

# Fluke Thermography

## Certificate of Calibration

Serial Number: **TiS20-17030910**

Model: **Fluke TiS20 9Hz Thermal Imager**

Accuracy:  $\pm 2^{\circ}\text{C}$  or 2% of Reading  
(whichever is greater)

Measurement Temp Range:  $-20^{\circ}\text{C}$  to  $+350^{\circ}\text{C}$   
(Not calibrated under  $-10^{\circ}\text{C}$ )

Date: **3/18/2017**

Certified By: **Fluke QA Manager**

Fluke Corporation certifies the above instrumentation has been calibrated to meet or exceed the published specifications. The calibration was performed using instrumentation and standards that are traceable to the United States National Institute of Standards and Technology (NIST), intrinsic standards, or national metrology institutes that actively participates in the activities of the BIPM, directly or indirectly through regional groups. This Certificate/Report shall not be reproduced, except in full, without the written consent of Fluke Corporation.

# Manual Supplement

Manual Title: TiS10, TiS20, TiS40, TiS45, TiS50, TiS55, TiS60, TiS65, TiS75 User, Web Only & TiS10, TiS20, TiS40, TiS45, TiS50, TiS55, TiS60, TiS65, TiS75 Safety Information

Part Number: 4633357

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**6**

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This supplement contains information necessary to ensure the accuracy of the above manual.

Change #1, Safety Information, 514

Under **Safety Specifications**, change Altitude:

From: Storage ..... 12,000 m (39,370 ft)  
To: Storage ..... 10,000 m (32,808 ft)

Change #2, Safety Information, 224, 225


On the Cover of the Manual, change:

From: **TiS10, TiS20, TiS40, TiS45, TiS50, TiS55, TiS60, TiS65**, *Safety Information*  
To: **TiS10, TiS20, TiS40, TiS45, TiS50, TiS55, TiS60, TiS65, TiS75** *Safety Information*

Change #3, Safety Information, 394

On the Cover, add the **BC** Symbol.

Add the following to the **Symbols** table:

	Conforms to the Appliance Efficiency Regulation (California Code of Regulations, Title 20, Sections 1601 through 1608), for small battery charging systems.
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## Change #1 Users Manual, 514

On page 38, under **General Specifications**, change the Altitude Storage:

From: Storage ..... 12,000 m (39,370 ft)

To: Storage ..... 10,000 m (32,808 ft)

On page 40, replace the **Infrared spectral band**, and add the following:

Infrared spectral band ..... 7.5  $\mu$ m to 14  $\mu$ m (long wave). See note with Figure A, Figure B, and Table A.

Published specifications are warranted as tested to the following conditions:

- Imager must be calibrated using Fluke 4181 black body source with emissivity set to 1.0.
- Imager must be positioned at a distance of 48 inches (121.9 cm) from the Fluke 4181 source.
- Imager emissivity is set to 1.0.

### Note

The effective spectral response for TiS45, TiS55, and TiS65 is shown in Figure A. Use Table A for correcting displayed temperature when emissivity on the Fluke 4181 and the Imager are set to other than 1.0. Figure B is a representation of Table A. Add the value from the table to the measurement on the Imager.

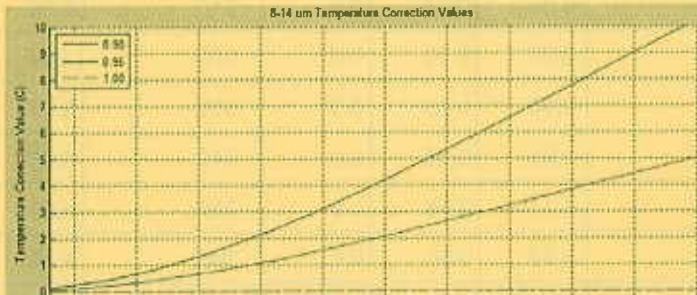
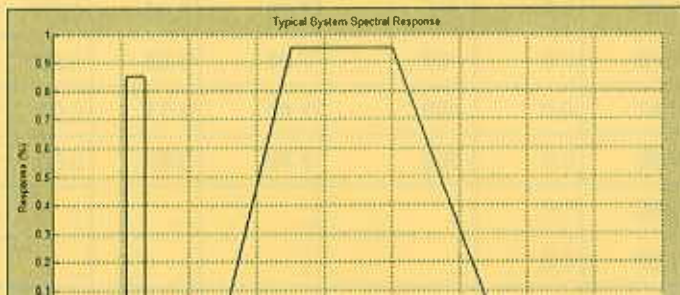


Table A. Displayed Temperature Correction

Source Temperature (°C)	Imager and Source Emissivity			Source Temperature (°C)	Imager and Source Emissivity			Source Temperature (°C)	Imager and Source Emissivity		
	0.90	0.95	1.00		0.90	0.95	1.00		0.90	0.95	1.00
80	0.13	0.07	0.0	240	1.96	0.98	0.0	400	5.35	2.65	0.00
90	0.18	0.09	0.0	250	2.14	1.07	0.0	410	5.59	2.77	0.00
100	0.24	0.12	0.0	260	2.33	1.16	0.0	420	5.83	2.88	0.00
110	0.31	0.16	0.0	270	2.52	1.25	0.0	430	6.07	3.00	0.00
120	0.39	0.19	0.0	280	2.71	1.35	0.0	440	6.31	3.12	0.00
130	0.47	0.24	0.0	290	2.91	1.45	0.0	450	6.55	3.24	0.00
140	0.57	0.28	0.0	300	3.12	1.55	0.0	460	6.79	3.36	0.00
150	0.67	0.34	0.0	310	3.33	1.66	0.0	470	7.03	3.48	0.00
160	0.78	0.39	0.0	320	3.54	1.76	0.0	480	7.27	3.59	0.00
170	0.90	0.45	0.0	330	3.76	1.87	0.0	490	7.52	3.71	0.00
180	1.03	0.52	0.0	340	3.98	1.98	0.0	500	7.76	3.83	0.00
190	1.17	0.58	0.0	350	4.20	2.09	0.0	—	—	—	—
200	1.32	0.66	0.0	360	4.43	2.20	0.0	—	—	—	—
210	1.47	0.73	0.0	370	4.65	2.31	0.0	—	—	—	—



## Change #2, Users Manual, 220

On page 6, under **Before You Start**, remove the last entry in the table.

## Change #3, Users Manual, 224, 532

On the Cover of the Manual, change:

From: **TiS10, TiS20, TiS40, TiS45, TiS50, TiS55, TiS60, TiS65** Users Manual

To: **TiS10, TiS20, TiS40, TiS45, TiS50, TiS55, TiS60, TiS65, TiS75** Users Manual

On page 1, under **Introduction** add the TiS75 to the first sentence.

On page 6, under **Before You Start**, add the TiS75 Model to the same column as TiS60, TiS65.

On page 12, under **IR-PhotoNotes™** add the TiS75 to the Model TiS60, TiS65.

On page 19, add the TiS75 to the heading:

**Transmission/Transmittance Adjustment (TiS45, TiS55, TiS65, TiS75 only)**

On page 20, under **User-Definable Spot Markers**, add the TiS75 to the Model TiS60, TiS65.

On page 21, under **Center Box**, add the TiS75 to the first sentence.

On page 22, under Table 4, add the TiS75 Model to the column that has TiS60, TiS65.

On page 23, under Table 5, add the TiS75 Model to the column that has TiS60, TiS65.

On page 24, under **Color Alarms** add the TiS75 to the Model TiS60, TiS65.

On page 39, in the **Specifications** section, under **Weight (includes battery)** add TiS75 to the Model TiS45, TiS60, TiS65.

On page 39, in the **Detailed Specifications** section, under **Temperature Measurements** add TiS75 to the Model TiS60, TiS65.

On page 39, under **On-screen transmission correction**, add TiS75 to the Model TiS45, TiS55, TiS65

On page 40, under **Imaging Performance, IFOV (spatial resolution) Distance to Spot** add TiS75 to the Model TiS60, TiS65

On page 40, under **Focus Mechanism** add TiS75 to the Model to the Manual Focus TiS45, TiS55, TiS65.

## Change #4, Users Manual

On page 5, remove the **SmartView Software** section.

On page 7, following the Caution add:

### ***Install SmartView® Software***

SmartView® software is intended for Fluke Imagers and contains features to analyze images, organize data and information, and make professional reports. SmartView allows audio annotations and photos from the IR-PhotoNotes™ annotation system to be reviewed on a PC. SmartView is used to export IR and visible images as .jpeg, .jpg, .jpe, .jfif, .bmp, .gif, .dib, .png, .tif, or .tiff formatted files.

Firmware updates for new Imager features are also available through SmartView®. The WiFi, Bluetooth, and Fluke FC Series Wireless Meter communication functions are enabled (where available) with SmartView.

To download Smartview:

1. Go to [http://www.fluke.com/support/software-downloads/Fluke Smartview for Infrared Cameras](http://www.fluke.com/support/software-downloads/Fluke_Smartview_for_Infrared_Cameras).
2. Click on the “Download” link to transfer the SmartView installer to your PC that operates on Windows 7® or newer.
3. When the download is complete, click **Setup.exe** and follow the prompts for installation. Administrator privileges are required for the installation. If prompted, restart the computer when installation is complete.

### ***Download the Latest Imager Firmware with SmartView®***

To download firmware:

1. Open SmartView® on the PC.

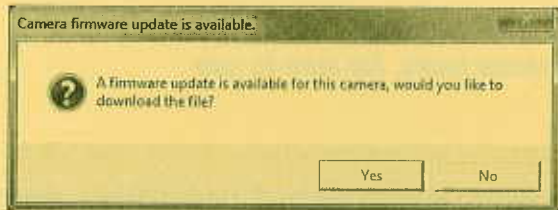
*Note*

*Some Imagers have both A and Micro B connector jacks. Be sure to use the Micro B jack on the Imager.*

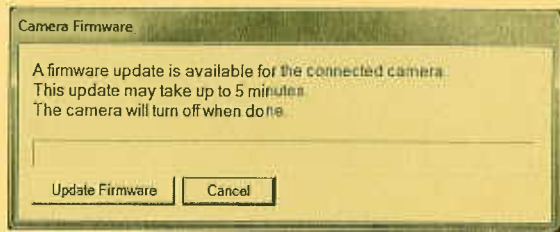
Windows automatically installs the necessary device driver for communication with the Imager. SmartView recognizes the connection with the Imager and shows a new toolbar menu item:



4. If a new firmware release is available, SmartView prompts you to download the firmware file:



5. Once the firmware file is downloaded, SmartView prompts you to update the firmware in the camera:





### ***Enable the Radio***

Where permitted by country-specific laws and regulations, wireless communication protocols are available to expand the utility of the Imager. All Imagers are shipped from the factory with the radios disabled. With SmartView you can enable the radios that are permitted in your locale.

Before you enable the radio, be sure that the Imager is upgraded to the most current firmware (see *Download the Latest Imager Firmware with SmartView*).


To enable the radio:

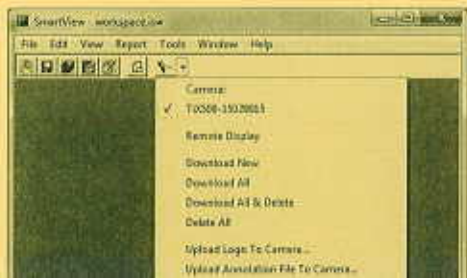
1. Open SmartView on the PC.
2. Connect the USB 2.0 (High Speed) cable included with the Imager.
3. Plug in the large (USB “A”) connector of the cable to your PC and the small (USB “Micro B”) connector to the Imager.

#### *Note*

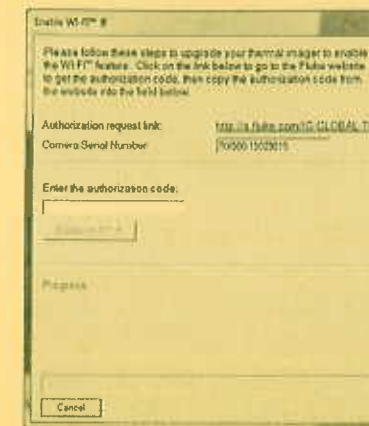
*Some Imagers have both A and Micro B connector jacks. Be sure to use the Micro B jack on the Imager.*

SmartView recognizes the connection with the Imager.

4. Use the  (Camera connected) menu to start the process to enable each of the available radios:



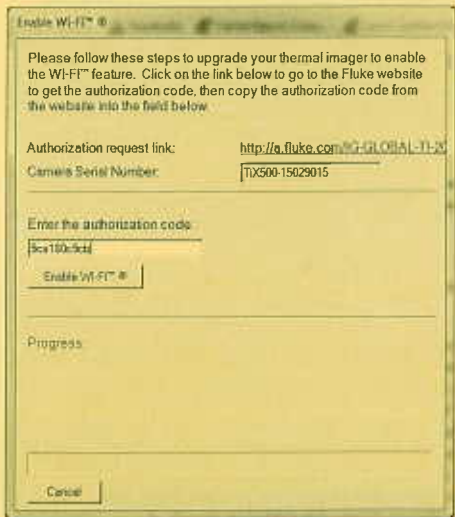
5. Choose one of the “Enable XX” options and click on the authorization request link of the Enable Wizard screen:



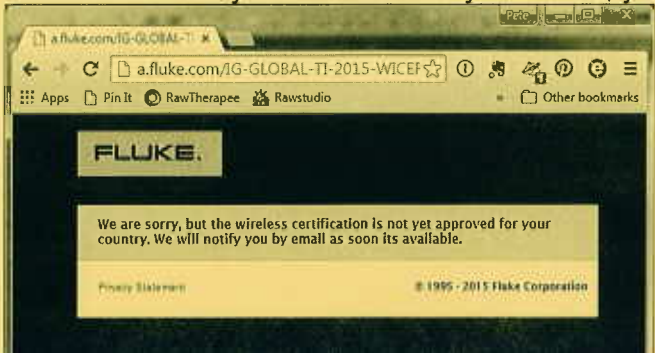
After you complete the registration at the request link web page, the web page provides an authorization code if this radio is authorized to use in your locale.



6. Copy the code from the web page and paste it into the SmartView Enable wizard dialog box and press the “Enable XX” button:



The radio is now enabled and you can use the radio features.  
If this radio is not yet authorized for your locale, you will see this message:



### Set Up Fluke Connect App

The Fluke Connect app works with Apple and Android mobile products. The app is available for download from the Apple App Store and Google play.

Check that the WiFi™ radio on the Imager is ready to operate. See *Enable the Radio*.

On the Imager:

1. Go to **Settings > Wireless**.
2. Select **WiFi Hotspot**.
3. If the “On” selection is checked, select “Off” before you check the network settings to connect the iOS mobile device to the Imager.
4. Choose the “Settings” menu option and review the SSID and Password values.

For a new Imager, the default value is “Fluke-Camera” for the SSID and the password is disabled.

#### Note

*To enable WiFi Hotspot protection, change the SSID and password values to your organization’s preference.*

5. Push **F2** (Back) until you reach the Off/On settings menu.
6. Select the “On” option and wait a few seconds while the WiFi radio activates.

On the mobile device:

1. Go to **Settings > Wi-Fi**.


The network name for your camera shows in the list (also known as “SSID”). Select this SSID and enter your password when prompted by your mobile device.

2. Open the Fluke Connect app.
3. In the list of Fluke products, connect to “Thermal Imager”.
4. When the connection is set, the app prompts you to “Push Save on the Imager to view the image here”.

On the Imager:

On page 33, remove the section, **Fluke Connect App**.

## Change #5, Users Manual, 394

On the Cover, add the  **Symbol**.

On page 4, add the following to the **Symbols** table:



Conforms to the Appliance Efficiency Regulation (California Code of Regulations, Title 20, Sections 1601 through 1608), for small battery charging systems.