



GenASIs Hardware Datasheet



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IMAGE ACQUISITION PLATFORMS

From 1-slide manual capture to 9-slide motorized stage and 99+ slides tray loader, ASI offers diverse image acquisition platforms to accommodate all image acquisition needs.

High Throughput Tray Loader



Tray based slide handling for maximum slide safety

9-slide Motorized Stage



Scanning Stage

Benefits to your lab

Maximized Efficiency

- Real-time access to captured images for **immediate analysis**
- **Remote scanning** status dashboard application
- **LIS connectivity** for automatic case and sample identification
- Automatic **oil dispensing** and smearing - optional
- 1D/2D automatic **barcode reader** support

Specific for Tray Loader

- **Continuous operation** for infinite capacity
- **User Independent scanning** of up to 99 slides
- **Non-stop slide loading** during system operation
- Front loading transparent cover to **view tray status**

Unmatched Accuracy

- Exceptional **image quality**
- Automated **tissue detection**
- Industry leading algorithms for **cell detection & classification**

Superior Flexibility

- Suitable for **Fluorescent & Brightfield** scanning
- **Slide prioritization** capabilities
- **Scanning mixed trays**



IMAGE ACQUISITION PLATFORMS

High Throughput Tray Loader Specifications

Tray Loader Dimensions W x D x H cm/inch	100 x 58.3 x 58.9 cm / 39.3 x 23 x 23.2 inch
Tray Loader Weight kg/lbs	72 kg / 158.7 lbs
Slides Tray Dimensions W x D x H cm/inch	35.3 x 14.7 x 0.7 cm / 13.9 x 5.8 x 0.27 inch
Slides Tray Weight kg/lbs	0.323 kg / 0.71 lbs
Power Supply Conditions	AC Power 100~230 V AC, 50/60 Hz, 3/6A
Installation Category	Overvoltage category II
Temperature Operating Condition	5°C to 40°C (41°F to 104°F)
Altitude	Up to 2500 meters (8000 feet)
Maximum Relative Humidity	80% for temperature up to 31°C (88°F), decreasing linearly through 70% at 34°C (93°F), 60% at 37°C (99°F) to 50% relatively at 40°C (104°F)
1D Barcode Compatibility	Configured 1D Barcode Reader TC1200
2D Barcode Compatibility	Configured 2D Barcode Reader Matrix 120



AUTOMATIC OIL DISPENSER

Compatible with all scanning platforms

The **Automatic Oil Dispenser** system is fully integrated into the ASI image acquisition platforms, taking automatic slide scanning to the next level.



Automatic
oil dispenser



Automatic
oil dispenser

Oil Recommendation

For optimal system performance, ASI recommends using any authorized brand that is approved by the microscope vendor and meets the following minimal oil pump requirements:

- Viscosity - 450-1250 cSt
- Refractive Index - 1.481 - 1.518

Oil Dispenser Volume

150ml reservoir

Benefits to your lab

- Allows greater levels of **automation and flexibility** during image acquisition
- Provides **controlled delivery** of immersion oil onto the slide surface
- **Reduces need** of frequent refilling



BASLER 5MP CMOS CAMERA SPECIFICATIONS

Monochrome & Color Cameras

The Basler acA2440-35u USB 3.0 camera with the Sony IMX264 CMOS sensor delivers 35 frames per second at 5.0 MP Resolution

Camera specification

Model	acA2440-35um/uc
Sensor Vendor	Sony
Sensor	IMX264
Sensor Type	CMOS
Sensor Size	2/3", 8.4 mm x 7.1 mm
Shutter	Global Shutter
Lens Mount	0.5x C-Mount
Resolution	5MP, 2448 x 2048
Pixel Size	3.45 μm x 3.45 μm
Pixel Bit Depth	12 bits
Frame Rate	35 fps
Interface Type	USB 3.0
Signal to Noise Ratio	40.2 dB
Housing Temperature	0 - 50°C
Power Requirements	Via USB 3.0 Interface \approx 2.7 W (typical) @ 5 VDC





DELL PRECISION 3660 I7 SPECIFICATIONS

All Platforms



Computer specification

Model		Dell Precision T3660 Tower
CPU		13th Generation Intel® Core™ i7-13700K, 24MB cache, 16 cores (8P+8E), 3.4GHz to 5.4GHz, 125W
Memory	All platforms	16GB DDR5, 4400MHz, ECC, dual channel
	AIO/ HiPath Pro PathFusion Scan	64GB DDR5, 4400MHz, ECC, dual channel
1st Hard Drive		1TB PCIe NVMe Class 40 M.2 SSD
2nd Hard Drive (Local Server Component)		Optional: 2TB (7200RPM) 3.5inch Serial ATA 6Gb/s
Display board	Capture/Review	Intel® UHD Graphics 770 (2x DisplayPort) Optional: RTX-5060 8GB (4x mini-DisplayPort) or higher
	Scan & Analysis	RTX-5060 8GB (4x mini-DisplayPort)
Speakers		Internal Dell Business Audio Speaker
Power Supply		Primary PS - 500W
Mouse		Dell USB Optical Mouse - Black
Keyboard		Dell US (QWERTY) Quiet key™ USB Black keyboard
Operating System		Windows 11 Pro (Version 23H2) or Windows 10 Pro 64 bit (Version 21H2)
Warranty		3 Years, ProSupport, NBD, On-Site, Worldwide Warranty



PC SPECIFICATIONS Capture & Analysis Platform

When purchasing locally

GenASIs Capture and Analysis provides support for manual acquisition of images using manual or motorized microscopes.

Primary usage is for karyotyping, spot counting and HiPath applications.



PC Case		Mid-Tower/Tower orientation Note: for 'Aided Karyotyping' option, a Tower PC case (supporting GPU specs described below) is mandatory!
Processor		Intel® Core i5-12500 Processor or higher
Memory		16GB 3600MHz DDR4 or higher
Internal Storage		At least 2 internal bays, at least one 3.5"
Internal Storage	Client System	500GB (or higher volume) SSD
	(Local Server Component)	2TB HDD/ SSD (or higher volume)
Display Board		Graphics processor, supporting resolution 2560 X 1440 or higher For optimal performance of the 'Aided Karyotyping' option, it is essential to use a GPU: 8GB VRAM, NVIDIA RTX-5060 or higher, as per ASI's approval.
PC Slots		Total of 3 slots or more, at least 2 of them PCIe
Interfaces USB		At least 4 USB ports (2 of them USB 3.1/3.0 with PowerShare)
Operating System *		Windows 11 64 bit (Version 23H2) or Windows 10 Pro 64 bit (Version 21H2)
Anti-Virus SW		**ESET NOD32 Antivirus version 16.1 - recommended

* Applied Spectral Imaging (ASI) systems are developed in Windows environment and continue being tested in that same environment. To ensure proper functionality of the system, it is very important that after installation of the system, no changes will be made. When installing using the Full deployment (WDS) procedure, ASI disabled the Windows update functionality and therefore recommends that the original setup will be maintained.

** ASI recommends its customers to use the 'ESET NOD32 Antivirus' software with the GenASIs software. The 'ESET NOD32 Antivirus' software was configured to perform optimally on ASI platforms. It has been tested and validated across ASI platforms. However, if you choose to use a different anti-virus software, please follow the guidelines provided in WI-SRV-051 (available upon request) however, the use of such different antivirus software (which has not been tested and validated by ASI) will be at your risk and responsibility. ASI shall not be liable to you for any failure relating to the use of such anti-virus, whether used in accordance with ASI's guidelines or not.



PC SPECIFICATIONS Review & Analysis Platform

When purchasing locally

PC Desktop | Laptop*

GenASIs Review and Analysis systems allow users to access images and analysis data stored in the GenASIs system, acquired through one of the capture or scanning platforms.



PC Case	Note: for ‘Aided Karyotyping” option, a Tower PC case (supporting GPU specs described below) is mandatory!
Processor	Intel® Core i5-12500 Processor or higher
Memory	16GB 3600MHz DDR4 or higher
Display Board	Supporting resolution of 2560 X 1440 or higher. If this station is reviewing a Capture station, for optimal performance of the ‘Aided Karyotyping’ option, it is essential to use a GPU: of 8GB VRAM, NVIDIA RTX-5060 or higher, as per ASI’s approval.
Anti-Virus SW	**ESET NOD32 Antivirus version 16.1 - recommended
Operating System**	Windows 11 64-bit (Version 23H2) or Windows 10 Pro 64-bit (Version 21H2)
Anti-Virus SW	***ESET NOD32 Antivirus version 16.1 – recommended

* For optimal display, it is recommended to connect the laptop to a monitor (by docking station or other connection) as defined in the *Recommended Display Specifications* section. If used without external display, the screen size should be at least 15.6

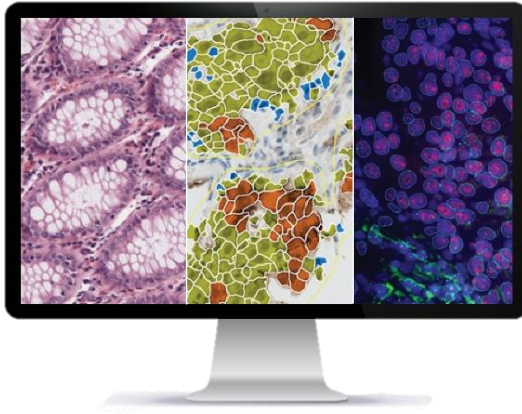
** ASI systems are developed in Windows environment and continue being tested in that same environment. To assure proper functionality of the system, it is very important that after installation of the system, no changes will be made. When installing using the WDS procedure, ASI disabled the Windows update functionality and therefore recommends that the original setup will be maintained.

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DISPLAY SPECIFICATIONS



		DELL	BARCO
General	For the best quality, Barco is recommended, while the Dell 25/27 monitors are suitable for all other applications and approved by ASI.	U2520D (25") U2724D (27")	27" 8MP Ultra-high definition display Cleared for digital pathology
Display	Supported Resolution	QHD 2560 x 1440 @ 60 Hz	8MP (3840 x 2160 pixels @ 120 Hz)
	Response Time	8ms	8ms
Image	Aspect ratio	16:9	16:9
	Brightness	350 cd/m ²	450 cd/m ²
	Contrast Ratio	1000:1	1000:1
	Max H-View Angle	178°	178°
	Max V-View Angle	178°	178°
Misc.	Connection type	Digital DVI / HDMI / mini-DP	
	Compatibility	Compatible with Windows 10 or Windows 11	



FISH REVIEW & ANALYSIS KEYPAD

When used together with HiFISH, ASI's digital FISH scanning and analysis solution, the **FISH Review and Analysis Keypad** enables fast and convenient navigation, review and analysis of cells within the gallery of detected cells*.

Benefits to your lab

- Cell classification of **up to 15 classes**, based on signal pattern
- **3D review** of all focal planes
- Review **any probe** color layers
- Toggle between **automated and preferred** view
- Toggle **contours and signals** display to review classifications
- Navigation arrows for **fast selection** of requested cells
- Improved **user experience** and increased case analysis productivity



*User review is required to validate, confirm or edit automated FISH scanning and cell classification results



mCounter |

MANUAL COUNTING OF FISH SAMPLES



mCounter is a wireless pad seamlessly integrated into ASI's FISH platforms. Used for counting and classifying cells based on FISH signal patterns, the mCounter promotes reliable clinical results and an efficient, streamlined workflow.

Benefits to your lab

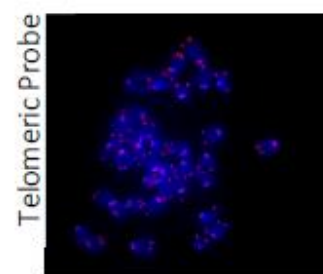
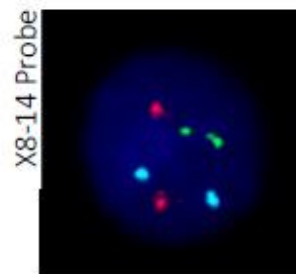
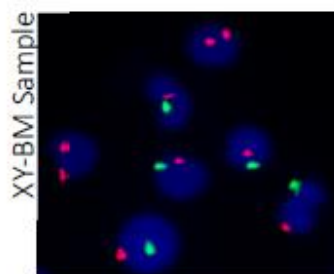
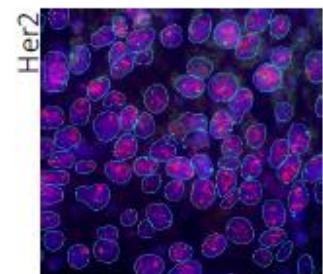
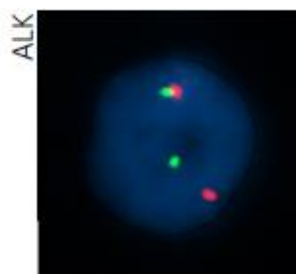
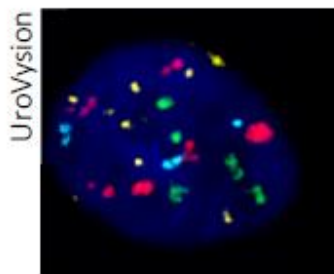
- **Easy to use** with seamless installation into ASI's FISH platforms
- Supports **any microscope**, cell type and signal pattern
- Reliable, accurate and **comprehensive cell counting** and classification
- Supports **double blind** multiple technologists scoring
- Effective **training and QA** while validating results and signing off cases
- Allows **continuous counting** while focusing on clinical rather than technical aspects of cell classification and counting
- Automatically recorded in the data management system and **integrated into reports**
- Gathered **statistics** available to users in both graphical and table formats
- **Audible cues** ensuring accurate scoring without looking away from the microscope





LIGHTSAVER

LightSaver turns OFF the fluorescent lamp at the end of scanning, increasing the lifespan of the lamp. This can save operational costs and ensure greater reliability and system up-time, particularly for automated fluorescent scanning and analysis.



Benefits to your lab

- **Lower operational costs** by automatically turning ON and OFF any microscope's fluorescent light
- **Increased reliability** and safety when performing automated and unattended fluorescent slide scanning
- **Easy to use** and simple to install
- Supports **any fluorescent light** system on any microscope
- Allows secure and **monitored operations**
- Integrates with both **automatic and manual workflows**





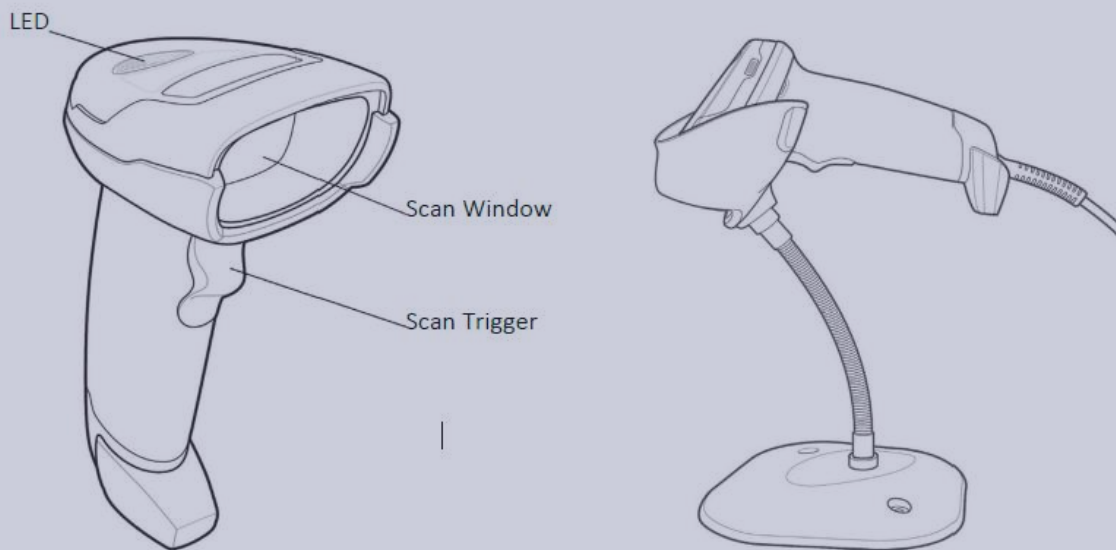
HANDHELD BARCODE READER

Zebra's handheld imager is a feature-rich next generation **handheld barcode reader** with high scanning performance, scanning range, versatility and ease-of-use. The handheld barcode reader is compatible with all ASI image acquisition platforms.



Benefits to your lab

- Capture virtually any barcode faster than ever
- Small and lightweight design for all day comfort
- Broad range, eliminating the need to purchase separate standard and extended range scanners





HANDHELD BARCODE READER

Handheld Barcode Reader Specifications

Item Description	Handheld 1D/2D Code Reader
Manufacturer	Zebra Technologies Corp.
Model	ZEBRA DS4308-SR
Communication Interface	USB
Readable Symbologies	1D Code 128 2D QR Code
Decode Ranges	1D 0-134cm 2D 2.3-41cm
Print Contrast	20% Minimum Reflective Difference
Operational & Performance	Roll 0-360° Pitch $\pm 65^\circ$ or greater Yaw $\pm 60^\circ$ or greater
Regulatory Standards	FCC, CE
Environmental	Compliant with RoHS directive 2011/65/EU
Barcode Printer	Full interaction with ASI's used barcode printer: DMX-E4204BDT



BARCODE PRINTER & LABELS SPECIFICATIONS

Zebra ZD621T

Zebra's ZD621T barcode printer is a high-resolution **thermal transfer desktop printer** that offers fast printing speeds and is ideal for small-label printing of text and graphics. Offering high print quality and various connectivity options, the Zebra ZD621T printer supports a wide range of applications and can be integrated into almost any environment.

The Zebra ZD621T is compatible with ASI's High Throughput Tray Loader.





BARCODE PRINTER & LABELS SPECIFICATIONS

Item Description	Barcode Printer
Manufacturer	Zebra
Model	ZD621T
Dimensions WxDxH cm/ Inch	19.2x 26.7 x 20.2 cm 8 x 10.5 x 7.5 Inch
Weight kg/ Lbs	2.5 kg/ 5.5 lbs.
Communication Interface	RS-232 Cord
Speed	6ips (152 mm/s)
Maximum Print Width	4.09" (104 mm) @ 203dpi (8 dots/mm) 4.25" (108 mm) @ 300dpi (12 dots/mm)
Maximum Media Roll Diameter	5" (127 mm)
Media Core Diameter	Standard: 0.5" (12.7 mm) / 1.0" (25.4 mm)
Memory	512 MB Flash; 256 MB SDRAM (8MB user available SDRAM)
Power Source Options/Accessories	Auto-detectable (PFC Compliant) 100-240VAC, 50-60Hz
Indicators/Display	Optional- full color LCD touch display
Power Source	Auto-switching 100-240V
Regulatory Standards	CE, UL
Environmental	Compliant with RoHS directive 2011/65/EU
Barcodes	1D; Code 128 2D; QR Code



BARCODE PRINTER & LABELS SPECIFICATIONS

Barcode Ribbon

Compatible With	Datamax Printer, Zebra Printer
Size	4.33" (110mm)
Length	328 feet (100m)
Color	Black
Material	Resin-Premium
Melting point	161.6°F (72°C)
Core	1" (2.54mm)

Barcode Specifications

A - 23 mm

B - 23 mm

C - 3 mm

D - 30 mm

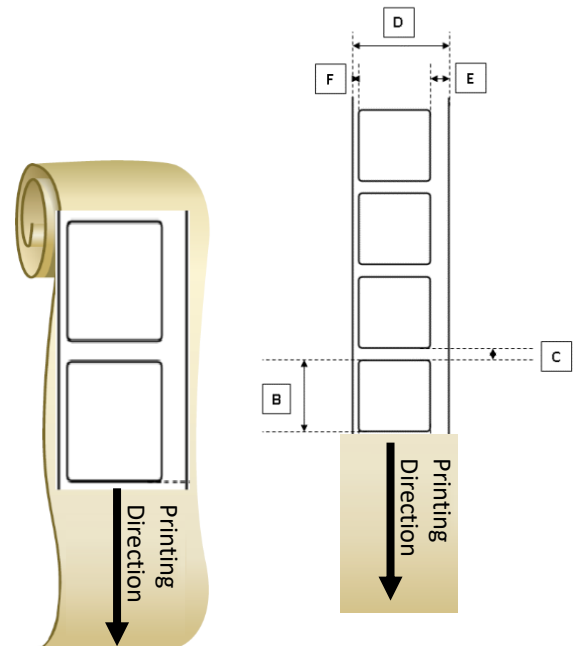
E - 6 mm

F - 1.5 mm

Quantity in a roll - **not more than 1000 pieces**

Review:

- Verify measurements and sizes of the width/height of the labels.
- Verify roll direction for printing.
- Verify the core of the roll was cut smoothly, without leftovers.
- Verify the roll is rolling smoothly, without sticking out or defective labels.
- Verify that the roll has no labels with any text on them.



Data Sheet

No Imprint /ST9269

FASSON PET WHITE PT - S697 - BG55WH

Fasson Specialty

Facestock

A gloss clear polyester film with a print-friendly top coating.

Basis Weight:	71 g/m ²
ISO 536	
Caliper:	50 µm
ISO 534	

Adhesive

Permanent adhesive / acrylic based / combined with very strong plastic face materials.

Coating Weight:	19g/m ²
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Backing

A supercalendered white glassine paper.

Basis Weight:	90 g/m ²
ISO 536	
Caliper:	78 µm
ISO 534	

OVERALL PERFORMANCES

Typical values

Adhesion 90°:	342 N/m
FINAT N°2 (Stainless Steel)	
Quick-Stick:	560 N/m
FINAT N°9 (Glass)	
Mini Appl. Temp:	+5 °C
Service Temp:	-40 / +150 °C
Total Caliper:	147 µm
Total Weight:	180 g/m ²

Applications & use

Adhesive perfectly suitable for uses that need a good resistance to UV, drippings, or solvents. Good general adhesion performance on a wide range of substrates.

For long-life applications such as labels for electric appliances for house. Excellent printing durability by using thermal transfer ribbon.

Conversion

Excellent conversion characteristics on flatbed and rotary presses. The performances of this adhesive with an automatic laying answer to the market needs.

Shelf life

1 year stored at 22 +/- 2 °C et 50 +/- 5 °HR.

Warranty

All statements, technical information, and recommendations about AVERY DENNISON products are based upon tests believed to be reliable but do not constitute a guarantee or warranty. All AVERY DENNISON products are sold with the understanding that PURCHASER has independently determined the suitability of such products for its purposes. AVERY DENNISON products are warranted to be free of defects in material or workmanship for a period of one year from the date of shipment. Any product shown to the satisfaction of AVERY DENNISON within the time provided to be so defective shall be replaced without charge or AVERY DENNISON may issue credit in such amount as it deems reasonable however, in no event shall AVERY DENNISON be responsible for claims beyond the replacement value of the defective product or in any way liable or responsible for consequential or incidental damages.

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