MSpecify® for Measure2D™Software
User Guide

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Use of the Software is subject to our End Users License Agreement (EULA).

Warranty

Roth Technologies, LLC warrants to the original purchaser that its products and any supplied component parts thereof, will be free from defects in workmanship and materials for a period of twelve (12) months from the date of purchase. We will, without charge, repair or replace (at OUR option) defective product or component parts.

Exclusions: This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs. The warranty is void if the serial number is altered, defaced or removed. Roth Technologies, LLC shall not be liable for any consequential damages, including without limitation damages resulting from loss of use. If this exclusion provision is not acceptable then we require that you return the unit to us for a full refund within the first 30 days of purchase.

This warranty gives you specific rights and you may have other rights, which vary from state-to-state.

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I. Introduction

Welcome to the MSpecify® for Measure2D™ User Guide. This manual will provide basic instructions on how to implement and use the Software.

II.   Reference Documents

- **End User License Agreement (EULA)**, Roth Technologies, LLC
- **Keyence OM Connection Guide**, Roth Technologies, LLC
- **Measure2D™ (Software) Installation Guide**, Roth Technologies, LLC
- **Measure2D™ User Guide**, Roth Technologies, LLC

III.   Necessary Components

The following components are necessary in order to run the Software:

1. The Installation Software that was provided with your order. This may have been provided to you on a USB Flashdrive, from our website, and/or directly via a Dropbox link

2. The MySQL ODBC driver must be loaded on your test computer.

3. Your computer that is used to run the software MUST be connected to the Internet and Port 3306 must be open on your Test Computer and Network for our **Server Static IP Address 74.208.165.58**. 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.
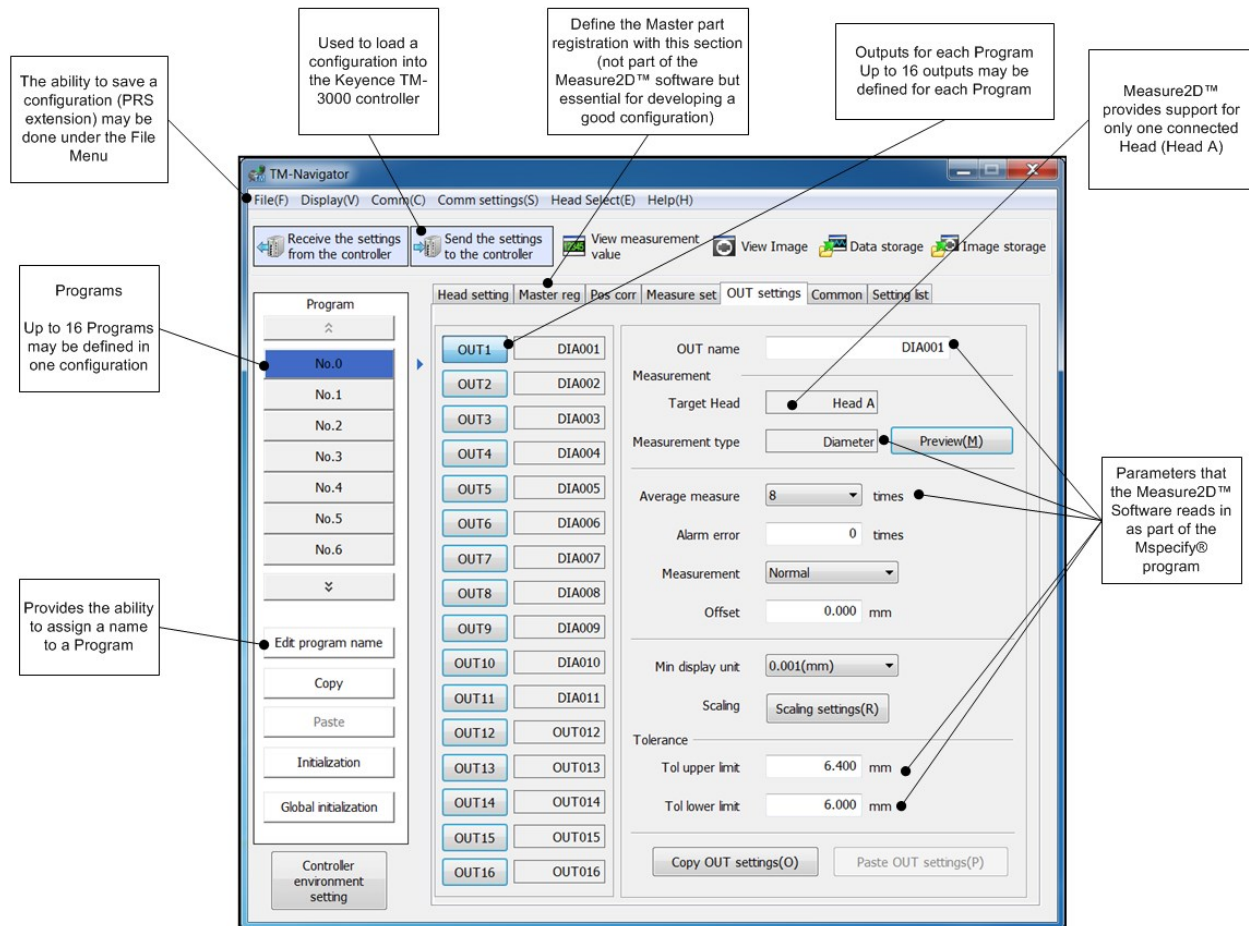
IV.   Program Purpose

The purpose of MSpecify® for Measure2D™ (heanceforth referred to as the Software) is to create Test Profiles that are used by the Measure2D™ software program.

- Measure2D™ Test Profiles are created by importing a Keyence TM-3000 PRS File. The Keyence PRS File contain all the information required by the Keyence TM-3000 controller when making measurements of the test article.
- The Keyence TM-3000 PRS File is created by using the Keyence TM-H1 Navigator software. This Software may be purchased directly from Keyence. A demo version of the software may be downloaded directly from the Keyence webiste that may be used for 30 days.

The MSpecify® Software may be run on any computer within your organizaton. The computer running the Software does not require a connection to the Keyence TM-3000 controller.

The User develops a Keyence test configuration (not to be confused with the Measure2D™ Test Profile) using the Keyence TM-H1 Navigator Software. This document will not provide the complete details and the methodology required -- the User is directed to Keyence Document 96M11229 which is available for download from the Keyence website. The following screenshot from the Navigator Software illustrates some of the key elements from the Navigator software excluding the method of defining the Outputs. This figure documents the elements that are read in from the Keyence PRS file into the Mspecify® for Measure2D™ Software via the import process.
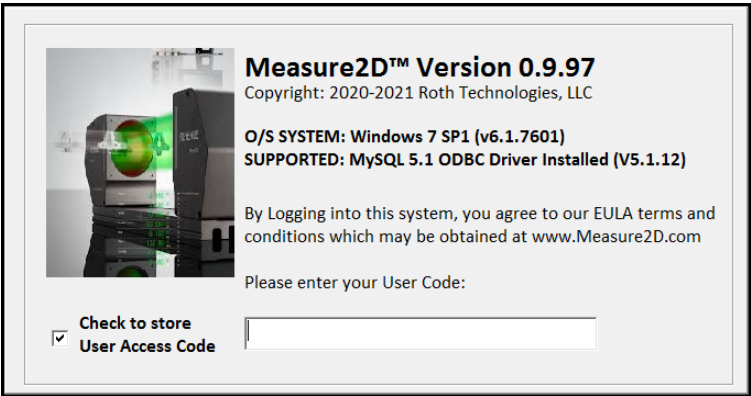

USL/LSL

- The Software imports the Tol upper lmt (Upper Specification Limit) and Tol lower lmt (Lower Specification Limit)
- The Software allows the User to change these limits within the MSpecify® program. Any changes to these limits are NOT reflected back to the PRS file. If you change the USL/LSL values in MSpecify® there will be a discontinuity between it and the Keyence PRS file.
- Ultimately, the Software utilizes the limits defined in the Measure2D™ Test Profile to evaluate the PASS/FAIL state of a part measurement
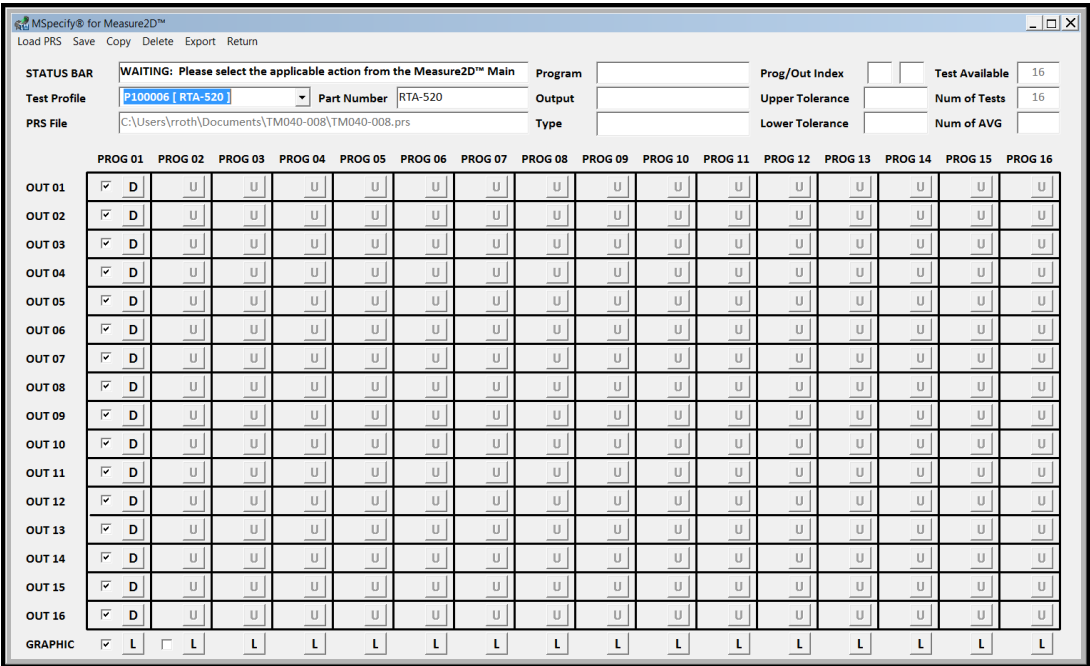
V.   Software Login with the User Access Code

The following steps may be taken for reviewing and developing Test Profiles using the Software.

Your company was provided a sixteen character length access code for logging into the Software. This character string identifies your company within the Software. Optionally check the [Check to store User Access Code] to store your UAC on your computer's harddrive which allows it to be automatically loaded at the time of software login. The UAC code is the same one that is used for the Measure2D™ Software.
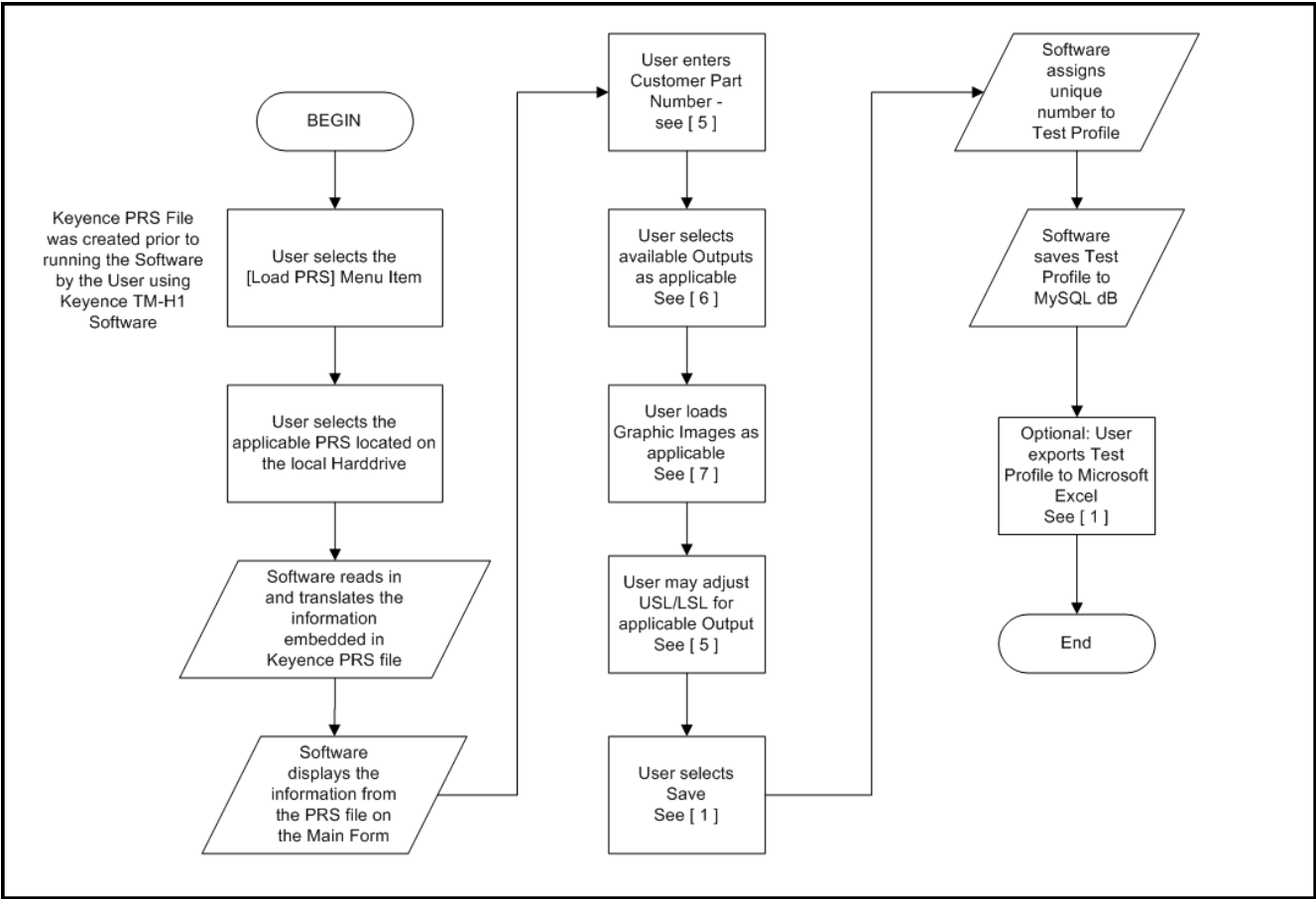

After logging into the system, the Main Form will appear on the screen as shown. The software at this point will connect to the MySQL database and download all applicable Test Profiles associated with your company. The following screenshot shows the overall User Software form/interface.
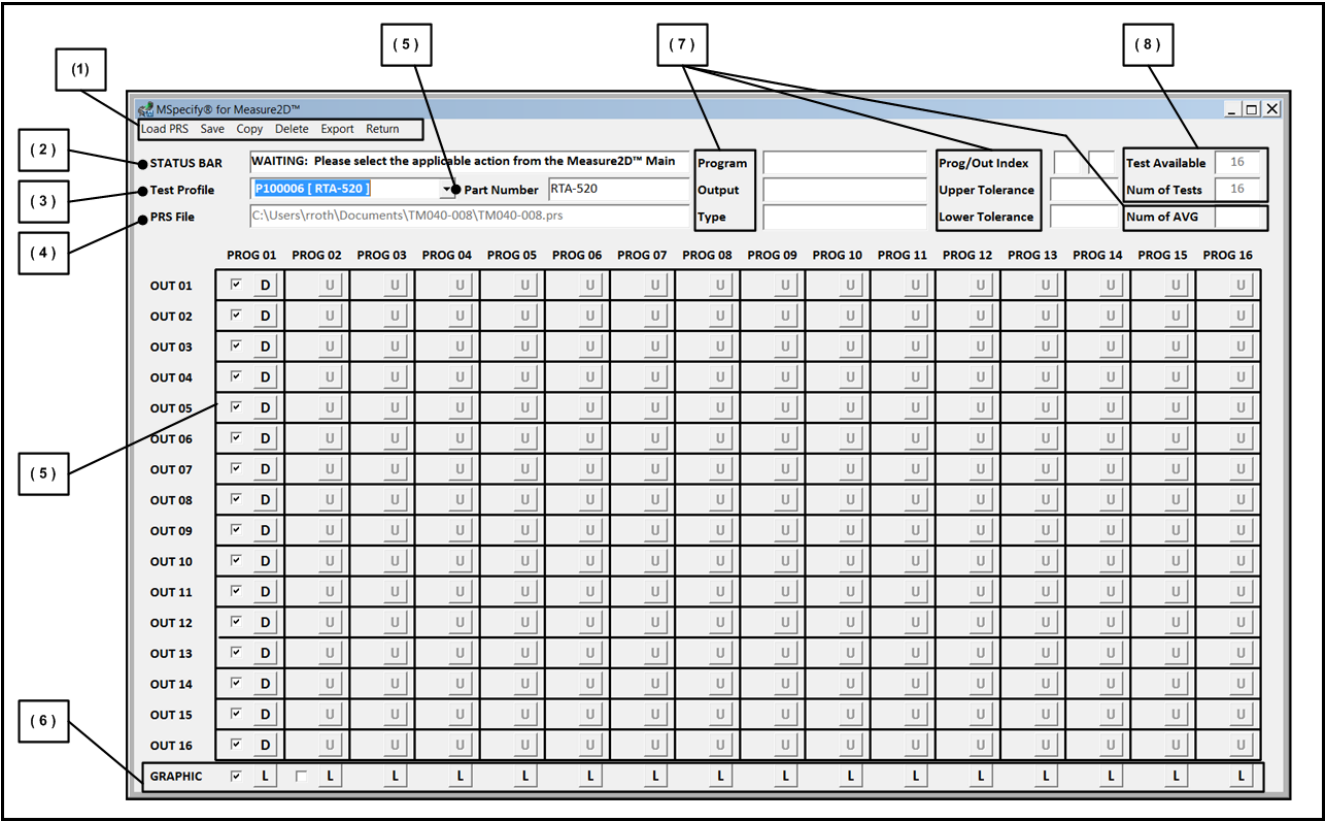
VI.   Software Process Flow

The following flowchart summarizes the Software process flow. This process flow assumes that the User is originating a new Test Profile. The applicable number listed in some of the operational blocks are described in detail in Section VII.

Section VII of this document provides detailed information about some of the main features of the Software's Main Form.

VII. MSpecify® for Measure2D™ User Interface

This section illustrates the MSpecify® for Measure2D™ User Interface and the applicable menu buttons/command buttons that support the flowchart shown in Section VI of this document. The following detailed summaries are organized by the numerical identifications shown on the figure below.

Summary

(1) Main Menu: The menu items listed allow the User to load, save, copy, and export the profile to Excel.

(2) Status Bar: The Status Bar provides information to the User about the current state of the Software

(3) Test Profile: The User selects the applicable (defined) Test Profile that is programmed into the Keyence TM-3000 controller via the Keyence TM-H1 Navigator software. The Software does NOT have the ability to directly program the Keyence controller. The User is responsible for developing and programming the Keyence TM-3000 controller using the TM-H1 software.

(4) PRS File: The Test Profile loaded/selected will show the location and name of the PRS file that was used to create the Measure2D™ Test Profile

(5) Customer Part Number: This text field (editable by the User) contains the Customer part number of the test article that will be measured. This field is optional and may be left blank.

(6) Programs/Outputs: The Keyence TM-H1 Naviagator Software allows for the creation of sixteen (16) programs and sixteen (16) outputs for each Program.
   a. The Software displays to the User the Ouputs that are available for each Program based on the information contained within the Keyence PRS file. This information is provided to the User in the User Interface by the [D] and [U] values.
      i. [D] = Program/Output is available
      ii. [U] = Program / Output is not available
   b. Selecting the [D] for a specific program/output will result in the Software displaying the Output summary – see (7)
   c. The Checkbox next to the [D] allows the User to enabled and/or disable the Output for the Test Profile.
      i. When the Checkbox is checked the Program / Output is Enabled for the Test Profile
      ii. When the Checkbox is not checked the Porgram / Output is Disabled for the Test Profile
   d. The Software allows for one (1) to twenty (20) active measurements
   e. The Software allows for up to sixteen (16) different orientations when measuring the test article.
      i. The User is responsible for the fixturing/alignment of the test article within the Keyence measurement head.
      ii. The User is responsble for developing the programming of the Keyence TM-3000 measurement system using the Keyence TM-H! Naviagator software.
   f. Multiple Test Profiles may be developed (generated) and saved from one PRS file configuration

(7) Graphic Image Management: The Software allows for a graphic Help image to be associated with each measurement position.
   a. Select the [L] to load the graphic image into the MySQL database. The Software supports jpg, bmp, and gif images. The Software does not support the png file format.
   b. Select the checkbox to actually enable the image as part of the Test Profile

(8) Program/Output summary: Selecting any of the available programs/outputs will result in a summary of the information obtained from the Keyence PRS file.

(9) Number of Tests Available / Number of Tests: This section shows the number of tests available from the Keyence PRS file (up to 16 * 16). This section also shows the number of the selected available programs/outputs as part of the Test Profile.

VIII.   Exporting a Measure2D™ Test Profile to Microsoft Excel

The Software provides a method to export a Test Profile directly to Microsoft Excel. Microsoft Excel must be purchased (valid license) and installed on the User's computer in order for this export function to be active.

This feature eliminates the requirement to write the Test Profile down by hand or making screenshots of the Software. Instead the Software directly exports the Test Profile directly to Microsoft Excel in a "ready to print" format.
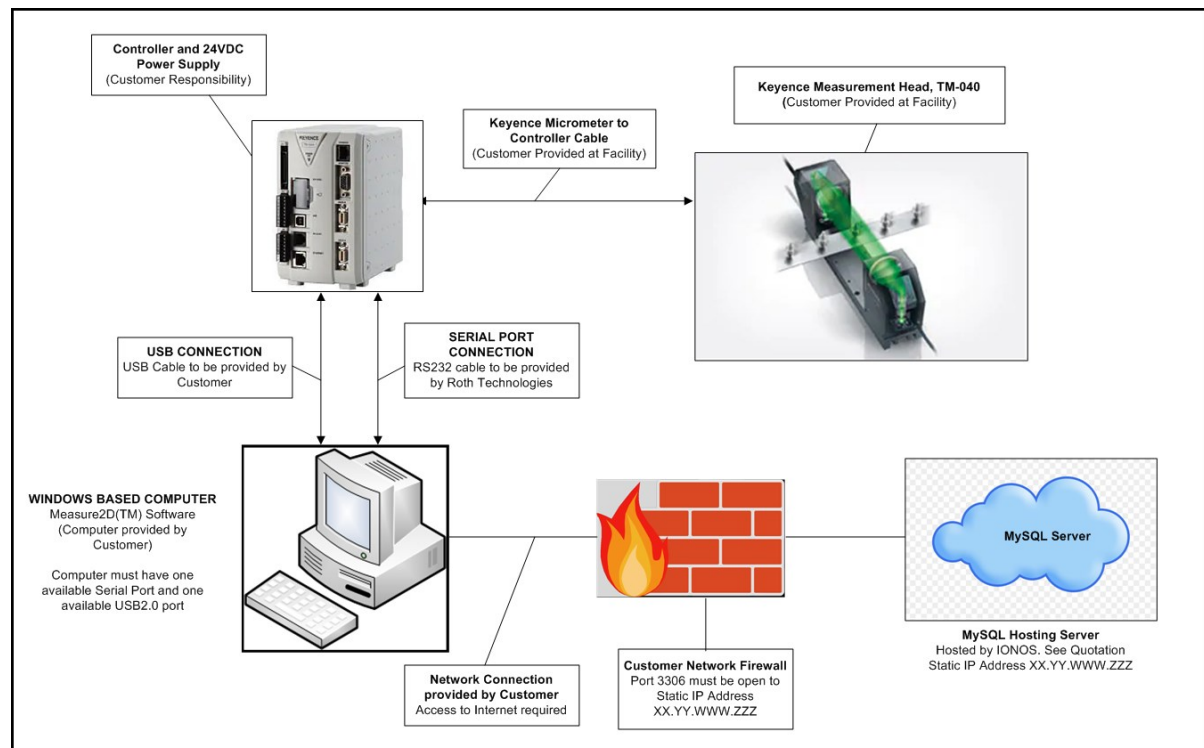
- The filename of the exported summary includes a date/timestamp and the Test Profile number
- The file is stored in the [My Documents] folder on your computer

A screenshot of the export format is provided below.

IX. Schematic and Algorithm Overview

The following schematic illustrates the connection between all the applicable required equipment

The applicable Static IP Address of the supporting Server that supports the Measure2D™ software is 74.208.165.58.

Please review our Measure2D™ Installation guide if you have any questions.