

**mDATA™ User Guide**  
**Roth Technologies, LLC**

**TABLE OF CONTENTS**

I.	Introduction.....	3
II.	Reference Documents.....	3
III.	Necessary Components .....	3
IV.	Running the Program.....	4
V.	Software Startup.....	5
VI.	Exporting Test Results to Microsoft Excel.....	7
VII.	mDATA™ Useful Notes .....	8
VIII.	MeasureOHM® Summary.....	9

# mDATA™ User Guide

## I. Introduction

Welcome to the mDATA™ User Guide. This manual will provide you basic instructions on how to implement and use the mDATA™ software system. This software may be utilized by the User to configure the hardware and software parameters for the MeasureOHM® System. Use of this software is subject to the End Users License Agreement (EULA) which is located on our website at [www.measureohm.com](http://www.measureohm.com).

## II. Reference Documents

- **MeasureOHM® End User License Agreement (EULA)**, Roth Technologies, LLC
- **Installing MySQL ODBC Driver**, Roth Technologies, LLC
- **Adding and Registering MSSTDFMT.DLL (Windows 7/8 OS)**, Roth Technologies, LLC
- **MeasureOHM® User Guide**, Roth Technologies, LLC
- **mSPECIFY™ User Guide**, Roth Technologies, LLC

## III. Necessary Components

The following components are necessary in order to run the mDATA™ system:

1. The software, identified as mDATA.EXE, which is included on the Installation CD that was provided with your order. This software may also be downloaded from our website at [www.measureohm.com](http://www.measureohm.com).
2. The MySQL ODBC driver must be loaded on your test computer.
  - If you are running Windows XP, you must load the MySQL 3.5.1 Driver, 32 bit driver
  - If you are running Windows 7 OR Windows 8, you must load the MySQL 5.1 Driver, 32 bit driver
  - Note that in both cases, you **MUST** load the 32 bit driver MySQL driver even if your operating system is 64 bit. Other operation systems are **NOT** supported
3. Your computer that is used to run the software **MUST** be connected to the Internet. There is an interchange of material data between the computer and the MySQL Server. If the interchange of data is slow and/or interrupted, the program may not run correctly or timeout.
4. Port 3306 on your gateway must be open. This Port is utilized by the MySQL ODBC driver.
5. You must have a valid User Code that is provided as part of your License Agreement with the MeasureOHM® Hardware and Software system. You must have a valid and active subscription to the **MeasureOHM®** data storage feature
6. You must have Microsoft Excel 2003 or later installed on your computer.

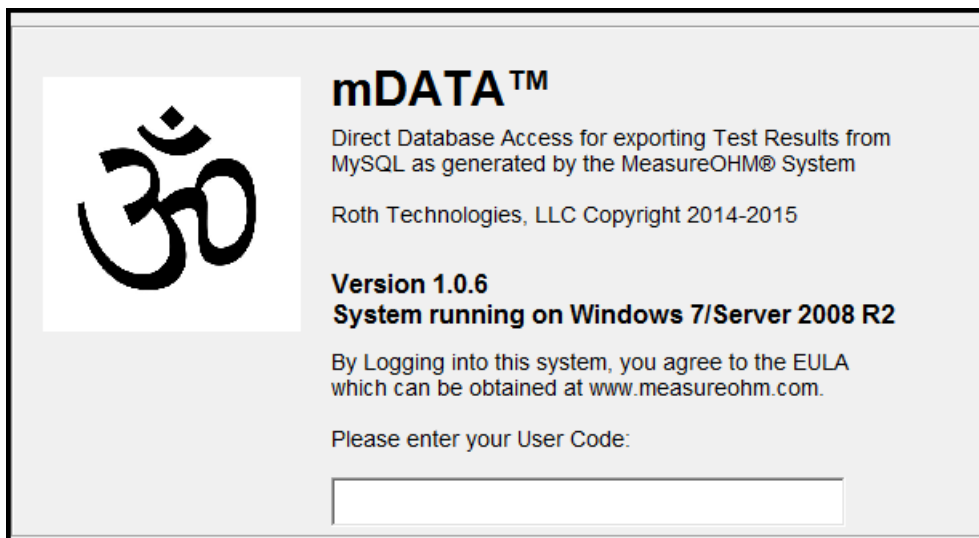
**IV. Running the Program**

In order to run the program, it must be copied from the media that it was provided to you on (i.e. on a CD-ROM and/or USB Flash Drive) to the Desktop of the computer you intend to run it on.

**Warning: The program WILL NOT execute if you try to run it directly from the CD-ROM drive.**

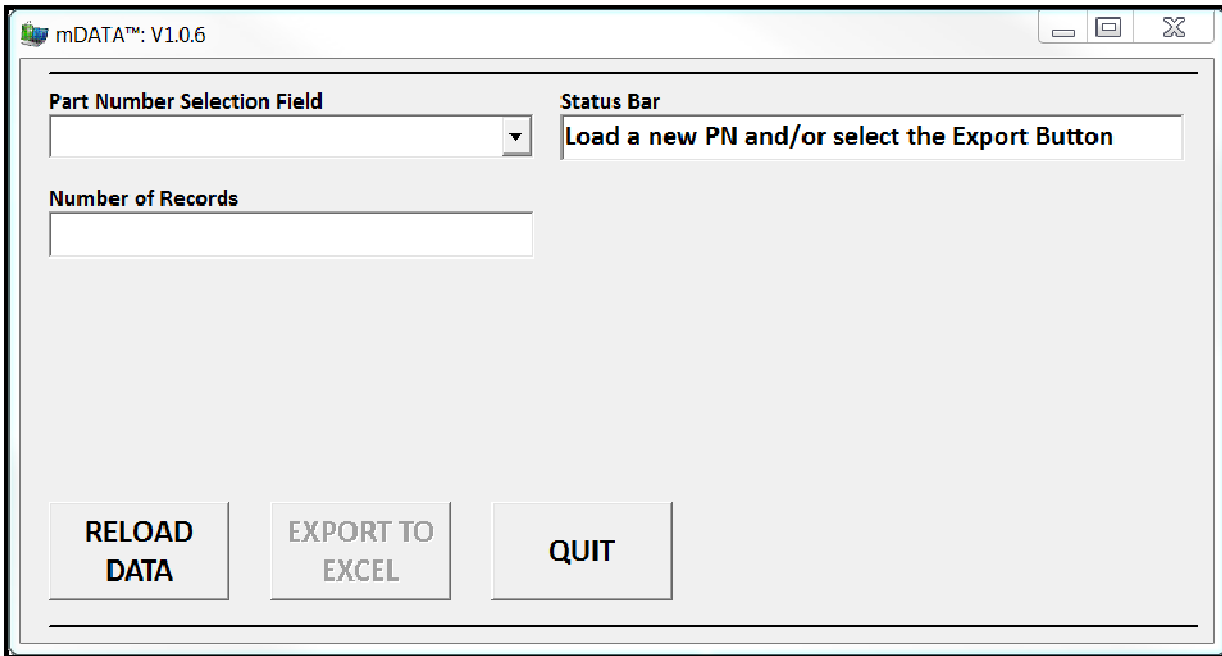
Once the program is on the computer Desktop, you can double click the mDATA™ Program Icon to execute it. A splash screen similar to the one shown appears when the program is run. The current software will only run on Windows XP, Windows 7, and/or Windows 8. Previous versions of the Windows Operating System are NOT supported.

In order to run the software, enter your User Code at the Splash Screen as shown.

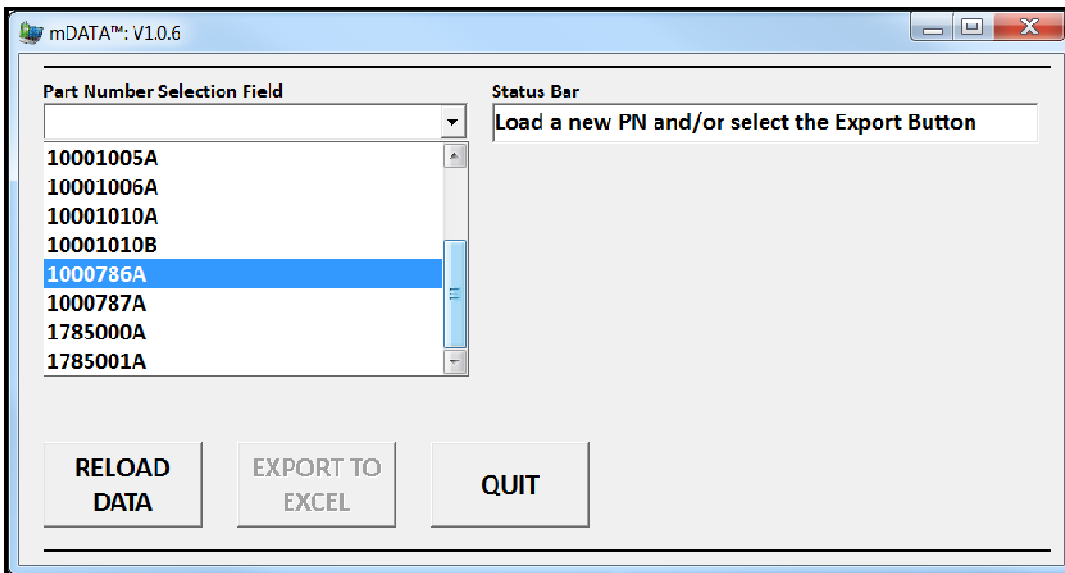


V. Software Startup

At the startup of the software, the User may selected an applicable Part Number from the Part Number Selection Field

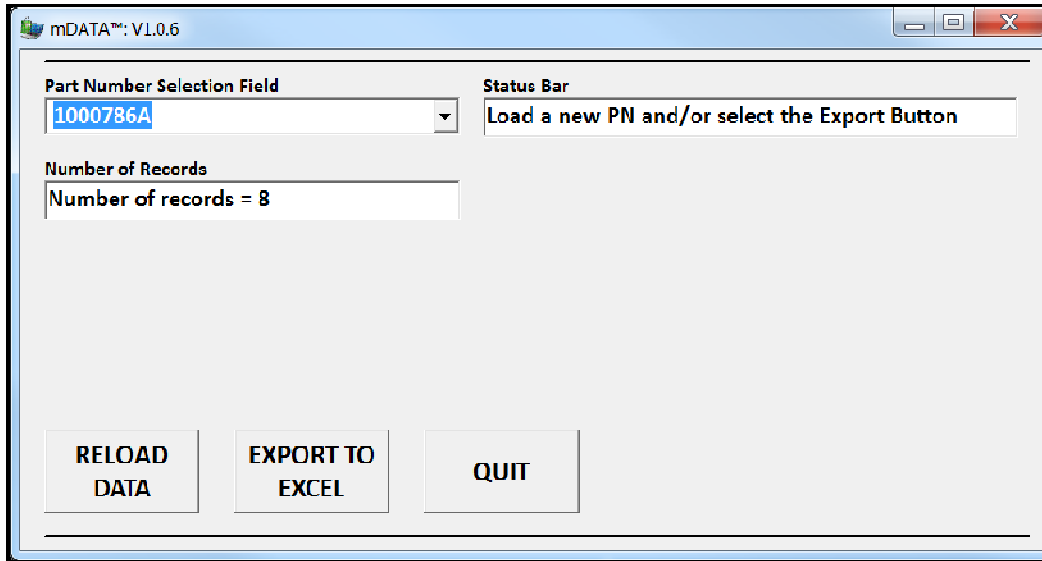


The following provides an example where the User selected the Part Number Selection Field. In this case, four part numbers have been developed and stored using the mDATA™ Software system. Any of these part numbers may be selected and loaded into the software for exporting to Microsoft Excel.



## mDATA™ User Guide

The following screen shot illustrates the case where the User has selected an existing (stored) part number 1000786A. The mDATA™ software reads the stored test results from the MeasureOHM® System from the MySQL database. In this case, there are eight (8) test records stored for PN 1000786A that may be exported.



The mDATA™ program works in real time so the part numbers may be reloaded by selecting the RELOAD data button. Likewise, the QUIT button allows you to exit the mDATA™ program.

**VI. Exporting Test Results to Microsoft Excel**

The MeasureOHM® test results stored in the MySQL database may be exported for part number 1000786A by selecting the EXPORT TO EXCEL button. The following illustrates the mDATA™ export to Microsoft Excel results.

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Part Number	Serial Number	Date	YYYYMM	YYYYNQ	Test Result	Port Num	Port Name	Reading	Min Spec	Max Spec	UOM	Port Result
1	1000787A	1000787A 00000016	2/13/2015 16:54	201502	20151Q	PASSED	1	Port 1	9.88	9.7	10.3	ohms	PASSED
2	1000787A	1000787A 00000017	2/13/2015 16:54	201502	20151Q	PASSED	1	Port 1	9.89	9.7	10.3	ohms	PASSED
3	1000787A	1000787A 00000018	2/13/2015 16:54	201502	20151Q	PASSED	1	Port 1	9.88	9.7	10.3	ohms	PASSED
4	1000787A	1000787A 00000019	2/13/2015 16:54	201502	20151Q	PASSED	1	Port 1	9.88	9.7	10.3	ohms	PASSED
5	1000787A	1000787A 00000020	2/13/2015 16:54	201502	20151Q	PASSED	1	Port 1	9.89	9.7	10.3	ohms	PASSED
6	1000787A	1000787A 00000021	2/13/2015 16:55	201502	20151Q	PASSED	1	Port 1	9.88	9.7	10.3	ohms	PASSED
7	1000787A	1000787A 00000022	2/13/2015 16:55	201502	20151Q	PASSED	1	Port 1	9.88	9.7	10.3	ohms	PASSED
8	1000787A	1000787A 00000023	2/13/2015 16:56	201502	20151Q	PASSED	1	Port 1	9.88	9.7	10.3	ohms	PASSED
9	1000787A	1000787A 00000024	2/13/2015 16:56	201502	20151Q	PASSED	1	Port 1	9.87	9.7	10.3	ohms	PASSED
10	1000787A	1000787A 00000025	2/13/2015 16:56	201502	20151Q	PASSED	1	Port 1	9.87	9.7	10.3	ohms	PASSED
11	1000787A	1000787A 00000025	2/13/2015 16:56	201502	20151Q	PASSED	1	Port 1	9.87	9.7	10.3	ohms	PASSED

**Figure 1 mDATA(TM) exporting results (only Port 1 shown)**

The mDATA™ results provides some very useful time related fields for data mining as follows:

1. Data and time of the MeasureOHM® test
2. A column that categorizes the test result in terms of YYYYMM
3. A column that categorizes the test result in terms of YYYYNQ

### VII. mDATA™ Useful Notes

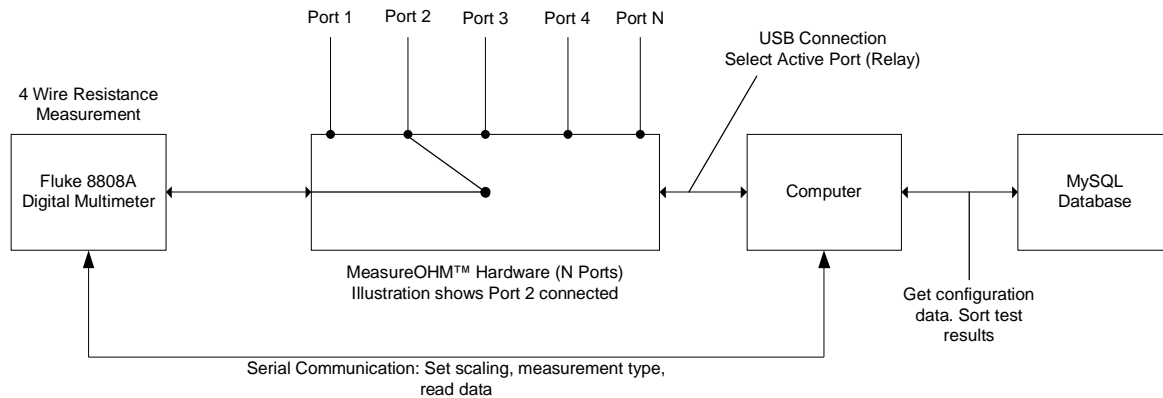
The following summarizes some useful notes with regards to the mDATA™ software utility program:

1. If you are using Microsoft Excel 2003 -- you are limited to 256 columns (approximately 35 data ports) and 65535 rows of data.
2. If you are using Microsoft Excel 2007, 2010, and/or 2013 -- you are limited to 1,048,575 rows of data.
3. If you exceed the limits on row and column data -- the mDATA™ exports the latest test results (LIFO).
4. Although mDATA™ exports the results to Microsoft Excel, you (as the User) are responsible for saving the Microsoft Excel file. mDATA™ does not and will not save the file for you.
5. Exporting of data results may take an extended period of time to complete. The current progress of exporting the data is shown on the screen while the exporting takes place.
6. The exporting process depends on your Internet download speed. Faster is better.
7. Efforts have been made to make the resulting Microsoft Excel format proper. However, you may have to edit some of the column widths, format cell widths, and other misc items. Likewise, the resulting Microsoft Excel file has not been optimized for printing. You will need to setup the print scaling of the resulting worksheet.
7. To take advantage of the MeasureOHM® Data storage feature, an active (annual) subscription is required and/or you must have your own MySQL server that can be used for this purpose. The MeasureOHM® software has been written to write out data to a directed MySQL databases without recompiling.
8. You must have a valid (valid = licensed) version of Microsoft Excel and it must be installed on the computer that is running mDATA™. We support Microsoft Excel 2003, 2010, and 2013. We recommend that Excel 2010 or 2013 be used. We do not support Excel software equivalents that are available.
9. If you have some special requirements with respect to mDATA™ exporting capabilities, please send us an email at [sales@measureohm.com](mailto:sales@measureohm.com) for our review. You can expect this program to be tweaked and improved as it is used by our end users and we receive feedback from them.
10. If you run into an issue please contact us with the problem at [sales@measureohm.com](mailto:sales@measureohm.com) and we will fix it immediately (if we determine that it is indeed a bug versus "this is how the program was intended to work.")



## VIII. MeasureOHM® Summary

The MeasureOHM® Hardware system allows for multiple resistive connections to be connected. Standard configuration for the system consist of 4 and 8 connections. If you need more or less connections -- contact us for a quotation and lead time. The MeasureOHM® software (as written) is capable of supporting up to 48 ports without being recompiled (although it was only tested with an eight port hardware box).



The MeasureOHM® system offers the following features:

- Standard 19 inch rack mount Electronics Cabinet (Height = 4U)
- Up to Eight (8X) device/port resistances measured sequentially (approximately 1.5 seconds between measurements)
- Wide Resistance Measurement Range: 10 microohms to 100 Megaohms via the integration of a Multiplexed/Switched Fluke 8808A Digital Multimeter
- Four Wire (Kelvin) Resistance Measurement method results in minimizing test lead resistances
- Use of the mSPECIFY™ software utility program which is used to configure and store the test parameters for a specific test part number (up to 100 unique test profiles may be stored)
- Full traceability of electrical resistance measurements to the test part serial number by logging of all test measurements and results to a MySQL Database with the first year of service provided at no charge.
- Use of the mDATA™ software utility program which is used to data mine and export the stored results in MySQL directly to MicroSoft Excel.
- Optional implementation of Good and Bad Gage R&R units (daily runs required). This process is a simple way of knowing that your measurement system is setup and running correctly.

The MeasureOHM® System is validated which means that you can easily integrate the System into your ISO 9000 Quality System as part of your Manufacturing Environment.