Smart Manufacturing and its adoption: **MNCs and SMEs**

ViTrox as an enabler for SMEs and MNCs in adopting Industry 4.0 tools in the journey towards Smart Manufacturing

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ViTrox Corporation Berhad
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BACKGROUND

World Leading Automated Machine Vision Solution Provider
Year 2000 founded
RM3.622b Market Capitalization
Over 500 Employees

324

ACTIVE CUSTOMERS WORLDWIDE

Malaysia, Singapore, Indonesia, Thailand, Vietnam, Philippines, Taiwan, China, Japan, Korea, India, Australia, Europe, Brazil, Mexico, the USA & many more.

No.1

3D IN-LINE AXI

We are No.1 3D IN-LINE AXI system provider in PCB SMT Assembly.

72

AWARDS WINNER

ViTrox is recognized its achievements in best products, best corporation, best human resources and best CEO throughout the years since 2004.

World Leading

3D IN-LINE AOI

We are the world leading 3D IN-LINE AOI system provider in PCB SMT Assembly.

15,000

VISION SYSTEM INSTALLED

No. 1 Turret Base Vision Solutions!

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Accountability
承担
Courage
勇气
诚正
Integrity
信实
Gratitude
& Care
感恩·关怀
Trust &
Respect
信任·尊重

Reel-to-Reel Vision Handler (R2R)

Tray-to-Tray Vision Handler (T2T)

3D Solder Paste Inspection System (SPI)

3D Optical Inspection System (AOI)

3D X-Ray Inspection System (AXI)

Advanced Robotic Vision System (ARV)

Industry 4.0 initiative - **V-ONE** connects the inspection systems in Semiconductor & SMT lines for real-time process and data analytics.

ViTrox®

Transforming Towards

Industry 4.0 Smart Inspection

SPI, AOI & AXI

Automated Board Inspection System

ARV

Automated Surface & Measurement Inspection

T2T, T2R & R2R

Vision Inspection System & Handler

i4.0 Dashboard & Analytics

V-ONE
Real Time Monitoring System

Smart Electronic Module

Electronic Communication System

Find out more about V-ONE®
...connecting vision

Transforming Towards
Industry 4.0 Smart Inspection

OPTIMIZE manufacturing performance while on the GO

i4.0 Dashboard & Analytics

V-ONE
Real Time Monitoring System

World Leading Automated Machine Vision Solution Provider

www.v-one.com.my

BETTER PEOPLE

WHAT DO WE NEED?

Challenges of yesterday, today and tomorrow

THIS WAS THEN

FACTORY WORKER

Job responsibilities

- Work on a production line
- Fulfill orders
- Administrative tasks

THIS IS NOW

FACTORY AUTOMATION

Job responsibilities

- Operate a $100k machinery
- Understand failure analysis
- Work on multiple production lines

Today's workplace is increasingly technical. The same is true in the manufacturing arena

BETTER PROCESS

WHAT DO WE NEED?

Challenges of yesterday, today and tomorrow

THIS WAS THEN

REACTIVE

Standard Reports

Ad hoc Reports

Preventive Maintenance

Alerts

THIS IS NOW

PROACTIVE

Statistical Analysis

Forecasting

Predictive Modelling

Optimization

Systems that will meet you where you are... it shouldn't mean “start all over”

AFA TECHNOLOGIES

AFA Industrial 4.0 Partners
BECKHOFF FESTO omron SMC VITrox

Electronics Manufacturing Services in Penang

VITrox

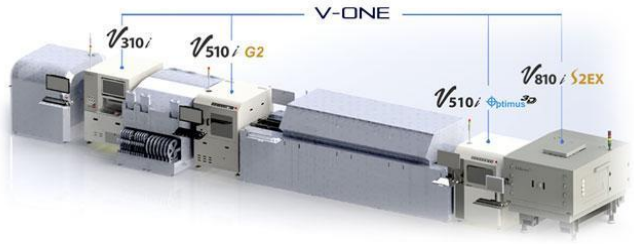
customer testimony

YouTube Search: V-One testimonial video

Smart manufacturing software-based solution in one-stop platform which offers data driven decisions in manufacturing by allowing users to **remote**, **visualize**, **monitor**, **control** and **implement** condition-based alerts to reduce downtime and increase throughput.

1. Connect

Automatically Collect Machine Data



2. Visualize

Machine Utilization and Dashboards

3. ProAct

Big Data and Deep Learning Artificial Intelligence

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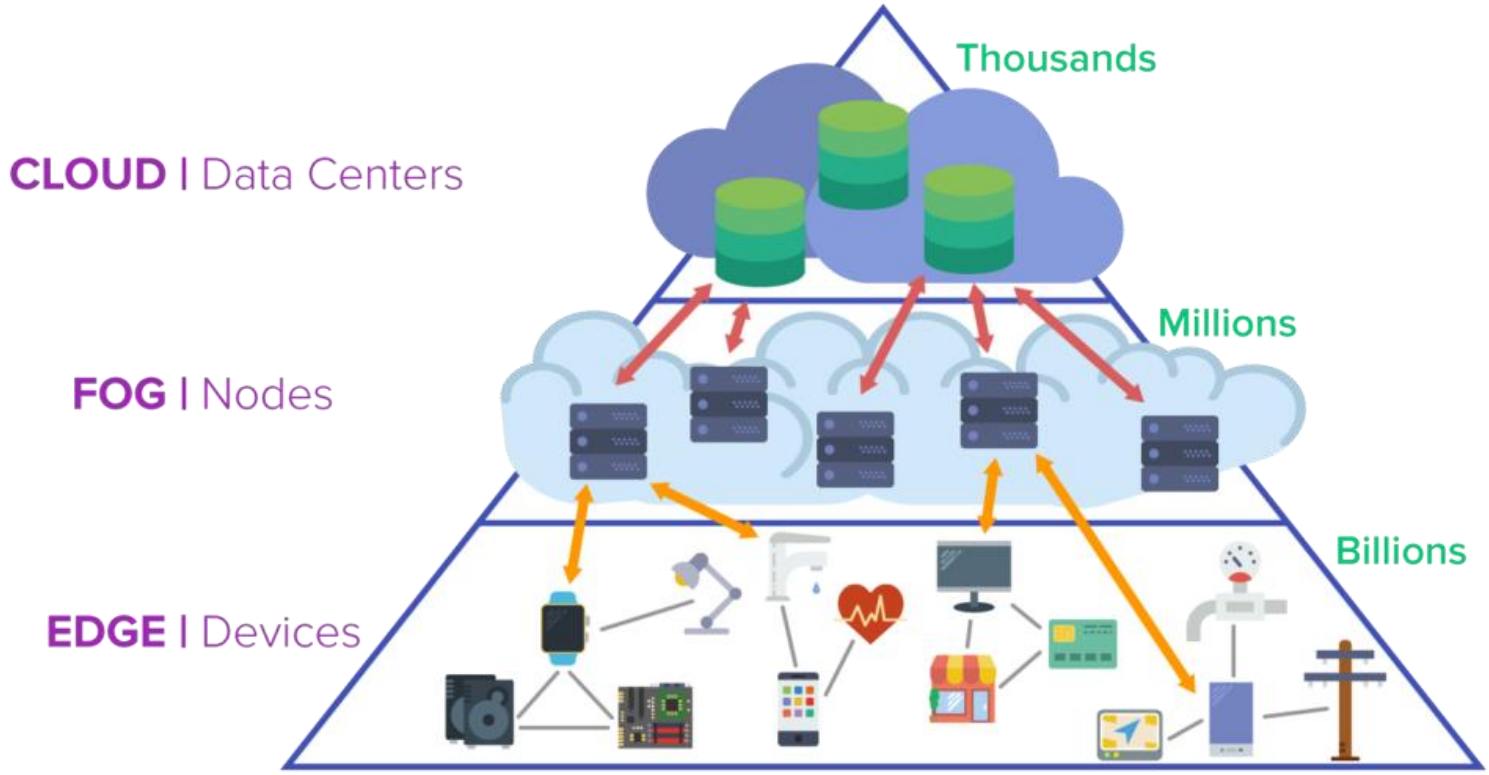
V-ONE ®
...connecting vision

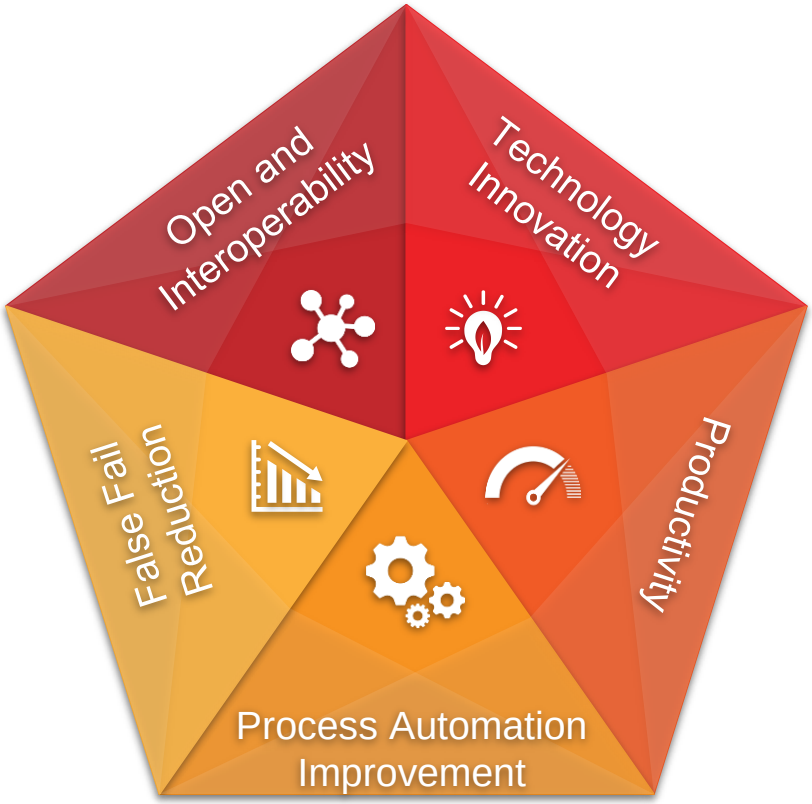
What is V-ONE ?



V-ONE analytics solution that targets **Cloud**, **Fog** and **Edge** processing, with fully flexible visualization chart and dashboard to provide **meaningful insights** to users in **real time basis**.

VITrox

V-ONE development Key Focus



Technology Innovation

Cloud Architecture (Kubernetes)
ML, DL & AI Platform (external integration)

Productivity

Real time production metrics display
Mobile E-Tickets for immediate actions
Machine utilizations metrics

Process Automation Improvement

M2M collaborations (auto PnP offset, Reflow PWI)
Smart Conveyors
Auto Learning 3D AOI Programming

False Fail Reduction

Programming Automation (Auto learning)
A.I auto classification

Open and Interoperability

Open platform for external plugin
Open standard (CFX, AMQP/MQTT, JSON)
Multiple data connectors (Oracle, MSSQL, MySQL, Postgres)

V-ONE ®
...connecting vision

V-ONE 6 Features Overview

DATA ANALYSIS

Monitor process performance and execute production planning with different charts plotted from databases linked to V-ONE.

DASHBOARD

A fully configurable dashboard that allow users to have graphical chart view based on process needs.

STATUS MONITORING

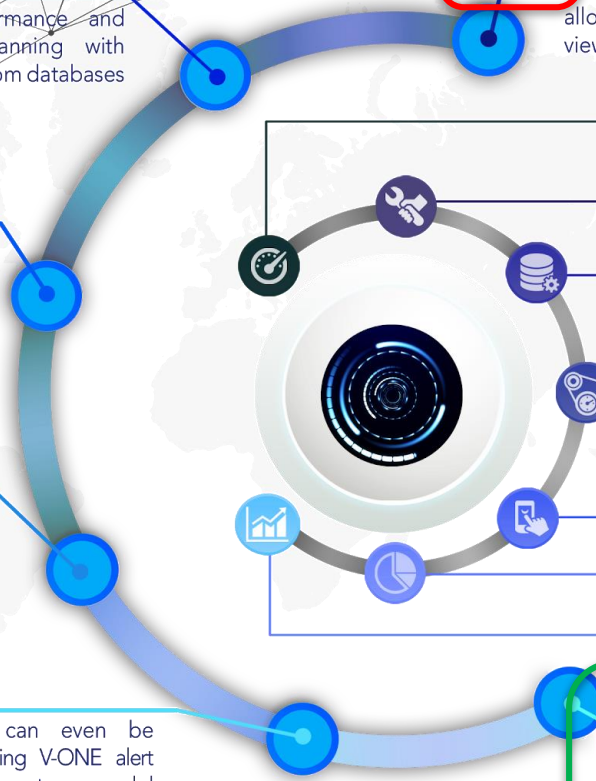
Provides continuous monitoring of production status and operational performance.

REMOTE CONTROL

Allows users to have remote access to Machine PC in order to ease the troubleshooting process or enable users to perform fine-tuning remotely.

ALERT

Process monitoring can even be automated by configuring V-ONE alert module based on different use model that have specific triggering condition according to the user requirements.



- I. REAL TIME MACHINE
- II. PREDICTIVE MAINTENANCE
- III. INTERGRATION WITH COMMON DATABASE
- IV. OEE MONITORING
- V. MOBILE FRIENDLY
- VI. CALL RATE ANAIYSIS
- VII. YIELD MONITORING

TICKETING

Allows technicians or operators to manage assigned work orders and maintenance activities.

ViTrox

Thank You

www.v-one.my

www.vitrox.com