code: Official Website of MT-Drive

MT Drive & Control (Shenzhen) Co.,Ltd. Suzhou Branch

Room 802, Guoyu Phase 2, No.20 Dongwu North Rd,
Wuzhong, Suzhou

TEL: 0512-65352699

Email: sales@mt-drive.com.cn