

## TECHNICAL NOTE

# Connectivity and user interaction with the SpectraMax iD3 Multi-Mode Microplate Reader

## Introduction

The 21st century laboratory has become a fast-paced environment characterized by frequent changes in assay technology and increased employee turnover, leaving less time for complex software training. In addition, researchers are spending more time analyzing data on office computers, leaving them with less time in the lab. To address these needs, Molecular Devices brings communication and interaction tools such as local area network (LAN) connectivity, near-field communication (NFC), and touchscreen to the lab with the SpectraMax® iD3 Multi-Mode Microplate Reader.

## Touchscreen

With a large built-in touchscreen, the SpectraMax iD3 reader unchains the reader from the desktop computer and brings it into the era of stand-alone devices (Figure 1). The touchscreen was designed to promote ease of learning for new users as well as speed up and simplify daily work. The personalized protocol library lets users store their most frequently used protocols for easy access, and the Quick Read icons on the dashboard save time when starting new experiments.

## QuickSync

With the QuickSync client installed on your computer, your SpectraMax iD3 reader can push data to any computer within the same network. Upon completion of a plate read, data are delivered to your computer in an Excel-compatible format.

The setup of QuickSync is easy. Just install the QuickSync client from the SoftMax® Pro Software install flash drive on your computer and select your SpectraMax iD3 reader from the 'Available Services' menu in the taskbar (Figure 2). Any documents received from your reader will then be available in the 'Received Documents' tab. QuickSync can be installed on any number of computers.



Figure 1. SpectraMax iD3 reader with touchscreen and inserted USB flash drive.

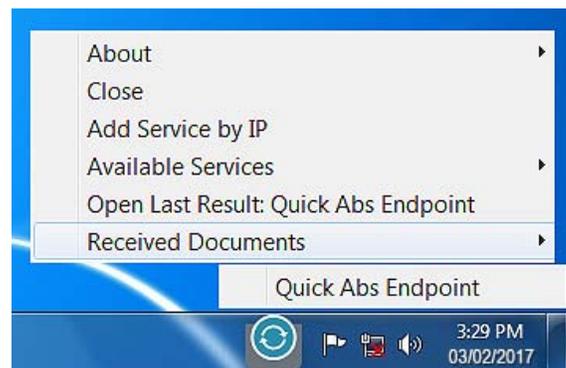


Figure 2. QuickSync taskbar menu showing the received data file "Quick Abs Endpoint".

## Connectivity

To take advantage of all benefits of this network accessible device, the SpectraMax iD3 reader should be connected to the local area network (LAN) using an Ethernet cable (Figure 3, Panel 4). Any computer that is connected to the same network (Ethernet or Wi-Fi) may be used to design protocols and control the reader using SoftMax Pro (Figure 3, Panel 3).

If you decide to control the plate reader using SoftMax Pro, the touchscreen will be locked (Figure 5). The Disconnect icon on the touchscreen reactivates the touchscreen and disconnects the remote user.

Another benefit of having the SpectraMax iD3 reader connected to the network in combination with the newly introduced QuickSync client is that once a plate read

is complete, the data is immediately pushed to your computer for further analysis in a convenient Excel-compatible XML format (Figure 3, Panel 1).

For GxP regulated laboratories or labs without a local network, the SpectraMax iD3 reader enables direct connection to a computer via an Ethernet cable. For laptops without a built-in network adapter or computers where the LAN port is already in use, low cost LAN-USB adapters are available from third party vendors. (Figure 3, Panel 2). For laboratories that need to be GxP compliant and are therefore required to maintain an audit trail, the SpectraMax iD3 reader offers a GxP lockdown mode to prevent any non-recorded touchscreen inputs (Figure 4).

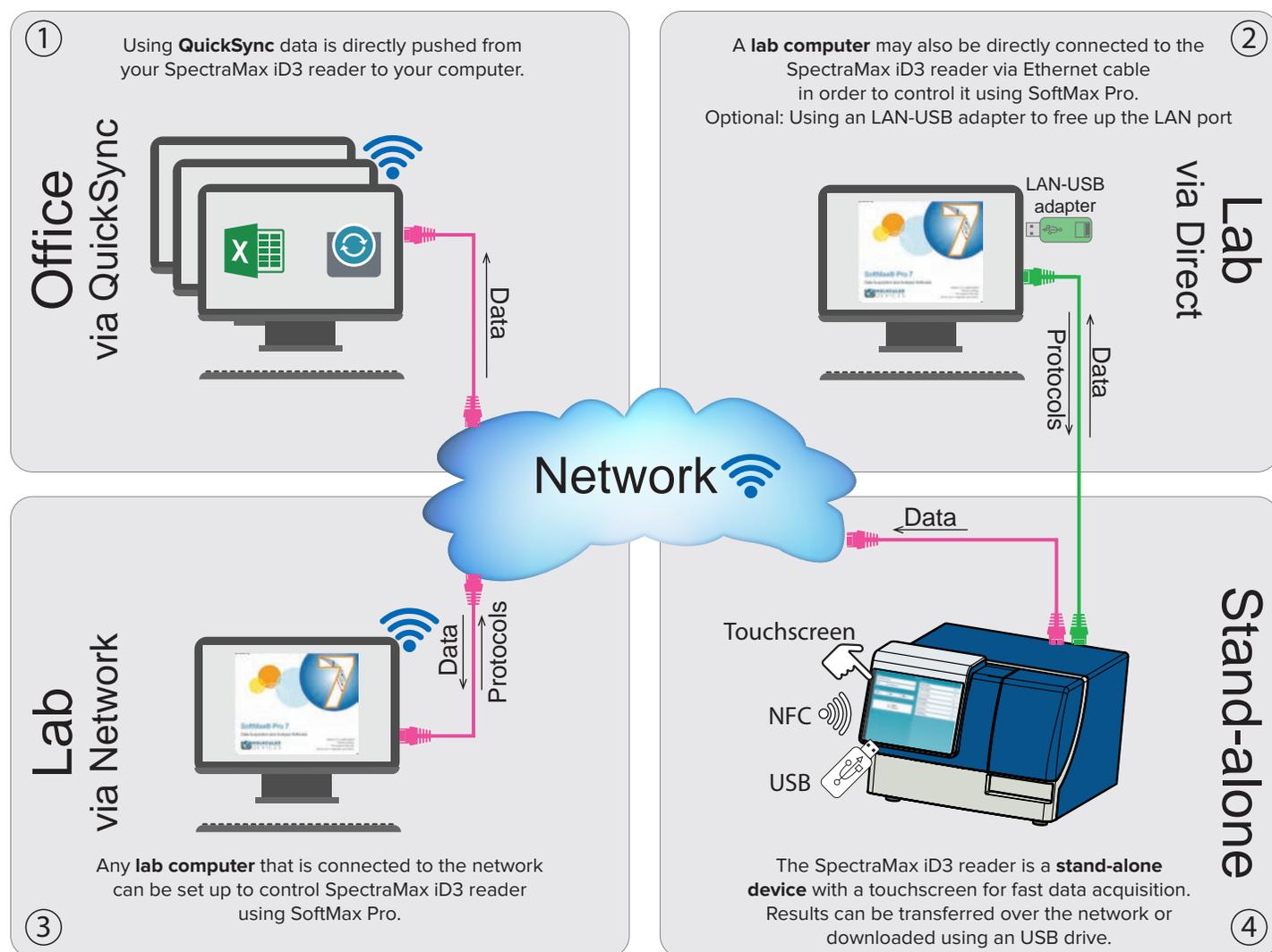


Figure 3. SpectraMax iD3 reader connection models. Panels 1, 3, and 4 show the network connection mode where the SpectraMax iD3 reader is connected to the local network. Panel 2 demonstrates how a computer in the lab may be used to control the reader using SoftMax Pro. Data can be pushed to any computer within the same network using QuickSync (Panel 1).

## Near-field communication (NFC)

Personalization typically requires user names and passwords, which can easily be forgotten, given the already large number of credentials a researcher must remember. The SpectraMax iD3 reader is equipped with an NFC module that can create and recognize personalized NFC tags that access individual user profiles on the reader and enable fast access to previously generated results and protocols (Figure 6).

## USB

In addition to the newly introduced QuickSync solution, the SpectraMax iD3 reader is equipped with a USB port located below the touchscreen (Figure 1). For increased convenience, the reader detects any connected USB drive and automatically exports the data in an Excel-compatible XML format after data acquisition is completed.

## Conclusion

The SpectraMax iD3 reader is a stand-alone multi-mode microplate reader that introduces NFC based user authentication and touchscreen interface personalization. The QuickSync client and automatic USB export option not only frees the user from waiting for data in front of the plate reader, but automatically sends it to one's computer in an Excel-compatible XML format for further data analysis.

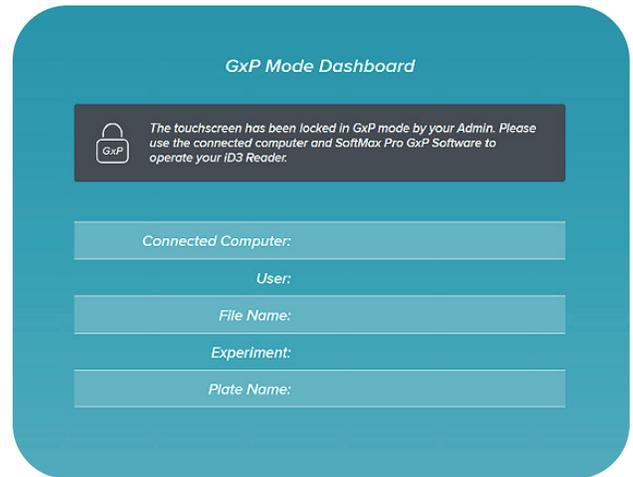


Figure 4. Touchscreen locked in GxP mode.

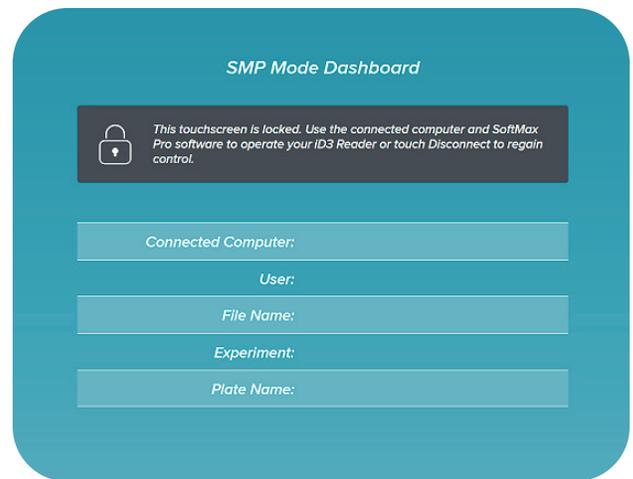


Figure 5. Touchscreen locked due to control of the reader by SoftMax Pro.



Figure 6. Personalized NFC tags can be used to access your user profile on the SpectraMax iD3 reader.

For more information on the SpectraMax iD3 Multi-Mode Microplate Reader, please visit [www.moleculardevices.com/spectramaxid3](http://www.moleculardevices.com/spectramaxid3)

#### Contact Us

Phone: [+1.800.635.5577](tel:+18006355577)  
Web: [www.moleculardevices.com](http://www.moleculardevices.com)  
Email: [info@moldev.com](mailto:info@moldev.com)

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