



morphle

# HEMOLENS 1

*Fastest.. True 100x Oil Scanner*



**Highest Resolution  
Digital Pathology**

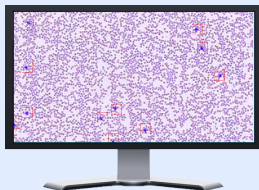
Z-Stacks @ 100x  
combined with WSI @ 40x

**10x faster screening with  
High Density Information**

Instant Cell Sorting with  
Integrated on-premise GPUs

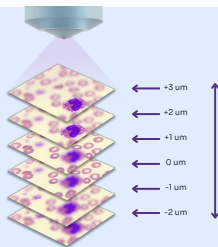
[www.morphlelabs.com](http://www.morphlelabs.com)

## A beautiful balance with a **multi-objective** system



40x for speed

Tracks specific cells within the  
40x whole slide scan



100x for specificity

Fast Z-Stacks at 100x under oil  
for specific cells

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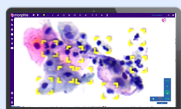
Truly excited to see this *next step in evolution* of slide scanner that delivers highest resolution scanning with 100x oil without compromising on speed. Shows great promise for demanding applications like BMA, PBS, CSF etc. beyond Histopathology & cytology.

Dr. Mahul Amin

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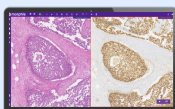
### LBC based

Pap, CSF, Urine,  
Body fluids



### FFPE based

H&E, IHCs,  
Special stains



### Smear based

PBS, BMA  
FNACs, Pap



**Versatility means High Returns**

# Technical Specifications & more

## **Tray Capacity**

Load and simply  
walk away

Single slide batch with  
Soft sideways clamping supporting

- Slides with / without coverslips
- Slide thickness from 0.8 to 2mm
- Slide shape 1"x3"

## **Optical Setup**

Optical resolution  
delivers the ground  
truth

Robotic turret with 2 Objectives

- 100x oil immersion
- 40x dry

High power flash LED & Condenser  
optimized for multiple NAs

## **Image Resolution**

Lossless capture  
that preserves the  
ground truth

Large size 2nd gen sony sensors yield

- 0.03 microns / pixel @ 100x
- 0.18 microns / pixel @ 40x

Secondary Preview Camera  
for single shot quick view of slide

## **Scan Algorithm**

Consistent Quality  
yields True Delight

Steps within Auto-scan

1. Single shot capture with Preview camera
2. WSI @ 40x for AI determined boxed area
3. Switch to 100x & Auto Oil dispensing
4. 100x scan for AI-determined ROIs

## **Scan Time**

Speed is a logical  
constraint

Time for specific scanning modes

- 3.5 mins for 40x Monolayer + 100x 120 ROIs
- 6 mins for 40x (20x20mm) + 100x 120 ROIs
- 3.5 mins for 40x (15x15mm)

## **Physical Properties**

Compact enough for  
the unfortunately  
cramped labs

A tabletop device with

Width : 9 Inches  
Depth : 13.5 Inches  
Height : 18 Inches  
Weight : 21 Kg (46 lb)

## Data storage & Cost

### Cloud Storage



Stored on a replicated HIPAA compliant cloud from tier 1 providers like Amazon Web Services, Google Cloud Storage, etc

As inexpensive as 10 cents per slide per year with cold storage mode on AWS

Cost scales gracefully with every slide in a fully automated manner

Lag-free uploads with 40 Mbps or nightly upload mechanism works with 12 hour lag but with half the bandwidth

### Local Storage



Storage on Network attached storage (NAS) drives backed by RAID architecture within the premises

Costs ~30% lower than cloud storage but adds IT maintenance

Storage scales in steps of 20-100 TBs and needs intervention from IT team

Internal Network transfer from scanner to NAS irrespective of internet availability

## Image Access & User Management



### User Management

**Un-limited** user login creations. Our software is free with no strings. Role Based **Access control** with a self-serve interface for scan level **permission** management.

### Ease of Access

100% **web based** image viewer. No need to download any software. Works well with google chrome on laptops & **iPads** alike.

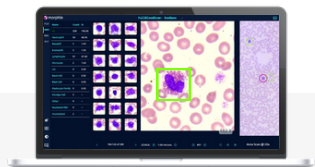
### Internet needs for Access

**Lag-free** navigation @ 8Mbps. Works well even with a mobile data Viewer works in **streaming mode** consuming under 50MB data during 1 min fast browsing

# Software, AI & more ..

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You will never miss your microscope

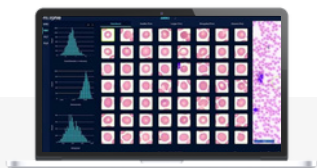


## Z-Stacks @ 100x co-ordinated with 40x WSI

100X fields on the left are mapped to the boxes drawn within the Area Scan @ 40x for traceability

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Z-Stacks for 100x can be navigated simply with mouse-scroll just like moving the fine focus knob



## Intelligence for Cell Sorting

WBCs are bucketed into 5-part buckets + blasts are flagged

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RBCs are quantified based on size, shape, pallor & more. Interface plots the data further allowing filtering & sorting for efficient screening.

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Platelets & rare events are spotted with high sensitivity and are displayed as a compact grid saving time to locate.



# 5 Million+ Slides Digitally Reported as of today!



# Options for every use-case



**Hemolens 1**



**Morpholens 240**



**Morpholens 6**



**Morpholens 1**

Single slide batch

240 Slide batch

6 slide batch

Single slide batch

Dual Obj  
100X Oil & 40x

40X Objective with crisp digital zoom upto 80X

Meant for digital microscopy for PBS, BMA, CSF, Urine & other applications demanding 100X

Meant for high volumes labs with Histopath, IHCs & Cytopath. Integrated workflows & image storage

All the goodness of packed with a smaller batch size. Optimum for scanning upto 100 slides a day.

Tiny footprint & surprisingly affordable. Perfect for turnkey projects.

## Remote Calibrations - Continuous Support - Risk free Returns



*Morphle delivered a unique solution to our problem with effective whole slide scanning for BMAs. Additionally the cell locating interface was a plus helping pathology assistants screen faster. We are now on track with our tele-microscopy goals.*

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Dr. Alireza - New Jersey



### Morphle Labs Inc

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CLINICAL  
PATHOLOGY  
ASSOCIATES



*With active support from team Morphle CPA was able to setup effective tele-reporting at our hospital sites for blood smears, CSF & more. CLIA validation baked into the workflow & IT setup for remote access within hospital network was a true delight for us.*

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Dr. Chandra Krishna - TX

Give us a call  
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Schedule a demo  
[morphlelabs.com](http://morphlelabs.com)



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