

# Canon



## imageSPECTRUM

ADVANCED DIGITAL IMAGE MANAGEMENT SYSTEM

Get a Better Handle on the Big Picture.

SECURELY STREAMLINE YOUR PRACTICE

## WORKFLOW WITH imageSPECTRUM.

imageSPECTRUM enables eye care practices, clinics, and even entire hospital departments to easily, efficiently, and securely acquire, distribute, and archive medical images and diagnostic reports across their enterprise. The system can also link Canon and third-party diagnostic eye care instruments to create an integrated environment that streamlines practice workflow and efficiency by integrating multiple images and modalities into a single patient record. imageSPECTRUM works with several of the nation's leading reading centers for image review, analysis, and diagnosis.

With imageSPECTRUM, you and your practice can benefit from:

### **FASTER IMAGE REVIEW AND DIAGNOSIS**

Helps you provide faster and more user-friendly access to all your images and image analysis tools.

### **INCREASED PRODUCTIVITY**

Streamlines the flow of diagnostic information to help you and your staff work more efficiently as a team.

### **REGULAR SOFTWARE UPDATES**

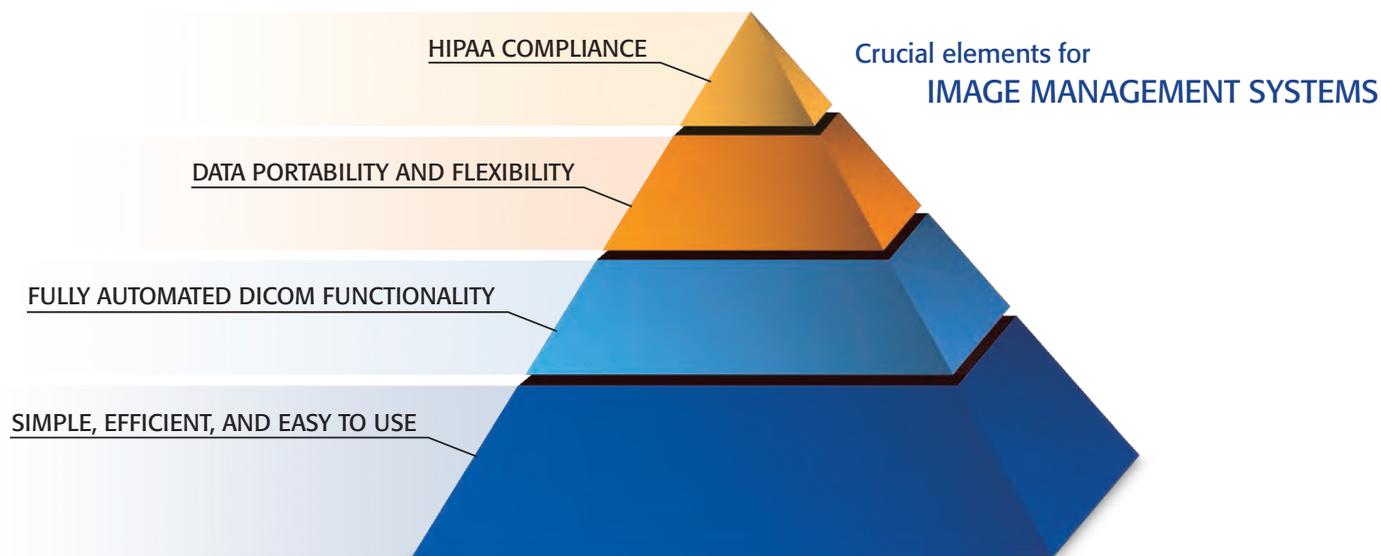
Your imageSPECTRUM System includes one year of software updates to help ensure that your image management system is up to date.\*



\* After the initial warranty period, an optional Extended Maintenance Agreement is available.

## MANAGE IMAGES WITH PEACE OF MIND.

To meet the needs of today's rapidly changing healthcare environment, an eye care image management system must excel in four key areas in order to keep your life simple and to help keep data safe and secure.



imageSPECTRUM is not only simple, efficient, and easy to use, but it's also designed with the data portability and advanced security features absolutely necessary to help you become—and stay—fully HIPAA compliant.

### **SIMPLE, EFFICIENT, AND EASY TO USE**

imageSPECTRUM employs a sleek and intuitive graphical user interface that's easy for you and your staff to use. The system communicates with major eye care modalities and is designed to optimize imaging workflow while simplifying the entire image management process.

### **FULLY AUTOMATED DICOM FUNCTIONALITY**

imageSPECTRUM can easily be configured to support virtually any practice network, small or large. Designed with your growing practice in mind, imageSPECTRUM is readily scalable. This means the system not only supports the needs of your current practice, but it's also capable of easily expanding as your practice grows or your needs change. An automated DICOM® system can help increase practice efficiency by eliminating extra steps and chances for error while streamlining workflow and enabling higher levels of communication (i.e., Modality Worklist).

### **DATA PORTABILITY AND FLEXIBILITY**

imageSPECTRUM's advanced architecture allows you to store and manage your image management files from within a single database or as a part of a multidatabase/multiarchive system requiring only high-speed Internet access. The system is designed to communicate well with most EMR systems and support practices of all sizes. It also allows clinical case data to be quickly and securely viewed from just about anywhere in the world.

### **HIPAA COMPLIANCE**

Designed with patient protection, the Affordable Healthcare Act, HIPAA/HITECH, and future reforms foremost in mind, imageSPECTRUM uniquely provides high-level image security and availability through features such as Role-based Access Control, Aging Password, Auto-logout, Advanced Encryption, and Complete Audit Log Recordkeeping, to name a few.

# imageSPECTRUM HAS WHAT IT TAKES TO PROTECT YOUR PATIENTS AND YOUR PRACTICE.

imageSPECTRUM was specifically engineered to help practices achieve the highest level of efficiency and includes standard HIPAA-compliant features, such as Role-based Access Control, Aging Password, Auto-logout, Advanced Encryption, and Complete Audit Log Recordkeeping.



The system also incorporates a robust set of advanced security and data management features.

## **SINGLE DATABASE**

imageSPECTRUM can utilize a single patient database, regardless of practice size, for streamlined data access from anywhere in the world.

## **PATIENT RECONCILIATION**

Advanced algorithms within the system constantly analyze incoming patient data to verify, identify, and correct erroneous patient demographics, thus ensuring that medical records are always attributed to the correct patient file.

## **ARCHIVAL SOLUTION**

imageSPECTRUM provides the business continuity and disaster recovery tools required by HIPAA. The system maximizes image storage, efficiency, and archival needs and optimizes the management of short-term and long-term image storage through local, NAS, or enterprise wide SAN solutions, all the while maintaining patient information securely.

## **DICOM IMPLEMENTATION**

Vendor-neutral and compatible with DICOM-based systems (including those that support the DICOM communication layer), imageSPECTRUM works within virtually any DICOM network and integrates with instruments from both Canon and third-party vendors.

## **MODALITY WORKLIST**

imageSPECTRUM supports DICOM Modality Worklist for optimized electronic workflow of patient demographic data.

## **FILE FORMATS**

Export images to a CD or other removable storage media in .JPG, .TIFF, .PNG, or DICOM format, with or without patient-identifiable information. Annotations may also be burned directly into the image.

## **DIAGNOSTIC (Dx) TAGS**

Assign and store user-definable diagnostic tags with any study for easy sorting and recall [i.e., Glaucoma, AMD (Dry or Wet), Cataract, etc.].

## **ACADEMIC AND RESEARCH SUPPORT TOOLS**

Easily separate and recall patient data involved in clinical trials, without having to create separate—and unnecessary—patient files.

## **UPGRADES AND CONVERSIONS**

As a totally open system, imageSPECTRUM enables you to upgrade or convert your patient data at any time. Conversions are available for a wide array of legacy and other third-party systems.

## TAKE A CLOSER LOOK AT CANON

# INNOVATION AND VERSATILITY.

This versatile image management solution offers an array of advanced image viewing and diagnostic tools.

### DIGITAL FILTER PROCESSING

A set of digital filters provides enhanced screening examinations of the retina. A blue 490nm filter enables detailed views of the RNFL and ILM, highlighting retina folds, cysts, and epiretinal membranes. A green filter focuses on the retinal vasculature and highlights common findings, such as hemorrhages, drusen, and exudates. And a red filter emphasizes the choroid, which is useful for visualizing pigmentary disturbances, choroidal ruptures, choroidal nevi, and choroidal melanomas.

### FAF OVERLAY DISPLAY

A Fundus AutoFluorescence (FAF) image may be superimposed over a color image to enhance subtle differences. Varying levels of opacity can be controlled by the user.

### EMBOSS

The emboss tool enhances depth perception with a 3D-like representation of elevations and depressions within the patient's posterior pole. This feature assists in the evaluation of macular degeneration, glaucoma, and diabetic retinopathy. The entire retina can be embossed as well as selected areas of the optic disc or macula area.

### AUTO-MOSAIC MODE

Auto-Mosaic mode enables multiple image segments of the same eye to be quickly joined together to create a seamless wide-field view of the retina.

### TELEMEDICINE

Capture, review, access, and store your data from any location, regardless of your telemedicine model. imageSPECTRUM Server can schedule transmission of studies from client-to-server or server-to-server, when optimal bandwidth is available.

### READING CENTERS

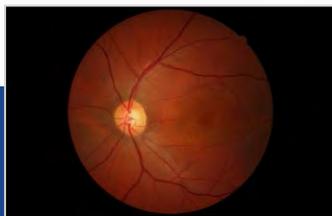
Grading feature allows retinal images to be reviewed by multiple graders for fast and efficient diagnosis.

### CUP-TO-DISC RATIO MEASUREMENT

Vertical cup-to-disc ratio is useful in identifying glaucomatous damage and can be valuable in the evaluation of tilted or small discs.

### IMAGE ANNOTATION TOOLS

Valuable annotation and measurement tools include stereo viewing, PDT marker, macular grid, laser treatment patterns, and more.



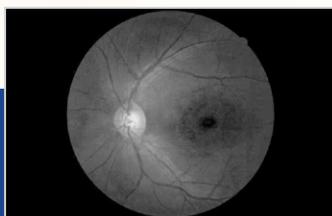
Color



Red



Green



Blue



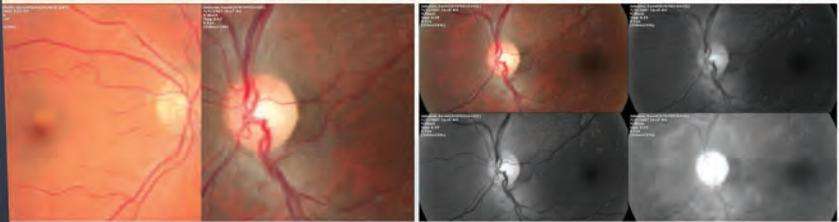
FAF



Emboss

# imageSPECTRUM EASILY FITS INTO NEARLY ANY BUSINESS ENVIRONMENT.

Being DICOM-compliant allows imageSPECTRUM to be quickly and easily integrated into a wide range of existing network configurations. Whether your practice uses a single digital camera or multiple retinal exam workstations that are fully networked across multiple sites, imageSPECTRUM can be scaled to meet your needs. It can be readily integrated into your existing networks as well as with other DICOM-compatible medical imaging devices, data storage devices, and servers. Furthermore, imageSPECTRUM can be configured so that the patient's entire history is kept in a single file and easily accessible from any location.



## imageSPECTRUM DIGITAL IMAGE MANAGEMENT SYSTEM SOFTWARE

### ▶ MINIMUM SPECIFICATIONS

#### Hardware

- ▶ Processor  
Intel® Core i7, 2 GHz or Better (64-bit Version)
- ▶ RAM  
4GB
- ▶ Hard Drive (Type/Size)  
SATA/500 GB+ (RAID Preferred)
- ▶ Graphics Card  
256MB of Memory
- ▶ Network Card (Type/Size)  
100Mbps or Better, Full Duplex

#### ▶ Monitor Type

Color Monitor/LCD Display, 600:1 Contrast Resolution or Better, High Luminance

#### ▶ Screen Resolution

1600 x 1200

#### Software

#### ▶ Operating System

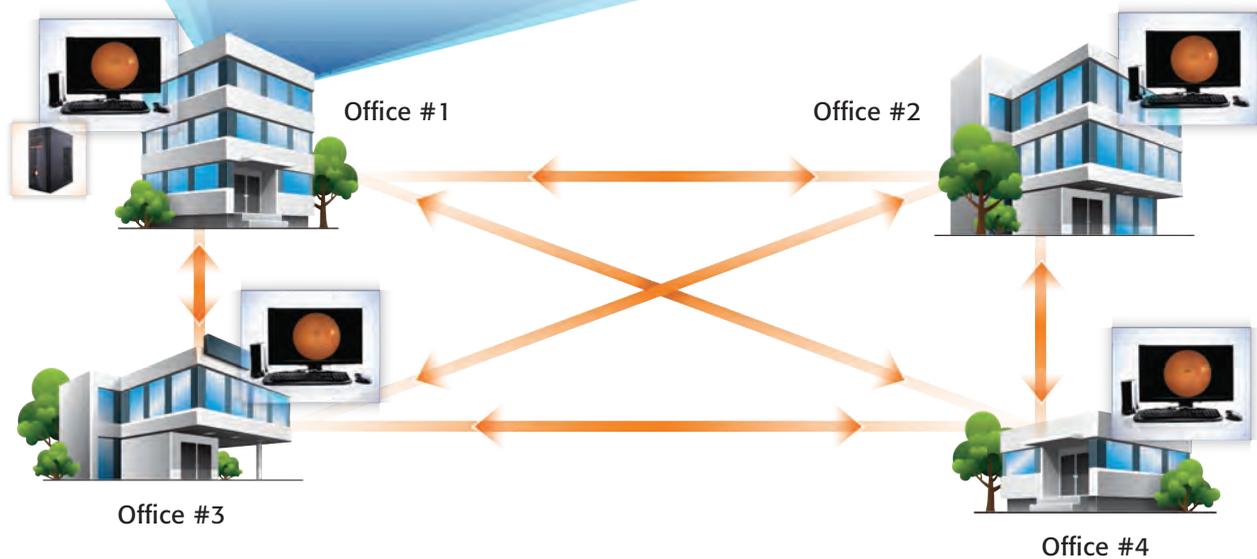
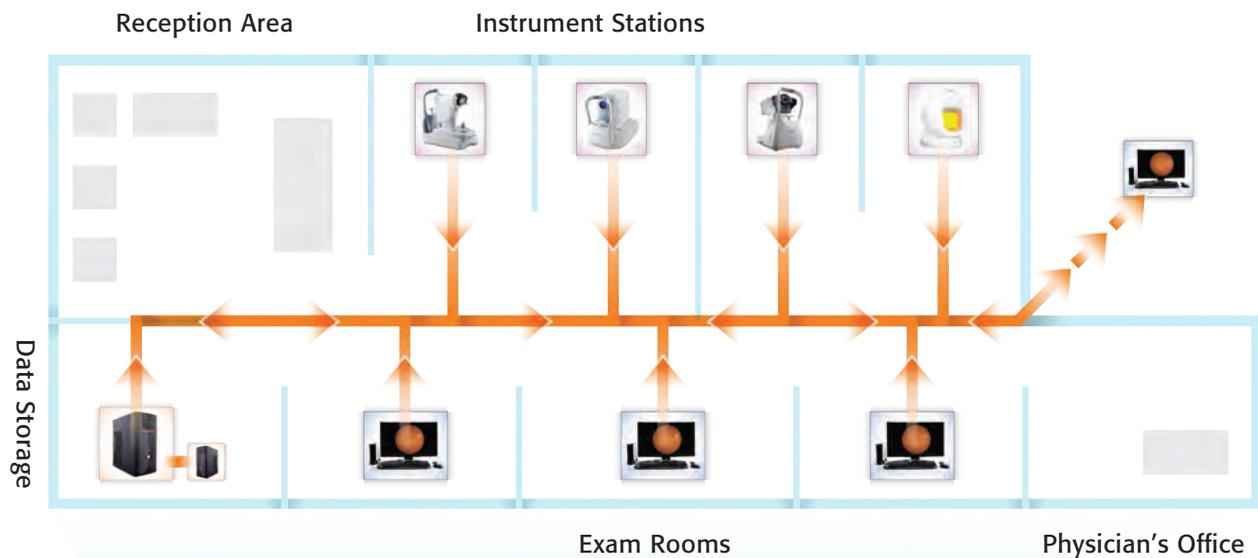
Windows® 7 Pro, SP1

## SUPPORTS YOUR PRACTICE

# TODAY AND IN THE FUTURE.

imageSPECTRUM can be easily configured to support virtually any practice network, small or large. Designed with your growing practice in mind, this system is readily scalable. This means that imageSPECTRUM cannot only support the needs of your current practice, but it can also easily expand as your practice grows or your needs change.

### ▼ A SINGLE-SITE NETWORK WITH MULTIPLE EXAM ROOMS ▼



### ▲ A MULTISITE NETWORK WITH MULTIPLE EXAM ROOMS ▲

# EYE CARE SOLUTIONS

ADVANCED DIAGNOSTIC EQUIPMENT FROM CANON.

Canon U.S.A., Inc. provides a full line of digital diagnostic imaging devices for your practice.

## ► Retinal Cameras



**CR-2**  
Digital Non-Mydriatic  
Retinal Camera



**CR-2 PLUS AF**  
Digital Non-Mydriatic  
Retinal Camera (with FAF)



**CF-1**  
Digital Mydriatic  
Retinal Camera



**CX-1**  
Hybrid Digital Mydriatic/Non-Mydriatic  
Retinal Camera (with FAF)

## ► Measurement Equipment



**TX-20**  
Full Auto Tonometer



**RK-F2**  
Full Auto Ref-Keratometer



**PTS-1000**  
Automated Perimeter

## MAINTAINING YOUR INVESTMENT IN EXCELLENCE.

imageSPECTRUM is backed by Canon Inc., a \$40B global microprocessor-based optical company with 75 years of experience. Each and every imageSPECTRUM System is backed by the Company's superb customer service and support organization, which is ready to answer your needs 24/7/365.

This common-sense approach to service allows you to purchase a service plan that suits your specific needs—and your budget. The Canon service program is built on a solid, customer-oriented foundation that includes three key components:

- 100 direct service centers throughout the U.S.
- Responsive, on-site service when you need it most
- Phone support that's available on a 24/7/365 basis

The Canon service program can help you avoid costly instrument downtime while also help to keep your vital patient images and information accessible, safe, and secure.



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