



Advantech Alliance Sdn. Bhd.

*Productivity, Quality, Reliability and Safety
through advanced inspection solutions*



Royce Wong
royce.wong@advantech.my

Advantech - Business Alliance

Heritage Brands :

 **Krautkramer**

 **STRESSTEL**

HOCKING

 **Everest VIT**

AGFA



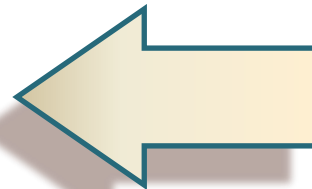
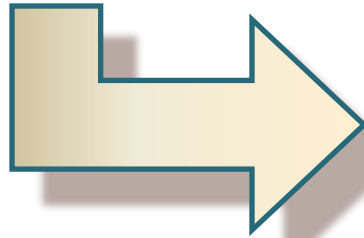
SEIFERT



GE
Inspection Technologies

Advantech Alliance

**Awarded by GEIT as the
Authorised Distributor
for Malaysia**



**Member of Malaysian
Society for Non
Destructive Testing
(MSNT)**

GE BUSINESS INTRO

GE Business History

- GE already in business since 1890.
- Founded by Thomas Edison in 1878 as the Edison Electric Co.



1890

2010



“We bring good things to life”

“Imagination at work”

GE Major Business

Energy Infrastructure Technology Infrastructure



Capital



NBC Universal



• Enterprise Solutions

- Healthcare
- Aviation
- Transportation

➔ **Sensing & Inspection Technologies**
sensor devices & precision instruments / non-destructive testing, inspection solutions

Security
security & safety communication / information technologies

Digital Energy
protection, metering, control, power sensing, communications and power quality solutions

Intelligent Platforms
automation solutions, embedded systems, computer numeric controls

Enterprise Solutions

Sensing & Inspection Technologies

sensor devices & precision instruments / non-destructive testing, inspection solutions

- A leader in NDT. Owner of strong product brands;
 - ❑ Agfa Structurix (**X-ray films**), Seifert (**X-ray**), Krautkramer (**UT**), Hocking (**EC**), Nutronik (**Testing Machine**), Everest VIT (**RVI**)
- Global presence with around 1,400 employees
- Global sales and services team
 - ❑ Direct sales in 40 countries
 - ❑ Representatives and distributors in over 120 countries
- Application centers around the world

Inspection Technology

■ Manufacturing
■ Offices



Support & Research

GE Global Research

- **A leading research facility**
 - ✓ 2,100 PhDs and researchers
 - ✓ Located in the United States, Germany, India, and China
- **World's foremost NDT labs**
 - ✓ Radiography, ultrasound, eddy current and other modalities
 - ✓ Focused on next generation of sensors, instrumentation, and imaging software development



Segment Focus

**Aerospace, Automotive, Oil & Gas,
Power Generation, Castings & Metals,
Electronic, Education etc.**



PRODUCTS

Products Range

Ultrasonic

Flaw Detectors
Thickness Gauges
Hardness Testers
Small Systems
Transducers



Remote Visual Inspection

Bore scopes
Fiber scopes
Video probes
PTZ Cameras
Robotic Crawlers



Radiography

Film, equipment & chemistry
Digital Radiograph (FS, CR, DR)
X-ray generators



Eddy Current

Instruments
Sensors
Automated systems



Testing Machines

Ultrasonic & X-ray
Standard
Customized



Image Management Software

ULTRASONIC (UT)

Flaw Detector
Thickness Gauge
Hardness Tester
Tranducers

Ultrasonic Testing (UT)

➤ Flaw Detectors

- ✓ Detection, location and evaluation of material defects
- ✓ Weld inspection, petrochemical piping & tubing, aerospace components, forged products, heavy metals and much more...
- ✓ Leading Technology :

Phased Array

A-Scan, B-Scan and C-Scan capability



USM 35X

Phasor XS



USM Go



USN 60

Ultrasonic Testing (UT)

➤ Thickness Gauges

- ✓ Measure wall thickness from one side
- ✓ Compact, rugged and portable
- ✓ Precision parts and components subject to wear or corrosion
- ✓ Through Coating, V-Path correction, Top Coat technology and Data Logger capability (Selected model)



DM5E



CL 5



DMS 2



CL 400

Ultrasonic Testing (UT)



➤ Hardness Testers

- ✓ UCI hardness testers:
small parts and fine-grained materials
- ✓ Rebound hardness testers:
large parts and coarse-grained materials
- ✓ Optical hardness testers:
thin parts and fine-grained materials
- ✓ UCI transducers and impact



MIC 20



TIV



UCI Probe



DynaPOCKET

Ultrasonic Testing (UT)



➤ Transducers

- ✓ Standard and special applications
- ✓ Advanced piezocomposite and Phased Array technologies



High Temp Probes



Coarse Grain Probes



Phased Array Probes

REMOTE VISUAL INSPECTION (RVI)

Boroscope / Fibrescope

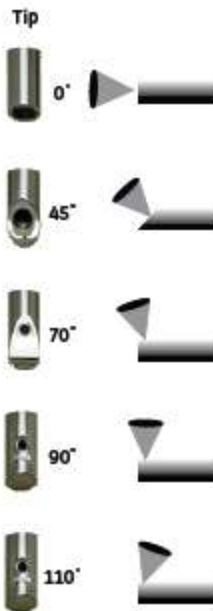
Videoprobe

PTZ Camera

Robotic Crawler

Remote Visual Inspection (RVI)

- **Borescopes :**
 - ✓ Rigid boroscope
 - Rotary Scan
 - Swing-prism
 - ✓ Mini-rigid boroscope



Remote Visual Inspection (RVI)

➤ Fiberscopes :

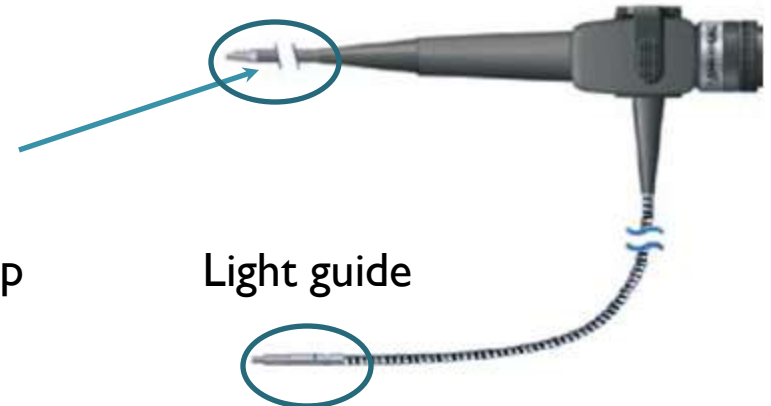
- ✓ Rugged, high performance
- ✓ Full range of model;
 - Over 30 standards model
 - Standard articulating diameter as small as 2.4 mm and length up to 2.7m
 - Non-articulating diameter from 0.5 mm and length up to 2 m
- ✓ High-resolution Image (Superfine Image)
- ✓ Ergonomic body



Tip Articulation



Interchangeable Tip
Optics



Light guide

Remote Visual Inspection (RVI)

Video probes

- Portable unit - XL Go
- Advance RVI - XL G3 , XL Pro
- Picture, Video and audio recording capability
- Can do measurement
- Various diameter and length for camera and cable



Camera



XL G3



XL Go



Remote Visual Inspection (RVI)

PTZ Camera

- ✓ 4" – 6" diameter
- ✓ Up to 1,650' length
- ✓ Up to 300:1 Zoom
- ✓ Digital Data Management
- ✓ Capable of Remote Operation via PC

Applications

- Condensers
- Tanks
- Ducts
- Electrical Vaults
- Other Large areas



Pan-Tilt-Zoom



Fuel Pool



Underground Ducts



Ca-Zoom ®
PTZ System



Electrical Vaults

Remote Visual Inspection (RVI)

Robotic Crawlers

- 2" – 9" diameter
- Up to 2000' length

Applications

- ✓ Piping
- ✓ Headers or Manifolds
- ✓ Ducts
- ✓ Rooms
- ✓ Reactor CRDM & BMI

Everest VIT



RADIOGRAPHY (RT)

Film, Equipment and Chemical

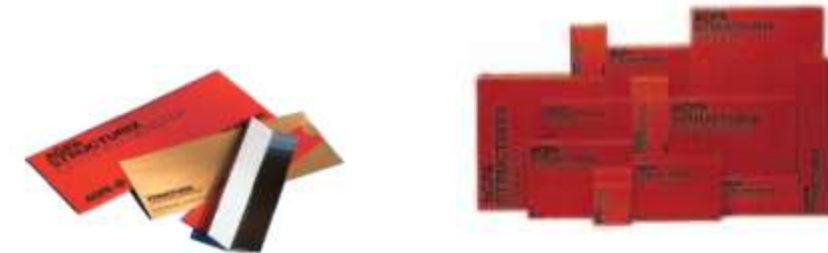
X-ray generator

CR and DR

Radiographic Testing (RT)

➤ Film, equipment & chemical

- ✓ Complete range of Agfa X-ray films with highest speed and sensitivity
- ✓ State-of-the-art processing equipment
- ✓ Optimized chemistry
- ✓ Quality Assurance tools



Film (D2 – D8)

Thio Test



Developer & Fixer



NDT M Eco



Structurix Dryer

Radiographic Testing (RT)

SEIFERT

➤ X-ray sources

- Portable ERESKO sources
 - ✓ 160 - 300 kV
 - ✓ Shortest exposure time
 - ✓ High current power mode
 - ✓ Low energy application
- Stationary ISOVOLT TITAN
 - ✓ 160 – 450 kV
 - ✓ High stability and accuracy
 - ✓ Precise reproducibility
 - ✓ Extremely low ripple
 - ✓ High dose rate output



ERESKO MF4 Series ISOVOLT Mobile

Radiographic Testing (RT)

➤ Digital Radiography

- **Film Scanning**

- ✓ Fast and accurate scanning

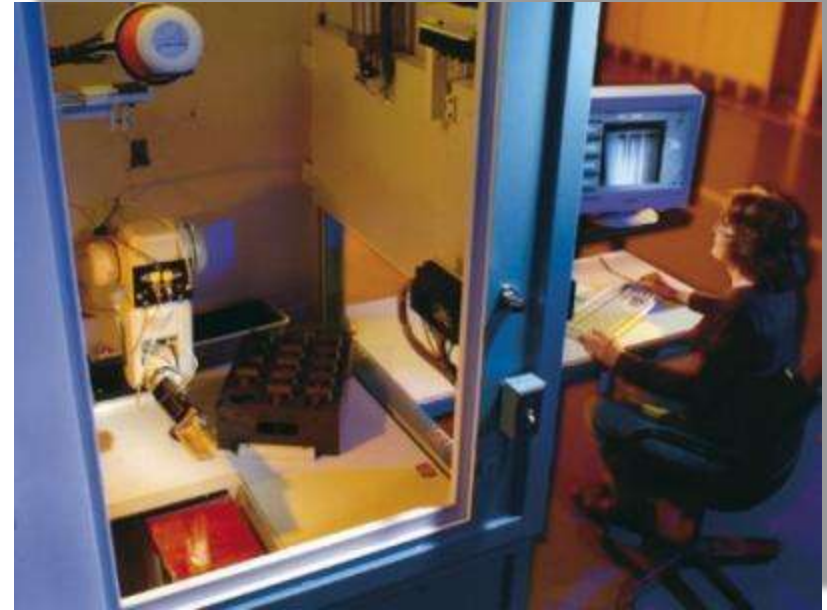
- **Computed Radiography**

- ✓ Reusable phosphor plates
- ✓ Shorter exposure times
- ✓ Higher throughput
- ✓ Designed for convenience

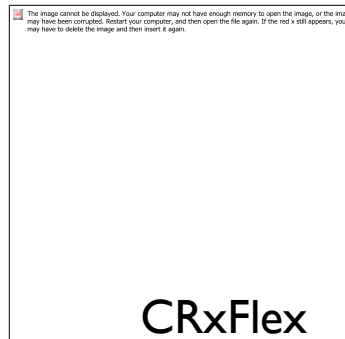
- **Direct Radiography**

- ✓ High volume applications
- ✓ No consumables

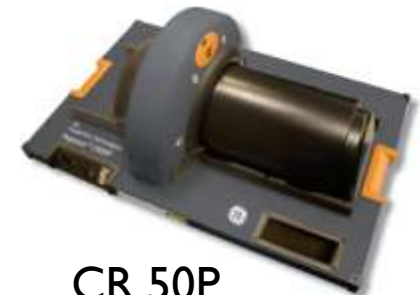
Pegasus™



Film Digitizer
FS50



CRxFlex



CR 50P

EDDY CURRENT (ET)

Instrument

Probes and accessories

Automated system

Eddy Current Testing (ET)

➤ Instruments

- ✓ Detection of surface cracks: complex geometries and shapes
- ✓ Metal sorting: heat treatment and composition of metals
- ✓ Corrosion Monitoring: aircraft skins and other structures

HOCKING



Pulsec



Phasec 3 Series



AutoSigma
3000

Eddy Current Testing (ET)

➤ Eddy Current Probes :

✓ Tubing inspection probes

Specifically designed to meet the stringent inspection needs of Balance-of-Plant applications in the Power Gen., O&G and Air Conditioner industries for non-ferrous and ferrous tubing.

✓ Standard Probes

For surface, sub-surface, fastener holes, aircraft wheels, and welds inspection. Also conductivity probes for measuring non-ferrous materials, coils for bar, wire and wire inspection

✓ Reference block

A range of reference blocks to enable correct settings and to ensure accuracy during inspection

HOCKING



Eddy Current Testing (ET)

WheelScan 5

➤ Products Features

- ✓ Compact with rugged construction
- ✓ "Teach and Learn" function for stored test setups
- ✓ Phasec 2d eddy current engine provides enhanced inspection capabilities
- ✓ Built-in rotary bolthole inspection and electrical conductivity measurement capability
- ✓ Bar code reader for simplified data entry and test setup
- ✓ Ethernet port for connecting to networks
- ✓ Tests wheels halves flange up or flange down
- ✓ Dual test mode allows a complete wheel to be inspected

➤ Applications

- ✓ Inspects all current commercial and military aircraft wheels
- ✓ Crack detection on wheel beadseat and tube well areas
- ✓ Crack detection via rotary scanner for tiebolt holes
- ✓ Electrical conductivity measurement for potential overheat damage

HOCKING



TESTING MACHINES

Ultrasonic

X-ray

(Standard or Customized)

Testing Machines

➤ Broad applications for quality and process control

- ✓ Aerospace components
- ✓ Automotive parts
- ✓ Bar, billet, rod and profile
- ✓ Railroad wheels, axles and rail
- ✓ Strip and plate
- ✓ Tube and pipe
- Turnkey inspection systems ...
Rugged, proven and dependable
- Leading technology — **Phased Array**



Testing Machines

SEIFERT

➤ Universal Inspection Systems

- ✓ Fast and efficient
- ✓ Excellent detail recognition with image enhancement
- ✓ Broad range of workpieces with regard to weight and size

➤ High Speed Inspection Systems

- ✓ Integrated into production line
- ✓ Proven and Reliable
- ✓ Automated Defect Recognition

➤ Fully-Customized Systems

- ✓ 3D CT Systems
- ✓ Analytical X-ray Systems



Testing Machines

➤ Field Deployable Systems

✓ Mapstar:

Portable multi-channel flaw imaging platform

- Multi-channel TOFD and pulse echo ultrasonic productivity
- Scanner Flexibility
- ASME Case 2235 compliant for pressure vessel inspection

✓ Weldstar:

Hybrid Phased Array AUT for pipeline girth weld inspection

- Avoids radiation hazards
- Identifies and sizes weld flaws
- API 1105 and DNV2000 OS-F101 compliant for pipeline inspection



IMAGE MANAGEMENT SOFTWARE

Rhythm Acquire

Rhythm Review

Rhythm Archive

Image Management Software

Rhythm®

➤ Powerful review tools

➤ Simple data management and collaboration tools

➤ Three integrated modules

- ✓ Review
- ✓ Acquire
- ✓ Archive



➤ Automatic Defect Recognition

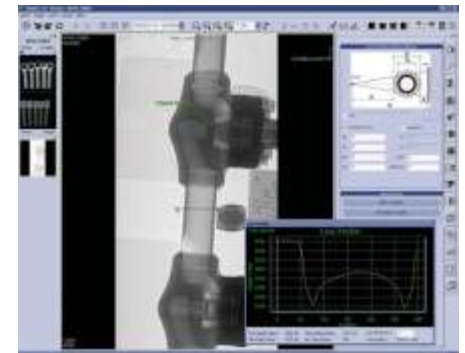
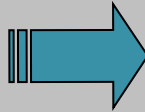
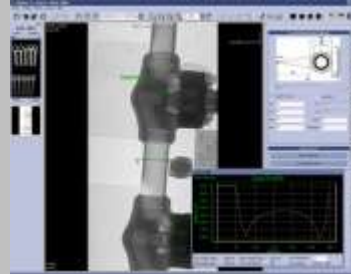


Image Management Software

Rhythm Acquire



Rhythm Review



LAN

Rhythm Archive



HP Server



DVD

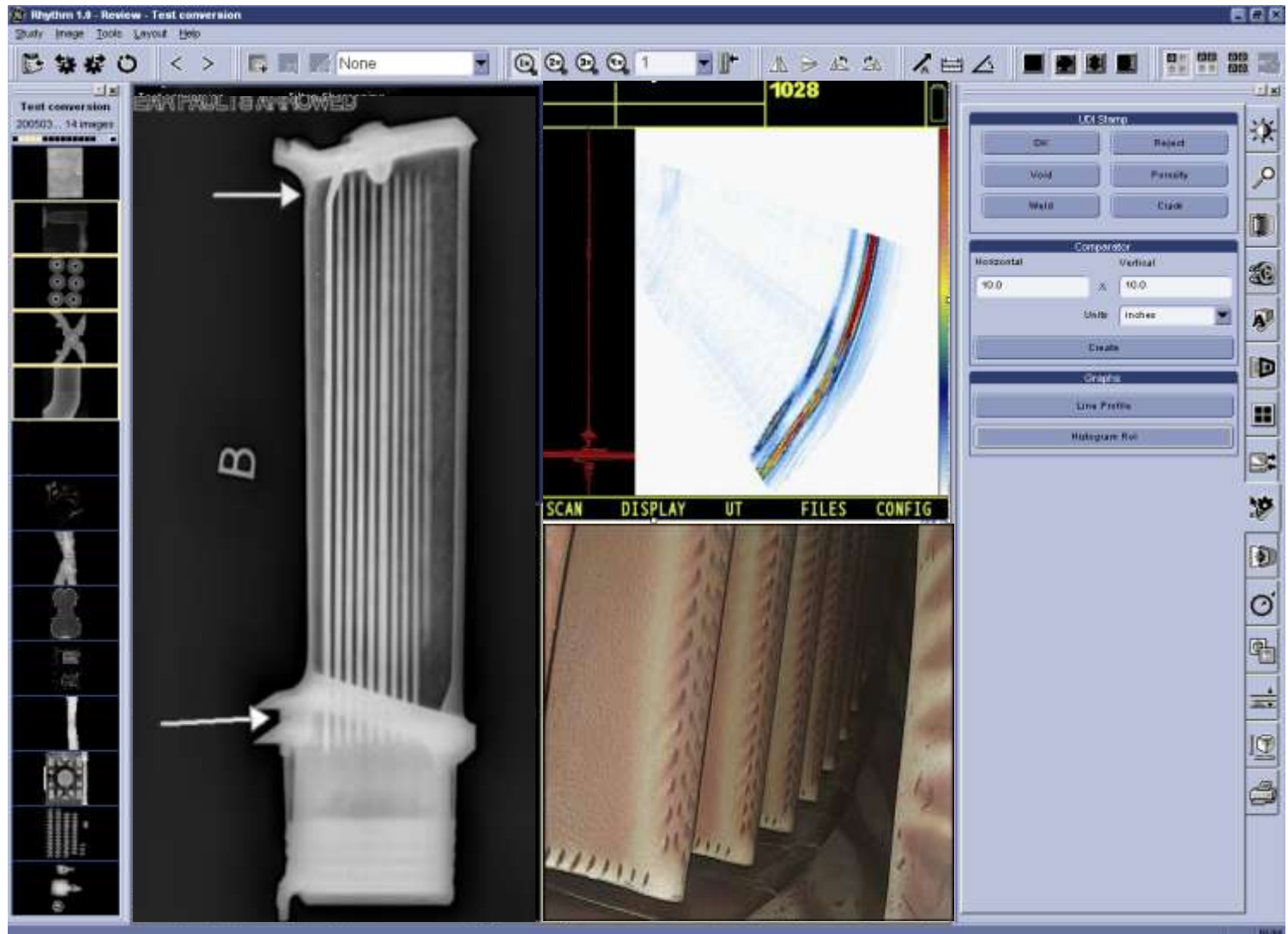


PC

Hi-Resolution Monitor
SVGA Monitor
CD/DVD Burner



Image Management Software



SERVICES

Repair & Re-calibration

Field Service

Spare & Part Fulfillment

Application Center

Equipment – Repair & Calibration

- Supporting Film, CR and X-Ray product lines
- Film processors and standard X-ray products – AASB
- RVI – GEIT HK
- UT, ET, TM – Collaboration with GEIT Germany and USA
- Traceable calibration certification
- Calibration to factory, customer-supplied or industry-standard specifications
- On-site calibration services



Field Service

- An experienced global team
- From emergency interventions with configurable response times to planned and unplanned maintenance
- Supporting all our products
- Focus on minimizing downtime
- Maintaining optimum performance levels



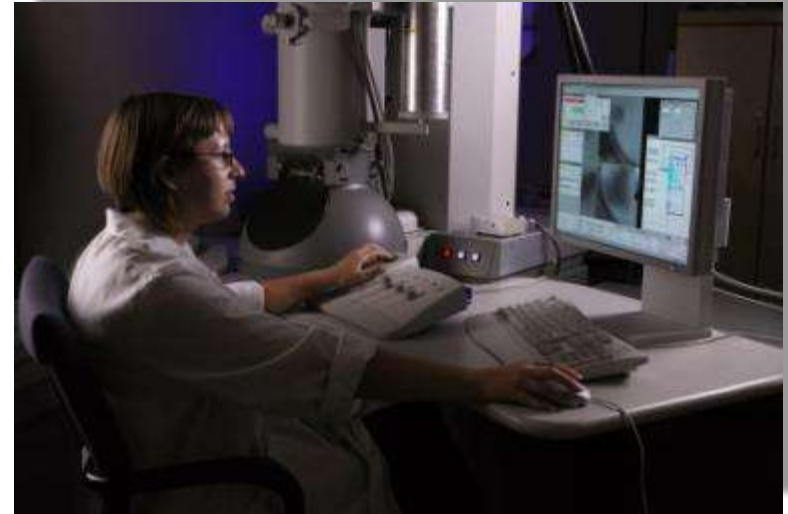
Spares & Parts Fulfillment

- **Focused on bringing operational benefits**
 - ✓ Timely delivery to keep equipment and systems up and running
 - ✓ Upgrade programs
 - ✓ A cost-effective solution for achieving high-impact operating results



Application Center

- GEIT Shanghai, Huerth, Ahrensburg, Berchem, Lewistown etc.
- Highly skilled and experienced dedicated team
- Covering a wide range of NDT modalities
- Solving inspection application problems quickly
- Providing industry-specific expertise for specific problems
- Designing & manufacturing custom-made probes for unique applications



ENQUIRY

Contact Information

Advantech Alliance Sdn Bhd

**No.28, Jalan Industri USJ 1/I3,
Taman Perindustrian USJ 1,
47600 Subang Jaya, Selangor, Malaysia.**

T: +603 8023 7017 / 7018

F: +603 8023 7016

**Web: www.advantech.my
www.ge-mcs.com**



Thank you...



Advantech Alliance Sdn. Bhd.

Productivity, Quality, Reliability and Safety
through advanced inspection solutions