



# The Conveyor

## Documentation



T9 - IoT

---

Ali MESSELMANI  
Thomas DESCHOMBECK  
Guillaume SCHAFFER  
Van PEN

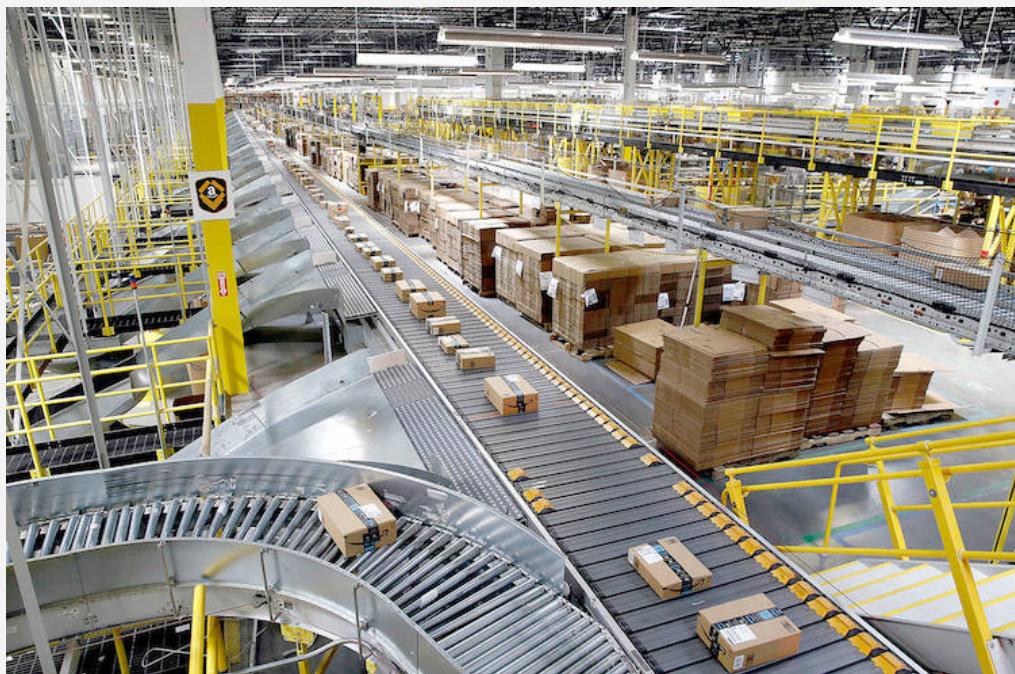
# The project

Our customer has an old sorting conveyor that he wants to integrate into his recent installations. A new version of the machine controller has been developed, it is possible to control all the components of the machine and to add network communication functions.

The conveyor receives packages directly after their manufacture and packaging by the production lines. It must direct them to one of the three storage warehouses and feed the information back to the WMS in order to track the stock. When a package arrives on the line, the conveyor must:

- bring the package to an NFC reader
- read the product reference on the card
- query the list of WMS products to obtain its destination and other information
- create a stock movement in the WMS to the destination warehouse
- add on the tag the reference of the stock movement (and other info)
- direct the package to the appropriate exit

The sorter is part of a complete logistics line, the customer insists on the ability of the machine to quickly restore operation in the event of a service interruption. The controller must be able to return to its operating state in the event of an outage (power failure, manual interruption, loss of connection, etc.)



## Functional flow

As noted above, the conveyor receives packages and directs them to one of three warehouses. Each package has a tag that is scanned whenever the package passes under NFC reader, and then depending on the destination, a servo motor changes the path. When the package passes under the NFC reader, the MC5 shows the package number, as well as the number of the packages on the conveyor. Multiple packages can be on the conveyor at the same time, but there should be a certain distance between both. If 2 packages are close to each other, the MC5 shows an error, asking to remove all packages from the conveyor.

