



# PATHARCHIV™

Powered by Lab Improvements

PATHARCHIV

## The Next Step in File Room Management

### Automated digital block and slide storage

- Eliminates sample losses from typos and misfiling
- Frees-up staff time required to manage file room
- Tracks samples in archives and during loan out
- 2.3 times the slide density of competing systems
- Uses standard-size storage format containers



**PathArchiv-B**  
Block Filing



**PathArchiv-S**  
Slide Filing



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## Address lost samples

### Homegrown file room management

Clinical lab personnel have valiantly built homegrown file room management systems, first using paper and now using electronic spreadsheets. In both cases, the weak link is the manual recording and handling of samples, which suffer from the 'mean human error' rate, along with ongoing labor costs. These processes deal with missing samples on a regular basis, while simultaneously absorbing a significant percentage of the laboratory staff to sort, record, file, and pick samples as well as search for missing and lost samples.

**Eliminate Sample Losses**  
from Typos  
and Misfiling

Lab Managers' wish list for their next solution.

- Reduce / eliminate lost samples
- Purpose-built to manage sample loans and collections
- Reduce file room FTE
- Minimize implementation costs
- Minimize storage container costs
- Maximize storage density



### 6 Essential Principles with PathArchiv

### A new era: Automated file room management

PathArchiv was designed with direct input from lab managers and file room personnel to eliminate the root cause of missing and lost samples: **manual labor**

- Principle 1** Eliminate typing and transferring of sample UID's into the recording system - the system automatically reads the existing barcode for the sample it is currently handling.
- Principle 2** Robotically place or select the location in the storage magazine associated with the barcode read.
- Principle 3** Automatically update the database with the sample UID and its location.
- Principle 4** Track loans to a contact for a set amount of time and provide a recall list for overdue samples.
- Principle 5** Eliminate manual refiling of samples - the system refiles them with the current filing workflow.
- Principle 6** Maintain storage density and use existing storage shelving.

### Staff Time Savings with PathArchiv

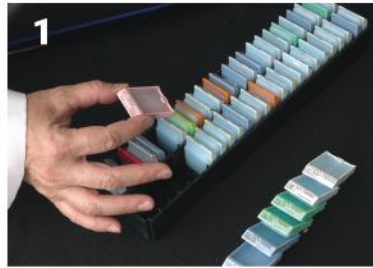
The automated workflow reduces the amount of personnel time needed to handle, record and manage the samples in the archive. PathArchiv puts the data at your fingertips. With a few clicks samples can be traced by case, loan status, location or age, freeing up personnel to perform higher skilled work tasks.

Still many labs brace themselves and wonder what the cost will be to overhaul their existing shelving and storage container systems. SPOT Imaging designed the system from the ground up to maintain standard storage formats and increase densities, ensuring an efficient and cost effective transition to the PathArchiv file room management system.



## PathArchiv-B paraffin block workflow

- 1 The PathArchiv-B workflow starts at microtomy where the blocks are placed into the standard format block magazines that hold 50 standard blocks (2 rows of 25).
- 2 Each magazine is labeled with a barcode identifier.
- 3 The magazine is then loaded into the PathArchiv-B where the magazine identifier is read followed by, a read of each cassette's barcode and its position. This data is recorded in to the PathArchiv database.
- 4 Scanned magazines are loaded into labeled storage boxes, which are placed on the storage shelving.



## PathArchiv-S slide workflow



**50 Minutes of  
unattended  
operation**

- 1 The PathArchiv-S workflow starts with the loading of up to 5 labeled slide magazines.
- 2 Up to 200 slides collected from the case manifest folders are loaded into the input slots.
- 3 Each slide is picked up, the label scanned, and the slide put into a magazine. An image of the barcode label, its identifier and its position in the magazine are recorded into the PathArchiv database.
- 4 Scanned magazines are then loaded into labeled storage boxes, which are placed on the storage shelving.

## PathArchiv handles exceptional samples

The PathArchiv system handles whole mount blocks and slides as well as broken slides that cannot run through the standardized automation. These low volume "Exceptional Samples" are recorded into the main database by the PathArchiv ExTrak™ scanner, a human-assisted automated recording system. This ensures the management of all samples, standard or exceptional.





## PathArchiv retrieval and loan management workflow

The PathArchiv retrieval order form is available from any network-connected device. Simply click the PathArchiver bookmark in your browser, enter your user passcode and select Retrieval. Pathologists submit their request by entering the case number, samples needed, delivery location, contact and loan duration. This completed entry systematically eliminates the unrecorded “sneaker” loans that cause sample losses.

SPOT Archiver  
Retrieval Order  
Created: Sep 27, 2022, 05:08 PM  
Created By: Philip Merlo  
Requested By: [Search]  
Destination Location: Men Clinic  
Department: History Lab  
Notes: [Text Area]  
Date Due Back: 10/11/2022  
Add Samples From Case: [Search]  
Samples Currently On This Order  
Slides: no slides found  
Blocks: S22-700000-A10, S22-700000-A12, S22-700000-A11, S22-700000-A14  
 Mark these all for Permanent Removal  
Add Order

## Pick the order

The completed order is then posted to “Retrievals List”, which file room personnel use to generate the order picklist.

SPOT Archiver  
Sample Pick Sheet  
Date: Sep 27, 2022, 05:14 PM  
Generated By: Philip Merlo  
Sort by: Mag Location | Order # | Case #  
 Select All Samples  
Total Slides: 0  
Total Blocks: 4  
Stored at: (default location)  
Year: 22B Box: 0001 Magazine: 1 Slides: 0 Blocks: 2  
S22-700000-A12 A-12 CRCEP 00000003  
S22-700000-A10 A-24 CRCEP 00000003  
Year: 22B Box: 0001 Magazine: 2 Slides: 0 Blocks: 1  
S22-700000-A11 B-1B CRCEP 00000003  
Year: 22B Box: 0001 Magazine: 3 Slides: 0 Blocks: 1  
S22-700000-A14 A-20 CRCEP 00000003  
Mark Samples Picked Print

## Collection made easy

Picked samples are recorded and tracked against their due date and, if late, posted to the “Chase list” for follow-up. Individual samples are tracked so that even partial returns are identified ensuring the return is complete. Returned samples are processed with the newly filed samples eliminating the labor, errors and third-party charges associated with legacy manual sequential filing.

PathArchiv tracks every sample across its entire life in the system and does not rely on a sequential filing order.

SPOT Archiver  
Chase List  
Lab Tiny: 2 samples  
Samples Selected: 2 / 2  
Case/Sample# Order# Days Late  
S21-700000 / A1-2 00000002 15 days  
S21-700000 / A13 00000002 15 days  
Snooze Selected

SPOT Archiver  
Reports  
Added to Needs Attention  
Events  
Mag < 50% full  
Notifications  
RCs Added (daily)  
Samples Added Per Device  
Samples Added Per Device (Daily)  
Samples Added Per Device (Monthly)  
Samples Picked (daily)  
Total Samples Added Daily  
Total Samples In CR

## Access the recorded data

The PathArchiv software records a full history of each sample’s transactions, thereby delivering standardized archival reports, sample searches and data analysis. Data integrity is ensured by internal backups, as well as by the institutional central server backups, providing a routine recovery of sample tracking data, if needed.



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## Secure samples and save costs

Make the approval decision easy for your budgeting committee. PathArchiv installations not only secure samples from loss but also deliver cost savings.

### ✓ Save on cost of acquisition

System acquisition is kept simple and affordable. PathArchiv uses an industry-standard storage format that many labs already have shelving for, eliminating the need for proprietary cabinets and racks.

IT setup and integration is minimized. PathArchiv's self-hosted web server connects all the system accessories on a LAN that is then bridged to the institution's network for user access and service.



### ✓ Save time running your file room

PathArchiv installations have shown significant staffing reductions, compared to other systems, allowing labs to redirect their resources. Depending on the archiving method and sample volume, labs have reduced file room staff hours 2-8 times. These improvements deliver savings year after year.

### ✓ Save on consumables

PathArchiv's standard-format, low-cost consumables and the near 100% storage density save institutions thousands of dollars annually. These savings set a new consumable base cost that provides savings year after year.



**75% Verses 98%**



### ✓ Save on 3rd party storage

PathArchiv's storage density is the highest of any solution available with a 25-30% density increase over legacy sequential storage and over a 200% higher slide storage density than competitors. On-site storage is increased and off-site storage requirements, and their associated fees, drastically reduced. Refiling charges required with sequential sample storage methods are eliminated, generally halving the previous charges for 3rd party retrieval and refiling.

### **Run the numbers...**

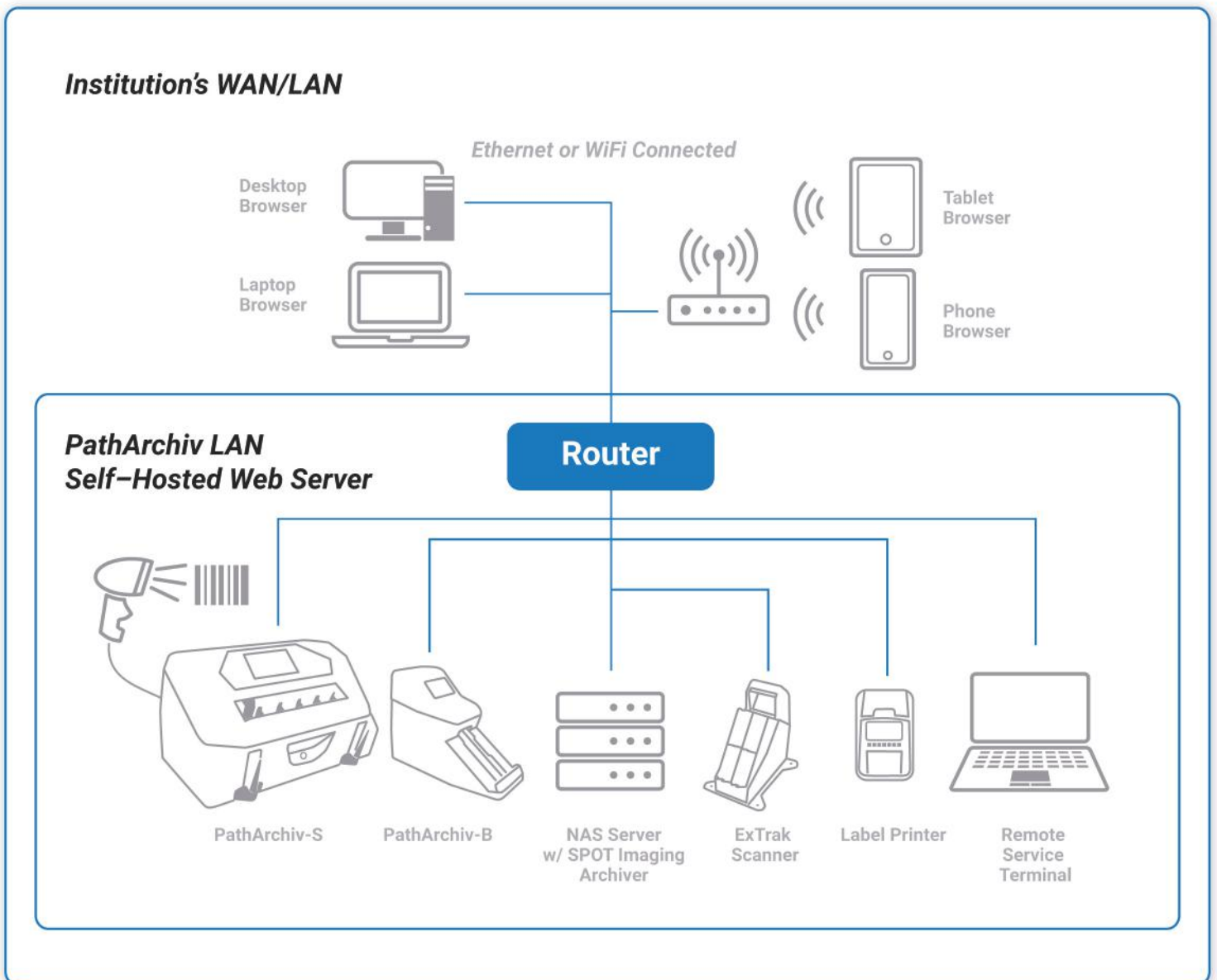
Every lab is different and putting together spreadsheet calculations is laborious. Our ROI calculator inputs your lab's parameters and provides a cost output for each of the above subsections. We compare your current storage system, the competitions' and PathArchiv's storage systems. This critical information provides a powerful working model for you and your budgeting team to analyze the dramatic improvement PathArchiv can achieve for your lab operations.



# PATHARCHIV™ Data architecture

IT setup, integration and maintenance are minimized with PathArchiv's self-hosted web server and IP-mounted system components. Each component logs into the network-attached storage server, providing or receiving data and commands as the situation requires. System access for users is set up via browser bookmarks and user passcode login making it easy to add users centrally and allowing user access from any network-connected device.

Samples are tracked over their lifespan via a full transaction history that is stored to the network-attached storage server. Data integrity is ensured via NAS RAID mirroring with long-term backup during the institution's automated after-hours backup protocol.

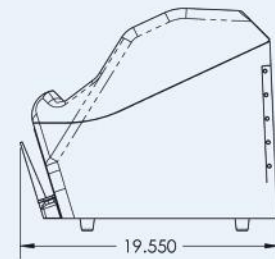
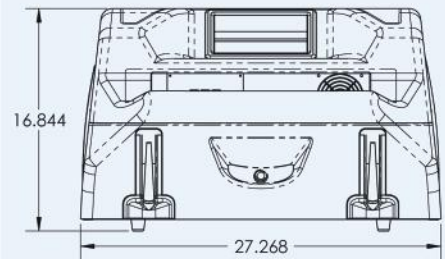




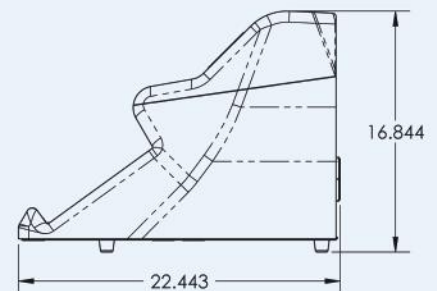
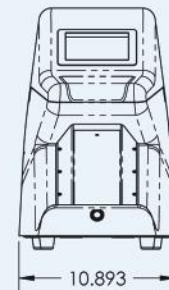
## PathArchiv Specifications

	PathArchiv-S	PathArchiv-B
USB 3.0 ports	2	2
LAN port	1	1
Handheld barcode reader	Standard	
<b>Display</b>		
Touch screen	Full color LCD	Full color LCD
<b>Power / Environment</b>		
Current	1.0 amp	1.0 amp
Power supply	120-240 VAC	120-240 VAC
Frequency	50/60 Hz	50/60 Hz
Operating temperature	41° - 86° F /+5 - +30°C	41° - 86° F /+5 - +30°C
Certifications	CE, FCC Class A, RoHS CSA/UL Electrical Certification	CE, FCC Class A, RoHS CSA/UL Electrical Certification
<b>Instrument size</b>		
Height	17" H (431.8 mm)	17.5" H (444.5 mm)
Width	27" W (685.8 mm)	10.75" W (273.05 mm)
Depth	19" D (482.6 mm)	22.5" D (571.5 mm)
<b>Weight</b>		
Instrument	52 lb / 23.6 kg	34 lb / 15.4 kg
<b>Sample size capacity</b>		
Standard slide size	1.007" x 3.007" (25.6 mm x 76.4 mm)	
Standard block cassette size		1.122" x 1.614" (28.5 mm x 41 mm)
<b>Sample processing and storage</b>		
Samples per instrument	200	50
Samples per magazine	200	50
Magazines per storage box	8	8
Samples per storage box	1,600	400
Storage box size	12" W (304.8 mm) 12" D (304.8 mm) 4" H (101.6 mm)	12" W (304.8 mm) 12" D (304.8 mm) 4" H (101.6 mm)
Magazine size	2-5/8" W (66.675 mm) 5-5/8" D (142.875 mm) 3-1/8" H (79.375 mm)	2-5/8" W (66.675 mm) 11-1/8" D (282.575 mm) 1-1/4" H (31.75 mm)
<b>Sample processing rate (Samples per hour)</b>		
	240 Slides/hr	1500 Blocks/hr

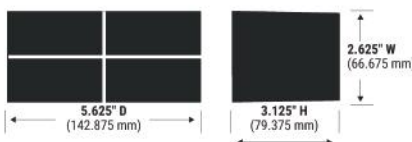
### PathArchiv-S Slide Filing



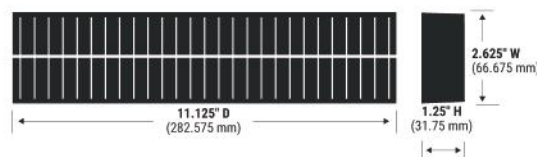
### PathArchiv-B Block Filing



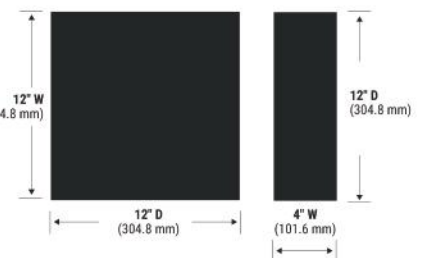
### Slide Storage Magazine



### Block Storage Magazine



### Outer Storage Box



# SPOT file room management

## File room teams needs:

Easy to set up, learn and use with any browser

Easy to implement

Easy to budget

Affordable consumables and shelving

High storage density

Reduction of file room staffing

Elimination of lost samples

Complete system for histology sample management

## PathArchiv provides:

Simple network-based web browser

Simple web service based LAN architecture is easy to deploy

Staff, consumable and storage savings results in ~1 Year ROI

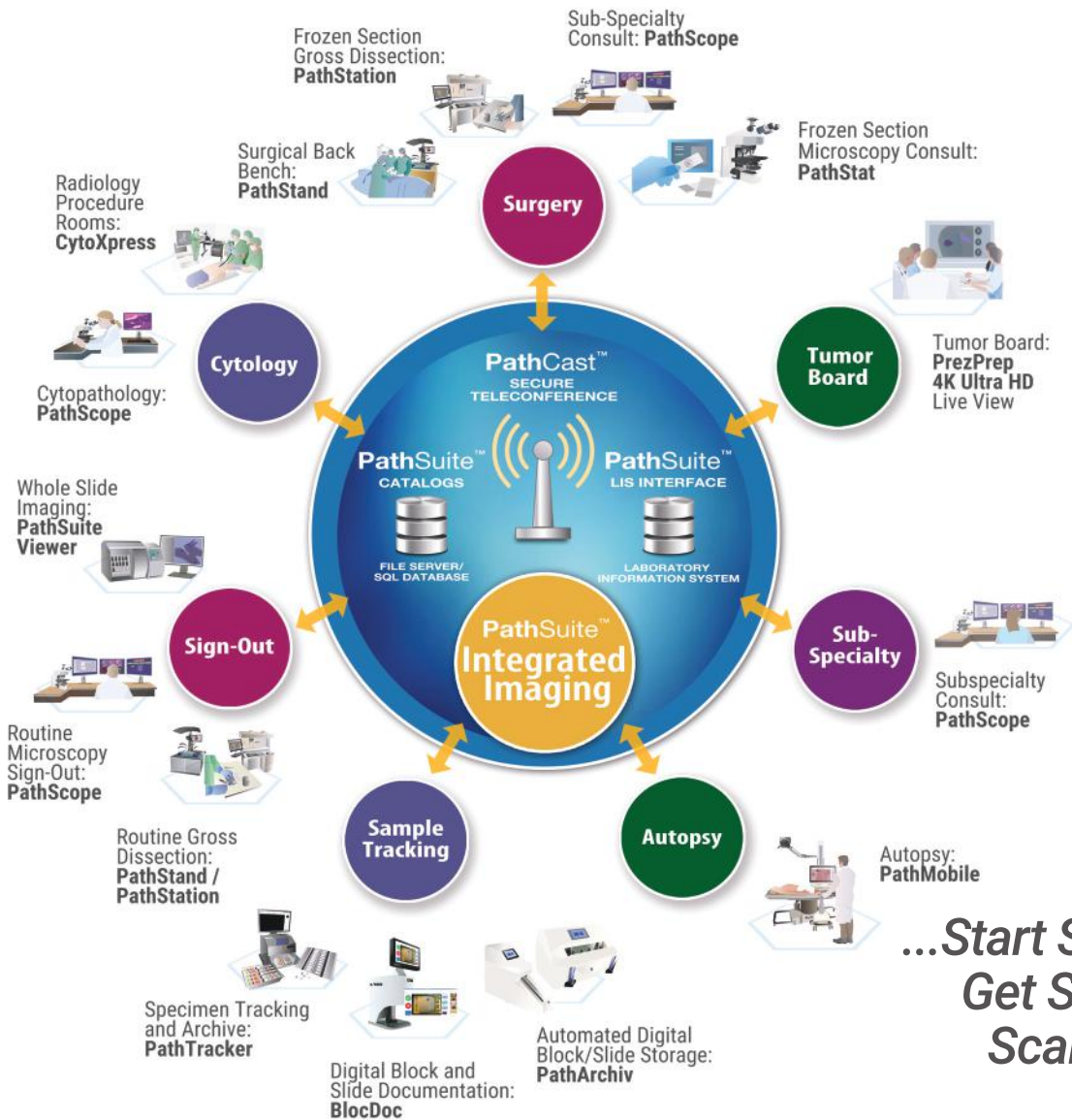
Uses industry standard 12" x 12" x 4" boxing system

Eliminates empty reserve space increasing density by 33%

Automated work process reduces staffing by 2-8x

Fully automated and tracked sample placement and recording

Purpose built, histology sample management system



**...Start Small,  
Get Smart,  
Scale Up!**