

EYOU Intelligent Control



Articulating a Smarter Future.
EYOU Intelligent Control Technology Co., Ltd.

About EYOU

EYOU Robotics was founded in 2018. The company has self-developed high-precision joint FOC algorithms, and launched the planetary, harmonic and actuator joint modules, covering all kinds of power needs of the upper limbs, waist, and lower limbs of humanoid robots.

In 2024, EYOU has achieved annual sales of 30,000 joint module units, securing the top position in Chinese humanoid robot industry for harmonic joint module.

With a current production capacity of 60,000 units (Wuxi) and a production capacity of 120,000 units (Shanghai automated production line), EYOU is fully committed to supporting the Chinese humanoid robotics industry into the "mass production era".



2018	2021	2022	2023	2024	2025
<ul style="list-style-type: none">Company Founded3 Years of Closed-Door R&D	<ul style="list-style-type: none">First Joint Production LineAngel Round: ¥5M raised	<ul style="list-style-type: none">Mass-Production of Gen 2 Hollow Joint Modules	<ul style="list-style-type: none">100+ client partnershipsAnnual Sales of 10,000 UnitsPre-A Round: ¥15M raised	<ul style="list-style-type: none">Automated Production Line Planning InitiatedProduct Launch of Humanoid JointsAnnual Sales of 30,000 UnitsSeries A Round: ¥50M raised	<ul style="list-style-type: none">Automated Production Line OperationalShanghai Joint Drive & Control Lab EstablishedMass Production of Humanoid Force-Controlled JointsProjected Annual Sales: 100,000 UnitsSeries A+ & A++ Rounds

Product Matrix

Product Portfolio

Planetary Joint Modules



Harmonic Joint Modules

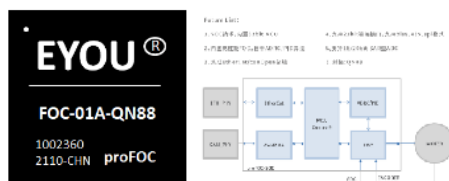


Linear Actuator Modules



Core Technologies

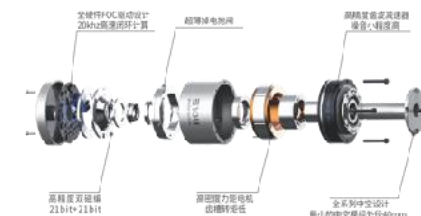
proFOC: FPGA-based FOC drive chip



High-performance servo drives & encoders



7-years motor & gearbox
process expertise



Core Drive Advantages

EYOU Full Hardware FOC Algorithm

Speed jitter < 0.2%

Drive efficiency > 95%



Cost-Optimized Mass Production

EYOU[®]

CORE-QN48

1002360
2110-CHN proFOC

proFocCore

High-Performance Custom Solution

EYOU[®]

FOC-01A-QN88

1002360
2110-CHN proFOC

proFoc

- Full Hardware FOC Implementation: Complete current loop, speed loop, and position loop control
 - 16 kHz closed-loop frequency for all three loops, enabling ultra-high precision and stiffness
 - Configurable operational modes with external ADRC (Active Disturbance Rejection Control) loop support
 - Interface supporting: 12-16bit SAR ADC (Successive Approximation Register ADC)
 - 14-21bit SPI interface encoder compatibility
 - Compact Design: QN48 package (6×6 mm) for space-constrained robotics applications
-
- SoC Technology: Integrated 32-bit MCU with hardware-accelerated
 - Built-in ADRC/PID hybrid control algorithms
 - Industrial Connectivity: Embedded EtherCAT & CANopen fieldbus protocols
 - Precision Sensing: 21-bit magnetic encoder interface (BiSS, RS-485, SPI protocols)
 - 16/20bit SAR ADC for multi-channel signal acquisition
 - Advanced Packaging: QN88 package with enhanced thermal dissipation

Production Capacity

Wuxi R&D and Manufacturing Center

CEC Electronics Digital Core Valley

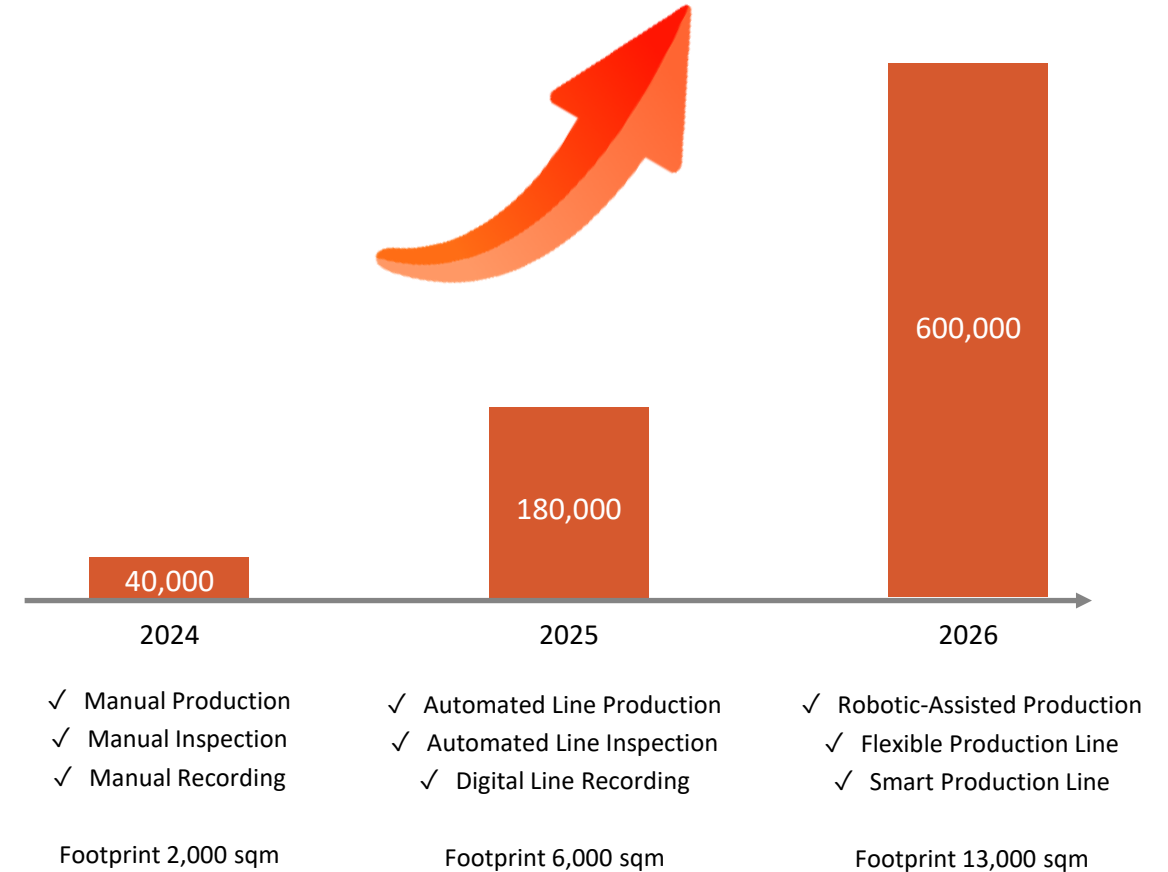
- Pilot Production Line
- Customized Production Line
- Annual Capacity: 60,000 Units
- Planned Total Capacity: 400,000 Units



Shanghai Advanced Manufacturing Center

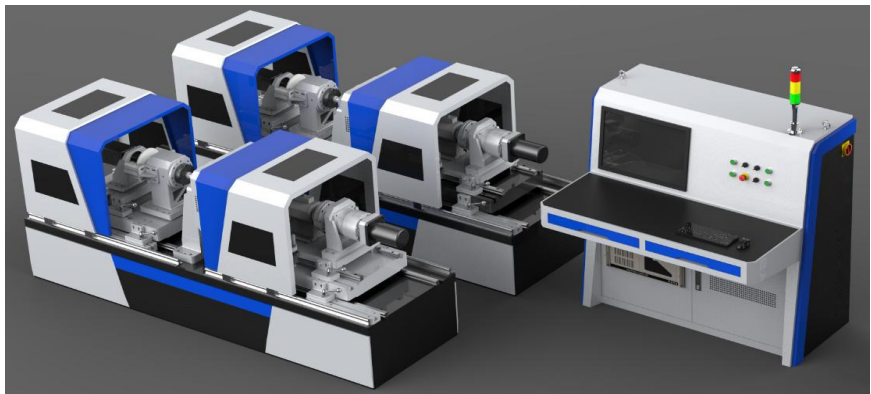
Zhangjiang Robotics Valley

- Fully Automated Mass Production Line
- "Robots Manufacturing Robots" production philosophy
- Total Capacity: 200,000 Units



Quality Assurance

Comprehensive Testing Equipment



Stringent Quality System

CERTIFICATE

质量管理体系认证证书

证书号: 84024Q10123R0S

兹证明

江苏意优机器人科技有限公司

社会统一信用代码: 91320913MA27292Q88

注册地址: 无锡市锡山区安镇街道先锋中路6号中国电子(无锡)数字新城一号楼2层203-1

经营地址: 江苏省无锡市锡山区安镇街道先锋中路6号中国电子(无锡)数字新城一号楼2层203-1

质量管理体系符合标准:

GB/T19001-2016/ISO 9001:2015

认证范围:

一般工业机器人用伺服关节模组的设计、制造、销售

初次发证日期: 2024年04月17日

批准人: [Signature]

BCZC

证书有效性需通过定期的监督审核确认保持, 证书信息可在国家认证认可监督管理委员会官方网站(www.cnca.gov.cn)查询。

博创众诚(北京)认证服务有限公司

北京市丰台区城南嘉园益城园16号楼12层3-1211

CERTIFICATE

环境管理体系认证证书

证书号: 84024E10123R0S

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环境管理体系符合标准:

GB/T24001-2016/ISO 14001:2015

认证范围:

一般工业机器人用伺服关节模组的设计、制造、销售所涉及的相关环境管理活动

初次发证日期: 2024年04月17日

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证书号: 84024S10123R0S

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职业健康安全管理体系符合:

GB/T45001-2020/ISO 45001:2018

认证范围:

一般工业机器人用伺服关节模组的设计、制造、销售所涉及的相关职业健康安全管理活动

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Key Clients

Humanoid



EXROBOTS



卓益得机器人



Industrial



TCL

Kaierda
凯尔达

CATL 宁德时代



EYOU Actuator Series

Product Series



≡ PH Series Harmonic

≡ PP Series Planetary

≡ PHC Humanoid Harmonic

≡ PHT Force-Controlled

≡ PN Series Legged

Nomenclature

PH—14—B/N—101—C/E

Series

Gearbox

Brake:

B (With Brake)

N (Without Brake)

Reduction Ratio

Protocol:

C (CANopen)

E (EtherCAT)

Harmonic Series Product Design

Full Hardware-Based FOC Drive Design

Ultra-Thin Power-Off Brake

High-precision Harmonic Gearbox



High-Precision Dual Encoder System

High-Density Torque Motor with Minimal Cogging

Full-Series Hollow-bore Design

Parallel Processing & High-Speed Closed-Loop Control:
Cycle frequency: 20–40 kHz

Integrated Trajectory Planning:
T-curve and S-curve profiles for optimized motion control.

Fully Customizable PI Parameters: Configurable modes tailored to application.

PH Series Harmonic Actuators



- ≡

Core Tech: Full Hardware FOC Technology
- ≡

Motor: Inner Rotor Torque Motor
- ≡

Encoder: Dual Magnetic Encoders (18-bit)
- ≡

Design: Hollow Shaft for Cable Routing
- ≡

Protocol: EtherCat/ CANopen
- ≡

Noise: <60 dB @1m

SSPT (Start-Stop Peak Torque)
MALT (Maximum Average Load Torque)
IPMT (Instantaneous Permissible Maximum Torque)

Model	Ø (mm)	Bore (mm)	Weight (kg)	Voltage (V)	Ratio	Power (W)	Speed (rpm)	Torque (Nm)	SSPT (Nm)	MALT (Nm)	IPMT (Nm)
PH08-51	40mm	4.6mm	N:185g	14V~42V	51	38W	60rpm	1.8Nm	3.3Nm	2.3Nm	6.6Nm
PH08-101					101	35W	30rpm	2.4Nm	4.8Nm	3.3Nm	9Nm
PH11-51	52mm	6mm	B:450g N:420g	24V~48V	51	50W	60rpm	3.5Nm	8.3Nm	5.5Nm	17Nm
PH11-101					101		30rpm	5Nm	11Nm	8.8Nm	25Nm
PH14-51	70mm	14mm	B:1080g N:970g	24V~48V	51	80W	60rpm	6.6Nm	23Nm	8.6Nm	43Nm
PH14-101					101		30rpm	9.6Nm	34Nm	13.5Nm	66Nm
PH17-51	80mm	14mm	B:1350g N:1250g	24V~48V	51	170W	60rpm	19.8Nm	42Nm	32Nm	86Nm
PH17-101					101		30rpm	30Nm	66Nm	49Nm	134Nm
PH20-81	90mm	18mm	B:1808g N:1606g	24V~48V	81	210W	26rpm	42Nm	91Nm	58Nm	158Nm
PH20-101					101		22rpm	50Nm	102Nm	61Nm	182Nm
PH20-121					121		18rpm	60Nm	108Nm	61Nm	182Nm
PH25-81	110mm	18mm	B:3130g N:2927g	24V~48V	81	270W	26rpm	78Nm	169Nm	107Nm	315Nm
PH25-101					101		22rpm	84Nm	194Nm	133Nm	351Nm
PH25-121					121		18rpm	84Nm	207Nm	133Nm	376Nm

PHC Humanoid Harmonic Actuators



PHC11



PHC14



PHC17

SSPT (Start-Stop Peak Torque)
MALT (Maximum Average Load Torque)
IPMT (Instantaneous Permissible Maximum Torque)

Model	Ø (mm)	Bore (mm)	Weight (kg)	Voltage (V)	Ratio	Power (W)	Speed (rpm)	Torque (Nm)	SSPT (Nm)	MALT (Nm)	IPMT (Nm)
PH11-101	52mm	6mm	450g	24V~48V	101	50W	30rpm	5Nm	11Nm	8.8Nm	25Nm
PH14-101	70mm	14mm	1080g	24V~48V	101	80W	30rpm	9.6Nm	34Nm	13.5Nm	66Nm
PH17-101	80mm	14mm	1350g	24V~48V	101	170W	30rpm	30Nm	66Nm	49Nm	134Nm

- ≡

Core Tech: Full Hardware FOC Technology
- ≡

Design: Hollow Shaft for Cable Routing
- ≡

Optimized: Lightweight Design for Humanoids
- ≡

Cost: Mass Production-Optimized
- ≡

Encoder: Dual Magnetic Encoders (18-bit)
- ≡

Safety: Standard Brake (Power-Off Lock)

PHT Force-Controlled Actuators



Model	Ø (mm)	Bore (mm)	Weight (kg)	Voltage (V)	Ratio	Power (W)	Speed (rpm)	Torque (Nm)	Peak Torque (Nm)
PHT14-101	60mm	9mm	630	24V~48V	101	120W	35rpm	5.4Nm	19Nm
PHT17-101	72mm	10mm	1150g	24V~48V	101	240W	45rpm	30Nm	70Nm
PHT20-121	82mm	13mm	1747g	24V~48V	121	450W	35rpm	50Nm	108Nm

- Core Tech: Full Hardware FOC Technology
- Encoder: Dual Magnetic Encoders (18-bit)
- Environment: -20°C to 80°C
- Control: High-Precision Current Loop
- Safety: Standard Brake (Power-Off Lock)
- Protection: IP54 Water & Dust Resistance

Planetary Series Product Design

**CAN 2.0 bus with 1 MHz
interface frequency**

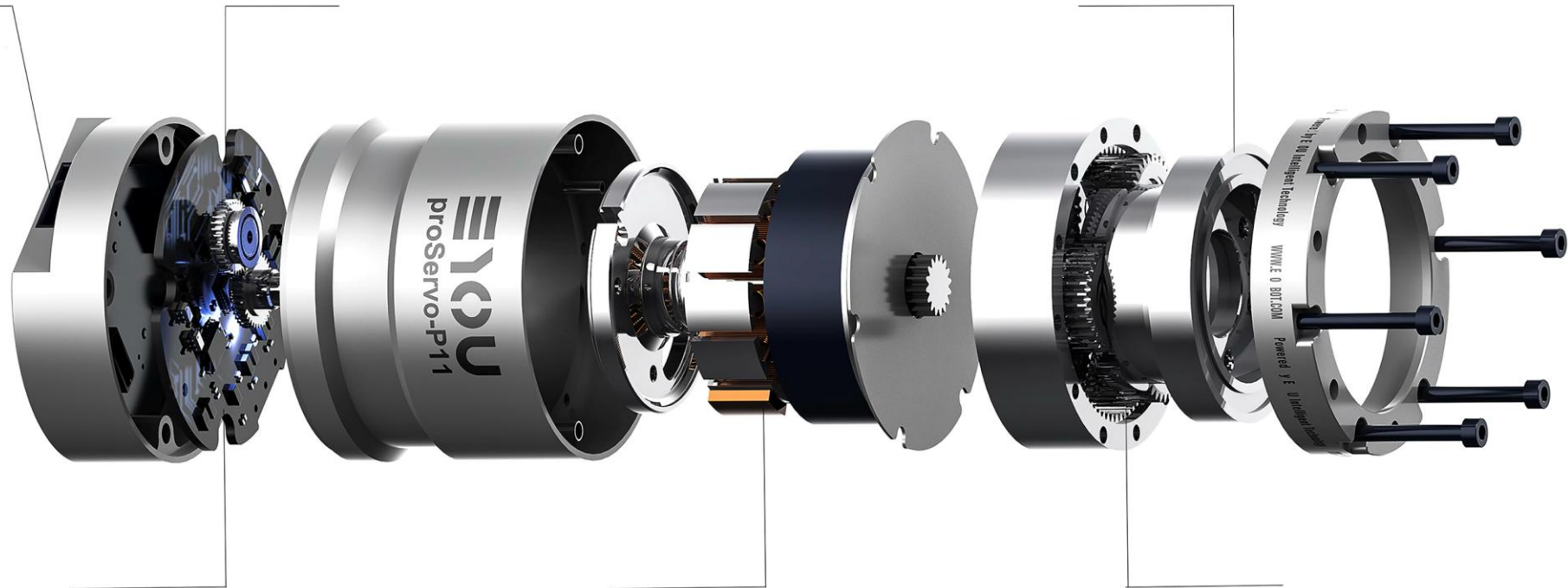
**Mechanical dual encoder
with 18-bit x2 resolution**

**Four-point contact bearing
withstands axial/radial loads**

**Fully hardware-based FOC drive
at 20 kHz closed-loop cycle**

**High-density frameless
torque motor**

**High-precision planetary reducer,
high strength & low noise**



PP Series Planetary Actuators



Model	Ø (mm)	Length (mm)	Weight (kg)	Ratio	Power (W)	Speed (rpm)	Torque (Nm)	Peak Torque (Nm)
PP05	32mm	33.4mm	82g	6	35W	50rpm	0.2Nm	0.48Nm
PP08	40mm	52mm	190g	36	36W	50rpm	1.0Nm	2.2Nm
PP08D	40mm	48mm	199g	36	36W	50rpm	1.0Nm	2.2Nm
PP11	52mm	64mm	391g	36	60W	50rpm	6.6Nm	10Nm
PP11D	52mm	61mm	436g	36	60W	50rpm	6.6Nm	10Nm
PP11L	52mm	82mm	517g	36	72W	50rpm	10Nm	18Nm

- Core Tech: Full Hardware FOC Technology
- Encoder: Dual Absolute Encoders
- Environment: -20°C to 80°C
- Motor: High-Density Frameless Torque Motor
- Protocol: CANopen
- Protection: IP54 Water & Dust Resistance

PN Legged Actuators



PN60



PN80

Model	Ø (mm)	Length (mm)	Weight (kg)	Ratio	Speed (rpm)	Torque (Nm)	Peak Torque (Nm)
PN60-C	62mm	60mm	565g	25	200rpm	15Nm	45Nm
PN80-C	86mm	62mm	1365g	25	160rpm	30Nm	120Nm

- ≡

Core Tech: Full Hardware FOC Technology
- ≡

Encoder: Dual Magnetic Encoders (18-bit)
- ≡

Environment: -20°C to 80°C
- ≡

Protection: Overheat/ Overcurrent Protection
- ≡

Protection: IP54 Water & Dust Resistance
- ≡

Noise: <60 dB @1m



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