

Industrial Robot Selection Guide



DOBOT

CRA Series – High-Performance & High-Precision Collaborative Robots

Excellent product performance, suitable for all general industrial scenarios

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Product	CR3A	CR5A	CR7A	CR6AL	CR10A	CR12A	CR16A	CR16AL	CR20A	CR30A
Weight	16.5 kg	25 kg	24.5 kg	41.5 kg	40 kg	39.5 kg	40 kg	40 kg	73 kg	70 kg
Maximum Payload	3 kg	5 kg	7 kg	6 kg	10 kg	12 kg	16 kg	16 kg	20 kg *1	30 kg
Working Radius	620 mm	900 mm	800 mm	1800 mm	1300 mm	1200 mm	1000 mm	1300 mm	1700 mm	1305 mm
Maximum Working Speed	3 m/s	4 m/s	4 m/s	5 m/s	5 m/s	5 m/s	4 m/s	4 m/s	5.5 m/s	4 m/s
Joint Range of Motion	J3: ±155° other joints ±360°	J3: ±160° other joints ±360°	J3: ±160° other joints ±360°	J3: ±170° other joints ±360°	J3: ±160° other joints ±360°	J3: ±160° other joints ±360°	J3: ±160° other joints ±360°	J3: ±160° other joints ±360°	J3: ±165° other joints ±360°	J3: ±165° other joints ±360°
Maximum Joint Speed	J1/J2	180°/s	180°/s	180°/s	150°/s	150°/s	150°/s	150°/s	110°/s	120°/s
	J3	223°/s	180°/s	180°/s	180°/s	180°/s	180°/s	180°/s	110°/s	150°/s
	J4/J5/J6	223°/s	223°/s	223°/s	223°/s	223°/s	223°/s	223°/s	180°/s	180°/s
End Effector I/O	DI	2 channels	2 channels	2 channels	2 channels	2 channels	2 channels	2 channels	2 channels	4 channels
	DO	2 channels	2 channels	2 channels	2 channels	2 channels	2 channels	2 channels	2 channels	4 channels
	AI	2 channels (Shared with RS485)	2 channels (Shared with RS485)	2 channels (Shared with RS485)	2 channels (Shared with RS485)	2 channels (Shared with RS485)	2 channels (Shared with RS485)	2 channels (Shared with RS485)	2 channels (Shared with RS485)	4 channels (Shared with RS485)
Repeat Positioning Accuracy	±0.02 mm	±0.02 mm	±0.02 mm	±0.05 mm	±0.03 mm	±0.03 mm	±0.03 mm	±0.04 mm	±0.05 mm	±0.05 mm
IP Rating	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54
Temperature Range	0~50℃	0~50℃	0~50℃	0~50℃	0~50℃	0~50℃	0~50℃	0~50℃	0~50℃	0~50℃
Typical Power Consumption	120W	150W	150W	350W	350W	350W	350W	350W	500W	500W
Cable Length from Manipulator to Controller Cabinet	5 m	5 m	5 m	5 m	5 m	5 m	5 m	5 m	6 m	6 m
Optional Safety Skin Model	CR3AS*3	CR5AS*3	CR7AS*2	-	CR10AS*3	CR12AS*2	CR16AS*2	-	-	-

*1 : For palletizing applications, the CR20A can support a maximum payload of 25 kg. For details, please consult DOBOT technical personnel.

*2 : Equipped with 3 safety skins, located on axes J4, J5, and J6.

*3 : Equipped with 4 safety skins, located on the forearm, and axes J4, J5, and J6.

CRAF Series – Intelligent Force-Control Collaborative Robots

High-precision 6-axis force sensor built into the flange end, enabling quick deployment of force-control applications



Product		CR5AF	CR10AF	CR20AF
Weight		25.5 kg	40.5 kg	74 kg
Maximum Payload		5 kg	10 kg	20 kg
Working Radius		900 mm	1300 mm	1700 mm
Joint Range of Motion		J3: ±160° other joints ±360°	J3: ±160° other joints ±360°	J3: ±165° other joints ±360°
Maximum Working Speed		4 m/s	5 m/s	5.5 m/s
Maximum Joint Speed	J1/J2	180°/s	150°/s	120°/s
	J3	180°/s	180°/s	150°/s
	J4/J5/J6	223°/s	223°/s	180°/s
Force Sensor	Measuring Range	Force(Fx/Fy/Fz): 150N Torque(Mx/My/Mz): 15Nm	Force(Fx/Fy/Fz): 300N Torque(Mx/My/Mz): 30Nm	Force(Fx/Fy/Fz): 500N Torque(Mx/My/Mz): 50Nm
	Overload	500% F.S.	500% F.S.	500% F.S.
	Accuracy	1% F.S.	1% F.S.	1% F.S.
	Precision	0.5% F.S.	0.5% F.S.	0.5% F.S.
End Effector I/O	DI	2 channels	2 channels	4 channels
	DO	2 channels	2 channels	4 channels
	AI	2 channels (Shared with RS485)	2 channels (Shared with RS485)	4 channels (Shared with RS485)
Repeat Positioning Accuracy		±0.02 mm	±0.03 mm	±0.05 mm
IP Rating		IP54	IP54	IP54
Temperature Range		0~50°C	0~50°C	0~50°C
Typical Power Consumption		150W	350W	500W
Mounting		Front Mounting		
Cable Length from Manipulator to Controller Cabinet		5 m	5 m	6 m
Material		Aluminum Alloy, ABS Plastic		

CRA-IP68 Series – High-Protection Collaborative Robots

IP68 protection rating, suitable for harsh environments with high dust and moisture



Product		CR5AP	CR10AP	CR20AP
Weight		25 kg	40 kg	73 kg
Maximum Payload		5 kg	10 kg	20 kg
Working Radius		900 mm	1300 mm	1700 mm
Joint Range of Motion		J3: ±160° other joints ±360°	J3: ±160° other joints ±360°	J3: ±165° other joints ±360°
Maximum Working Speed		4 m/s	5 m/s	5.5 m/s
Maximum Joint Speed	J1/J2	180°/s	150°/s	120°/s
	J3	180°/s	180°/s	150°/s
	J4/J5	223°/s	223°/s	180°/s
	J6	223°/s	223°/s	180°/s
End Effector I/O	DI	2 channels	2 channels	4 channels
	DO	2 channels	2 channels	4 channels
	AI	2 channels (Shared with RS485)	2 channels (Shared with RS485)	4 channels (Shared with RS485)
Repeat Positioning Accuracy		±0.02 mm	±0.03 mm	±0.05 mm
IP Rating		IP68	IP68	IP68
Temperature Range		0~50°C	0~50°C	0~50°C
Typical Power Consumption		150W	350W	500W
Cable Length from Manipulator to Controller Cabinet		5 m	5 m	6 m
Material		Aluminum Alloy, ABS Plastic		

CRH Series

300°/s Industry's Fastest High-Payload Collaborative Robots

Industry-leading quality, empowering high-end manufacturing



Product		CR 30H	CR 30HT	CR 30H-Food
Weight		100 kg	102 kg	100 kg
Maximum Payload		30 kg	30 kg	30 kg
Working Radius		1800 mm	1800 mm	1800 mm
Repeat Positioning Accuracy		± 0.05 mm	± 0.05 mm	± 0.05 mm
Torque Sensor Accuracy		/	0.1% F.S.	/
Joint Range of Motion	J1/J2/J4/J5/J6	± 360°	± 360°	± 360°
	J3	± 163°	± 163°	± 163°
Maximum Joint Speed	J1/J2	150°/s	150°/s	150°/s
	J3	200°/s	200°/s	200°/s
	J4/J5/J6	300°/s	300°/s	300°/s
End Effector I/O	Power Supply	0/12/24V, Avg. 2A, Max. 3A	0/12/24V, Avg. 2A, Max. 3A	0/12/24V, Avg. 2A, Max. 3A
	DI	4 channels	4 channels	4 channels
	DO	4 channels	4 channels	4 channels
	RS485	1 channels	1 channels	1 channels
IP Rating		IP65	IP65	IP67
Noise		70dB(A)	70dB(A)	70dB(A)
Temperature Range		0 ~ 50°C	0 ~ 50°C	0 ~ 50°C
Power Consumption	Typical Value	500W	500W	500W
	Maximum Value	2500W	2500W	2500W
Mounting		Any orientation	Any orientation	Any orientation
Cable Length from Manipulator to Controller Cabinet		6 m	6 m	6 m
Material		Aluminum Alloy, ABS Plastic, Rubber	Aluminum Alloy, ABS Plastic, Rubber	Aluminum Alloy, Stainless Steel, ABS Plastic, Food-Grade Grease

Nova Series

Compact and streamlined, ideal for commercial and lightweight industrial applications



Product		Nova 2s*	Nova 2	Nova 5
Weight		11 kg	11 kg	14 kg
Maximum Payload		2 kg	2 kg	5 kg
Working Radius		500 mm	625 mm	850 mm
Maximum Working Speed		1.3 m/s	1.6 m/s	2 m/s
Joint Range of Motion	J1/J4/J5/J6	± 360°	± 360°	± 360°
	J2	± 150°	± 180°	± 180°
	J3	±150°	±156°	±160°
Maximum Joint Speed	J1/J2/J3/J4/J5/J6	135° /s	135° /s	100° /s
End Effector I/O	DI		2 channels	
	DO		2 channels	
	RS485		supported	
Repeat Positioning Accuracy			± 0.05 mm	
IP Rating			IP54	
Noise		65dB (A)	65dB (A)	70dB (A)
Operating Environment			0 ~ 50°C	
Power Consumption	Typical Value	100W	100W	230W
	Maximum Value	250W	250W	770W
Mounting			Any orientation	
Cable Length from Manipulator to Controller Cabinet			3 m	
Material			Aluminum Alloy, ABS Plastic	

*CE certification is not yet available for the Nova 2s.

4-Axis Series – Industrial Desktop 4-Axis Robots

Compact 4-axis robots for light industry, ideal for diverse, small-batch light industrial automation



ProductMG400

Number of Robot Axes		4
Payload		500 g（Max 750 g）
Working Radius		440 mm
Repeat Positioning Accuracy		± 0.05 mm
Joint Motion Range	J1	± 160°
	J2	-25° ~ 85°
	J3	-25° ~ 105°
	J4	-360° ~ 360°
Maximum Joint Speed	J1	300° /s
	J2	300° /s
	J3	300° /s
	J4	300° /s
Power Supply		100 ~ 240V AC, 50/60Hz
Rated Voltage		48V
Rated Power		150W
Communication Method		TCP/IP、Modbus TCP
Mounting		Desktop
Weight		8 kg
Base Dimensions		190 mm × 190 mm
Operating Temperature		0° ~ 40° C



ProductM1 Pro

Working Radius		400 mm
Rated Payload		1.5 kg
Joint Motion Range	Upper Arm	-85° ~ 85°
	Forearm	-130° ~ 130°
	Z-axis Lead Screw	5 mm ~ 245 mm
	End Rotation	-360° ~ 360°
Maximum Joint Speed	Upper & Forearm Joint	180° /s
	Combined Speed of Upper & Forearm	2 m/s
	Z-axis	1 m/s
Repeat Positioning Accuracy		± 0.02 mm
Power Supply		100 ~ 240V AC, 50/60Hz
Weight		15.7 kg
Communication Method		TCP/IP、Modbus、WiFi
I/O Interface		16-channel Digital Output (PNP Type) 16-channel Digital Input (PNP Type)

Robot Controller Cabinet



Robot Control Cabinet



CC262		CC263		
	AC Version	DC Version	AC Version	DC Version
Dimensions	345 mm*345 mm*145 mm	345 mm*345 mm*145 mm	400 mm*400 mm*175 mm	400 mm*320 mm*175 mm
Weight	9.5 kg	8.5 kg	15.5 kg	11.5 kg
Input Power Supply	100~240V, 47~63Hz	30~60V	100~240V, 47~63Hz	40~60V
I/O Power Supply	24V, Max 3A, Max 0.5A per channel			
I/O Interface	DI	24 channels (NPN or PNP)		
	DO	24 channels (NPN or PNP)		
	AI	2 channels, Voltage/Current mode, 0~10V, 4~20mA		
	AO	2 channels, Voltage/Current mode, 0~10V, 4~20mA		
Communication Interfaces	Ethernet Port	2 ports, for TCP/IP, Modbus TCP, EtherNet/IP, PROFINET communication		
	USB Port	2 ports, for file import/export		
	RS485 Interface	1 port, for RS485, Modbus RTU communication		
	Encoder	1 port, ABZ incremental encoder interface		
IP Rating	IP20 (Optional IP54)			
Teaching Method	PC, APP (Android), Teach Pendant			
Compatible Robot Models	CRA Series (3~16 kg models)		CRA Series (20~30 kg models)	



ProductCC365

Dimensions		400 mm × 190 mm × 400 mm
Weight		19 kg
Input Power Supply		Single-Phase 200~240V AC, 50/60Hz
I/O Power Supply		24V, Max 3A, Max 0.5A per channel
General I/O Interface	DI	24 channels (NPN or PNP)
	DO	24 channels (NPN or PNP)
	AI	2 channels, Voltage/Current mode, 0~10V, 4~20mA
	AO	2 channels, Voltage/Current mode, 0~10V, 4~20mA
Safety I/O Interface	SI	10 channels
	SO	10 channels
Communication Interface	Ethernet Port	2 ports, for TCP/IP, Modbus TCP, EtherNet/IP, PROFINET communication
	RS485 Interface	1 port, for RS485, Modbus RTU communication
	Encoder	1 port, ABZ Incremental Encoder Interface
Environment	Temperature, Humidity	≤95%, Non-Condensing
IP Rating		IP20 (Optional IP54)
Teaching Method		Teach Pendant, PC, APP (Android)
Compatible Robot Models		CR30H



ProductDSC

Dimensions		220mm*150mm*45mm
Weight		1.2kg
Input Power Supply		30~60V DC
I/O Power Supply		24V, Max 2A, Max 0.5A per channel
General I/O Interface	DI	16 channels (NPN or PNP)
	DO	16 channels (NPN or PNP)
	AI	2 channels, Voltage/Current mode, 0~10V, 4~20mA
	AO	2 channels, Voltage/Current mode, 0~10V, 4~20mA
Safety I/O Interface	SI	16 channels (Shared with DI Interface)
	SO	16 channels (Shared with DI Interface)
Remote Power On/Off		supported
Communication Interface	Ethernet Port	2
	USB	1
	RS485 Interface	1 port, available for Modbus RTU communication
Environment	Temperature	0~50°C
	Humidity	≤95%, Non-Condensing
IP Rating		IP20
Cooling Method		Fan Cooling
Teaching Method		Teach Pendant, PC, APP
Compatible Robot Models		CRA Series, CRV Series

	
ProductSimBOX	
Dimensions193 mm*122 mm*35 mm	
Weight0.8kg	
Input Power Supply30~60V DC	
I/O Power Supply24V, Max 2A, Max 0.5A per channel	
I/O Interface	DI8 channels (NPN or PNP)
	DO8 channels (NPN or PNP)
Communication Interface	Ethernet Port1 port, for TCP/IP, Modbus TCP communication
	USB1 port, for connecting USB wireless modules
Environment	Temperature0~50°C
	Humidity≤95%, Non-Condensing
IP RatingIP20	
Cooling MethodPassive Cooling	
Teaching MethodPC、APP（Android、iOS）	
Compatible Robot ModelsNova 2s	

	
ProductCCBOX	
Dimensions200 mm*120 mm*55 mm	
Weight1.3kg	
IP RatingIP20	
Digital I/O InterfacePNP or NPN, DI×8, DO×8	
Analog I/O InterfaceVoltage Only, AI×2, AO×2	
Safety I/O InterfaceNone	
LAN Port2 ports	
Communication MethodTCP/IP, Modbus TCP/RTU	
Remote I/O Power On/Offsupported	
Process Packagenone	
Compatible Robot ModelsNova 2、Nova 5	

TP10 Teach Pendant

High-Performance Collaborative Robot Teach Pendant

	
ProductDT-TP10-3PE-N	
Dimensions (LWH)290*180*41（mm）	
Resolution1920*1200@60Hz	
Screen Size10.1 inches	
IP RatingIP54	
Weight1.02 kg	
Standard Cable Length4.5 m	
MaterialPC + ABS	

VX500 Smart Camera

2.5D High-Performance Industrial Camera

Precise and Efficient, Plug & Play

	
ProductVX500 Smart Camera	
Sensor TypeCMOS, Global Shutter	
Pixel Size3.2 μm × 3.2 μm	
Sensor Format1/1.7"	
Resolution5 Megapixels	
Pixel FormatMono 8	
ColorMonochrome	
Lens MountM12 - mount	
Focal Length12.4 mm	
Light Source14 LEDs: White	
Net Weight520 g	

