HX Technology
Connected by science. Bonded by technology.

CORASCAN CONFOCAL. ONE FIBER IN. ONE FIBER OUT.

FIBER-COUPLED LASER SCANNING CONFOCAL SCAN HEAD

CoraScan is a compact dual-galvo confocal scan head that turns your inverted microscope into a full laser-scanning confocal. Bring your own laser and detector over two fiber ports, pick a pinhole and filters to match your experiment, and start scanning with the **ready-to-use acquisition software** — from full-field 3D surface maps to single-point photon-correlation measurements.

2000 × 2000	1.0 fps	1–8 µs	25–100 µm
MAX IMAGE FORMAT · PX	BIDIRECTIONAL · 512 × 512	PIXEL DWELL TIME	PINHOLE OPTIONS ×4

YOUR MICROSCOPE, UPGRADED TO CONFOCAL

The scan head mounts to a **Nikon Eclipse Ti2-E** inverted microscope (further platforms TBD) and works with 1× to 100× objectives: excitation enters through a dedicated **FC/APC laser input**, and the descanned, pinhole-filtered signal exits through an **FC/APC fiber output** — ready for whatever detector your experiment demands.

DUAL-GALVANOMETER SCANNING
Two galvano scanners steer the beam in XY or XYZ — full-field scans, targeted ROI scans, or park mode for point measurements on a single emitter.

DETECTOR-AGNOSTIC FIBER OUTPUT
The FC/APC signal port routes photons to your APD, PMT or correlation setup — the scan head does the optics, you keep the detection chain.

CONFIGURABLE CONFOCAL OPTICS
Four pinhole options (25 µm · 50 µm · 75 µm · 100 µm), optional excitation and emission filters, and a beam splitter / dichroic chosen for your wavelengths.

READY-TO-USE SOFTWARE
Acquisition software included — full scan, ROI scan and park mode, XY and XYZ stacks, up to 2000×2000 pixels.

CORASCAN CONFOCAL SCAN HEAD
DUAL-GALVO FIBER-COUPLED CORE · CAD MODEL

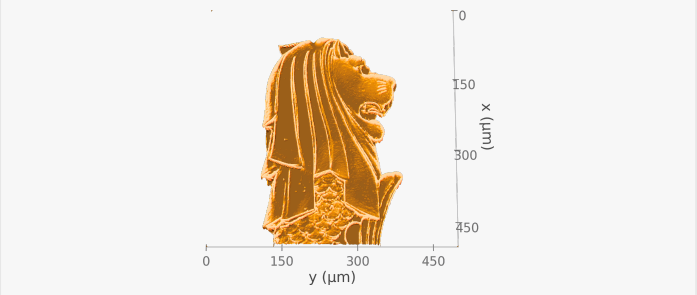
1 × IN	1 × OUT
LASER · FC/APC FIBER	SIGNAL · FC/APC FIBER

APPLICATIONS

± µm
SURFACE METROLOGY
Non-contact 3D profiling of microstructures, micro-optics and MEMS — full-field height maps at micrometre-scale sampling.

g²(τ)
SINGLE-PHOTON EMITTER G² MEASUREMENT
Park the beam on an individual emitter and route the signal fiber to your HBT setup for photon-antibunching and g²(τ).

hν
SINGLE-CHANNEL FLUORESCENCE
Confocal fluorescence on one detection channel, filters matched to your fluorophore. Further applications TBD.



SCANNED WITH CORASCAN

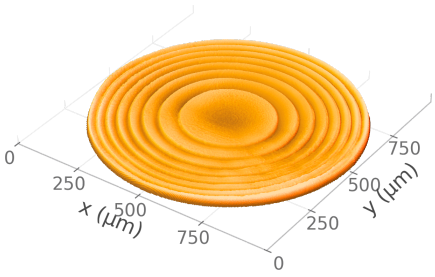
REAL 3D DATA, NOT A SIMULATION

The Merlion's head and mane as a grayscale microstructure, profiled in XYZ scan mode — every surface in this brochure is measured confocal data.

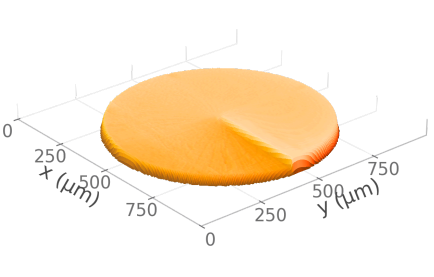
500 × 500 µm scan field
5.5 µm max feature height
900 × 900 points · **0.56 µm** pitch

HX TECHNOLOGY
HX Technology Pte. Ltd. · 60 Paya Lebar Road, #06-28, Paya Lebar Square, Singapore 409051 · Tel: (65) 81278703 · sales@hxtech.sg · Co./GST Reg. No.: 202440161W

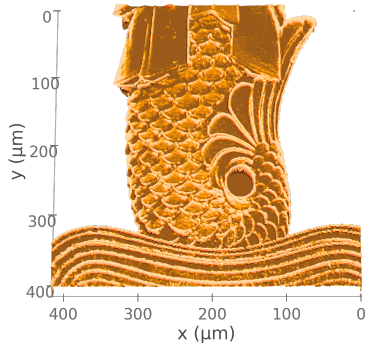
SCANNED 3D PROFILES



FRESNEL LENS
1.0 × 1.0 mm · 6.6 µm RELIEF · 1.0 µm PITCH



SPIRAL HEIGHT GRADIENT
1.0 × 1.0 mm · 11.8 µm HEIGHT RANGE



MERLION TAIL
417 × 415 µm · 5.0 µm MAX HEIGHT · 0.56 µm PITCH

TECHNICAL SPECIFICATIONS

SCANNING	
Scanner	Galvano scanner × 2 (dual-axis)
Scanning modes	XY · XYZ
Scan patterns	Full scan · ROI scan · park mode
Image format	up to 2000 × 2000 pixels
Frame rate	1.0 fps @ 512 × 512 pixels (bidirectional)
Pixel dwell time	1 µs to 8 µs
Field of view	TBD — objective-dependent
OPTICS & PORTS	
Laser input	1 × FC/APC fiber port
Signal output	1 × FC/APC fiber port
Objective range	1× to 100× (microscope objective)
Confocal pinhole	25 µm · 50 µm · 75 µm · 100 µm (selectable option)
Excitation filter	Optional — specified per application
Emission filter	Optional — specified per application
Beam splitter / dichroic	Choice of beam splitter or dichroic filter
Detection	External detector via signal fiber (APD · PMT · photon counter)
COMPATIBILITY & SOFTWARE	
Microscope compatibility	Nikon Eclipse Ti2-E inverted · others TBD
Software	Ready-to-use acquisition & control software
Software functions	Full / ROI / park acquisition · XY & XYZ stacks
Dimensions & weight	TBD
Power supply	24 V DC · 2.5 A

PINHOLE OPTIONS

Select the confocal pinhole to trade optical sectioning against signal throughput.

25 µm | 50 µm | 75 µm | 100 µm

FILTER OPTIONS

Add excitation and emission filters matched to your laser line and fluorophore — specified at order time.

BEAM SPLITTER / DICHROIC

Choose a broadband beam splitter or a wavelength-selective dichroic filter for your excitation / detection bands.

Notes. 3D profiles shown are demonstrated results measured with this scan head on fabricated grayscale microstructures; scan fields and heights are as measured per image. Renders are downsampled for display with the substrate floor hidden and the height (z) axis stretched 5× for visibility — feature heights are stated in each caption. Specifications marked TBD are pending release and will be confirmed before publication. Laser source and detector are not included. Frame rate quoted for bidirectional scanning at 512×512 pixels.

HX Technology Pte. Ltd. · 60 Paya Lebar Road, #06-28, Paya Lebar Square, Singapore 409051 · Tel: (65) 81278703 · sales@hxtech.sg · Co./GST Reg. No.: 202440161W