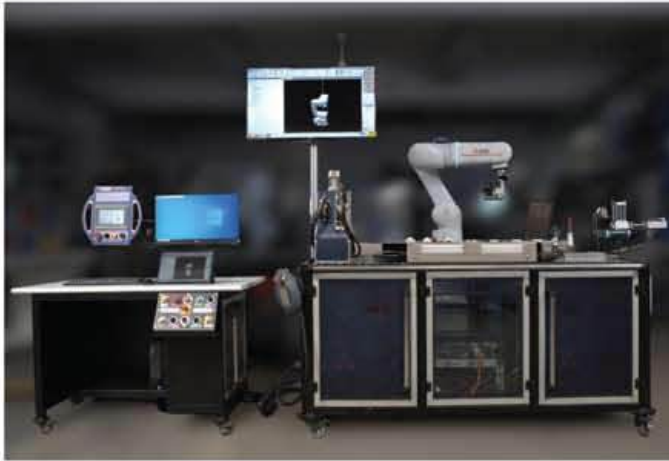


# COBOT TRAINING CELL WITH PLC HMI AND IIOT



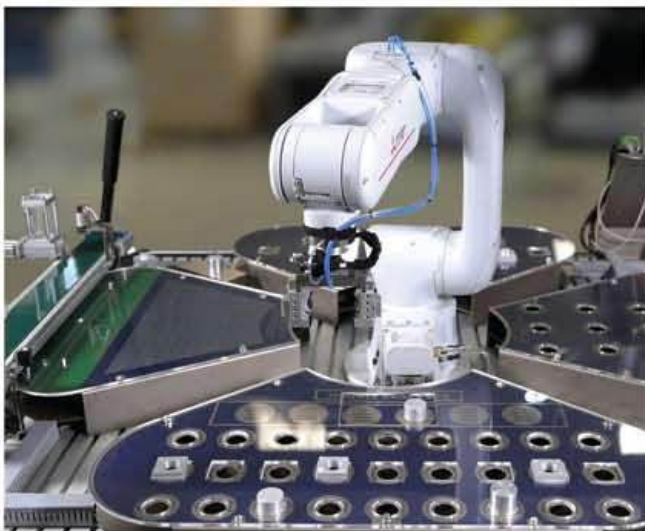
Hytech COBOT Cell is a training cell in integration with Central Control Unit which is equipped with PLC, HMI and IIOT. Users can be trained on individual COBOT operation as well as COBOT operation in integration with PLC and HMI with IIOT.

COBOT in Hytech Didactic Training cell is MITSUBISHI ASSISTA and the end effector is an electrically operated universal gripper from Schunk.

Four Experiment tables are provided on a training cell structure made up of Aluminium extrusions. COBOT can be operated with teach pendant as well as touch pad. 3D Simulation software which can act as a digital dynamic twin can generate the Offline programs of a COBOT.

Complete training cell in 3D and COBOT movement is dynamically demonstrated on the tv screen mounted on the training cell.

COBOT Central Control Unit is equipped with PLC, HMI and IIOT. User can integrated PLC and IIOT for COBOT applications. I/O Link connectivity with Smart light and i/o link based sensors provide exposure to latest industrial technologies. COBOT can be operated either by a teach pendant or by a touch screen tab with dynamic twin. Complete 3D environment of a COBT can be replicated in the dynamic twin which is capable of developing offline programs for COBOT. Hardware Operation Panel provides industrial experience to users. Monitor screen is reflected on the tv screen on the backside of the COBOT cell which can demonstrate the digital dynamic twin.



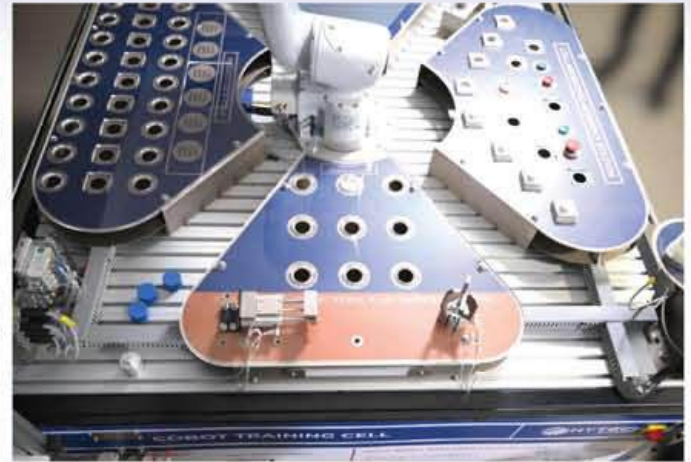
## COBOT TABLE 1

COBOT Table 1 is equipped with a collaborative application where user is expected to operate in collaboration with a COBOT. Cobot picks and places two separate raw jobs in designated cells. Buzzer sound indicates the completion of COBOT operation. Operator then assembles these two parts with automatic screw drivers and hands over command to COBOT by pressing push button. COBOT then picks up the assembled job and places it in the designated cell.

## COBOT TABLE 2

COBOT Table 2 is a POKAYOKE Table. User needs to program COBOT in such a way that COBOT will pick up commanded jobs and places them in the bin.





### COBOT TABLE 3

Table 3 is a writing table where operator can carry out COBOT based writing applications. Conveyor is also mounted on the table 3 which can be utilised for various applications.

### COBOT TABLE 4

COBOT Table 4 is a machine tending and palletising table. Operator can pick up the job from the conveyor and carry out palletising operation. Operator can also carry out machine tending operations on this table.



#### Touch Pad with Digital Twin

COBOT can be operated directly from a touch pad equipped with a digital dynamic twin. Offline programs with 3D environment can be created in the software and they can be directly executed on the COBOT Training Cell.

Along with Touch pad, teach pendant with touch screen is also provided along with COBOT.

### MAJOR COMPONENTS

<b>COBOT</b>	Mitsubishi Assista with Minimum 900mm reach and 5 KG Payload
<b>PLC</b>	Siemens S7 1200 / Mitsubishi FX5
<b>HMI</b>	IIOT Based HMI / Siemens KTP 700 / Mitsubishi GS
<b>Gripper</b>	Schunk COBOT Assistive Gripper / Robotiq Universal Gripper
<b>Operation</b>	Through Tab (Lenovo Yoga) and Mitsusbishi Teach Pendant
<b>Connectivity</b>	i/o link based and profinet
<b>OLP Software</b>	Mitsusbishi Visual Toolbox - Perpetual

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