

# Laser Fault Injection for Smart Card Testing

Modular Microscope System

Adaptable to multi-wavelength Laser

Compatible with both Free Beam or Fiber Coupled Lasers

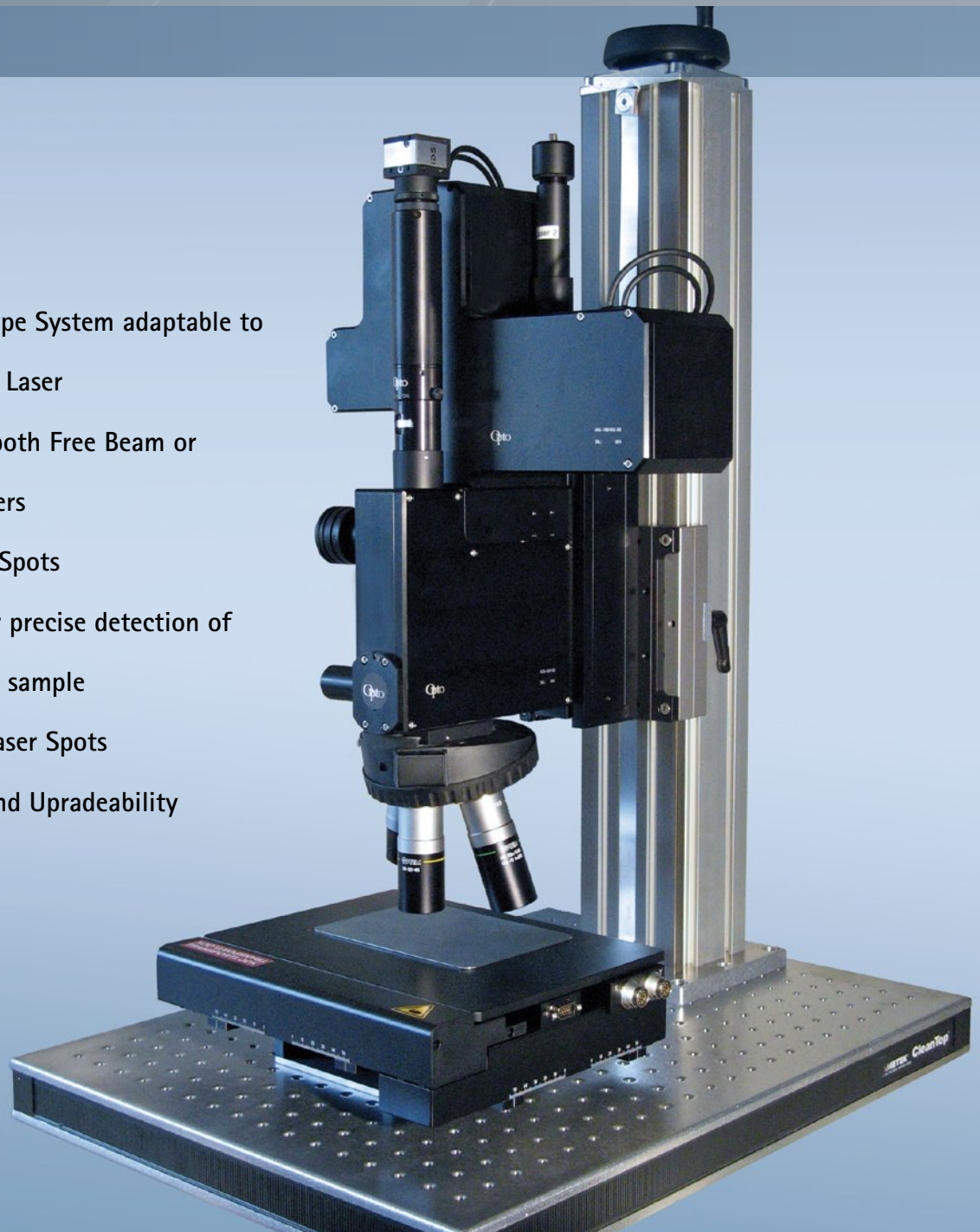
One or Two Laser Spots

Monitor Diode for detection of laser activation

Fixed or Mobile Laser Spots



- Modular Microscope System adaptable to multi-wavelength Laser
- Compatible with both Free Beam or Fiber Coupled Lasers
- One or Two Laser Spots
- Monitor Diode for precise detection of laser activation at sample
- Fixed or Mobile Laser Spots
- Diverse Options and Upgradeability



Sample Specification with two Lasers:

- Wavelength selector (532 or 1064nm)
- Power on Object adjustable from 3000nJ to 3nJ
- Pulse Width: <1nsec
- Aim Laser with 635nm



<b>Optical configuration</b>	Injection channel (up to 2 simultaneous laser inputs), Inspection channel (provides camera overview possibility)
<b>Magnification</b>	5x, 10x, 20x, 50x NIR or VIS or Combo fitted to revolving turret Inspection channel coaxial to injection channel, features 7:1 optical zoom and high resolution camera Zooming range with 10x objective of 2.4x – 16.5x Object FOV with 1/2" CCD and 10x objective: 1.8mm dia to 0.3 x 0.4mm Enables free magnification zooming in conjunction with main objective
<b>Wavelength optimisation</b>	Optimised for 400-1064nm Combination of VIS/NIR in same system Upgradeable bolt-on modules enables future wavelength upgrades
<b>Laser port option</b>	Supports any input method Fiber coupled lasers: SMA, FCPC, FCAPC Standard configuration with 200µm fiber laser spot of 40µm with 10x objective (fully customizable) Free beam lasers can also be accepted
<b>Laser positioning options</b>	Option A: 1 laser, fixed position Option B: 2 lasers, fixed position Option C: 2 lasers, both mobile within the FOV
<b>Laser firing monitor</b>	Monitor Diode function enables precise detection of laser activation at sample (detection bandwidth 200 -1100nm, 1ns rise & fall)
<b>Sample positioning options</b>	Fully motorized X, Y, Z – closed loop with controller Z travel=100mm, X/Y travel 100 x 100mm
<b>System control options</b>	RS232, USB interface
<b>Upgrade options</b>	Breadboard Manual or motorised coarse height adjustment Micro tilting table, manual & motorised for card normalisation

