



PRE-INSTALLATION GUIDE

ImageXpress Pico Automated Cell Imaging System with CellReporterXpress

Welcome to the family of Molecular Devices® ImageXpress® system users. This document provides you with the necessary information to prepare your facility for the installation of your new ImageXpress Pico Automated Cell Imaging System.

Environmental Requirements

The ImageXpress Pico System and all options are designed to operate indoors under laboratory conditions at 18°C to 30°C (64°F to 86°F) with 20% to 75% non-condensing humidity. As with any precision optical instrument, take care to maintain a low-dust, low-vibration environment. Temperature and humidity extremes can compromise performance.

Most low-magnification applications will tolerate non-optical tables that can be purchased from companies specializing in industrial furniture, including:

- Anthro (www.anthro.com)
- RDM (www.rdm-ind.com)
- SteelSentry (www.steelsentry.com)

Avoid the following lab conditions or situations:

- Avoid installation in or next to a room where there is high-motion equipment, such as elevators, air conditioners, or heaters.
- Avoid installation directly in the path of air vents. Sudden temperature changes and air-flow vibrations can degrade performance.

- Avoid installation near external vibration caused by trains or excessive vehicle traffic.
- Avoid installation in any room with noticeable vibration on floors or walls.
- Avoid installation in direct sunlight.
- Avoid installation within 5 m (16.4 ft.) from a refrigerator.
- Avoid installation within 2 m (6.5 ft.) from a door.
- Avoid installation on a table that is mechanically attached to a wall.
- Avoid installation on a table with shakers, stirrers, mixers, or centrifuges.

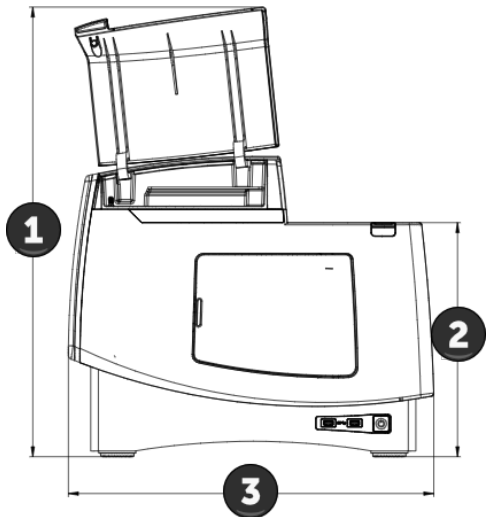


Space and Table Requirements

A table or lab bench suitable for the size and weight of the instrument is required. With no options, the instrument weighs 38 kg (83.3 lb.).

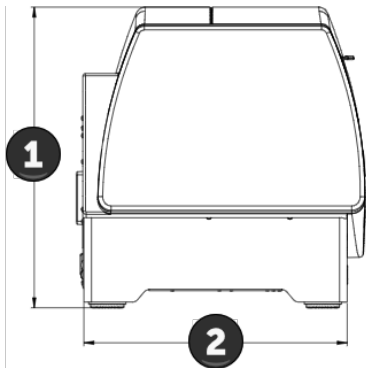
The front and the top of the instrument must be accessible to allow access to the objectives, filters, and stage holder. Adequate clearance around the instrument is necessary for user and service access.

Instrument Front View



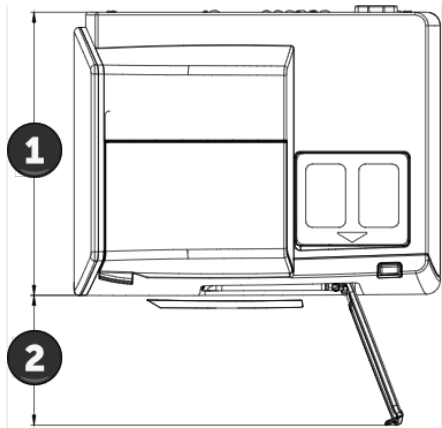
Item	Description
1	67.8 cm (26.69 in.)
2	35.3 cm (13.90 in.)
3	55.1 cm (21.68 in.)

Instrument Side View



Item	Description
1	45.3 cm (17.83 in.)
2	39.7 cm (15.63 in.)

Instrument Top View



Item	Description
1	42.5 cm (16.73 in.)
2	19.5 cm (7.68 in.)

Host Computer

A host computer is required to serve as the interface to the instrument. You can provide a host computer that meets the specifications described in the CellReporterXpress IT Configuration Guide or you can purchase a host computer from Molecular Devices. The following table lists the space requirements for the host computer optionally purchased from Molecular Devices:

Host Computer	Specification
Width	20 cm (8 in.)
Length	53 cm (21 in.)
Height	43 cm (17 in.)

Power Requirements

- Direct connections to all international supply voltages available.
- The instrument requires an input voltage range from 100 VAC to 240 VAC, 50/60 Hz, 4 amps maximum at 115 VAC.
- Fluctuations must be within 10% of the nominal voltage.
- When using a power strip, the computer and monitor should be connected to a different power strip than the instrument.

To limit the risk of interruption during power loss, you can use an uninterruptible power supply (UPS) to provide backup power and power line conditioning for the instrument and computer.

The power requirements for individual components are listed below. To determine the power consumption (in watts) for the ImageXpress Pico System, add the power requirements of all applicable components. For example, the power consumption of a typical system and with a large monitor is 360 watts (200 + 120 + 40).

Power Requirement	Watts	Power Cables
Instrument	200	1
Computer (optional MD)	120	1
Monitor, 27" (each) (optional)	40	1
Monitor, 22" (each) (optional)	20	1

ImageXpress Pico with CellReporterXpress

The CellReporterXpress Software resides on the host computer to offer a uniquely designed, user-friendly interface and allows the ImageXpress Pico to be networked in a variety of configurations. The software takes advantage of over 25 available predefined experiment protocols and high-powered analysis tools. You can supply your own host computer to run the CellReporterXpress Software. Alternatively, you can purchase a host computer from Molecular Devices.

In a standalone configuration or a network configuration, the host computer performs all analysis and storage. In these configurations, the host computer must meet the following minimum requirements:

Item	Minimum Requirement	Notes
Operating System	Microsoft Windows 10 (64-bit)	Pro, Enterprise, and Education editions are supported.
CPU Speed	2.4 GHz	
Logical Processors	10	10 logical processors supports 4 concurrent analyses. For each additional concurrent analysis that you want to perform, add 2 logical processors.
RAM	12 GB	12 GB of RAM supports 4 concurrent analyses. For each additional concurrent analysis that you want to perform, add 2 GB of memory.

In a server configuration, analysis and storage operations can be performed remotely, and the host computer requirements can vary. The CellReporterXpress IT Configuration Guide describes the various configurations and the corresponding host computer requirements.

Supported Browsers for Remote Clients

In a network configuration or a server configuration, you can connect to the host computer using other computers and tablets as remote clients. The remote client can be any desktop computer, laptop computer, or iPad or Android tablet with a screen size of at least 9 inches.

Remote clients use a browser to communicate with the host computer. The following browsers are supported:

Operating System	Minimum Browser Version
Microsoft Windows	Google Chrome 60 (64-bit) or Mozilla Firefox 58 (64-bit)
Apple macOS 10.12 or higher	Google Chrome 60 or Apple Safari 11.0
Apple iOS 11.2 or higher	Apple Safari
Google Android	Google Chrome 59
Linux	Google Chrome 60

Installation Supplies

Users must provide the following:

- Sturdy table of at least 94 cm by 61 cm (37 in. by 24 in.) with 25 cm (10 in.) of vertical clearance and rated for over 50 kg (110 lb.) with minimal vibration
- Additional space or a separate table or workstation for the host computer keyboard, mouse, and monitor(s)
- Power strip(s) (optional)
- Online power conditioning UPS (optional, recommended)
- Network cable and 1 gigabit network connection

Installation Guidelines

The ImageXpress Pico System is designed to be user installable. All installation documentation is available in the Knowledge Base on the Molecular Devices Support website. Before you begin, review the documentation so you know what to expect.

As an option, a field service engineer from Molecular Devices can install the ImageXpress Pico System for you. During installation, the field service engineer will set up a standalone configuration to configure and test the system. This will be done using the host computer you provide or the host computer optionally purchased from Molecular Devices. The host computer must meet the minimum requirements described in this document and the CellReporterXpress IT Configuration Guide. If no acceptable host computer is available, the system will be tested and configured with the field service engineer's laptop. You will then be responsible for eventually connecting the host computer to the ImageXpress Pico and installing the CellReporterXpress Software.

Network Requirements

Antivirus software is highly recommended for all networked devices. To maximize the speed and performance of the ImageXpress Pico System, the firewall must not block access to the required ports. The following table lists the ports and services that must be accessed through the firewall.

Configuration	Port	Computer	Direction	Notes
All	UDP 3702	Host Computer	Inbound and Outbound	For auto detection of the imaging device.
All	TCP 8091 TCP 9090	Host Computer	Outbound	For communication with the imaging device. If the imaging device is behind a firewall, these ports should be forwarded to the imaging device's IP address.
All	TCP 80	Host Computer	Inbound	For remote client connections to the host computer.
Server (with external analysis operations)	TCP 12325	Analysis Computer	Inbound	For communication between the host computer and the computer running analysis operations (MD.AnalysisService).
		Host Computer	Outbound	
Server (with external storage operations)	TCP 12324	Storage Computer	Inbound	For communication between the host computer and the computer running storage operations (MD.LocationService).
		Host Computer	Outbound	
Server (with external storage and analysis operations)	TCP 12323	Host Computer	Inbound	For communication between the host computer and the computers running analysis operations (MD.AnalysisService) and storage operations (MD.LocationService).
		Analysis Computer	Outbound	
		Storage Computer	Outbound	

Antivirus Settings

The installation program will attempt to create the required antivirus exclusions, but your antivirus software or network policies may prevent this. In that case, you must create exclusions for the following services:

- MD.CoreService (MolDev.CoreService.exe)
- MD.DataService (MolDev.DataService.exe)
- MD.WebService (MolDev.WebService.exe)
- MD.AnalysisService (MolDev.AnalysisService.exe)
- MD.LocationService (MolDev.LocationService.exe)

In addition, you must do the following:

- Create exclusions for all paths to storage devices.
- Enable automatic updates for antivirus definitions to increase system security.
- Enable the ability to turn off virus scanning for troubleshooting.

Facility Receiving Requirements

The ImageXpress Pico System will arrive in one or more boxes; the largest box contains the instrument. If you choose to have the installation performed by a field service engineer from Molecular Devices, do not open any boxes until the field service engineer is present.

Instrument Box	Specification
Width	66 cm (26 in.)
Length	112 cm (44 in.)
Height	74 cm (29 in.)
Weight	50 kg (110 lb.)
Ambient Storage Conditions	Temperature: -20°C to +60°C (-4°F to 140°F) Relative Humidity: 15% to 75% relative humidity (noncondensing)

All boxes should be stored indoors and protected from environmental extremes until equipment is removed. If the instrument box is stored in conditions significantly colder than room temperature, do not open it until the temperature has reached equilibrium (typically at least 6 hours) to avoid the formation of condensation inside the instrument.

Due to its weight, the instrument should be moved to installation site in its box with a pallet jack or on a rolling cart that is at least 61 cm by 92 cm (24 in. by 36 in.) and is rated to hold the weight of the system.

Documentation

The CellReporterXpress Software includes context-sensitive Help that you can access from within the software. In addition, you can access the following guides in the Knowledge Base on the Molecular Devices Support website:

- CellReporterXpress Installation Guide
- CellReporterXpress IT Configuration Guide
- CellReporterXpress User Guide
- ImageXpress Pico Installation Guide
- ImageXpress Pico User Guide

Support and Service

For support or service, please contact us at:

- www.moleculardevices.com/support
- www.moldev.com/support

Contact Us

Phone: +1.800.635.5577
Web: www.moleculardevices.com
Email: info@moldev.com
Check our website for a current listing of worldwide distributors.

Regional Offices

USA and Canada
+1.800.635.5577
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* Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Netherlands, Spain, Sweden, and Switzerland

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