Product Specifications

Model	–	Nova 2	Nova 5
Weight	–	11 kg (24.3 lbs)	14 kg (30.9 lbs)
Payload	–	2 kg (4.4 lbs)	5 kg (11 lbs)
Working Radius	–	625 mm (24.6 in)	850 mm (33.5 in)
Maximum Speed	–	1.6 m/s (63 in/s)	2 m/s (78.7 in/s)
Range of Motion	J1	±360°	±360°
	J2	±180°	±180°
	J3	±156°	±160°
	J4 to J6	±360°	±360°
Maximum Joint Speed	J1 to J6	135° /s	100° /s
End IO	DI	2 inputs	2 inputs
	DO	2 outputs	2 outputs
	RS485	Supported	Supported
Repeatability	–	±0.05 mm	±0.05 mm
IP Rating	–	IP54	IP54
Noise	–	65 dB (A)	70 dB (A)
Working Environment	–	0° to 50° C (32° to 122° F)	0° to 50° C (32° to 122° F)
Power Consumption	Typical value	100W	230W
	Maximum value	250W	770W
Installation Orientation	–	Any angle	Any angle
Cable Length to Controller	–	3 m (9.84 ft)	3 m (9.84 ft)
Materials	–	Aluminum alloy, ABS plastic	

Product	–	Controller
Dimensions	–	200 mm x 120 mm x 55 mm (7.9 in x 4.7 in x 2.2 in)
Weight	–	1.3 kg (2.9 lbs)
Input Power	–	30 to 60V DC
IO Power	–	24V, Max 2A, Max 0.5A for each channel
IO Interface	DI	8 inputs (NPN or PNP)
	DO	8 outputs (NPN or PNP)
	AI	2 inputs, voltage mode, 0V to 10V
	AO	2 outputs, voltage mode, 0V to 10V
Communication Interface	Network interface	2, for TCP/IP and Modbus TCP communication
	USB	2, for connecting USB wireless module
	485 interface	1, for RS485 and Modbus RTU communication
Working Environment	Temperature	0° to 50° C (32° to 122° F)
	Humidity	0% to 95% noncondensing
Remote Power On/Off	–	Supported
IP Classification	–	IP20
Cooling Mode	–	Passive heat dissipation
Software	–	DobotStudio Pro 4.6.1 system and Above

D250409

DOBOT Nova Series
the Ultra-compact industrial Robots

DOBOT Nova Series for Light Industry

Consumer Electronics	Semiconductor	Automotive	Lithium Battery	Lab	Light Industry	Healthcare

Key Features

Compact & Lightweight

The Nova Series boasts a lightweight and compact design, enabling easy integration into tight spaces and existing production lines. Its modular structure allows for quick adaptation and expansion to meet diverse industrial needs.

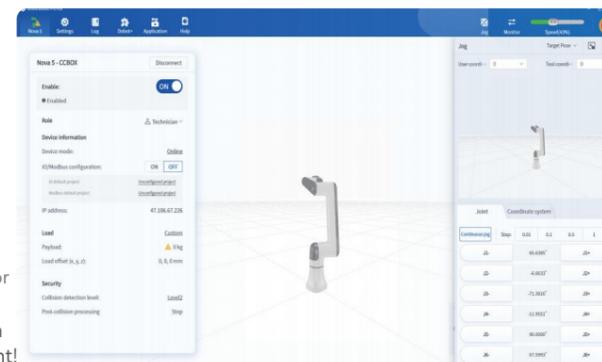40% Lighter than CR Counterparts Palm-sized Control Box

Easy to Use & Flexible to Deploy

With block-based programming and a user-friendly interface, the Nova Series requires no prior coding experience, enabling quick setup and operation. Wireless tablet connectivity further enhances deployment flexibility and operational freedom.

Safe Human-Robot Collaboration

Ensures optimal safety with adjustable 5-level collision detection, instant electromagnetic braking for emergency stops, and configurable interference zones, effectively preventing accidents and protecting both personnel and equipment while maintaining high operational efficiency.

Brilliant Expandability

The Nova Series supports a wide range of end-effectors and offers an open ecosystem with comprehensive SDK support (C++, C#, Python, ROS1, ROS2), enabling seamless customization and scalability for evolving industrial demands.

Upgraded Software for Smarter Control

Powered by the DobotStudioPro 4.6.1 control system, specially optimized for industrial applications, Nova Cobot delivers a smarter and safer automation experience:

- Flat UI design for smoother operation
- Vibration suppression technology ensures high-precision tasks
- Smart payload identification auto-adapts to different workloads
- Multi-layer safety protection (safety walls/zones + auto/manual switching) for secure human-robot collaboration
- Comprehensive operation logs and user permission management for traceability and control

Empowering businesses to build stable and intelligent production lines with simpler, more efficient industrial automation deployment!
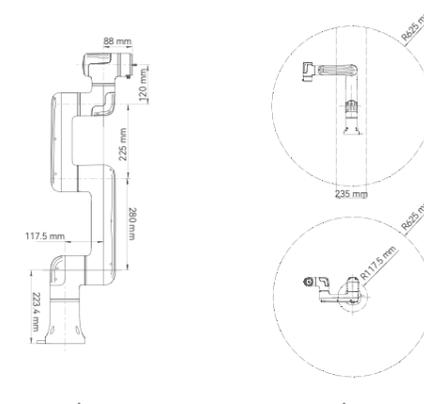
Perfect for Tight Workspaces

Easy to Deploy on Mobile Workstation

Available to Switch Diverse Product Lines
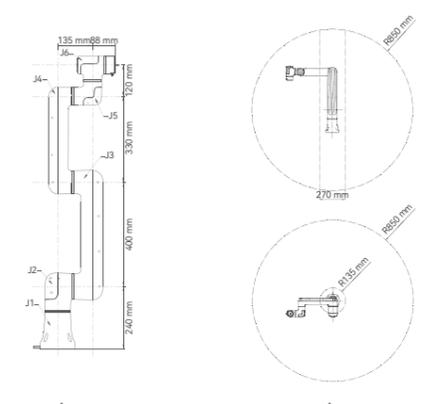
Nova 2

Overall dimension diagram   Motion range diagram

Nova 5

Overall dimension diagram   Motion range diagram