



SANA2

Fiber Endface Interferometer

User Manual

Please read this manual thoroughly before use.
Properly keep this manual with the equipment
for future reference.

Introduction

Dear customer:

Thank you for choosing SANA2 product. SANA2 product has high quality and excellent performance. To make full use of this product, please read this manual carefully before using. Whenever you have any questions, please contact us and we are happy to support.

Marks

The following symbols are used for the important information in this manual.

Caution

The notice and restrictions in the process.

Remarks

1. The manual could be upgraded without further notice. Please kindly understand.
2. As far as possible, the content of this manual is accurate. However, if there is anything erroneous or ambiguous, please contact us.

Caution in using

1. Please do not use the interferometer in high vibration area.
2. Please clean the fixture periodically to make sure the fixture is clean and avoid damaging the fixture.
3. Please move the instrument gently.
4. Please cover the instrument if not use in short terms and put into container if not use in long term.
5. Do not change the power adaptor, only use the adaptor from Dimension.

Warranty

Warranty Term

Dimension Technology warrants that for a period of one (1) year from the Shipping Date, the product purchased by customer shall be free of defects in material and workmanship under normal authorized use consistent with the product instructions.

Warranty Content

In the event that Dimension Technology receives notice during the warranty period that any part does not conform to its warranty, Dimension Technology's sole and exclusive liability shall be, at its sole option, to either repair or replace the non-conforming part in accordance with this limited warranty.

Warranty Exception

No warranty will apply if

- 1) Device damage caused by wrong operation;
- 2) Unconventional repair or modification;
- 3) The causes of failure outside of the instrument;
- 4) Used in high temperature and humidity, corrosive gas, harsh conditions such as vibration;
- 5) Fires, earthquakes and other natural disasters as well as the pollution caused by radioactive substances and harmful substances, and when the other force majeure such as war, riot, crime.
- 6) Consumables and consumable parts.

Content of manual

1 Start Introduction of the containing parts.

2 Installation Installation of instruments.

3 Hardware Operation of hardware.

4 Software Installation and operation of software.

5 Scenario Scenario of usage.

6 Problems Problems and solvent.

7 Attachments Contact information and etc.

CONTENTS

INTRODUCTION	1
WARRANTY	2
CONTENT OF MANUAL	3
CONTENTS	4
1 START	7
1.1 CHECK PACKAGE	7
1.1.1 Main Frame	7
1.1.2 Accessory	7
1.2 INTRODUCTION OF MACHINE	7
1.2.1 Front panel of Future	7
1.2.2 Side Panel	8
1.3 ACCESSORIES	9
1.3.1 Fixtures	9
1.3.2 APC positioning piece	9
1.3.3 Calibration kit	10
1.3.4 SC/APC reference kit	10
1.3.5 Fixture lock screw	10
2 INSTALLATION	12
2.1 INSTALLATION ENVIRONMENT	12
2.2 PARTS INSTALLATION	12
2.2.1 SC fixture installation	12
2.2.2 LC fixture installation	13
2.3 DEVICE CONNECTION	14
2.3.1 Connect device to PC	14
2.3.2 Power supply installation	15
3 HARDWARE BASIC OPERATION	16

3.1	HARDWARE PERFORMANCE CHARACTERISTICS	16
3.2	SPECIFICATION	17
3.3	HARDWARE OPERATION	18
3.3.1	<i>Manual focusing</i>	18
3.3.2	<i>MEAS switch measurement</i>	18
3.3.3	<i>Lock handle operation</i>	19
4	SOFTWARE BASIC FUNCTIONS.....	20
4.1	SOFTWARE FEATURES.....	20
4.2	SOFTWARE INSTALLATION.....	20
4.2.1	<i>Requirements</i>	20
4.2.2	<i>Software installation environment</i>	20
4.2.3	<i>Software installation process</i>	21
4.3	BASIC FUNCTIONS OF SOFTWARE INTERFACE.....	24
4.3.1	<i>Main interface of software</i>	24
4.3.2	<i>Real time image display area</i>	25
4.3.3	<i>Measurement results image display area</i>	25
4.3.4	<i>Measurement preset area</i>	26
4.3.5	<i>Digital display area</i>	27
4.3.7	<i>Measure control button area</i>	28
4.3.7	<i>Measure task interface</i>	28
4.3.8	<i>Calibration interface</i>	31
4.3.9	<i>Setting interface</i>	31
5	SOFTWARE OPERATION INSTRUCTIONS	35
5.1	IMAGE CENTER OPERATION.....	35
5.2	CALIBRATION OPERATION	36
5.2.1	<i>Calibration procedure</i>	36
5.2.2	<i>Calibration considerations</i>	37
5.3	MEASUREMENT TASK SWITCHING	38

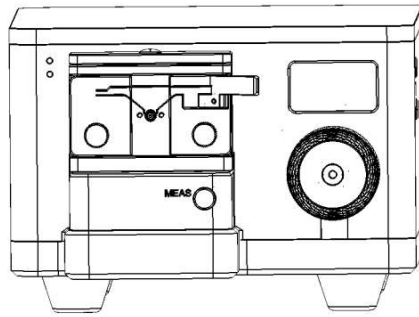
5.3.1	Setting angle 0	38
5.3.2	Setting angle 8	39
5.4	EDIT MEASURE TASK	39
5.5	MEASURE METHODS	41
5.5.1	Measure trigger mode.....	41
5.5.2	Measurement procedure.....	41
5.6	LOCK UNLOCK.....	42
6	USE SCENARIO GUIDANCE	43
6.1	SINGLE PC FIBER OPTIC CONNECTOR INTERFERENCE MEASUREMENT	43
6.1.1	Equipment installation	43
6.1.2	Connect device to PC	43
6.1.3	Open software.....	44
6.1.4	Set measure task	44
6.1.5	Calibration.....	44
6.1.6	Measure.....	45
6.1.7	Review measure results	45
6.2	APC FIBER OPTIC CONNECTOR INTERFERENCE MEASUREMENT.....	45
7	EXCEPTION HANDLING	46
7.1	CAMERA EXCEPTION	46
7.2	EXCEL EXCEPTION.....	46
7.3	ENCRYPTION LOCK EXCEPTION	46
7.4	MEASURE EXCEPTION	46
APPENDIX	47

1 Start

1.1 Check package

Please pick out the containments in the package and check if there are any missing parts. If there are missing parts, please contact Dimension.

1.1.1 Main Frame



1.1.2 Accessory

Please check the accessories on the package list, if there are any missing parts, please contact us.

1.2 Introduction of machine

1.2.1 Front panel of Future

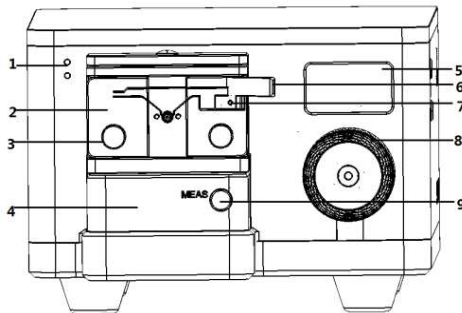


Figure 1- 1 Front panel of Future

1. Result Indicator: the red light represent fail and green light represent pass.

2. Fixture: Lock the connector when testing.
3. Fixture screws: Lock the fixture to machine.
4. Fixture Platform: the area to lock the fixture.
5. Power indicator: turns on when the power is on.
6. Lock Handle: turn left to lock the fixture.
7. Handle sensor: to trigger the measurement when lock fixture with handle.
8. Focusing adjustment screw: rotating the focusing adjustment screw can obtain the interference pattern of the end face of the tested device;
9. Measure Switch: to trigger the measurement.

1.2.2 Side Panel

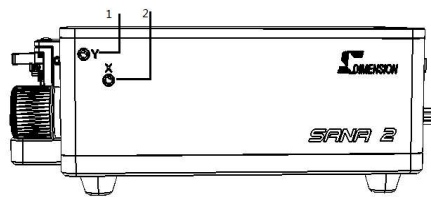


Figure 1- 2 Side Panel

1. Y Axis: to adjust the machine in Y axis
2. X Axis: to adjust the machine in X axis

1.2.3 Back Panel

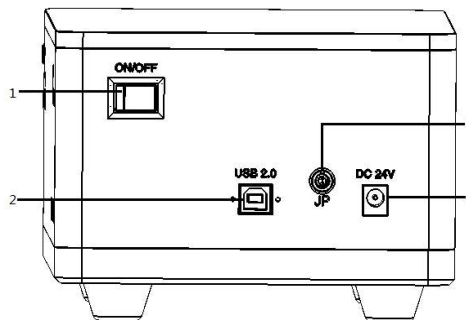


Figure 1- 3 Back Panel

1. Power switch: to turn on or off power.
2. USB 2.0 port: connect the machine to PC.
3. Extend port: connect extend instrument.
4. Power supply: use 24V power adaptor.

1.3 Accessories

1.3.1 Fixtures

Caution:

LC fixture is used for LC, MU with 1.25mm diameter.

SC fixture is used for SC, ST with 2.5mm diameter.

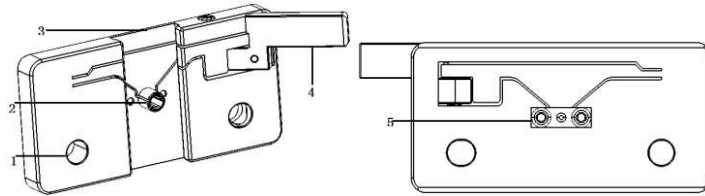


Figure 1- 4 Fixtures

1. Screw Hole: to lock fixture to platform.
2. Connector fixture hole: to insert connector.
3. APC position piece install point: install APC positioning piece.
4. Lock Handle: to lock the connector.
5. Fixture piece.

1.3.2 APC positioning piece

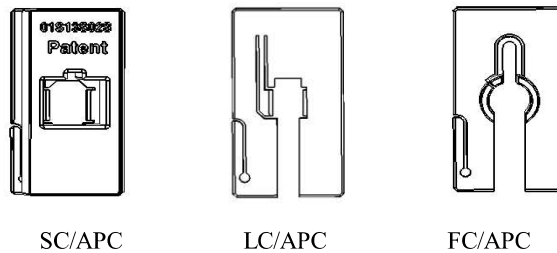


Figure 1- 5 APC Positioning piece

SC/APC position piece: for testing SC/APC connector.

LC/APC position piece: for testing LC/APC connector.

FC/APC position piece: for testing FC/APC connector.

1.3.3 Calibration kit

Caution:

1. Each kit has serial number(at the bottom) with calibration report.
2. Please put the cap on the kit and put into containing box after calibration to protect the kit.

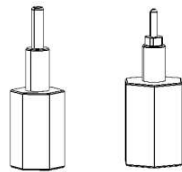


Figure 1- 6 Calibration kit

SC Calibration kit: for SC/PC calibration.

LC Calibration kit: for LC/PC calibration.

1.3.4 SC/APC reference kit



Figure 1- 7 SC/APC Reference kit

SC/APC reference kit: for reference SC/APC.

Caution:

1. Each reference kit has serial number on the label with data in the package.
2. Please put on cap and put into package after test to protect the kit.

1.3.5 Fixture lock screw



Figure 1- 8 Lock screw

Fixture locking screw: for locking fixture.

Caution:

Each device is equipped with a 2PCS fixture locking screw. Rotate the screw simultaneously until the fixture is locked.

2 Installation

2.1 installation environment

The installation environment should meet the following conditions:

1. Flat, no vibration platform;
2. Keep instrument and fixtures clean.

2.2 Parts installation

2.2.1 SC fixture installation

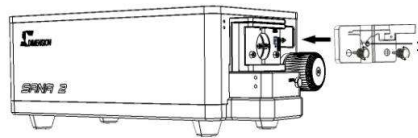


Figure 2- 1 SC fixture installation

Usage: Used for measuring SC single core connector.

Caution: In the process of installation, keep the instrument and fixtures clean, lock two screws at the same time.

SC/APC positioning piece installation

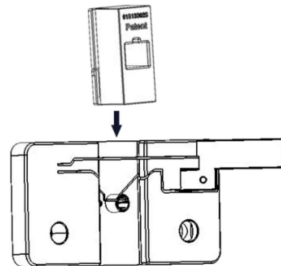


Figure 2- 2 SC/APC positioning piece installation

Usage: To keep the direction of connector when measuring SC/APC connector.

Caution: Positioning piece should be installed before fixture.

2.2.2 LC fixture installation

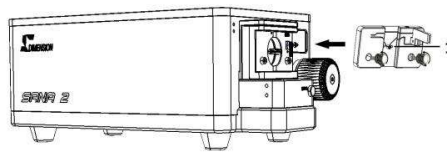


Figure 2- 3 LC fixture installation

Usage: Used for measuring LC single core connector.

Caution: In the process of installation, keep the instrument and fixtures clean, lock two screws at the same time.

LC/APC positioning chip installation

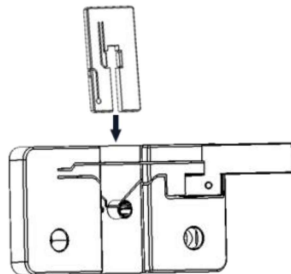


Figure 2- 4 LC/APC positioning chip installation

Usage: To keep the direction of connector when measuring LC/APC connector.

Caution: Positioning piece should be installed before fixture.

FC/APC positioning chip installation

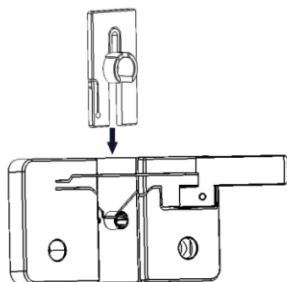


Figure 2- 5 FC/APC positioning chip installation

Usage: To keep the direction of connector when measuring FC/APC connector.

Caution: Positioning piece should be installed before fixture.

2.3 Device connection

2.3.1 Connect device to PC

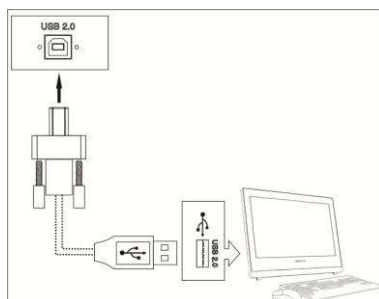


Figure 2- 6 Connect device to PC

Caution: Keep the power off when connecting USB, only turn it on after connecting USB.

2.3.2 Power supply installation

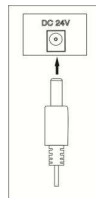


Figure 2- 7 Power supply installation

Caution: Keep the power off when connecting power to avoid damaging instrument. Do not replace the power adaptor, using only the adaptor supplied by the dimension technology.

3 Hardware basic operation

3.1 Hardware performance characteristics

1. Full automatic focus measurement

SANA 2 has switch in the fixture that can trigger measurement by locking the fixture, the machine also has a switch at the platform.

2. 0~12 degree APC angle automatic adjustment

SANA 2 has unique fixture platform design and able to adjust 0~12 degree to meet the special needs of the connector test requirements.

SANA 2 fixture platform can provide high precision adjustment, and software to provide angle compensation function at each measurement to achieve higher accuracy.

3. Adaptive fixture locking strength

SANA 2 fixture using adaptive locking structure design, could adjust the spring lock strength, to ensure the consistency of each locking force and reduce the wear and tear of the fixture and extend the service life.

4. Fast test speed

SANA 2 excellent software and hardware design greatly improve the speed of the test, 0.5s to complete the test of a single connector in fastest condition.

5. Unique focus handle

The unique designed handle can make focus adjustment easy and comfortable.

6. Panel LED indicator for test results

SANA 2 has a panel LED indicator to show test results. LED turns red represents FAIL, and green for PASS.

7. Excellent software design

SANA 2 uses a new interface design, software optimization, fast switching, automatic measurement, automatic exposure mode centered, AF provides superior functionality, faster measurement speed and more intuitive interface for customers.

8. Stable data connection and incomparable seismic performance

SANA 2 using the locking USB data line, to ensure that there is a stable and high speed data connection;

SANA 2 new hardware design is able to obtain stable test results and the accuracy of measurement in vibration factory environment.

3.2 Specification

Items	Range	Repeatability	Reproducibility
Radius of curvature (mm)	3~Flat	±0.1%	±0.2%
Apex offset (UM)	0~250	±0.5	±1.5
Fiber height (nm)	-1000~1000	±1	±2
Angle (degree)	0~12	±0.01	±0.015
Measure Speed		0.5s	
Endface resolution		0.29um	
Size		283mm*150mm*108mm(L*W*H)	
Power supply		DC 24V	
Data connection		USB 2.0	

Repeatability: Sigma value obtained after 50 times repeated measurement.

Reproducibility: Sigma values obtained after 50 times of repeated plug in and out measurement.

3.3 Hardware operation

3.3.1 Manual focusing

Manual focus adjusting screw (according to circumstances to turn to the left or right) for end face of the device being tested clear interference pattern.

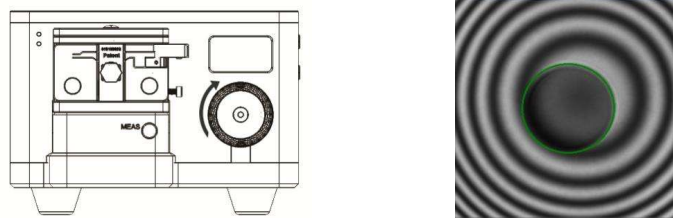


Figure 3- 1 Manual focusing

3.3.2 MEAS switch measurement

Make sure equipment connection is normal, open the software, press MEAS button to trigger measurement.

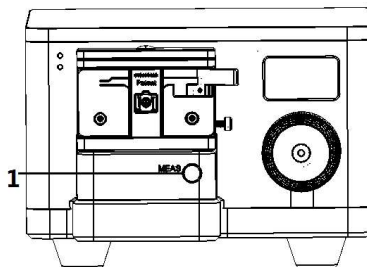


Figure 3-2 MEAS switch measurement

3.3.3 Lock handle operation

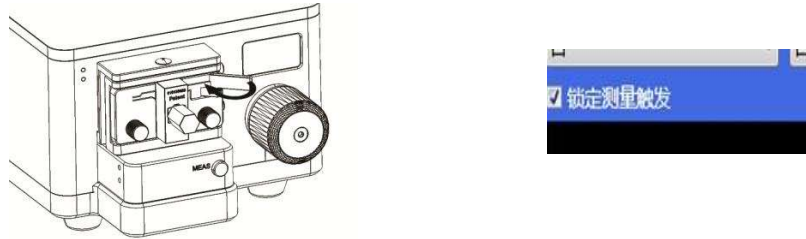


Figure 3- 3 Lock handle operation

Locking handle prevents connector loosening to decrease influence of the measuring result.

Tip: Make sure "lock trigger" of the software interface is checked to trigger measurement after lock.

4 Software basic functions

4.1 Software features

1. WPF architecture: Can be adapted to a variety of resolution and adjust the layout size;
2. Device could be searched automatically: Just insert the USB interface of the interferometer to the computer can automatically find the corresponding interferometer;
3. One-click automatically adjust the exposure function: Just click the auto exposure button can complete the action of automatic exposure;
4. No third party software module, runs more quickly and stable;
5. Optimized image processing and algorithm makes the measurement accurate and stable, even if image quality is poor;
6. Measurement standards based on the latest IEC standard. The user can customize the settings to meet their needs.
7. Data and report saving or not could be determined by measure result automatically.
8. Interferometer calibration has been optimized to improve the calibration accuracy. Future provides mechanical calibration process;
9. Interface displays the numerical results, 3D image and data fitting that shows intuitive details of fiber connector.
10. The result could be saved with the standard EXCEL, PDF format.

4.2 Software installation

Caution: The software is suitable for use with SANA2.

4.2.1 Requirements

1. System requirement: Windows 7 or above.
2. Memory 4GB or above.
- 3 USB interface 2.0.
- 4 Office2007 or above.

4.2.2 Software installation environment

1. .NET 4.5 Framework or above.

- 2. Visual C++ 2012.
- 3. Visual C++ 2013.
- 4. Camera driver.

4.2.3 Software installation process

Warning: double click on the installation application, you need to install the software dependencies and then install the software ontology.

Software dependency installation

Double click on the install software to pop the install interface, click "next" to install the software dependencies.



Figure 4- 1

First Installation of Framework .NET 4.5, if the module is installed, it would not pop out to install this module. Install prompt as shown below:



Figure 4- 2

Second: Install C++ Visual 2012 check "agree to the license I terms and conditions" click "Install".

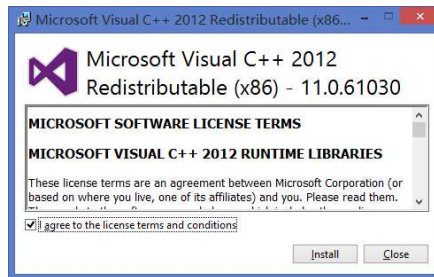


Figure 4- 3

Again: Install C++ Visual 2013 check "agree to the license I terms and conditions" click "Install".

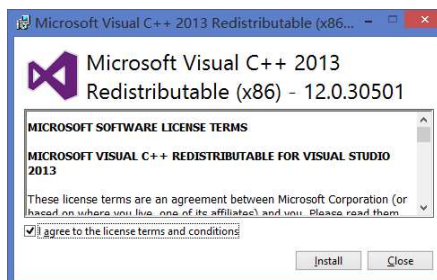


Figure 4- 4

Last: Device driver installation, click "Install" to install as shown below:

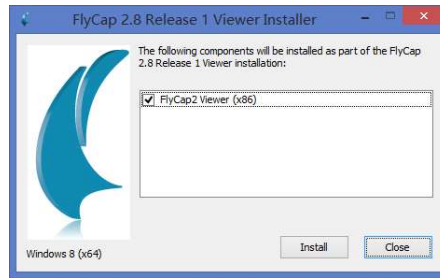


Figure 4- 5

Next click "next" to finish driver installation, as shown below:

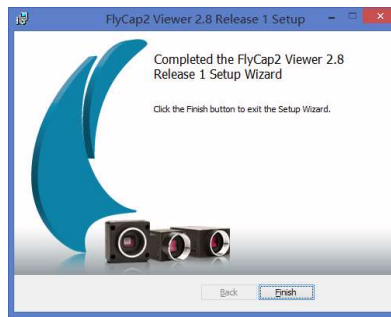


Figure 4- 6

Software installation

After the software dependencies installed, the software will enter interface as below:



Figure 4- 7

Click "next" to enter the installation interface, click "Install" and wait for the software installation, and finally click "OK" to complete the software installation, as shown below.



Figure 4- 8

4.3 Basic functions of software interface

4.3.1 Main interface of software

Caution:

1. Before opening the software, ensure that the device is connected to the computer.
2. Before opening software, ensure the power supply of equipment.
3. Before opening software, ensure that the power has been turned on.

Running the desktop shortcut, after the software starts, can open the software main interface, as follows:

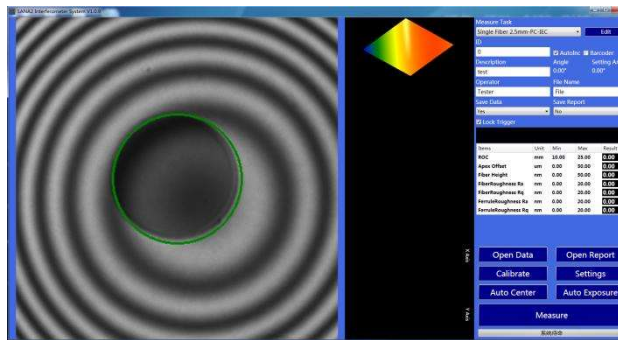


Figure 4- 9 Software main interface

Note: the software open process last for a few seconds.

The software main interface like below after clicking measure:

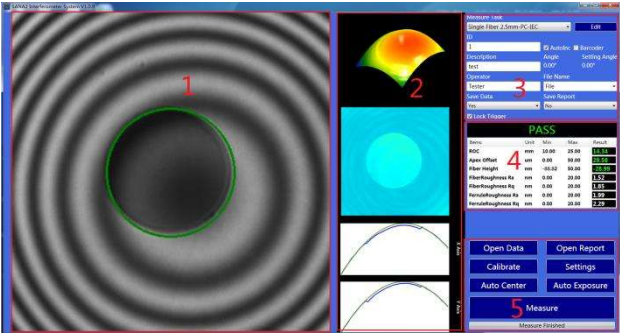


Figure 4- 10 Software measure interface

The software is divided into five parts, each part of the name:

- 1. Preview zone
- 2. Result image zone
- 3. Setting image zone
- 4. Result parameter zone
- 5. Control zone

4.3.2 Real time image display area

The real-time image area displays the real-time image of connector. The green circle shows fiber center. The circle is slightly larger than fiber and fiber is in the circle if auto center is successful.

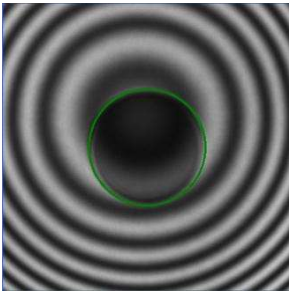


Figure 4- 11 The interference interface real-time image

4.3.3 Measurement results image display area

The interference results are as follows:

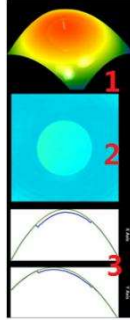


Figure 4-12 The interference results image

This area displays the current results in three different ways:

1. 3D graph: The surface of connector is shown in 3D graph, right mouse button can rotate, the mouse wheel can zoom in and out.
2. Roughness map: The size of the roughness is shown in the form of two dimensional graphs.
3. Plot chart: The X, Y direction of the current connector is displayed in the form of plot graph.

4.3.4 Measurement preset area

Measure Task		
Single Fiber 2.5mm-PC-IEC	<input type="button" value="Edit"/>	
ID		
0	<input checked="" type="checkbox"/> AutoInc	<input type="checkbox"/> Barcoder
Description	Angle	Setting Angle
test	0.00°	0.00°
Operator	File Name	
Tester	File	
Save Data	Save Report	
Yes	No	
<input checked="" type="checkbox"/> Lock Trigger		

Figure 4-13 Measurement preset area

Measure task: Different task types can be selected by the drop - down menu.

Edit: Click to enter the measurement task set interface.

ID: The serial number of the current measurement is displayed in the column.

AutoInc: ID number automatically plus 1 after measurement if checked.

Barcode: The information in ID column will be cleaned for receive barcode scanner when checked.

Description: The description of the current product can be manually entered so that the operator can identify the characteristics of product.

Content will be automatically saved in the Excel form of the measurement data and the report.

Angle: Real time display of the current fixture angle.

Setting angle: Display the setting angle of the current measure task.

Operator: Can manually enter the name of the current operator, the content will be automatically saved to the data table.

File name: You can manually enter the file name of the test data to be stored, so that the operator can sort the data, and the file name of the first 10 times can be viewed through the drop-down menu.

Save data: Can choose whether to save the data through the drop-down menu.

Save report: Can choose whether to save the report by the drop-down menu.

Lock trigger: Lock the fixture will trigger measurement, default state is on.

4.3.5 Digital display area

The interference results will show in digital display area:

Items	Unit	Min	Max	Result
ROC	mm	5.00	30.00	14.27
Apex Offset	um	0.00	70.00	25.00
Fiber Height	nm	-158.16	100.00	-33.20
FiberRoughness Ra	nm	0.00	20.00	1.16
FiberRoughness Rq	nm	0.00	20.00	1.35
FerruleRoughness Ra	nm	0.00	20.00	1.44
FerruleRoughness Rq	nm	0.00	20.00	1.73

Figure 4- 14 Interference digital results

Digital display area measurement results: lists the current measurement task corresponds to the judgment standard of text (white) and actual measurement value (black).

If measured values stays in the standard, the judgment bar shows words in green display;

If there are one or more of unqualified with the standard, judgment bar shows words in red display.

The measured value in white font is that the data did not participate in the results of the decision (measure task is applied).

4.3.7 Measure control button area



Figure 4- 15 Measure control button area

Open data: Click to open the data table of last measurement after the data is saved.

Open report: Click to open the last report after report is saved.

Calibration: Click to enter the calibration interface.

Settings: Click to enter the password input dialog box, enter the password, click OK to enter the system settings interface.

Auto Center: Click to center the image.

Auto Exposure: to set exposure automatically

Measure: Click to perform a single measurement.

Progress bar: Shows the progress of current operation.

4.3.7 Measure task interface

Click the "Edit" button on the main interface, enter the password input dialog box, as follows:



Figure 4- 16 Password box

Enter the password "dimension" to enter the measurement task editing interface, as follows:

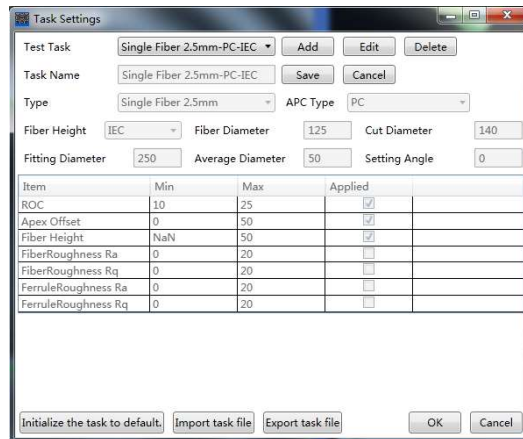


Figure 4- 17 Measure task setting

Measure tasks: a different task can be selected by the drop-down menu.

Add: click to add a custom measure task with the current task.

Edit: click to edit the current custom measure task.

Delete: click to delete the current custom measure task.

Task name: name of the custom measure task can be modified in editing mode.

Save: Click Save the current changes and exit the edit mode.

Cancel: click cancel current modify and exit edit mode.

Connector type: connector type for measure tasks.

APC type: fiber optic connector angle type, PC or APC.

Fiber height: a reference to the parameters of the standard: IEC or IEC2006.

Fiber diameter: the fiber diameter of the connector, default is 125um.

Excluding diameter: removal diameter of the fiber for fitting, default is 140um.

Fitting diameter: the core to participate in the fitting calculation of the outer diameter, default is 250um.

Average diameter: used to calculate the diameter of the fiber height region, default is 50um.

Setting angle: set the value of the angle of the measure task.

Initialize the task to default: set to the measure task back to default.

OK: click to save the current operation and exit the measure task setting interface.

Cancel: click cancel the current operation and exit the measure task set interface.

Default measure task parameter setting

Caution: System default tasks cannot be edited or deleted

Parameter setting bar

Item: parameter name.

Min: minimum value of parameter range (in the case of FiberHeight, NaN on behalf of IEC standards based on automatic calculation of minimum size).

Max: maximum value of parameter range.

Applied: check to apply the parameter to measurement.

Parameter table

	Corresponding name	Meaning
ROC	Radius of curvature	radius obtained by the fitting end face
Apex Offset	Apex offset	The distance between the highest point of the connector and the center of the optical fiber
Fiber Height	Fiber height	The distance between the spherical surface and the actual optical fiber height.

SANA2 Fiber end-face interferometer

Angle	Connector angle	Only in the APC measurement tasks
Key Offset	Key Offset	The deviation values of angle direction and key direction, only in the APC measurement task is reflected
Fiber Roughness Ra & Rq	Roughness value of fiber area	Ra is mean value and Rq, is variance of roughness of fiber
Ferrule Roughness Ra & Rq	The roughness value of ferrule	Ra is mean value and Rq, is variance of roughness of ferrule

4.3.8 Calibration interface

Click the "calibration" button in the main interface to enter the calibration interface as shown in the figure below:

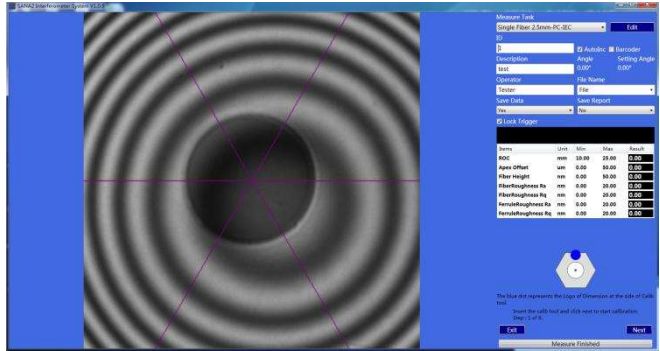


Figure 4- 18 Calibration interface

4.3.9 Setting interface

Caution:

Click on the main interface "Settings" button, enter the password input dialog box, enter the password (default is "dimension") and click OK.



Figure 4- 19 Password box

Video setting

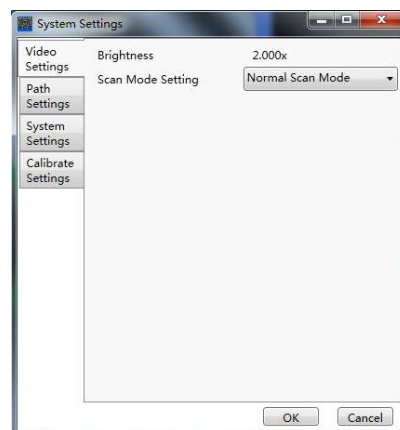


Figure 4- 20 Video Settings

Brightness: Display the current brightness 2.000x.

Scan mode settings: there are two modes: normal mode and fast mode, if the computer has higher specification, the fast mode will slightly increase the measuring speed.

Path setting

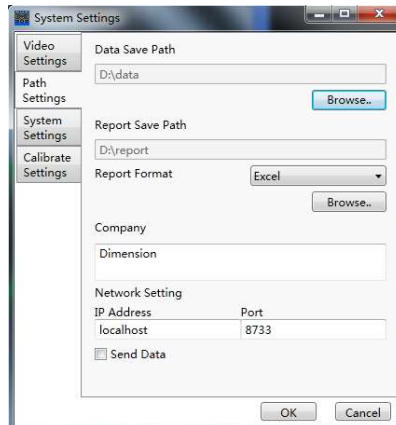


Figure 4- 21 Path Settings

Data Save Path: click "Browse" button to select the save path, the default path is D:\data .

Report Save Path: click "Browse" button to select the save path, the default path is D:\report.

Report format: there are two modes: Excel and PDF.

Company: You can manually enter the company name, the content will be stored in the test data and reports.

Network settings: Set the network address and port number to receive remote measurement data, check send data to the current server settings for testing. If you need to use the remote service function, please contact the Dimension Technology to obtain the development package of remote services.

System settings



Figure 4- 22 System Settings

Language setting: Through the drop-down menu to select the software interface language, there are two options in simplified Chinese and English.

Reset the system settings to the default values: After you click, you can restore the system settings to the initial state.

Calibration setting

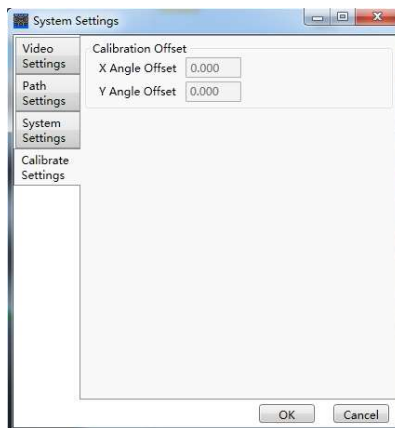


Figure 4- 23 Calibrate settings

Angle correction parameter: Display calibration after the X axis angle and Y axis angle.

5 Software operation instructions

5.1 Image center operation

Products using automatic centering and manual centering.

Caution: Fit optical fiber center into green circle.

Auto Center operation

Click the "Auto Center" button on the main interface of the software, which can quickly and accurately locate the position of the center of the optical fiber.



Figure 5- 1 Image auto center

Manual Center operation

If the fiber center is too far away that auto centering cannot find center, you can center the image manually. Press right button of mouse when pointing at real time area and drag green circle on to the center of fiber.

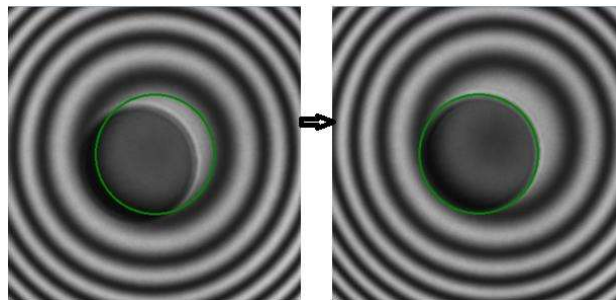


Figure 5- 2 Image manual center

5.2 Calibration operation

Caution: Calibrate after the centering of the optical fiber, the button and trigger is the same as measuring.

5.2.1 Calibration procedure

Click the "calibration" button on the main interface to enter the calibration interface.

Click "next" for the first step:



Figure 5- 2 Calibration first step

Click "next" to carry out the second step:

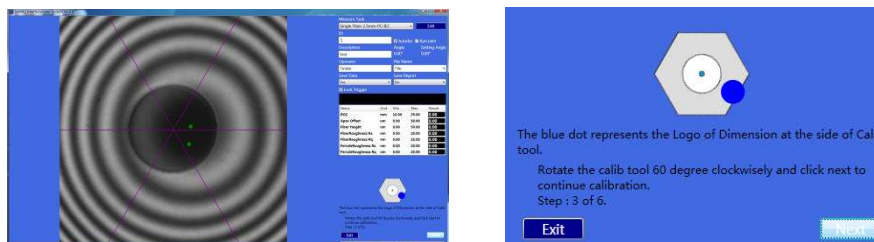


Figure 5- 3 Calibration second step

Click "next" to carry out the third step:

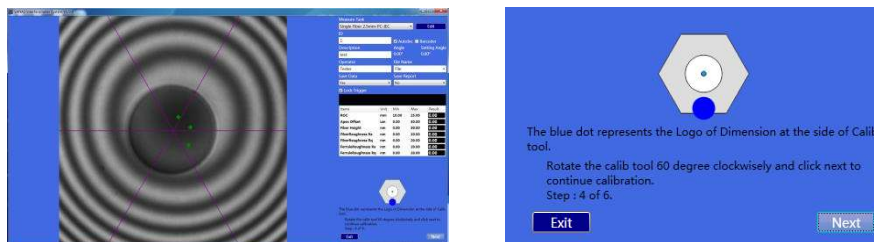


Figure 5- 4 Calibration third step

Click "next" to carry out the fourth step:

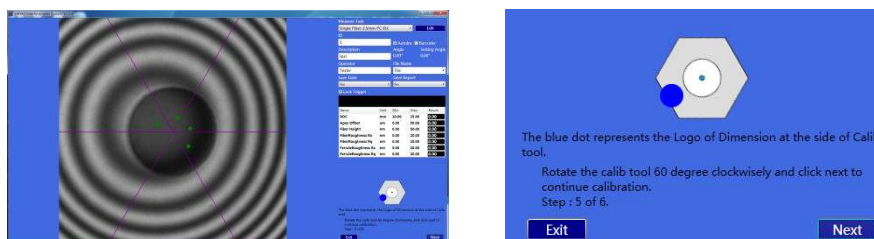


Figure 5- 5 Calibration fourth step

Click "next" to carry out the fifth step:

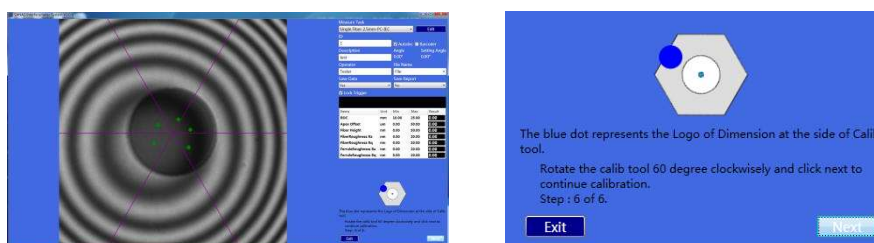


Figure 5- 6 Calibration fifth step

Click on the next step, the sixth step calibration success:

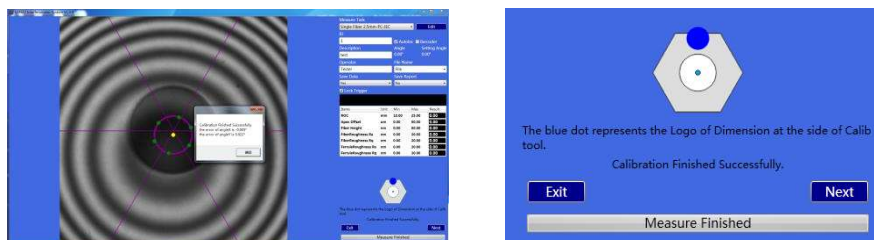


Figure 5- 7 Calibration sixth step

Caution: After calibration, click "OK" button to exit the calibration operation interface.

5.2.2 Calibration considerations

1. Ensure that end face of calibration kit is clean.
2. Rotate 60 degrees at each steps, it will be error or failure if the angle is too large or small.

3. Make sure that fixture is locked and focus is clear at each measurement.
4. After the calibration, it is necessary to test the reliability of the calibration result, otherwise the error will be introduced into each connector. Test 6 direction of the kit, the maximum deviation of the 6 measurements of apex offset is less than 6um.
5. After the success of the calibration X, Y direction of the error will be synchronized to the calibration set.

5.3 Measurement task switching

Caution:

The fixture platform can be adjusted automatically according to the setting angle of the measure task.

The main interface "measure task" column, click the drop-down menu, select measure task needed.

5.3.1 Setting angle 0

Angle	Setting Angle
0.00°	0.00°

Figure 5- 8 Angle 0

The following measurement task is set at 0 degrees:

- Single Fiber 2.5mm-PC-IEC
- Single Fiber 2.5mm-PC-IEC2006
- Single Fiber 1.25mm-PC-IEC
- Single Fiber 1.25mm-PC-IEC C2006
- Bare Ferrule 2.5mm-PC-IEC
- Bare Ferrule 1.25mm-PC-IEC
- Bare Ferrule-PC-IEC
- Flat Polish-PC-IEC

5.3.2 Setting angle 8

Angle	Setting Angle
8.00°	8.00°

Figure 5-9 Angle 8

The following measurement task is set at 8 degrees:

Single Fiber 2.5mm-APC-IEC

Single Fiber 2.5mm-APC-IEC2006

Single Fiber 1.25mm-APC-IEC

Single Fiber 1.25mm-APC-IEC C2006

Operation steps: The angle will adjust automatically after changing measure task.

5.4 Edit measure task

Caution:

1. Click on the main interface of the "edit" button, enter the password input dialog box, enter the password (default is "dimension"), click "OK" to enter.
2. Measure task added has the same parameter as current one.
3. New measure task name has "-custom" in default, if there is a task with the same name, it will add number in the end automatically.
4. The default measure task cannot be deleted or edited.

SANA2 Fiber end-face interferometer

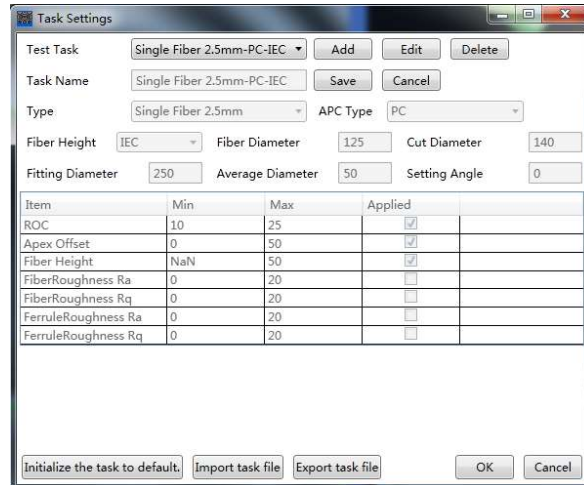


Figure 5- 10 Measure task setting

Add:

Click the Add button to pop up the warning dialog box, click Yes (Y) to determine the new task.

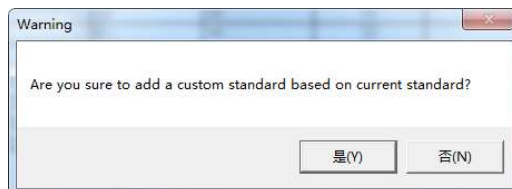


Figure 5- 11

Edit:

Click the Edit button to enter the edit state, you can modify the corresponding parameters according to the demand.

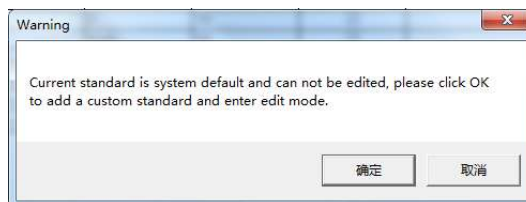


Figure 5- 12

Delete:

Click the delete button to pop up the warning dialog box, click Yes (Y) to determine to delete current task.



Figure 5- 13

Save:

Click the "Save" button to save the current changes and exit the edit mode.

Cancel

Click Cancel to not save the current modification and exit the edit mode.

5.5 Measure methods

5.5.1 Measure trigger mode

SANA2 has four ways to trigger measurement:

1. Software interface button
2. Keyboard Enter key
3. Fixture platform MEAS key
4. Fixture lock handle

Fixture handle will trigger the measurement automatically and no need for operate the software.

Fixture handle trigger could be turned on or off by "lock trigger" check box at the main interface.

Caution: Please do not lock the handle too slow to avoid affect to result.

5.5.2 Measurement procedure

Step 1: Fixture installation: Install the fixture according to test connector (reference equipment installation).

Step 2: Set software: Set file name, product description ,the way to save data and report, choose right measure task.

Step 3: Focus: Insert and lock the connector, click "Focus" or check "AutoFocus" to get clear image.

Step 4: Image centering: Click the image center or manual adjust fiber center to in the green circle.

Step 5: Calibration: Reference calibration operation.

Step 6: Measure: Click the "measure" button to measure.

Remarks:

1. Ensure that the interference fringes in real-time image are clear.
2. Do not plug the connector when testing.

5.6 Lock unlock

Encryption lock installed in the device is the key to open the FUTURE software, when date of encryption lock expired, software will pop up dialog box as shown in figure below.

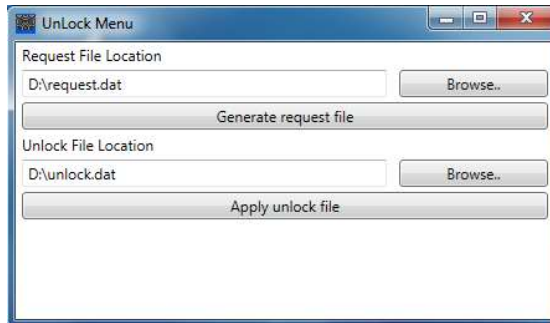


Figure 5- 14 Lock unlock

Unlock step:

Step 1: click the "Generate request file" and send the file to our sales agent.

Step 2: Click "browse" to choose the unlock file that our sales replied.

Step 3: Click the "Apply unlock code" button to complete the unlock operation.

Remarks:

Please make sure that send the file to our sales agent is the last one.

6 Use scenario guidance

6.1 Single PC fiber optic connector interference measurement

6.1.1 Equipment installation

Select the SC or LC fixture to install.

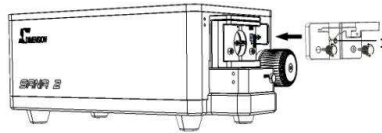


Figure 6- 1 Fixture install

Caution:

1. SC fixture inner hole diameter is 2.5mm.
2. LC fixture inner hole diameter is 1.25mm.
3. Two locking screws are locked at the same time.

6.1.2 Connect device to PC

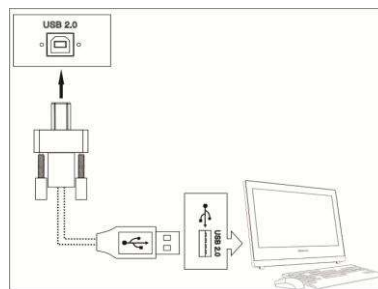


Figure 6- 2 Connect device to pc

Connected power supply to device and turn on the switch.

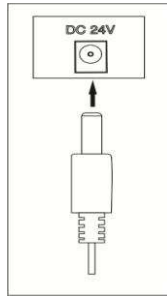


Figure 6- 3 Connected power

6.1.3 Open software

Double click the desktop shortcut, wait a moment, the software will enter the main interface.

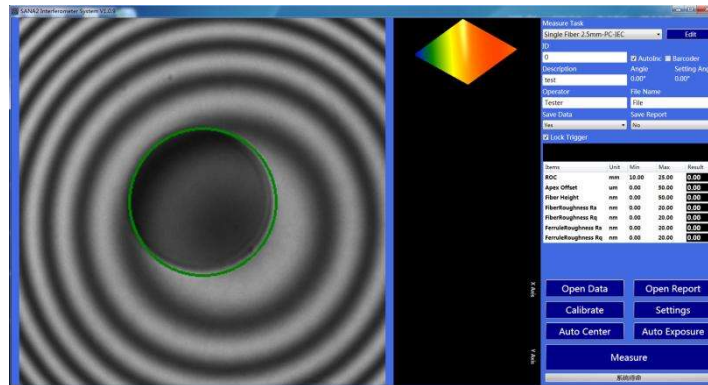


Figure 6- 4 Software main interface

6.1.4 Set measure task

Select the corresponding measurement task, select the file saving mode according to the requirement, select "yes" to save the measurement result, and select "no" to dont save the measurement result.

6.1.5 Calibration

Choose calibration kit needed (PC 2.5mm or 1.25mm calibration kit) and calibrate refer to 5.2.1 .

There are four ways to trigger calibration: handle, software interface measurement button, the device meas button, the Enter button on keyboard.

Caution: The trigger mode of calibration is the same as measuring.

6.1.6 Measure

There are four ways to trigger measurement: handle, software interface measurement button, the device meas button, the Enter button on keyboard.

6.1.7 Review measure results

The measurement results:

The image display area has three-dimensional map, figure of roughness, plot chart of X, Y direction.

The digital display area shows measuring value of current measurement and the number of the defects and scratches in the area.

You can open data and report if saved by "Open Data" and "Open Report" button, you can also find and set the data and report in save path in system setting menu.

6.2 APC fiber optic connector interference measurement

Operating procedure is the same as PC fiber connector; The difference is that the need to install positioning piece on to fixture.

Caution: Fixture platform will automatically adjust the angle when changing tasks.

7 Exception handling

In the process of starting and running, the software will encounter the unexpected errors and pop up specific information.

7.1 Camera exception

1. Problem: Can Not Find the Camera!

Reason: Equipment is not on or the device is not connected to the computer.

2. Problem: Camera initialization failed, the software can not open the camera.

Reason: Two software simultaneously on the open, or the camera itself is damaged.

7.2 Excel exception

1. Problem: Failed to open Excel.

Reason: Please make sure you have installed Office2007 or above.

2. Problem: File already exists * * * * *.

Reason: Has opened the Excel file, or the process has left the Excel project is not closed.

7.3 Encryption lock exception

1. Problem: Could not find encryption lock.

Reason: Device is not on or encryption lock is damaged.

7.4 Measure exception

1. Problem: Calculation failed, cannot calculate the 3D value.

Reason: Check whether the image has been in focus.

2. Problem: Failed to get the fiber center, using the estimated center as the center of the optical fiber.

Reason: Fail to obtain fiber center and use preset fiber center to calculate geometry result, but it can be ignored if there is no fiber center in the connector.

Appendix

If you have any further problem, please contact Dimension Technology Co., Ltd

Tel:+86 755-26480850

Fax:+86 755-26480895-0

E-mail:

Sales consultant: sales@weidujs.com

After-sales service: servers@weidujs.com

Technical support: support@weidujs.com

Web Url:www.weidujs.com

Address: 3F,Minlida industrial park , Hong hua ling industrial zone, Liuxian Blvd, Xili town,
Nan shan district, Shenzhen, China

East China office

Tel: +86 21-36532952

Fax: +86 21-36532952

Address: Shanghai putuo district peach pu road306,room 1809

South West China Office

Telephone: +86 28-83198070

Fax: +86 755-26480895-0

Address:4F,Derun science and Technology Park,No.2 Xingsheng West Road,Jinniu
Distrist,Chengdu ,China