

# Conveyor Tracking Module

## Advanced and high-speed dynamic tracking



One Conveyor Tracking Module (CTM module) has connections for up to 4 robots, 4 conveyors and 8 cameras. This not only reduces field wiring by 60%, but also reduces the total integration costs and streamlines installation

### Fastest tracking speed available

ABB's advanced conveyor tracking module delivers market leading tracking speeds that enable high-speed picking, packing, and palletizing for significantly increased productivity. The module offers tracking speeds of up to 1.7 meters per second and 100 meters per minute.

### Variable and circular tracking for flexible installation

With support for variable and circular tracking, the advanced conveyor tracking module ensures flexible installation and enables customers to handle a wide variety of packages for mass customization. The module's tracking speed can be adjusted from variable to constant, and constant to variable. Moreover, it features reachable targets to enable picking at higher and more variable conveyor speeds, which provides higher pick rates and eliminates sporadic reach errors. Regarding circular tracking, the module supports tracking in radians, which can be adjusted from circular to inline flow, and from inline to circular flow.

### Required parts reduced from 12 to 1

For a four-robot, three-conveyor system, the number of required conveyor tracking modules decreases from 12 to 1. Additionally, field wiring is decreased by 60%, streamlining installation and lowering total integration costs.

### Multiple I/O connectors for easy integration

The module also features multiple connectors for integrating up to 8 cameras/sensors and 4 conveyors/encoders. The advanced conveyor tracking module can be easily integrated with PickMaster, RobotWare 6, and all ABB robots. It is suitable for all markets, including Food & Beverage, Consumer Packaged Goods, Logistics, Automotive parts handling, 3C assembly, Pharmaceutical, and Medical Devices.

### Supports convenient expansion

The advanced conveyor tracking module supports a scalable solution for convenient expansion. Customers can configure the modules to support specific interfaces according to their usage requirements, for example 16 conveyors (4 CTMs) and 4 robots (scalable to 40).

### Key features and benefits

- The fastest tracking speed
- Superior tracking performance
- Variable and circular tracking
- Reduced the number of tracking modules
- Reduced total integration cost
- Support all ABB robots

## Technical information

### General

Power supply	24 VDC (-15/+20%), typically 200 mA (Current not including power outputs)
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Operating temperature	+5°C - +65°C
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Ethernet LAN	2 switched LAN ports, 100 Mbit (Only for installation and service purposes )
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Ethernet WAN	1 WAN port, 100 Mbit
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### Encoders

Power output	24 VDC, max 120 mA <sup>1</sup>
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Frequency	0 - 20 kHz
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Input current	5.2 mA at 24 VDC
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Voltage levels	15 VDC < '1' < 30 VDC, -3 VDC < '0' < 5 VDC
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Supported encoder types	PNP, NPN, and Push-Pull
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### Cameras

Camera power output	Supplied from X20 camera power inlet (normally 24 VDC, maximum 250 mA) <sup>2</sup>
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### Sync input signal

Power output	24 VDC, 120 mA <sup>1</sup>
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Input Current	5.2 mA at 24 VDC
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Voltage levels	15 VDC < '1' < 30 VDC, -3 VDC < '0' < 5 VDC
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### Trigger output

Digital output	24 VDC, Max 120 mA <sup>1</sup>
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Minimum load	0.1 mA (Floating pins will drift towards voltage rails)
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<sup>1</sup> With connection discovery and overload protection/diagnostic.

<sup>2</sup> With overload protection.

Data and dimensions may be changed without notice.

## Specification

### Hardware

Network interface	3 x RJ45 (WAN + 2 x LAN)
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Encoder interface	4 x (2-phase encoder inputs, power)
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Sensor interface	8 x (sync input, trigger output, power)
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Other features	Console port, reset button, discovery led
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Power Supply	24V/0.6A
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CPU	NXP/Freescale P1010
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FPGA	Altera Cyclone
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RAM	2 x 128MB DDR3
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Flash	128MB
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Encapsulation	IP20
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