

Industry : Production

Challenge:

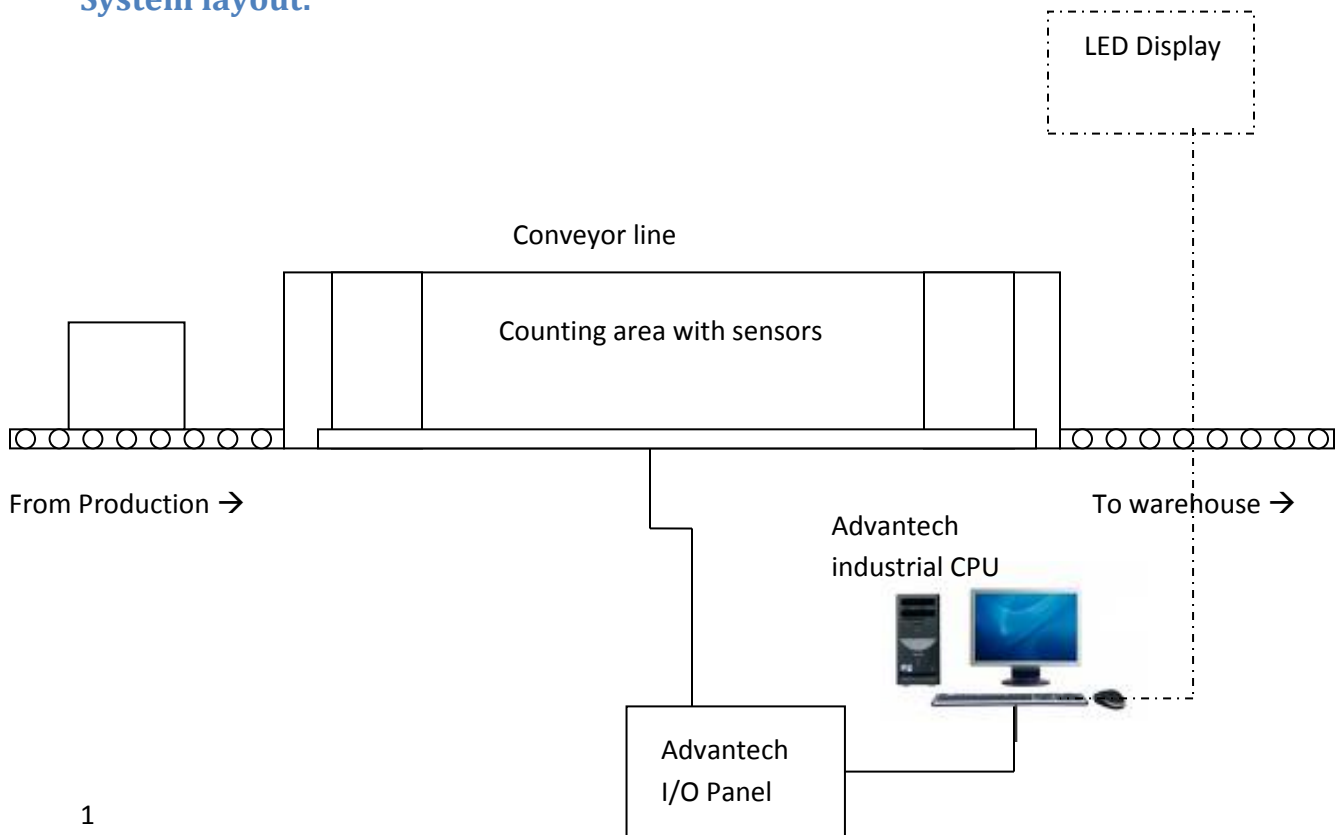
The requirement is from a production line and ultimate goal was to show the final product count in shift basis on a large display to check by operators.

- Counting of finished product comes through a conveyor line in box form
- several sizes of boxes are maintained and counting method to be same for all
- avoid mis-counts
- detect errors and makes an alarm accordingly
- record all the counts for reporting purpose
- display the count on a separate screen shift wise

Solution:

The solution was made with the use of Advantech industrial PC, ADAM series I/O module(s) with a custom made software application to offer the required control and recording functions.

System layout:



System information:

1. The proposed system counts and display the no. of boxes passing through the enclosed conveyor
2. a sensors mechanism is arranged to detect boxes
3. The software captures the counting data from the system and records real time

Software features:

1. Password protected login account for administration (user management, counter reset settings, sensor settings to enable counting)
2. Real-time sensor status indication
3. Alert when any abnormal detections from sensors (as per the sensing logic)
4. Change the product being counted when new product is introduced
5. The counting data arranged on a separate large display screen
6. Authorized user can change the product type and start counting
7. Current box count saved against the product name/type

Additional benefits:

1. Uses a set of sensors to increase the accuracy
2. Real time values, sensor status indication
3. Possibility of feature additions at a later stage to improve functionality
4. Connectivity to LAN and to get client software when required
5. Ease of functionality addition / Ease of I/O expandability

Result:

- All operators can check the current production count as it is displayed in a large screen
- improved the quality of productivity
- avoid misuse on counting
- ease of reporting to management on production and for planning