# SuZhou XiEn Technology Co., Ltd.



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# HIGH POWER DENSITY DRIVER

Small size ·
high power ·
high intelligence ·

Note:

■ Thank you for your love of Xien Technology (hereinafter referred to as the "Company") products all the time, please carefully read the product before purchasing the company's products, after reading, please put it around for reference.

■ The relevant personnel of the company have carefully reviewed the information, if you find any incorrect typesetting or page loss, please contact the company for requests.

■ Due to the improvement of the product, the technical specifications and the contents of the instruction manual are changed without prior notice, please understand that without the authorization and permission of the company, it is prohibited to change and print all or part of the contents of the instruction manual.

## HIGH-END SERVO LEADER

Lead the progress control industry

With cutting-edge technology to create maximum value for customers

# COMPANY PROFILE

The drive can be customized

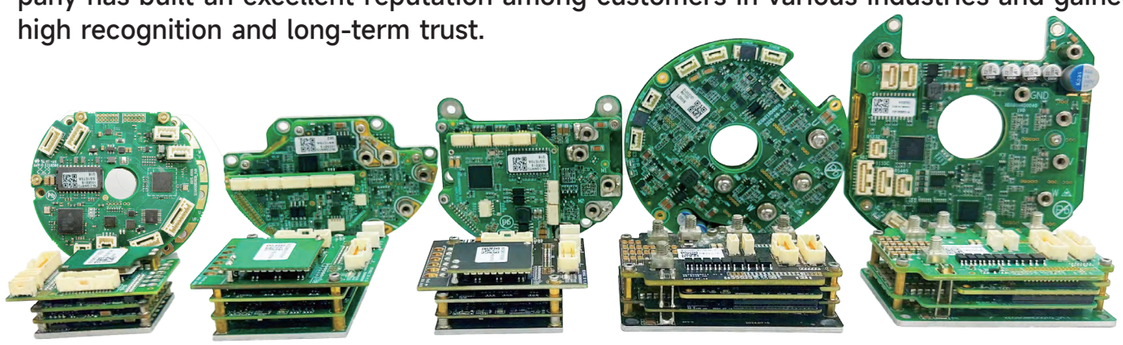
2025


## Suzhou XiEn Technology Co., Ltd.

Founded in 2021 and led by a team of senior professors from Harbin Institute of Technology, Xien Technology dedicates itself to the technological innovation and product R&D in the field of high-end servo drives.

Since its establishment, the company has achieved breakthrough development driven by scientific research and innovation, and has now grown into a benchmark enterprise in China's servo drive and control industry. With independently developed high-precision servo drive and control algorithms as its technical foundation, and featuring the original soft-switching technology as its core characteristic, the company focuses on the R&D and industrialization of high power density drives. It has successfully been recognized as a national-level specialized, sophisticated, and innovative enterprise, and established a full-chain innovation system covering "algorithm R&D - technological breakthrough - product implementation". In the field of core components for intelligent manufacturing equipment, it demonstrates strong technological competitiveness and industrial empowerment value.

Currently, its products have been widely applied in multiple high-end fields such as humanoid robots, quadruped robotic dogs, aerospace, industrial automation, and semiconductor equipment. With solid technical expertise and stable product performance, the company has built an excellent reputation among customers in various industries and gained high recognition and long-term trust.



HIGH-END SERVO LEADER

# Corporate Culture

## | VISION

HIGH-END SERVO LEADER

## | MISSION

Lead the progress control industry
With cutting-edge technology
Create maximum value for customers

## | VALUE

People-oriented
committed to innovation
Pursue excellence
build a win-win situation

## FOUNDER:

YANG MING


**50+**
Various items

**10**
Draft servo drive and
Motor system
Performance test
National standard

**200+**
Academic article

**40+**
Invention patent

Doctor of Electrical Engineering, Professor and doctoral supervisor of Harbin Institute of Technology; Senior member of IEEE, Deputy Chairman of the Electrical Automation Committee of the Chinese Society of Automation, Zhongda Young scholars, science and technology innovation talents of Harbin City, and leading talents of science and technology innovation and entrepreneurship of Shishan High-tech Zone in Suzhou;

Presided over and undertook more than 50 projects such as the National Natural Science Foundation, national key research and Development Plan, national major science and technology projects, high-quality projects of the Ministry of Industry and Information Technology, Huawei, Delta, Siemens and other projects, with a total scientific research fund of over 100 million yuan;

Draft 10 national standards for servo drive and motor system performance testing;

Published more than 200 academic articles;

More than 40 authorized invention patents; Industrial automation industry enjoys a high reputation.

# SOFTWARE FEATURES: INTELLIGENT PARAMETER TUNNING

Applicable for permanent magnet synchronous motor, square wave brushless DC motor, brushless DC motor and linear motor, voice coil motors, direct drive motors, etc

## ONE-CLICK PARAMETER SETTING

- ·Identification of motor phase sequence and pole number
- ·Static/dynamic pole position identification
- ·Motor parameter identification
- ·Off-line/on-line inertia identification
- ·Friction and damping identification
- ·Three control loop parameter self-tuning
- ·Inverter nonlinear compensation
- ·Disturbance observer and feedforward compensation
- ·Adaptive on-line mechanical resonance suppression technology
- ·Terminal jitter suppression technique
- ·Overquadrant bulge suppression technique
- ·Intelligent fault diagnosis technology

**HIGH EFFICIENCY**

Unique within China

**ALGORITHM TECHNIQUE**

World Class

**ALL DOMESTIC**

Independently Controllable

## Xien Technology products highlights:

> Ultra high power up to 14kW

> Super current - up to 140A/100V, 80A/200V

> Light weight, only 25.5 grams

> Ultra-small size, ultra-efficient, designed to be mounted on the PCB board

> Advanced EtherCAT and CANOpen network bus technology

> Intelligent algorithm is more in line with the Chinese application market, control parameters one-key self-tuning, easy to use, high performance

> With the national certification

> Wide range of work(Power electricity):

- "80VDC",11VDC- 75VDC
- "100VDC", 11VDC- 95VDC
- "200VDC", 20VDC- 195VDC

> Support encoder feedback for any single, double and gantry loop configurations

> Support dual encoders working simultaneously

**TAISHAN 1 pro+** (Excluding interface board)

Specifications: 70A/100V
Maximum Power: 5.5kW
Size: (35x30x11.6)mm³
Weight: 21g without heat sink

**TAISHAN 1 pro** (CAN)

Specifications: 70A/100V
Maximum Power: 5.5kW
Size: (45x30x20)mm³
Weight: 25.5g without heat sink

**TAISHAN 1 pro** (EtherCAT)

Specifications: 70A/100V
Maximum Power: 5.5kW
Size: (45x30x23.89)mm³
Weight: 36.6g without heat sink

**TAISHAN 1+** (Excluding interface board)

Specifications: 70A/100V
Maximum Power: 5.5kW
Size: (35x30x11.6)mm³
Weight: 33g without heat sink

**TAISHAN 1** (CAN)

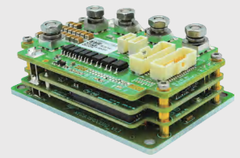
Specifications: 70A/100V
Maximum Power: 5.5kW
Size: (45x53x22.5)mm³
Weight: 49g without heat sink

**TAISHAN 1** (EtherCAT)

Specifications: 70A/100V
Maximum Power: 5.5kW
Size: (45x53x26.1)mm³
Weight: 52.5g without heat sink

## TAISHAN 2
(CAN)

Specifications: 80A/200V
Maximum Power: 14kW
Size: (69.5x47x27.3)mm³
Weight: 90g without heat sink



## TAISHAN 2
(EtherCAT)

Specifications: 80A/200V
Maximum Power: 14kW
Size: (69.5x47x27.5)mm³
Weight: 95.7g without heat sink

## HUASHAN 1
(Military-level devices)

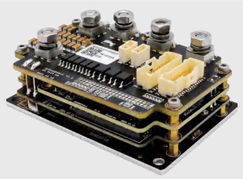
Specifications: 70A/100V
Maximum Power: 5.5kW
Size: (45x53x22.5)mm³
Weight: 49g without heat sink

## HUASHAN 1+
(Excluding interface board)

Specifications: 70A/100V
Maximum Power: 5.5kW
Size: (45x40x19)mm³
Weight: 33g without heat sink

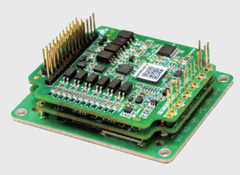
## HUASHAN 2
(Military-level devices)

Specifications: 140A/100V
Maximum Power: 11kW
Size: (69.5x47x27.3)mm³
Weight: 90g without heat sink



## HENGSHAN 1
(CAN)

Specifications: 20A/60V
Maximum Power: 0.96kW
Size: (55x46.5x14.5)mm³
Weight: 35.7g without heat sink



## SONGSHAN 1
70 (CAN)

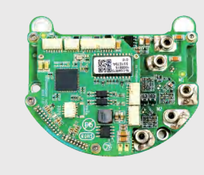
Specifications: 15A/100V
Maximum Power: 1.125kW
Size: (65x58x12.45)mm³
Weight: 51.95g without heat sink

## SONGSHAN 1
90 (CAN)

Specifications: 80A/100V
Maximum Power: 6.3kW
Size: (79.80x53.60x16.80)mm³
Weight: 66.8g without heat sink

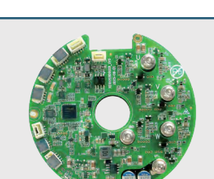
## SONGSHAN 1
90 (EtherCAT)

Specifications: 80A/100V
Maximum Power: 6.3kW
Size: (70.90x61.50x16.80)mm³
Weight: 75g without heat sink



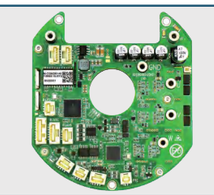
## SONGSHAN 1
(Hollow driver)

Specifications: 80A/100V
Maximum Power: 6.3kW
Size: (84x81.8x15)mm³
Weight: 124g without heat sink



## SONGSHAN 2
120 (CAN/EtherCAT)

Specifications: 140A/100V
Maximum Power: 11kW
Size: (93.30x86x16.10)mm³
Weight: 92.65g without heat sink



# Product Selection

## Taishan Series Model Coding:

M - EGMP D R XX/ YYY S E 1 S - XX

Series:
Five Sacred Mountains

Product Line: Taishan

Version
Blank = Standard
P= Compact Pro

Blank = Taishan 1
D= Taishan 2
T= Taishan 3

Current Capacity
Blank = Standard
R= No overload current

Sustained Current Capacity (A)

Maximum DC Operating Voltage (V)

Bus type:

S = Standard:
- CANopen
- RS-232

E = EtherCAT:
- EtherCAT
- RS-232

Encoder Type:
E = Standard:
- Absolute
- Incremental
- Digital Reset

R = Resolver

Power Supply:
S = Non-isolated (15-90VDC)
I = Isolated (15-90VDC)
N = Single Power Supply

Interface:
Blank: Pin header
1: 5V IO & STO
2: 24V I/O & STO
3: 5V I/O
4: 24V I/O

Horizontal terminal connection, rated current < 20A
5: 5V IO & STO
6: 24V I/O & STO
7: 5V I/O
8: 24V I/O

Special needs:
L:-55℃~+70℃

# PRODUCT INTRODUCTION


45mm*30mm*20hmm

CAN

45mm*30mm*23.89hmm

EtherCAT

- Support dual encoders working simultaneously
- Support process: Low-power drive, dual-encoder full closed-loop control, configurable carrier frequency, BLDC current closed-loop control, frequency division output (under development), gantry synchronization control (under development), etc.
- Encoder type: Absolute (Tamagawa, BISS-C), incremental, Hall, rotary
- Hardware protection function: over current, over voltage, under voltage protection, over temperature protection, overload protection, etc
- Communication interface: CANopen,EtherCAT,RS-232
- Standard (-25 °C to +50°C), low temperature (-55°C to +70°C)

## ELECTRICAL SPECIFICATION

| FEATURES | U. | 15/100 | 25/100 | R50/60 | R80/80 | R50/100 | R70/100 |
|---|---|---|---|---|---|---|---|
| Minimum supply voltage | VDC | 10 | 10 | 8 | 10 | 10 | 10 |
| Rated supply voltage | VDC | 85 | 85 | 48 | 65 | 85 | 85 |
| Maximum supply voltage | VDC | 90 | 90 | 55 | 75 | 95 | 95 |
| Maximum continuous electrical power output | KW | 1.125 | 2 | 2.3 | 5 | 4 | 5.5 |
| Efficiency at rated power | % | > 99 | | | | | |
| Maximum output voltage | | Up to 96% of DC bus voltage | | | | | |
| Sine amplitude | A | 15 | 25 | 50 | 80 | 50 | 70 |
| Continuous sinusoidal RMS Current limit | A | 10 | 17.7 | 35.3 | 56.5 | 35.3 | 49.5 |
| Peak current limitation | A | 20 | 35.4 | 35.3 | 56.5 | 35.3 | 49.5 |

| FEATURES | U. | 30/60 | 1/100 | 3/100 | 6/100 | 10/100 |
|---|---|---|---|---|---|---|
| Minimum supply voltage | VDC | 8 | 15 | | | |
| Rated supply voltage | VDC | 48 | 85 | | | |
| Maximum supply voltage | VDC | 55 | 90 | | | |
| Maximum continuous electrical power output | W | 1370 | 80 | 235 | 470 | 800 |
| Efficiency at rated power | % | > 99 | | | | |
| Maximum output voltage | | Up to 96% of DC bus voltage | | | | |
| Sine amplitude | A | 30 | 1 | 3 | 6 | 10 |
| Continuous sinusoidal RMS Current limit | A | 21 | 0.7 | 2.1 | 4.2 | 7.1 |
| Peak current limitation | A | 42 | 1.4 | 4.2 | 8.4 | 14.2 |

# PRODUCT INTRODUCTION


45mm*53mm*22.5hmm

CAN

45mm*53mm*26.1hmm

EtherCAT

- Support dual encoders working simultaneously
- Support process: Low-power drive, dual-encoder full closed-loop control, configurable carrier frequency, BLDC current closed-loop control, frequency division output (under development), gantry synchronization control (under development), etc.
- Encoder type: Absolute (Tamagawa, BISS-C), incremental, Hall, rotary
- Hardware protection function: over current, over voltage, under voltage protection, over temperature protection, overload protection, etc
- Communication interface: CANopen,EtherCAT,RS-232
- Standard (-25 °C to +50°C), low temperature (-55°C to +70°C)

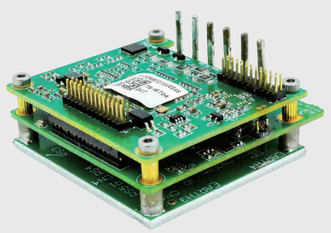
# ELECTRICAL SPECIFICATION

| FEATURES | U. | 15/100 | 25/100 | R50/60 | R80/80 | R50/100 | R70/100 |
|---|---|---|---|---|---|---|---|
| Minimum supply voltage | VDC | 10 | 10 | 8 | 10 | 10 | 10 |
| Rated supply voltage | VDC | 85 | 85 | 48 | 65 | 85 | 85 |
| Maximum supply voltage | VDC | 90 | 90 | 55 | 75 | 95 | 95 |
| Maximum continuous electrical power output | KW | 1.125 | 2 | 2.3 | 5 | 4 | 5.5 |
| Efficiency at rated power | % | > 99 | | | | | |
| Maximum output voltage | | Up to 96% of DC bus voltage | | | | | |
| Sine amplitude | A | 15 | 25 | 50 | 80 | 50 | 70 |
| Continuous sinusoidal RMS Current limit | A | 10 | 17.7 | 35.3 | 56.5 | 35.3 | 49.5 |
| Peak current limitation | A | 20 | 35.4 | 35.3 | 56.5 | 35.3 | 49.5 |

| FEATURES | U. | 30/60 | 1/100 | 3/100 | 6/100 | 10/100 |
|---|---|---|---|---|---|---|
| Minimum supply voltage | VDC | 8 | 15 | | | |
| Rated supply voltage | VDC | 48 | 85 | | | |
| Maximum supply voltage | VDC | 55 | 90 | | | |
| Maximum continuous electrical power output | W | 1370 | 80 | 235 | 470 | 800 |
| Efficiency at rated power | % | > 99 | | | | |
| Maximum output voltage | | Up to 96% of DC bus voltage | | | | |
| Sine amplitude | A | 30 | 1 | 3 | 6 | 10 |
| Continuous sinusoidal RMS Current limit | A | 21 | 0.7 | 2.1 | 4.2 | 7.1 |
| Peak current limitation | A | 42 | 1.4 | 4.2 | 8.4 | 14.2 |

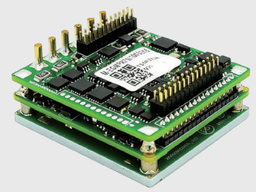
# PRODUCT INTRODUCTION


35mm*30mm*11.6hmm



Excluding interface board

35mm*30mm*11.6hmm



PRO

- Customer can design the interface board. • Support dual encoders working simultaneously
- Support process: Low-power drive, dual-encoder full closed-loop control, configurable carrier frequency, BLDC current closed-loop control, frequency division output (under development), gantry synchronization control (under development), etc.
- Encoder type: Absolute (Tamagawa, BISS-C), incremental, Hall, rotary
- Hardware protection function: over current, over voltage, under voltage protection, over temperature protection, overload protection, etc
- Communication interface: CANopen, RS-232
- Standard (-25 °C to +50°C), low temperature (-55°C to +70°C)

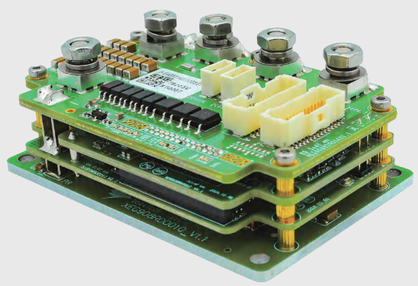
## ELECTRICAL SPECIFICATION

| FEATURES | U. | 15/100 | 25/100 | R50/60 | R80/80 | R50/100 | R70/100 |
|---|---|---|---|---|---|---|---|
| Minimum supply voltage | VDC | 10 | 10 | 8 | 10 | 10 | 10 |
| Rated supply voltage | VDC | 85 | 85 | 48 | 65 | 85 | 85 |
| Maximum supply voltage | VDC | 90 | 90 | 55 | 75 | 95 | 95 |
| Maximum continuous electrical power output | KW | 1.125 | 2 | 2.3 | 5 | 4 | 5.5 |
| Efficiency at rated power | % | > 99 | | | | | |
| Maximum output voltage | | Up to 96% of DC bus voltage | | | | | |
| Sine amplitude | A | 15 | 25 | 50 | 80 | 50 | 70 |
| Continuous sinusoidal RMS Current limit | A | 10 | 17.7 | 35.3 | 56.5 | 35.3 | 49.5 |
| Peak current limitation | A | 20 | 35.4 | 35.3 | 56.5 | 35.3 | 49.5 |

| FEATURES | U. | 30/60 | 1/100 | 3/100 | 6/100 | 10/100 |
|---|---|---|---|---|---|---|
| Minimum supply voltage | VDC | 8 | 15 | | | |
| Rated supply voltage | VDC | 48 | 85 | | | |
| Maximum supply voltage | VDC | 55 | 90 | | | |
| Maximum continuous electrical power output | W | 1370 | 80 | 235 | 470 | 800 |
| Efficiency at rated power | % | > 99 | | | | |
| Maximum output voltage | | Up to 96% of DC bus voltage | | | | |
| Sine amplitude | A | 30 | 1 | 3 | 6 | 10 |
| Continuous sinusoidal RMS Current limit | A | 21 | 0.7 | 2.1 | 4.2 | 7.1 |
| Peak current limitation | A | 42 | 1.4 | 4.2 | 8.4 | 14.2 |

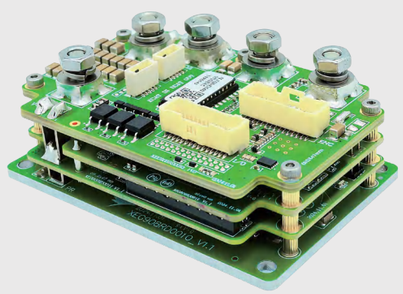
# Product Introduction


69.5mm*47mm*27.3hmm



CAN

69.5mm*47mm*27.5hmm



EtherCAT

## ELECTRICAL SPECIFICATION

| FEATURES | U. | D160/80 | D140/100 | D40/200 | D80/200 |
|---|---|---|---|---|---|
| Minimum supply voltage | VDC | 15 | 15 | 20 | 20 |
| Rated supply voltage | VDC | 65 | 85 | 170 | 170 |
| Maximum supply voltage | VDC | 75 | 95 | 195 | 195 |
| Maximum continuous electrical power output | KW | 10 | 11 | 7 | 14 |
| Efficiency at rated power | % | > 99 | | | |
| Maximum output voltage | | Up to 96% of DC bus voltage | | | |
| Sine amplitude | A | 160 | 140 | 40 | 80 |
| Continuous sinusoidal RMS Current limit | A | 113 | 99 | 28 | 56.5 |
| Peak current limitation | A | The driver detects the maximum current at a radiator temperature of < 85° | | | |

- Support dual encoders working simultaneously
- Support process: Low-power drive, dual-encoder full closed-loop control, configurable carrier frequency, BLDC current closed-loop control, frequency division output (under development), gantry synchronization control (under development), etc.
- Encoder type: Absolute (Tamagawa, BISS-C), incremental, Hall, rotary
- Hardware protection function: over current, over voltage, under voltage protection, over temperature protection, overload protection, etc
- Communication interface: CANopen,EtherCAT,RS-232
- Standard (-25 °C to +50°C), low temperature (-55°C to +70°C)

# Product Selection

## Huashan Series Model Coding:

M - WGM P D R XX/ YYY S E 1 S - XX

Series:
Five Sacred Mountains

Product Line: Huashan

Version
Blank = Standard
P= Compact Pro

Blank = Huashan 1
D= Huashan 2
T= Huashan 3

Output current capacity
Blank = standard
R= No overload current

Sustained Current Capacity (A)

Maximum DC Operating Voltage (V)

Bus type:

S = Standard:
- CANopen
- RS-232

E = EtherCAT:
- EtherCAT
- RS-232

Encoder Type:
E = Standard:
- Absolute
- Incremental
- Digital Reset

R = Resolver

Interface:
Blank: Pin header
1: 5V IO & STO
2: 24V I/O & STO
3: 5V I/O
4: 24V I/O

Power Supply:
S = Non-isolated (15-90VDC)
I = Isolated (15-90VDC)
N = Single Power Supply

Reservation:
Special needs

# PRODUCT INTRODUCTION


45mm*40mm*19hmm

standard

53mm*45mm*28hmm

solo

- Customer can design the interface board. • Support dual encoders working simultaneously
- Support process: Support process: Low-power drive, dual-encoder full closed-loop control, configurable carrier frequency, BLDC current closed-loop control, frequency division output (under development), gantry synchronization control (under development), etc.
- Encoder type: Absolute (Tamagawa, BISS-C), incremental, Hall, rotary
- Hardware protection function: over current, over voltage, under voltage protection, over temperature protection, overload protection, etc
- Communication interface: CANopen, RS-232
- Standard (-25 °C to +50°C), low temperature (-55°C to +70°C)

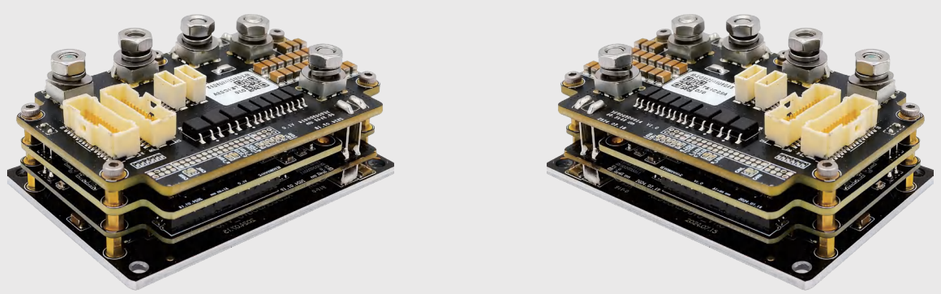
## ELECTRICAL SPECIFICATION

| FEATURES | U. | 15/100 | 25/100 | R50/60 | R80/80 | R50/100 | R70/100 |
|---|---|---|---|---|---|---|---|
| Minimum supply voltage | VDC | 10 | 10 | 8 | 10 | 10 | 10 |
| Rated supply voltage | VDC | 85 | 85 | 48 | 65 | 85 | 85 |
| Maximum supply voltage | VDC | 90 | 90 | 55 | 75 | 95 | 95 |
| Maximum continuous electrical power output | KW | 1.125 | 2 | 2.3 | 5 | 4 | 5.5 |
| Efficiency at rated power | % | > 99 | | | | | |
| Maximum output voltage | | Up to 96% of DC bus voltage | | | | | |
| Sine amplitude | A | 15 | 25 | 50 | 80 | 50 | 70 |
| Continuous sinusoidal RMS Current limit | A | 10 | 17.7 | 35.3 | 56.5 | 35.3 | 49.5 |
| Peak current limitation | A | 20 | 35.4 | 35.3 | 56.5 | 35.3 | 49.5 |

| FEATURES | U. | 30/60 | 1/100 | 3/100 | 6/100 | 10/100 |
|---|---|---|---|---|---|---|
| Minimum supply voltage | VDC | 8 | 15 | | | |
| Rated supply voltage | VDC | 48 | 85 | | | |
| Maximum supply voltage | VDC | 55 | 90 | | | |
| Maximum continuous electrical power output | W | 1370 | 80 | 235 | 470 | 800 |
| Efficiency at rated power | % | > 99 | | | | |
| Maximum output voltage | | Up to 96% of DC bus voltage | | | | |
| Sine amplitude | A | 30 | 1 | 3 | 6 | 10 |
| Continuous sinusoidal RMS Current limit | A | 21 | 0.7 | 2.1 | 4.2 | 7.1 |
| Peak current limitation | A | 42 | 1.4 | 4.2 | 8.4 | 14.2 |

# Product Introduction


69.5mm*47mm*27.3hmm



CAN版

## ELECTRICAL SPECIFICATION

| FEATURES | U. | D160/80 | D140/100 | D40/200 | D80/200 |
|---|---|---|---|---|---|
| Minimum supply voltage | VDC | 15 | 15 | 20 | 20 |
| Rated supply voltage | VDC | 65 | 85 | 170 | 170 |
| Maximum supply voltage | VDC | 75 | 95 | 195 | 195 |
| Maximum continuous electrical power output | KW | 10 | 11 | 7 | 14 |
| Efficiency at rated power | % | > 99 | | | |
| Maximum output voltage | | Up to 96% of DC bus voltage | | | |
| Sine amplitude | A | 160 | 140 | 40 | 80 |
| Continuous sinusoidal RMS Current limit | A | 113 | 99 | 28 | 56.5 |
| Peak current limitation | A | The driver detects the maximum current at a radiator temperature of < 85° | | | |

- Customer can design the interface board. • Support dual encoders working simultaneously
- Support process: Support process: Low-power drive, dual-encoder full closed-loop control, configurable carrier frequency, BLDC current closed-loop control, frequency division output (under development), gantry synchronization control (under development), etc.
- Encoder type: Absolute (Tamagawa, BISS-C), incremental, Hall, rotary
- Hardware protection function: over current, over voltage, under voltage protection, over temperature protection, overload protection, etc
- Communication interface: CANopen, RS-232
- Standard (-25 °C to +50°C), low temperature (-55°C to +70°C)

# Product Selection

## Songshan Series Model Coding:

M - CGM D R XX/ YYY E E 1 S - XX

Series:
Five Sacred Mountains

Product Line: Songshan

Blank = Songshan 1
D= Songshan 2
T= Songshan 3

Output current capacity
Blank = standard
R= No overload current

Sustained Current Capacity (A)

Maximum DC Operating Voltage (V)

Bus type:

S = Standard:
- CANopen
- RS-232

E = EtherCAT:
- EtherCAT
- RS-232

Encoder Type:
E = Standard:
- Absolute
- Incremental
- Digital Reset

R = Resolver

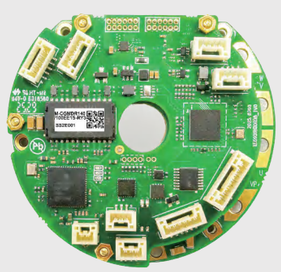
Interface:
Blank: Pin header
1: 5V IO & STO
2: 24V I/O & STO

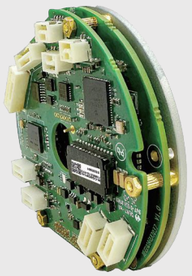
Power Supply:
S = Single power supply
I = Isolated power supply (VL)15V-90V

YH: Arc-shaped driver
RY1:70 Joint motor driver
RY2:90 Joint motor driver
RY3:120 joint motor driver

# Product Introduction


65mm*58mm*12.45 hmm





CAN版

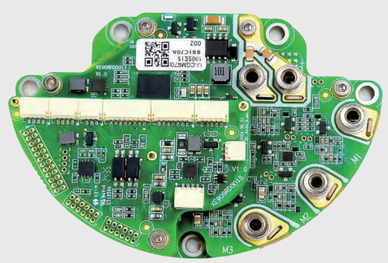
## ELECTRICAL SPECIFICATION

| FEATURES | U. | | | | 15/100 | | | |
|---|---|---|---|---|---|---|---|---|
| Minimum supply voltage | VDC | 15 | | | | | | |
| Rated supply voltage | VDC | | | | 85 | | | |
| Maximum supply voltage | VDC | | | | 95 | | | |
| Maximum continuous electrical power output | KW | | | | 1.125 | | | |
| Efficiency at rated power | % | > 99 | | | | | | |
| Maximum output voltage | | Up to 96% of DC bus voltage | | | | | | |
| Sine amplitude | A | | | | 15 | | | |
| Continuous sinusoidal RMS Current limit | A | | | | 10 | | | |
| Peak current limitation | A | 50 | | | | | | |

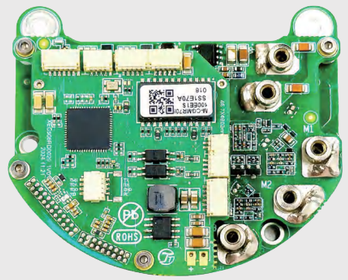
- Support dual encoders working simultaneously
- Support process: Low-power drive, dual-encoder full closed-loop control, configurable carrier frequency, BLDC current closed-loop control, frequency division output (under development), gantry synchronization control (under development), etc.
- Encoder type: Absolute (Tamagawa, BISS-C)
- Hardware protection function: over current, over voltage, under voltage protection, over temperature protection, overload protection, etc.
- Communication interface: CANopen
- Standard (-25 °C to +50°C), low temperature (-55°C to +70°C)

# Product Introduction


79.80mm*53.60mm*16.80hmm



CAN



EtherCAT

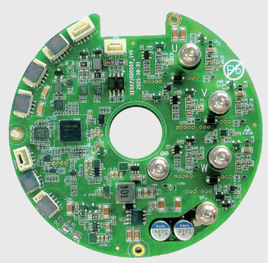
## ELECTRICAL SPECIFICATION

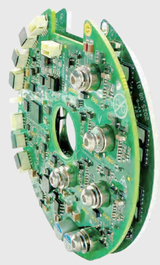
| FEATURES | U. | 10/100 | 15/100 | 25/100 | 40/80 | R50/100 | R70/100 | R80/80 |
|---|---|---|---|---|---|---|---|---|
| Minimum supply voltage | VDC | 15 | | | | | | |
| Rated supply voltage | VDC | 85 | 85 | 85 | 65 | 85 | 85 | 65 |
| Maximum supply voltage | VDC | 95 | 95 | 95 | 75 | 95 | 95 | 75 |
| Maximum continuous electrical power output | KW | 0.79 | 1.125 | 2 | 2.5 | 4 | 5.5 | 5 |
| Efficiency at rated power | % | > 99 | | | | | | |
| Maximum output voltage | | Up to 96% of DC bus voltage | | | | | | |
| Sine amplitude | A | 10 | 15 | 25 | 40 | 50 | 70 | 80 |
| Continuous sinusoidal RMS Current limit | A | 7.1 | 10 | 17.7 | 28.2 | 35.3 | 49.5 | 56.5 |
| Peak current limitation | A | 14.2 | 20 | 35.4 | 56.5 | 35.3 | 49.5 | 56.5 |

- Support dual encoders working simultaneously
- Support process: Low-power drive, dual-encoder full closed-loop control, configurable carrier frequency, BLDC current closed-loop control, frequency division output (under development), gantry synchronization control (under development), etc.
- Encoder type: Absolute (Tamagawa, BISS-C), incremental, Hall, rotary
- Hardware protection function: over current, over voltage, under voltage protection, over temperature protection, overload protection, etc.
- Communication interface: CANopen, EtherCAT, RS-232
- Standard (-25 °C to +50°C), low temperature (-55°C to +70°C)

# Product Introduction
# 产品简介


84mm*81.8mm*15hmm





CAN

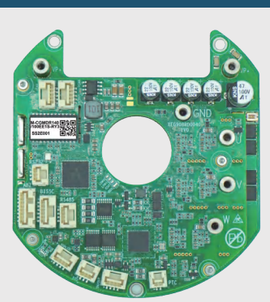
## ELECTRICAL SPECIFICATION

| FEATURES | U. | | | | 80/100 | | | |
|---|---|---|---|---|---|---|---|---|
| Minimum supply voltage | VDC | 15 | | | | | | |
| Rated supply voltage | VDC | | | | 85 | | | |
| Maximum supply voltage | VDC | | | | 95 | | | |
| Maximum continuous electrical power output | KW | | | | 6.3 | | | |
| Efficiency at rated power | % | > 99 | | | | | | |
| Maximum output voltage | | Up to 96% of DC bus voltage | | | | | | |
| Sine amplitude | A | | | | 80 | | | |
| Continuous sinusoidal RMS Current limit | A | | | | 56.5 | | | |
| Peak current limitation | A | 150 | | | | | | |

- Support dual encoders working simultaneously
- Support process: Low-power drive, dual-encoder full closed-loop control, configurable carrier frequency, BLDC current closed-loop control, frequency division output (under development), gantry synchronization control (under development), etc.
- Encoder type: Absolute (Tamagawa, BISS-C), incremental, Hall, rotary
- Hardware protection function: over current, over voltage, under voltage protection, over temperature protection, overload protection, etc.
- Communication interface: CANopen
- Standard (-25 °C to +50°C), low temperature (-55°C to +70°C)

# Product Introduction


93.30mm*86mm*16.10hmm



CAN/EtherCAT

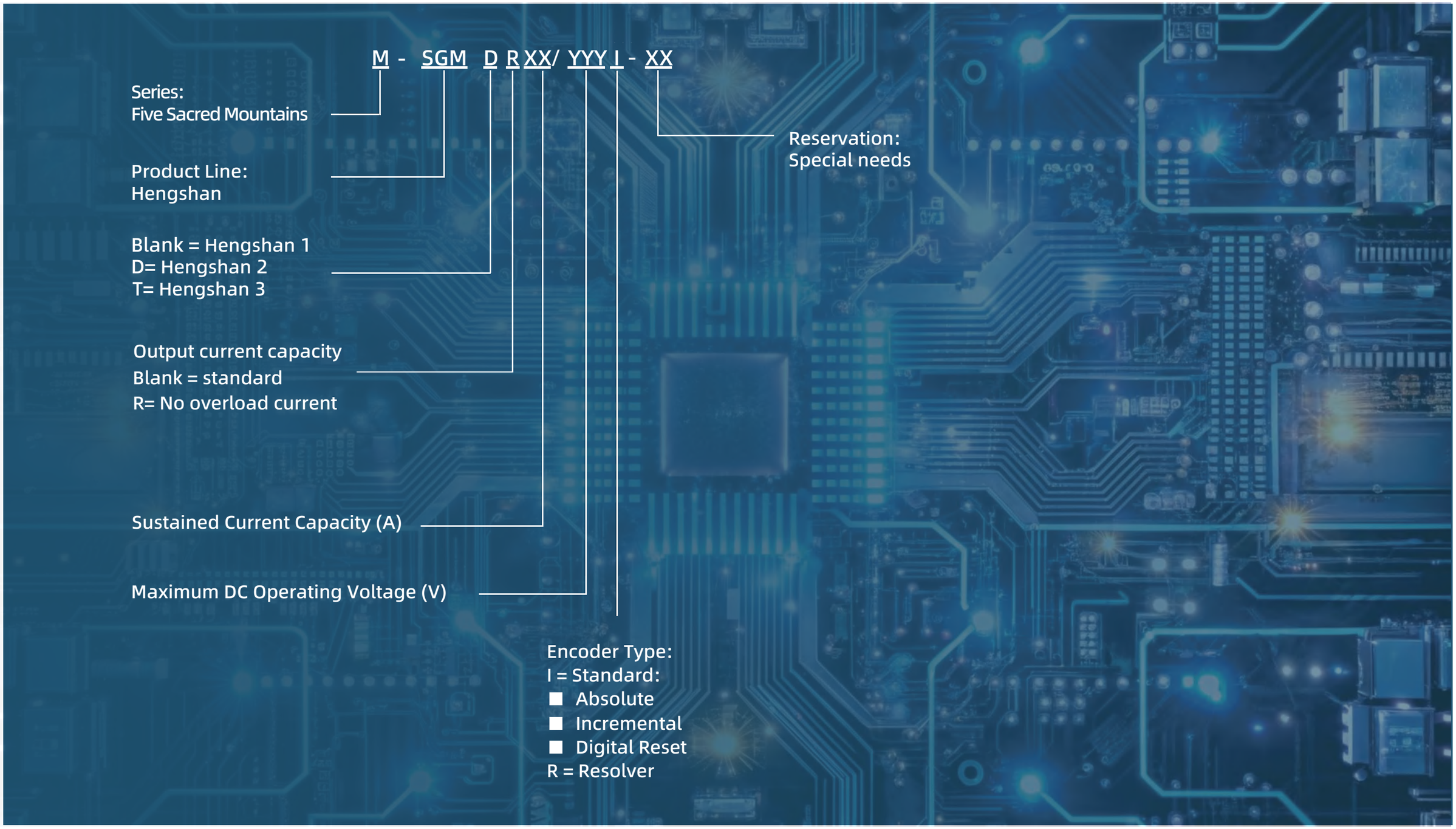
## ELECTRICAL SPECIFICATION

| FEATURES | U. | D140/100 |
|---|---|---|
| Minimum supply voltage | VDC | 15 |
| Rated supply voltage | VDC | 85 |
| Maximum supply voltage | VDC | 95 |
| Maximum continuous electrical power output | KW | 11 |
| Efficiency at rated power | % | > 99 |
| Maximum output voltage | | Up to 96% of DC bus voltage |
| Sine amplitude | A | 140 |
| Continuous sinusoidal RMS Current limit | A | 99 |
| Peak current limitation | A | The driver detects the maximum current at a radiator temperature of < 85° |

- Support dual encoders working simultaneously
- Support process: Low-power drive, dual-encoder full closed-loop control, configurable carrier frequency, BLDC current closed-loop control, frequency division output (under development), gantry synchronization control (under development), etc.
- Encoder type: Absolute (Tamagawa, BISS-C), incremental, Hall, rotary
- Hardware protection function: over current, over voltage, under voltage protection, over temperature protection, overload protection, etc.
- Communication interface: CANopen, EtherCAT, RS-232
- Standard (-25 °C to +50°C), low temperature (-55°C to +70°C)

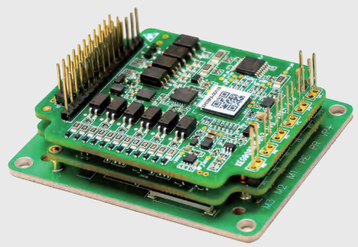
# Product Selection

## Hengshan Series Model Coding:



# Product Introduction


55mm*46.5mm*14.5hmm



CAN

## ELECTRICAL SPECIFICATION

| FEATURES | U. | | | | 20/60 | | | |
|---|---|---|---|---|---|---|---|---|
| Minimum supply voltage | VDC | | | | 15 | | | |
| Rated supply voltage | VDC | | | | 50 | | | |
| Maximum supply voltage | VDC | | | | 59 | | | |
| Maximum continuous electrical power output | KW | | | | 0.96 | | | |
| Efficiency at rated power | % | | | | > 99 | | | |
| Maximum output voltage | | | | | Up to 96% of DC bus voltage | | | |
| Sine amplitude | A | | | | 20 | | | |
| Continuous sinusoidal RMS Current limit | A | | | | 14.1 | | | |
| Peak current limitation | A | | | | 2×Ic | | | |

- Supports simultaneous operation of dual encoders
- Military-grade components, fully domestically produced
- Supported processes: Low-power drive, dual-encoder full closed-loop control, configurable carrier frequency, BLDC current closed-loop control, frequency division output (under development), gantry synchronous control (under development), etc.
- Encoder types: Absolute (Tamagawa, BISS-C, SSI), incremental, Hall, resolver
- Hardware protection functions: Overcurrent protection, overvoltage protection, undervoltage protection, overtemperature protection, overload protection, etc.
- Communication interfaces: CANopen, RS-232
- Standard (-25 °C to +50°C), low temperature (-55°C to +70°C)

# Technological Advantage

## THE ONLY ONE IN CHINA

### High efficiency Soft switching drive technology

Effectively reduce switching loss, greatly improve system efficiency, energy conversion efficiency is higher than 99%. It eliminates the phenomenon of voltage and current overshoot and ringing in the switching process of the device, fundamentally solves the EMI interference problem of the servo driver, and is conducive to the promotion and application of the driver in complex scenes such as medical, aerospace, military and other demanding electromagnetic environment.

## INDEPENDENTLY CONTROLLABLE

### Full domestic component supply chain

Ultra-high power density servo drive is widely used in military, aerospace and medical fields, our company independently developed soft switch technology, not limited by the purchase of parts; And master the core technology of high power density servo driver, MCU, power chip and other devices have been realized nationwide, get rid of the core components are "stuck" dilemma.

## WORLD CLASS

### Advanced motion control algorithm technology

Has mastered the servo drive control full link technology, intelligent no-adjustment servo: one-click parameter self-tuning, free switching of module algorithms in different environments, can provide customers with modular, digital, intelligent, highly refined solutions, including but not limited to: ① intelligent self-organizing current loop technology; ② Servo drive parameter auto-tuning technology; ③ Intelligent electrical fault diagnosis technology.

- One-key parameter self-tuning
- Automatic resonance suppression
- Automatic gap compensation
- Position error compensation
- Multi-stage run control
- Torque ripple compensation
- Friction compensation
- Fault intelligent diagnosis
- Applicable for different kinds of motors and encoders
- Customization: The research and development cycle is 1 to 3 months.

Taishan 1, the first high power density servo drive, was selected as the first place in the Ministry of Industry and Information Technology's "2023 Future industrial innovation task - humanoid robot motor drive" project. Xien Technology, with a global agent sales system, through training and certification, can provide users in all regions with timely and effective services.

# INTELLECTUAL PROPERTY


As of April 30, 2025

3 invention patents have been granted.

5 invention patents are in the substantive examination stage.

2 utility model patents have been granted.

24 ntegrated circuit layout designs have been obtained.

2 software copyrights have been granted.

3 trademark registration certificates have been obtained.

# ENTERPRISE CERTIFICATION


Innovative smes in Heilongjiang Province
Heilongjiang Province science a nd technology smes
High-tech enterprises in Heilongjiang Province

Heilongjiang Province science and technology smes
JiangSu Province science and tech-nology smes


Suzhou Gaoxin District leading talent project
Suzhou Gusu District leading talent project

Harbin double soft certification enterprise

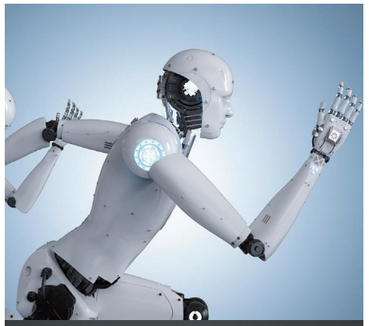

Suzhou double soft certification enterprise

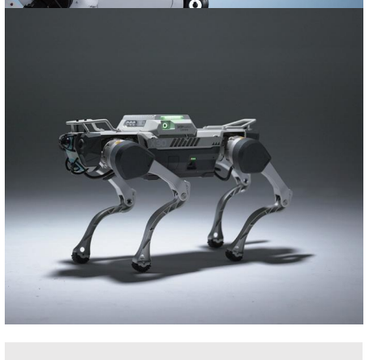
# APPLICATION FIELD

## Humanoid robots

## Robotic dogs

Small in size; High quality output performance; Advanced motion control algorithm technology; Customized design solution.



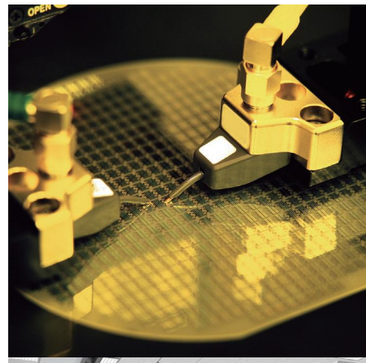


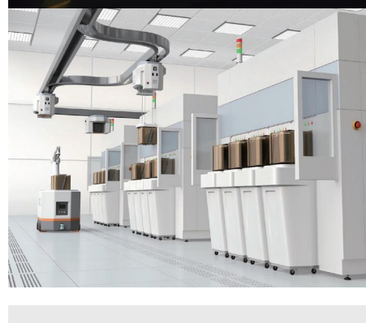
## Military industry

Improve the endurance of underwater submersibles; Enhance the stability of artillery, optoelectronic, and detection equipment; Break the monopoly of individual soldier lifting and obstacle-crossing devices.

## Semiconductor

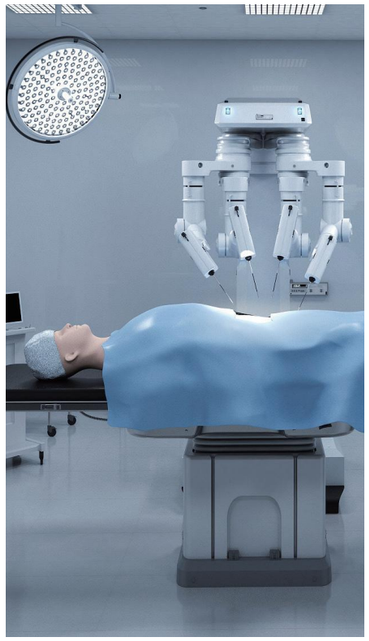
Wafer handling manipulators, wafer cutting equipment, semiconductor equipment positioning systems, vacuum equipment control, etc.





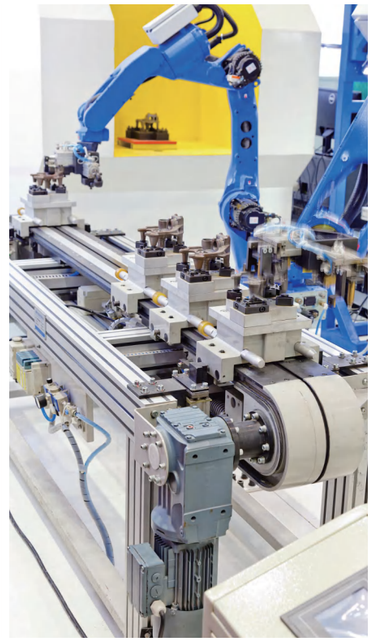
## Aerospace

Can be applied to navigation systems, power control systems, unmanned aerial vehicle systems, aerial cameras, space rendezvous and docking, etc.



## Medical field

Can be applied to surgical robots, medical infusion pumps, patient monitors, electric operating tables, medical microscopes, etc.



## Industrial automation

Can be applied to electric screwdrivers, motors, joint modules, 3C digital products, etc.