MACHINE INTEGRATION LIST

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INTEGRATION INFORMATION

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RS-232 Serial Cables

Most manufacturers will provide you with the compatible RS-232 Serial cable required for attaching your machine to your computer. In the case the manufacturer does not provide you with such cable, you will need to purchase this cable online before integrating your machine. Most autorefractor, autophoropter, autolensometer, and autotonometer machines require an RS-232 Serial cable with a Null Modem Adapter. This cable can be found online here: [RS-232 Serial to USB with Null Modem Adapter](#).

Cloud Integrations

Cloud compatible machines require mapping a network drive of the machine output folder on the local side of the computer before integration.

Integration Requests

The list below contains all machine and software integrations Crystal Practice Management currently offers. If any machine is not listed in the list below, you may request an integration by emailing info@crystalpm.com.

AUTOREFRACTORS

Company	Equipment/Software	Connection Type	Integration Type	Additional Info	Cloud Compatible?
Canon	RK F1 RK F2	RS-232C Serial Cable	CPM Machine Integration Utility		✔
Essilor	AKR 500/750	RS-232C Serial Cable	CPM Machine Integration Utility		✔
Essilor	Clarifye Plus	LAN XML	Shared Folder		✔
Eye Logic	Automated Refraction System		EyeLogic Software	EyeLogic software must be configured prior to the integration to output to a HuvitzData.dat file	✔
Ezer	ERK-9000	RS-232C Serial Cable	CPM Machine Integration Utility		✔
Humphrey	499 AR 599 AR	RS-232C Serial Cable	CPM Machine Integration Utility		✔
Huvitz	MRK 3100P HRK 7000A/8000A/9000A		CDR/HDR-Mate Software HRK-Mate Software		✔
Marco/Nidek	ARK-10000 ARK-1S ARK-510A ARK-530A ARK-560A ARK-700A ARK-730A ARK-760A ARK-Handy Tonoref 2 RKT-770		Marco Connect Software	Marco Connect software must be installed and configured by Marco prior to the integration.	✔
	OPD Scan3	LAN Export	OPD Scan3 Software		✔
Potec	PDR-7000 PRK-8000	RS-232C Serial Cable	CPM Machine Integration Utility		✔

Reichert	RK- 600 Autorefractor RK-700 Autorefractor	RS-232C Serial Cable	Reichert Capture Software		✓
Retinomax	K-plus 3	RS-232C Serial Cable	CPM Machine Integration Utility		✓
Righton/Nikon	Speedy K / Speedy K2	RS-232C Serial Cable	CPM Machine Integration Utility	Serial cable requires Null Modem Adapter	✓
Shin-Nippon	Accuref-K 9001	RS-232C Serial Cable	CPM Machine Integration Utility		✓
Tomey	RT-7000		Tomey Software	Tomey software must be installed and configured by Tomey prior to the integration.	✓
Topcon	KR 8000/8800/8900 KR-1 KR-1W	RS-232C Serial Cable	CPM Machine Integration Utility	Ethernet LAN Connection integration requires Crystal PM Version 4.5.2 +	✓
	KR 800/800s KR-1/KR-1W	RS-232C Serial Cable or Ethernet LAN Connection	CPM Machine Utility or Network Shared Folder		✓
	KR 7000P / 8000P	RS-232C Serial Cable	Topcon Color Mapping Software	Requires registry file to import readings	✓
Visionix	L79 VX110 VX118 VX120 VX130	RS-232C Serial Cable or Ethernet LAN Connection	CPM Machine Integration Utility or Network Shared Folder	LAN output has to be set up by Visionix prior to integrating	✓
Zeiss	VisuRef	RS-232C Serial Cable	CPM Machine Integration Utility		✓
	iProfiler/iScription		Zeiss iScription Software	Requires iScription software to be set up by Zeiss prior to the integration	✓

AUTOLENSOMETERS

Company	Equipment/Software	Connection Type	Integration Type	Additional Info	Cloud Compatible?
Essilor	ALM 500 ALM 700	RS-232C Serial Cable	CPM Machine Integration Utility		✓
Essilor	Clarifye Plus	LAN XML			✓
Humphrey	LM 350	RS-232C Serial Cable	CPM Machine Integration Utility		✓
Huvitz	CLM 3000	RS-232C Serial Cable	CPM Machine Integration Utility		✓
Marco/Nidek	LM-500 LM-600 LM-820A LM-970 LM-990A LM-1000 LM-1200 LM-1800		Marco Connect Software	Marco Connect software must be installed and configured by Marco prior to the integration.	✓
Reichert	AL-200 AL-500 AL-700 LensChek		Reichert Capture Software		✓
Tomey	TL-3000B		Tomey Software	Tomey software must be installed and configured by Tomey prior to the integration.	✓
Topcon	CL 100 / 200 / 300	RS-232C Serial Cable	CPM Machine Integration Utility	Ethernet LAN Connection integration requires Crystal PM Version 4.5.2+	✓
	CL 300	RS-232C Serial Cable or Ethernet LAN Connection	CPM Machine Utility or Network Shared Folder		✓
Visionix	VX35 (LAN) VX40 (LAN) VX40 (SERIAL) WaveLine VL 3100	RS-232C Serial Cable or Ethernet LAN Connection	CPM Machine Integration Utility or Network Shared Folder	LAN output has to be set up by Visionix prior to integrating	✓

| Zeiss | VisuLens | RS-232C Serial Cable | CPM Machine Integration Utility | | ✓ |

AUTOPHOROPTORS

Company	Equipment/Software	Connection Type	Integration Type	Additional Info	Cloud Compatible?
Essilor	APH 550	RS-232C Serial Cable	CPM Machine Integration Utility		✓
Essilor	Clarifye Plus	LAN XML			✓
Eye Logic	Digital Refraction System		EyeLogic Software	EyeLogic software must be configured prior to the integration to output to a HuvitzData.dat file	✓
Huvitz	CDR-7000/9000 HDR-7000/9000		CDR-Mate Software or HDR-Mate Software		✓
Marco/Nidek	RT 5100		Marco Connect Software	Marco Connect software must be installed and configured by Marco prior to the integration.	✓
	Bi-Directional Communication: Send To Marco	XML Output File	Button Command in Crystal	Available on Crystal PM Version 4.4.45 +	✓
Reichert	Phoroptor VRx Auto Phoroptor RS Visutron 900+		Reichert Capture Software		✓
	Bi-Directional Communication: Send To Reichert	XML Output File	Button Command in Crystal	Available on Crystal PM Version 4.5.4 +	✓
Topcon	CV 5000 / KB 50 CV5000 XML Chronos	RS-232C Serial Cable or Ethernet LAN Connection	CPM Machine Utility or Network Shared Folder	Ethernet LAN Connection integration requires Crystal PM Version 4.5.2 +	✓
Visionix	VX55 / VX60 (LAN) VX55 VX60	RS-232C Serial Cable or Ethernet LAN Connection	CPM Machine Integration Utility or Network Shared Folder	LAN output has to be set up by Visionix prior to integrating	✓
VMAX Vision	VASR	XML Output File			✓
Zeiss	Clarifye		Clarifye Integrator Software	Clarifye Integrator software must be install/configured by Clarifye	
Zeiss	Visuphor		Network Shared Folder		✓

AUTOTONOMETERS (NCT)

Company	Equipment/Software	Connection Type	Integration Type	Additional Info	Cloud Compatible?
Canon	TX-F	RS-232C Serial Cable	CPM Machine Integration Utility		✓
Essilor	Clarifye Plus				✓
Marco/Nidek	Tonoref II RKT-7700		Marco Connect Software	Marco Connect software must be installed and configured by Marco prior to the integration.	✓
Reichert	AT-555 Reichert 7 Tonometer Reichert 7CR Tonometer		Reichert Capture Software		✓
Topcon	CT-80	RS-232C Serial Cable	CPM Machine Integration Utility		✓

EXTERNAL SOFTWARE / IMAGING MACHINES

Company	Equipment/Software	Integration Type	Additional Info	Cloud Compatible?
Digital Optometrics	Digital Optometrics Tele-Optometry	Records → Import Machines	Imports all exam readings, images and videos to Crystal PM Medical Records. Exports patient demographics to Digital Optometrics Software.	✓
Essilor	M'eyeFit VisiOffice	Frame Order Page	To VisiOffice: Full Name, Phone #, Email, Address, DOB, Account ID From VisiOffice: Seg Ht, DPD, NPD, Mono PD, Dbl, A, B, ED, Frm Wrap, PantoTilt, Vertex, OC, Eye Rot, Head Pos, Head Eye Co, Stab Co	
Eye Photo Systems	EPS Software	Button Command	Creates or updates a patient in the EPS software, and opens to the corresponding patient in the camera program.	
EyeQuip	Scout Keratron	Button Command	EyeQuip – Capture button will send information from Crystal to Scout software EyeQuip – View button will pull in information from the Scout software	
Haag-Streit	EyeSuite (Octopus)	Button Command	Opens the EyeSuite software to the correct patient, or creates the patient if he/she does not exist.	
Heidelberg	Heidelberg Spectralis	Records → Import Machines	Pulls in XML Output information into Crystal	✓
iZon	iZon Software	Records → Import Machines	Imports OD/OS Sph, Cyl & Axis from the iZon Software into Records	✓
Konan	Konan CellChek Software	Records → Import Machines	Imports CellChek Photos / Readings	✓
Kowa	DigiVersal	Button Command	Opens the DigiVersal software to the correct patient, based on Patient ID.	
Nidek	Navis-EX	Button Command	Opens the Navis-EX software to the correct patient, based on Patient ID, Patient Name, Sex & DOB.	
Oculus	Easyfield	Button Command	Opens the Easyfield software to the correct patient, or creates the patient if he/she does not exist.	
Optikam	OptikamPad	Frame Order Page	Pulls Optikam results into Frame Order Page. Available on CrystalPM versions 4.6.29+ **REQUIRES OPTIKAM CLOUD SUBSCRIPTION**	✓

Optomap	Optos Capture Optos Review Optos Advance (4.5.10+)	Button Command	Opens the Capture/Scheduler software and creates the patient if he/she does not exist. Opens the Optos Review software to the correct patient, based on Patient ID.	Only Optos Advance (*requires VPN*)
Optovue	iVue ReVue	Button Command	Opens the iVue/ReVue software to the correct patient, based on Patient ID, Patient Name, Sex & DOB.	
Quantify	Quantify Software	Records → Import Machines	Imports Right Eye / Left Eye	✓
Synemed	EyeScape	Button Command	Opens the EyeScape software to the correct patient, or creates the patient if he/she does not exist.	
Topcon	ImageNET Lite ImageNET Capture/View	Button Command	Opens the ImageNET software to the correct patient, or creates the patient if he/she does not exist.	
	ImageNET6	Button Command		
Zeiss	Zeiss FORUM	Button Command	Opens the Forum software to the correct patient, based on Patient Name, Sex, DOB, & ID.	
Zeiss	Zeiss iCOM iTerminal	XML File		

NON-DIRECT INTEGRATIONS

Company	Equipment/Software	Integration Type	Additional Info
Humphrey/Zeiss	Humphrey Field Analyzer HFA Humphrey Matrix 715 Humphrey Matrix 800 Zeiss Atlas 9000 Zeiss Cirrus HD- OCT Zeiss Cirrus Photo Zeiss Stratus OCT Zeiss VisuCam	Direct Integration with Zeiss FORUM	You will need to contact Zeiss support to have them configure a shared folder to export files to. Export files as a .pdf format.

Importing Images:

It is not the intention of Crystal PM to replace the complex software's that often accompanies your imaging devices. The images contained in these programs are typically very large and best viewed and manipulated with the original software. If no software for viewing the images exists and you would like to add images directly in Crystal, images exported in an image file format may be integrated into Crystal in two ways:

- In the Patients File Section:
    - o Choose Add File
    - o Browse to the file location of the image
    - o Create a Description/File Type for the image
    - o Add File to Patient's File
- In the Records Section:
    - o In EHR Settings → Edit Medical Record Templates, create picture boxes with the type of (Upload External App)
    - o Stop Editing and Save Changes, open the records page and click on the picture box you created.
    - o Set the default file location to the folder containing the images.
    - o Now when you click on the picture box, it will add in the most recent file from the image folder into the picture box.