Connect the unconnected
引領智能製造
DEX-100智能閘道器

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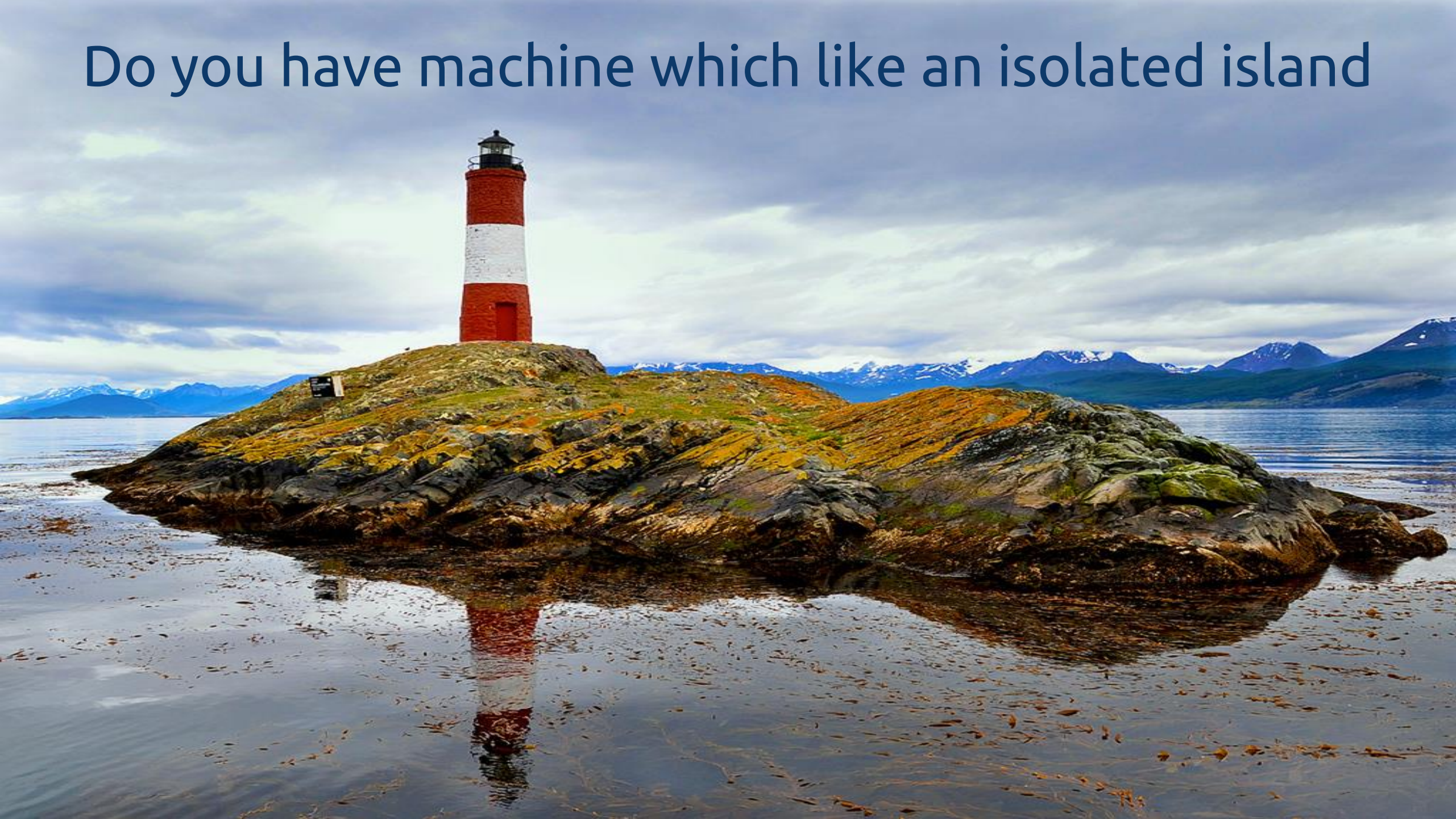
Leading EDGE COMPUTING

Do you have machine which like an isolated island



Machine Data Extraction Methods

Log File
- The most common way of extracting data
- Non Real-time

MXE Gateway

Tower Light
- Status Indicator
- Can be used to calculate the Machine up time

DEX-300

Field Bus Layer
- Direct tag value from PLC
- Need to know the register mapping table

DEX-200

SSCNET EtherNet/IP DeviceNet Modbus EtherCAT PROFIBUS CANopen PROFINET

Non of above Works?
- There is NO communication port on the machine
- Want to collect the message but not in log file
- Adding program is not allowed

Case 1: SMT system Webserver UI automation integration

The Challenges

~SMT production line webserver integration.
~ Open API from the machine maker is too expensive.

The Target

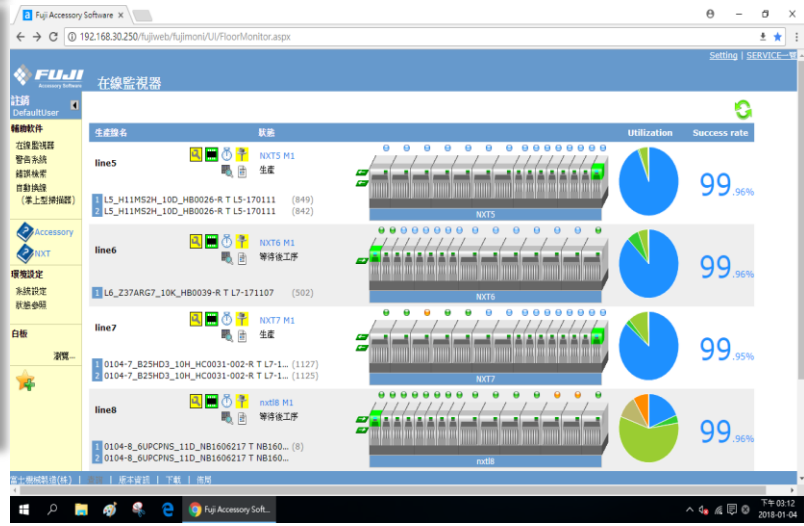
~ UI automation flow integration for production data collecting .

The Benefit

~1M Cost reducing for customer system integration.

The Result

~Enable 8 machines production status monitoring with 1 DEX-100.



Case 2: PCB Drilling machine data extraction

The Challenges

~Legacy operation system: OS2
~No Open API from the machine maker.

The Target

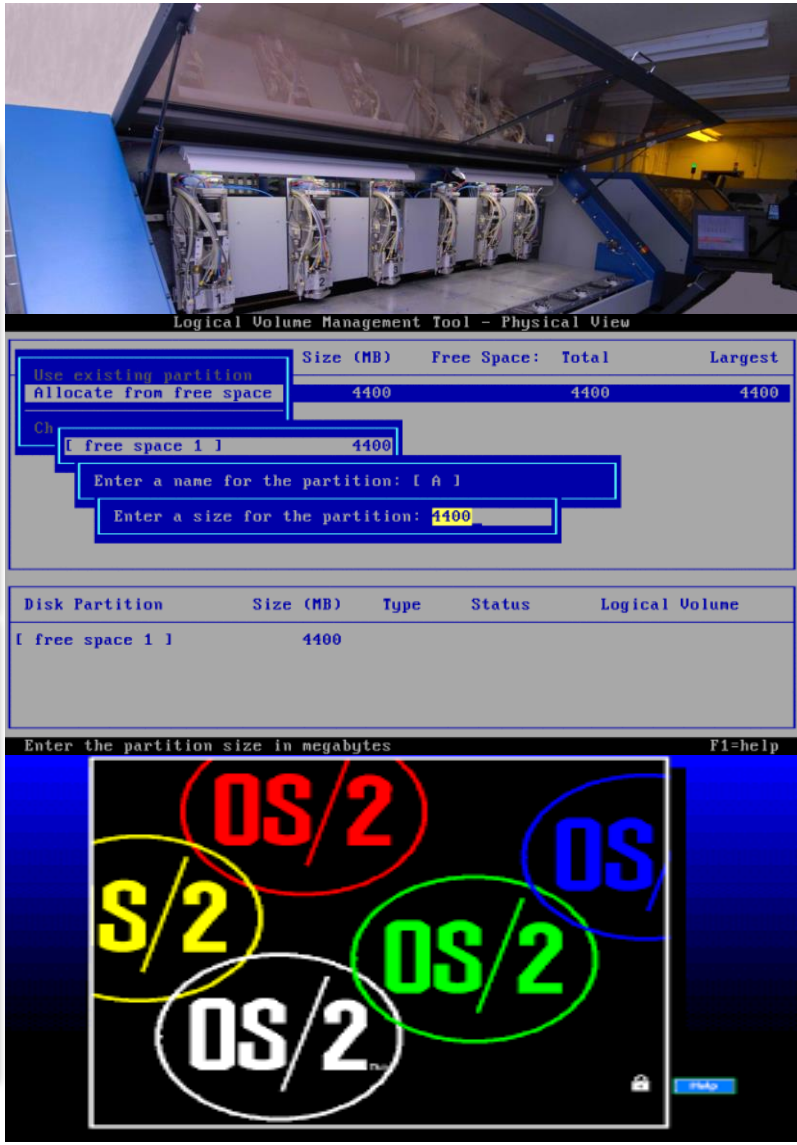
~Extract Operational message in PC based controller

The Benefit

~Data monitoring without expensive machine migration

Prospect Result

~ Legacy machine remote control and data extraction capability.



Case4: LCD manufacturing Chlorine concentration monitoring

The Challenges

~Intrusive solution is not allowed
~Open API from the machine maker is too expensive.

The Target

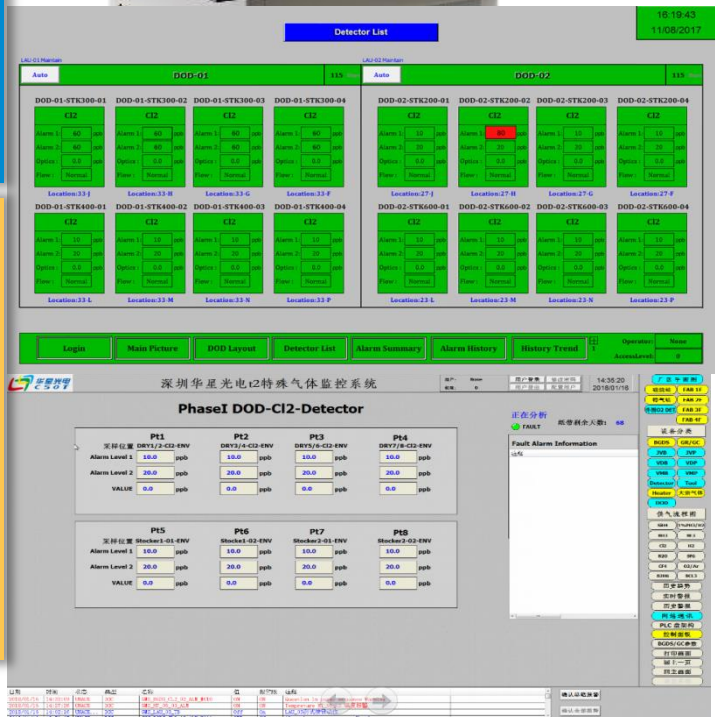
~Collect the chlorine concentration and prevent the hazardous chlorine leakage.

The Benefit

~Reduce human power for dangerous field.
~Monitor chlorine concentration in dangerous area without Installation in field.

Prospect Result

~ Provide2 hazardous area with Hazardous monitoring.

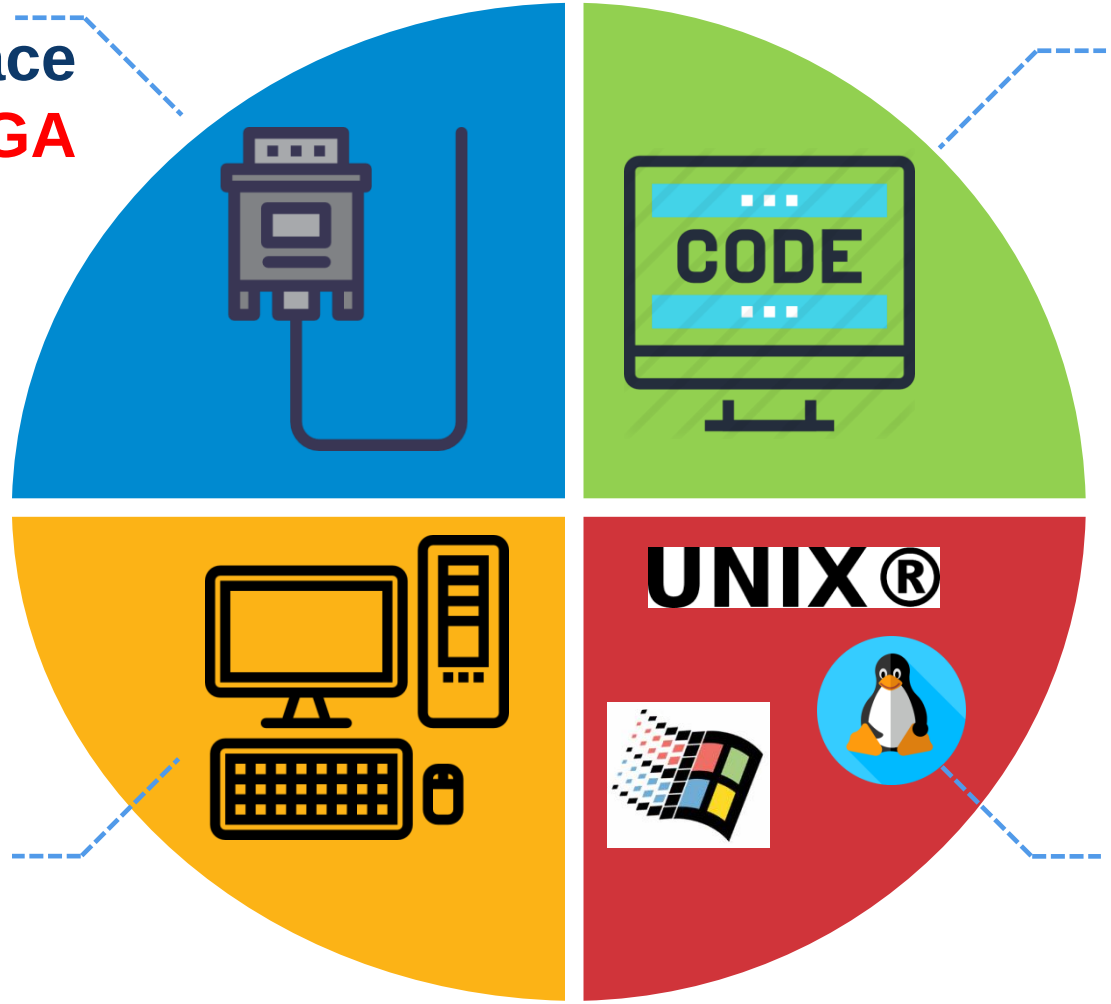


Solution: The VGA port on PC Controller

Human Machine Interface cross all PC generations

Solution: DEX-100 Target Machine

Common PC Interface
VGA



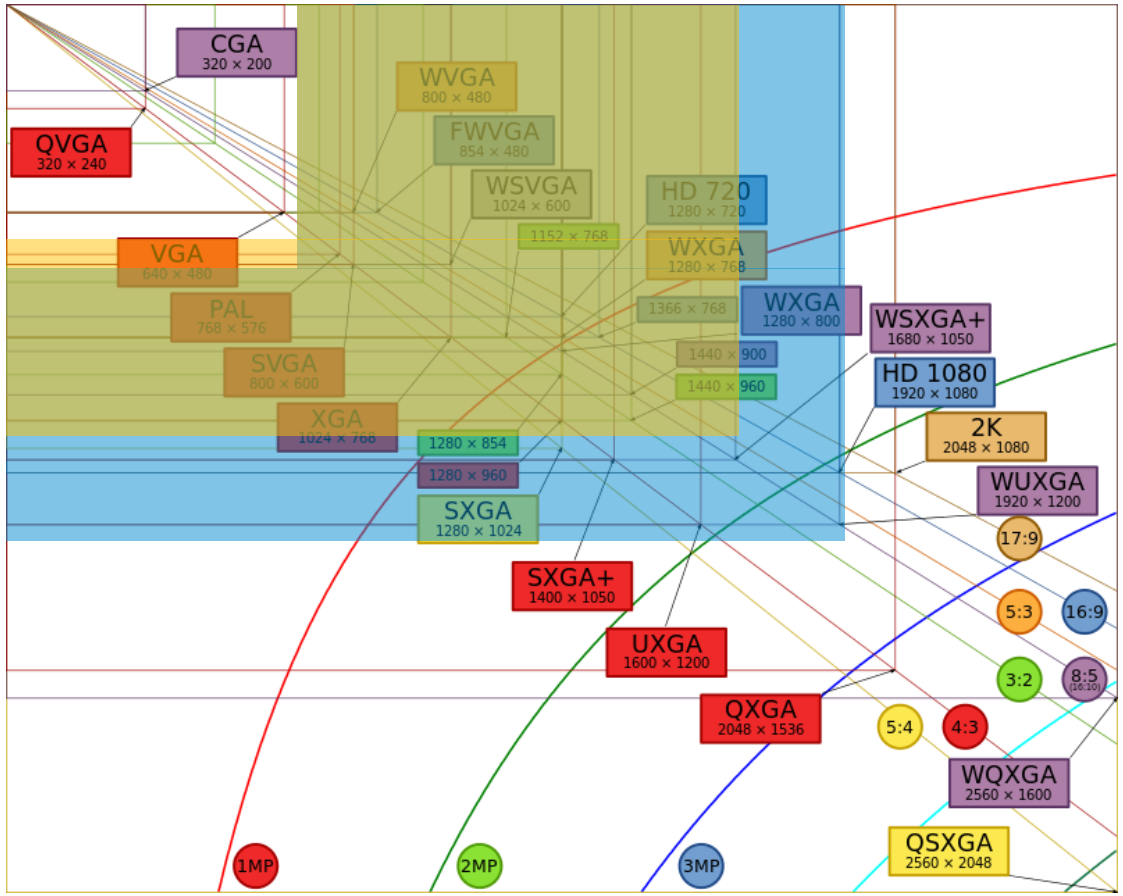
Text bigger than 12pts and fix position

USB & PS2 KB/MS Control

Legacy OS supported

DEX-100 Solution

Supporting Resolution



DEX-100

Common Legacy

Cover most common legacy machine

2 weeks for adding new resolution with sufficient material

HUMAN MACHINE INTERFACE DATA EXTRACTION SOLUTION DEX-100

Intel ® MRS and RRK solution

Are you looking for a smart technology solution for your business, today? Industry innovators — from small businesses to big box retailers to hospitals to manufacturing facilities — are increasingly looking for smart technology to streamline operations, deliver cost savings, accelerate time to market, and create efficiencies across the workforce and in the workplace. Intel is listening. This is why we offer Intel® MRS and RRK solution. Intel is working with key partners to develop and deliver end to end solutions so that we can empower businesses to achieve real results.

Smart Cities

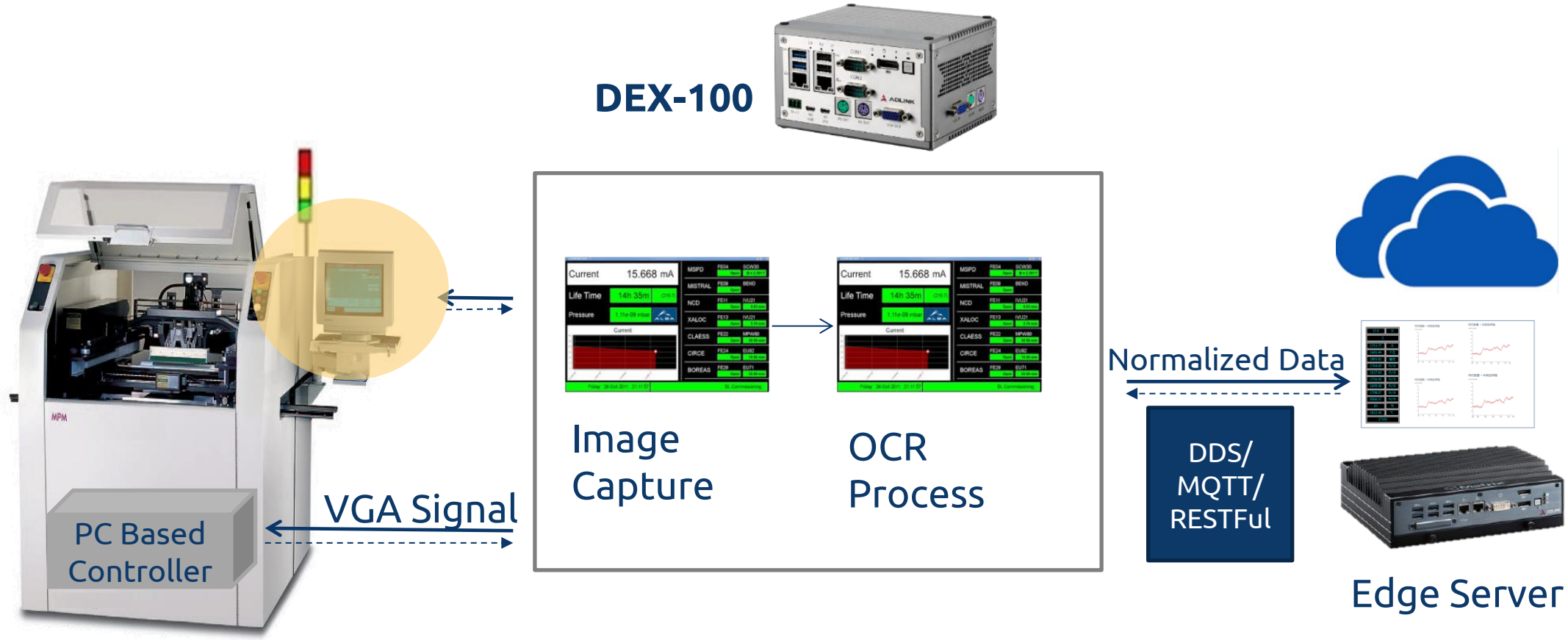
Retail

Energy

Industrial/Smart Buildings

DEX-100 Architecture

display port with Optical Character Recognition (OCR)

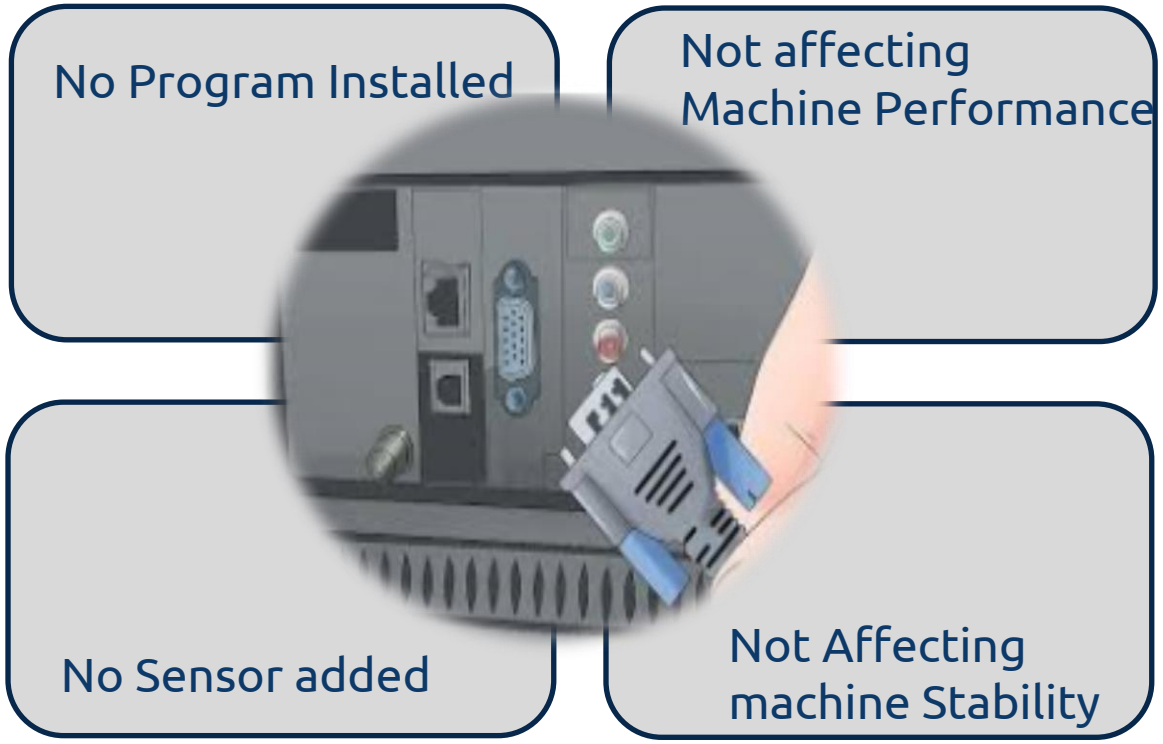


Key Benefits

- **Non-intrusive:**
  Guarantee machine stability
- **Common Interface:**
  VGA/DVI output port is available for all legacy machines
- **Real-time:**
  Build in KVM function, which can drive KB/mouse to get the real-time screen shot
- **Easy to learn:**
  Engineer can hands on within one day

Non-Intrusive

1. The display content is the output of the machine
   - Will not affect machine performance
   - Will not cause machine unstable
2. No additional program loaded into the machine system
3. No add-on sensors needed



Easy Maintenance

1. Service Engineer learn one skill set for all machines
2. Reduce Servicing Engineer
3. Intuition setup enable fast learning curve
4. Programming by Configuration allow service ability to re-configure as needed

Real Time Information

1. The display content shows Real-time Information of the machine status
2. It is after processed Information, not just Data
3. All Warning and Alarming messages captured provides Reason and Prescription to the failure

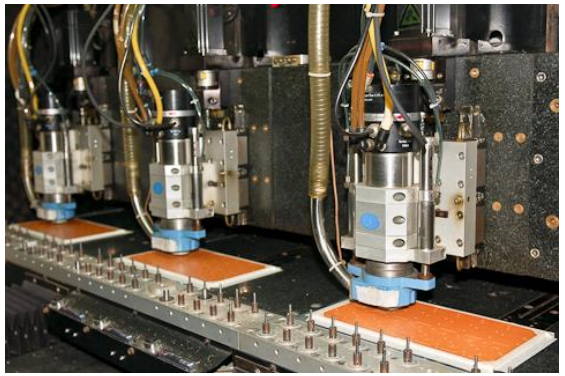
Hassel Free Deployment

1. Offline/Remote Editing and Debugging without interrupting machine Operation time
2. Interference time with machine kept minimum since the only interface is display port with mouse/keyboard
3. Programming by Configuration requires lower skill set
4. OT/IT and M2M bridging full taken care

Machine in Operation

Offline/Remote Edit and Debug

Prospect Industry



15 year old
Drilling machine in PCB Manufacturing

Back end Semi-con process machine

LCD dispensing machine in LCD manufacturing

Printer, Reflow
And Dispensing machine in SMT Industry.

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