BLUETECHNIX
Embedding Ideas

Sentis3D-M520 (Sentis-ToF-P510)

Quick Start Guide

Version 3

Bluetechnix

Waidhausenstraße 3/19
A-1140 Vienna
AUSTRIA

office@bluetechnix.com
www.bluetechnix.com

Quick Start Guide

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Information

For further information on technology, delivery terms and conditions and prices please contact Bluetechnix (http://www.bluetechnix.com).

Warning

Due to technical requirements components may contain dangerous substances.

1 Unboxing the Kit

1.1 In the box

- Sentis3D-M520 (former named Sentis-ToF-P510)
- CAT5/7 Ethernet Cable
- Quick Start Guide
- Customer Software Package CD
- Power Supply *
- Power Cable

*** Note**
The power supply's operating temperature is specified from 0 to +40°C. This represents not the effective working temperature of the Sentis3D-M520 sensor!

1.2 Connecting your Sentis3D-M520

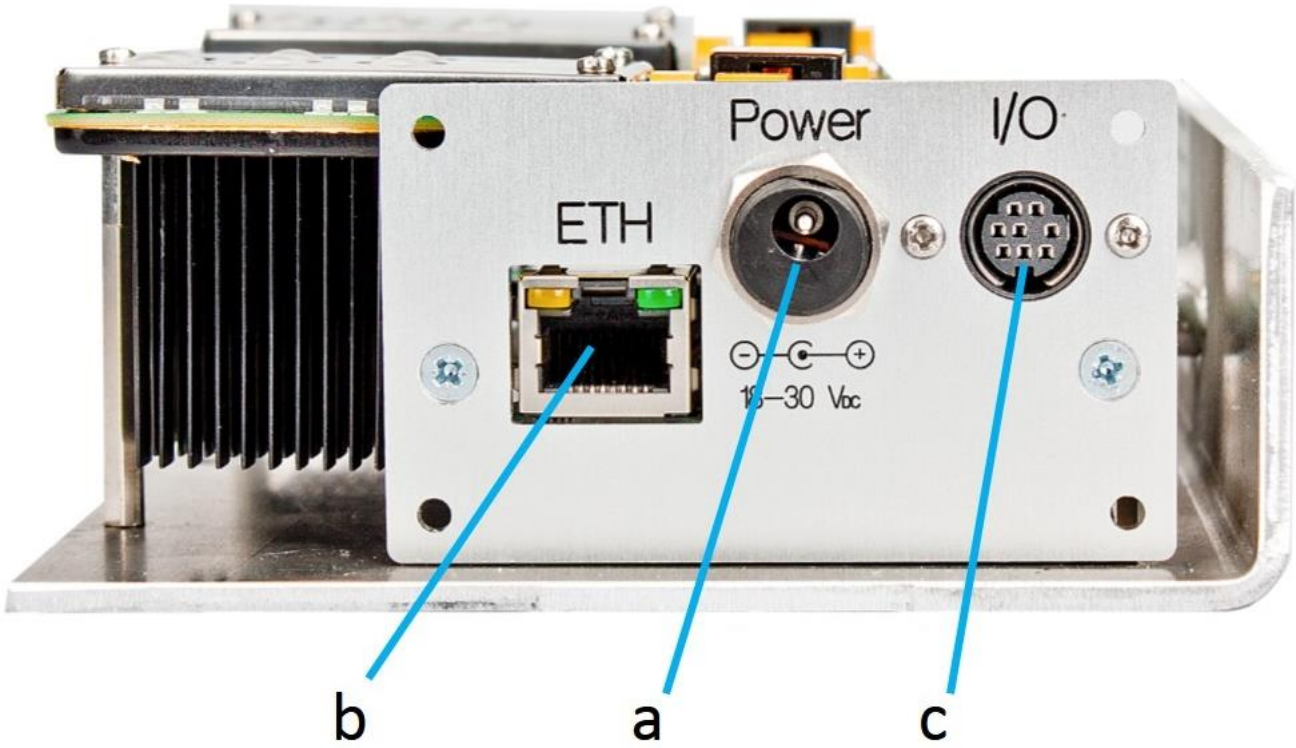

Figure 1-2: Sentis3D-M520 connector view

1.3 Connector Overview

a. Power Supply
b. GBit Ethernet (RJ45) 10/100/1000 Base-T
c. Extension Connector

Note
Please follow the next steps in the right order to get your ‘Sentis3D-M520’ up and running correctly.

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1.4 Power Connector (a)

Pin assignment on the power connector:

Connector Type: 2.1mm ID / 5.5mm OD

Voltage: 18-30V

Polarity:

This pins are protected against wrong polarity.

Note
Use inherently limited power sources only!

The power supply connector is protected against wrong polarity but the 'Sentis3D-M520' will not work in case you don't use the correct polarity! If the Sentis3D-M520 doesn't work please check the power supply polarity first!

To ensure, that your Sentis3D-M520 works correctly, connect the 'Sentis3D-M520' to a **12-30V DC** power supply using connector **(a)** and wait for approximately 20 seconds until the camera boots up.

1.5 GBit Ethernet Connector (b)

This standard RJ45 connector provides a 10/100/1000 Base-T interface to the Sentis3D-M520.

Plug in the Ethernet cable **(b)** and connect your Sentis3D-M520 to your PC.

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1.6 Extension Connector (c)

The Mini-DIN 8 connector provides several interfaces to connect the Sentis3D-M520 to external devices.

No.	Signal	Type	Description
1	GND	Power	Ground
2	nRESET	Input (100k pu)	Reset input (active low)
3	TRIGGER_IN	Input (100 pd)	Trigger input, 10-30V
4	OWIRE	Output	External OWIRE interface
5	MOD_P	Output	External Light modulation signal, differential, positive
6	MOD_N	Output	External Light modulation signal, differential, negative
7	GPIO	In-/Output	General purpose I/O (galvanic isolated)
8	Reserved	-	-

Table 1-1: Extension connector pin-out

Note:

To use the output functionality of the GPIO pin an external pull-up resistor is necessary. This pull-up must be designed for a minimum current of 13mA. (e.g 1k5 pull-up to 20V)

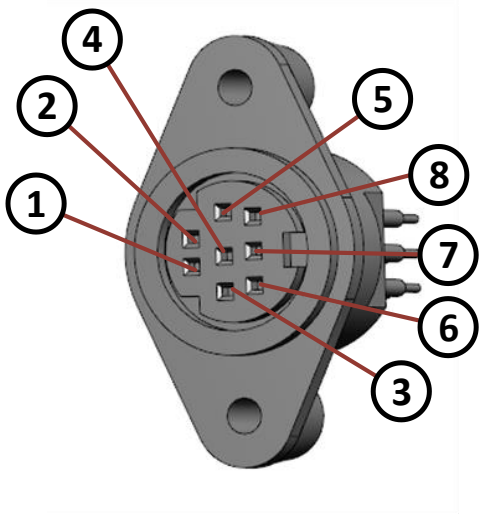

Figure 1-1 Extension Connector (Mini-DIN8) pin out

Description	Manufacturer	Part Number
Mini-DIN8 plug, male	CUI Inc	MD-80

Table 1-2: Mating connector

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1.7 Overview of the Test Set-up

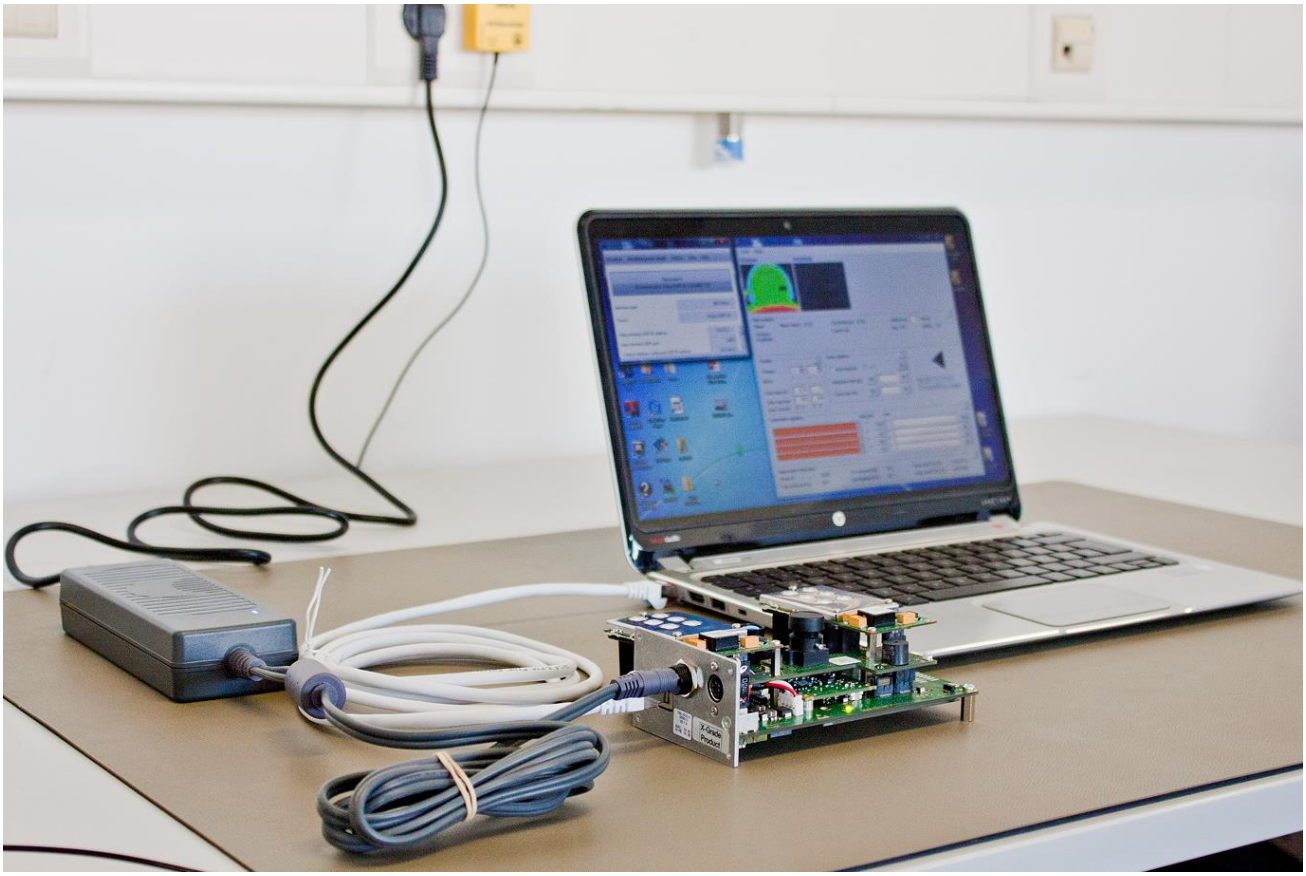

Figure 1-2: Sentis3D-M520 with connected power supply and Ethernet cable

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2 Downloading the Evaluation Software

Please go to our support website at https://support.bluetechnix.com/ and download the Sentis3D-M520 customer software package. This package also includes the Bluetechnix ToF-Suite.

2.1 Support website

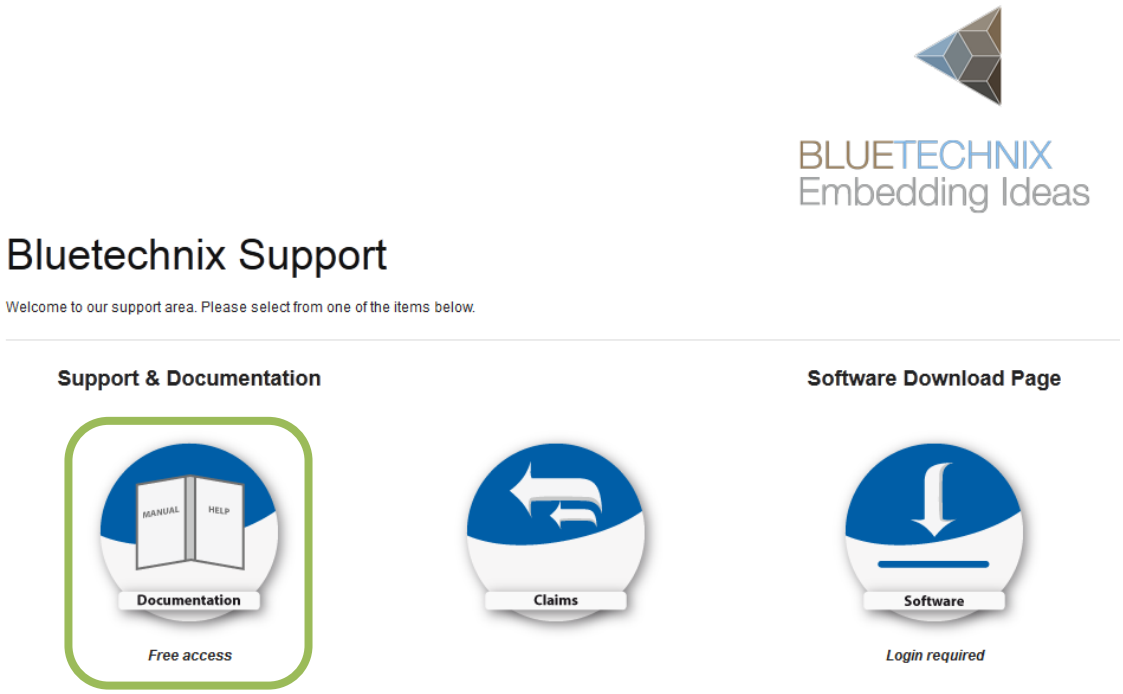

Figure 2-1: Bluetechnix support site

Please follow the instructions on the WEB-Site

2.2 Start-up screen

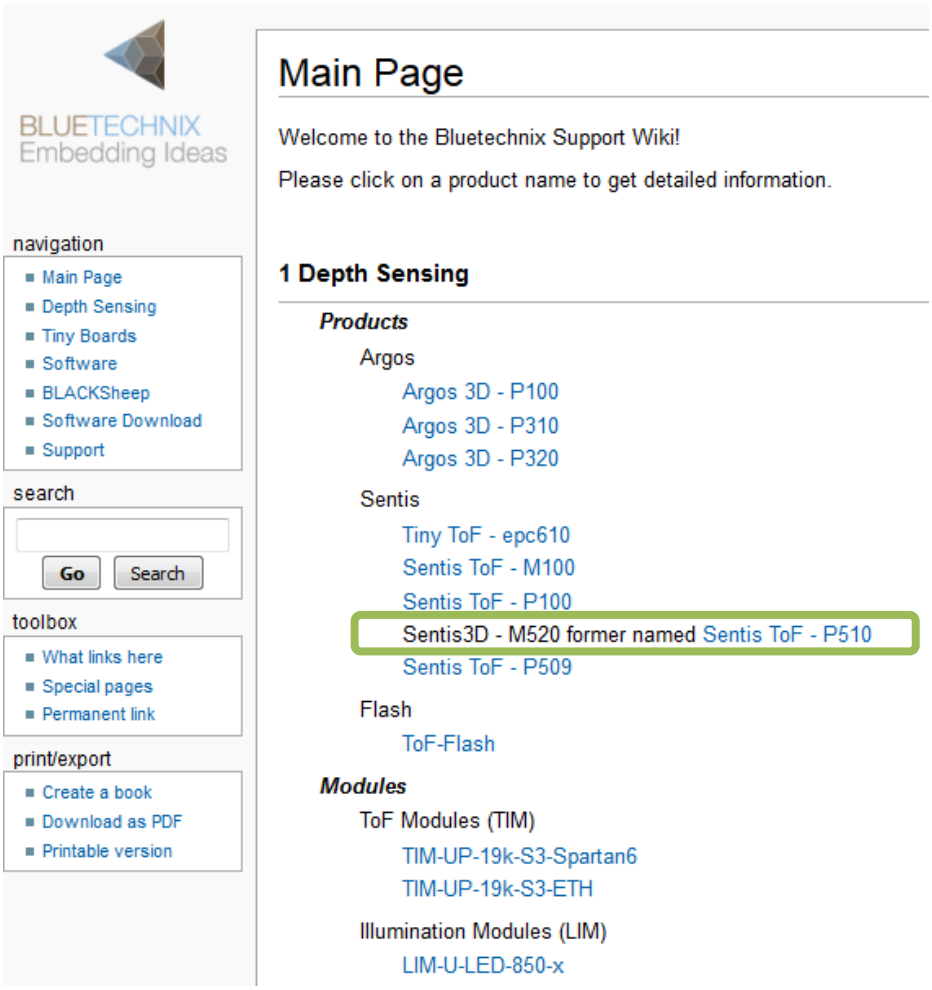

Figure 2-2: Start-up screen

Please select your product: **Sentis3D-M520**

2.3 Prepare your Network Interface Card (NIC)

Once you have connected your Sentis3D-M520 to a Network Interface Card (NIC) of your PC give this NIC the IP-Address 192.168.0.1 with a subnet mask of 255.255.255.0.

No driver must be installed on your PC!

The Sentis3D-M520 uses IP-Address 192.168.0.10 with subnet mask 255.255.255.0.

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3 Start using your Sentis3D-M520 with 'BltTofSuite'

Browse to the directory where you previously saved the BltTofSuite software zip file. Unzip the software.

Using this software you can simply display the depth image and the amplitude image of the Sentis3D-M520. For a detailed introduction to the software, please read the 'Bluetechnix ToF Suite - Quick Start Guide'

Place the Sentis3D-M520 on your desk approximately 50 cm in front of you.

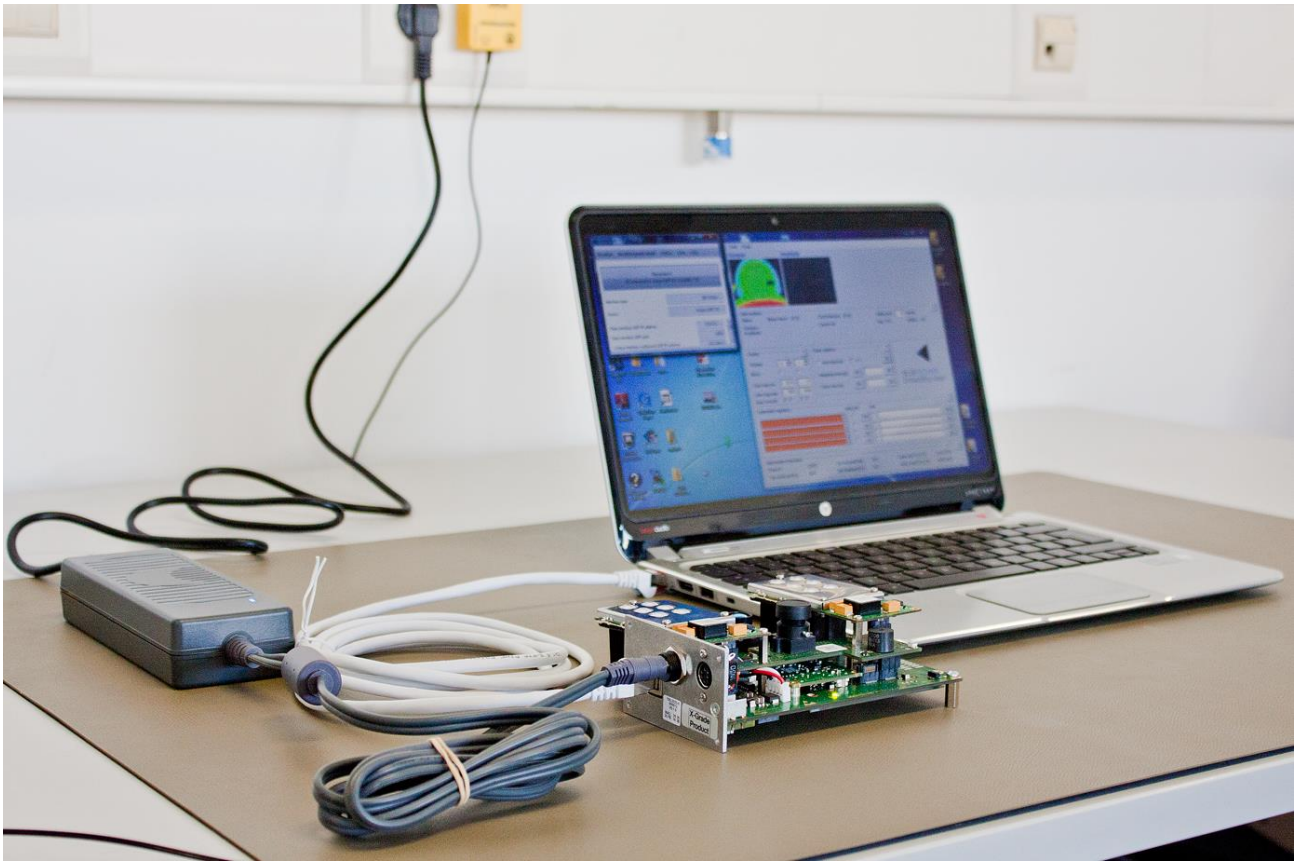

Figure 3-1: Sample scenario with Sentis3D-M520

Go to the directory where you unzipped the software and start the "*BltTofSuite.exe*". Connect to the Sentis3D-M520 using the network configuration listed in 2.3.
After the connection is established, you should see something like the screenshot below.

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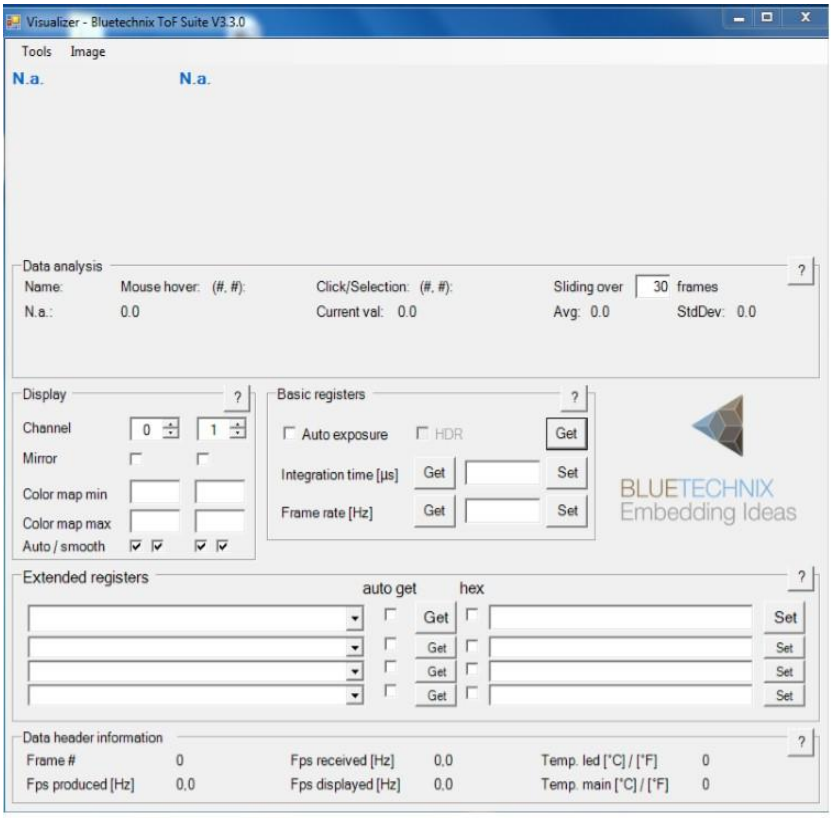
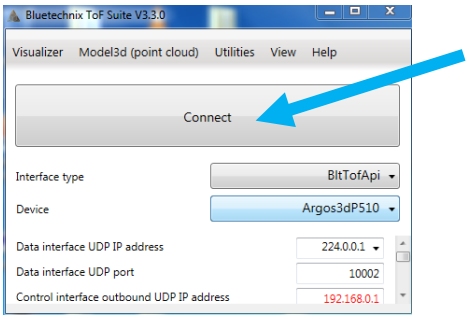
Select your product:

e.g. **Sentis3DM520** or **SentisTofP510**

(both selections should work)





Connect your product:
Press the **Connect** button and wait some seconds.

After successful connection you will see the live-picture as a result on the screen.

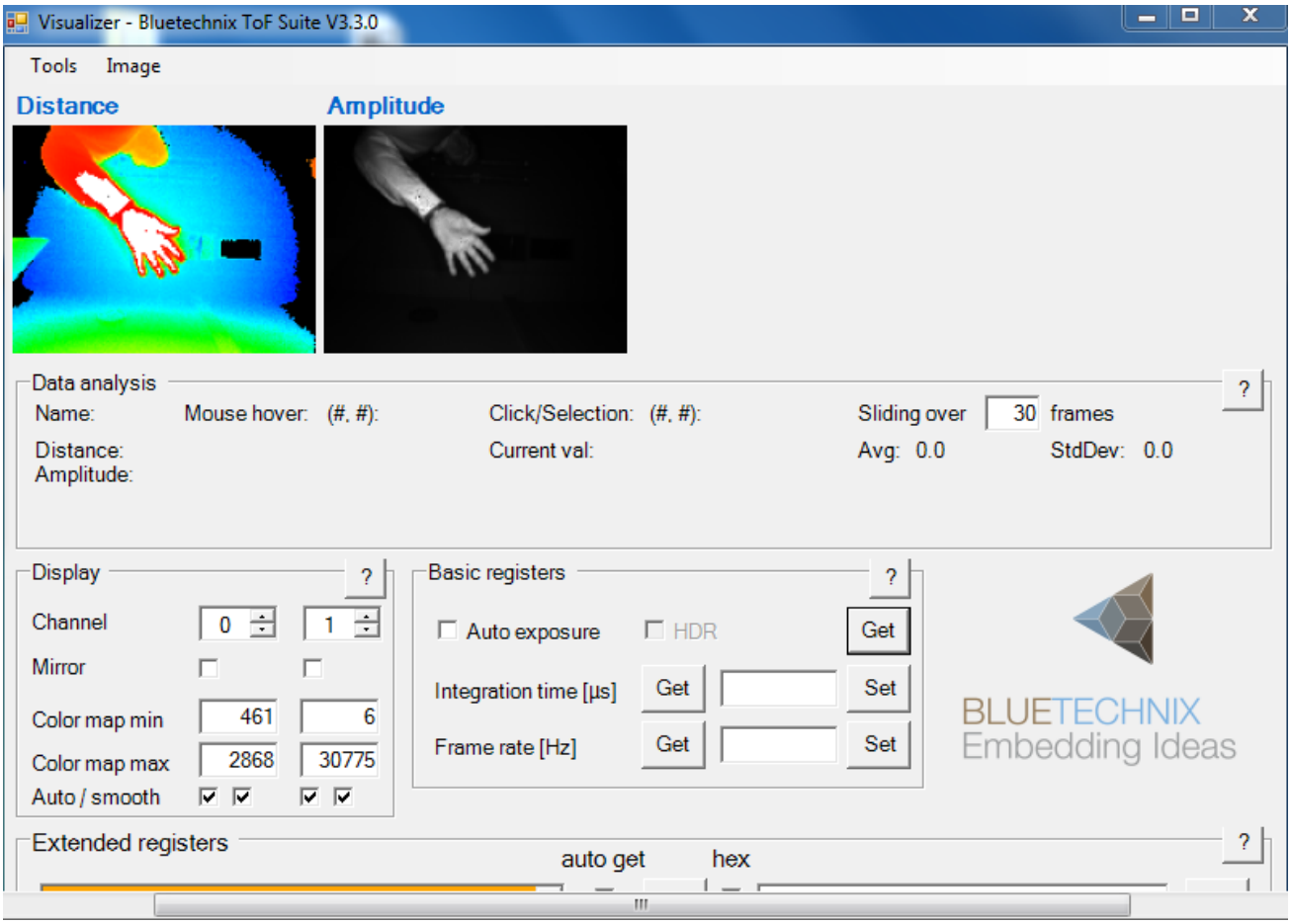


Figure 3-2: BltTofSuite screenshot (example image; the screen may differ for different versions)

4 System Requirements & Support

A Sentis3D-M520 enabled application is required in order to use this device.

Connect to a system with:

- Operating System: Microsoft Windows XP/7/Vista
- 32 bit (x68) or 64 bit (x64) processor
- Dual-core 2 GHz or faster CPU
- Dedicated Ethernet port
- 2GByte RAM

4.1 Bluetechnix ToF Suite

Visualizer is a .NET application and needs the **.NET framework 4.0** which is available from Microsoft for all actual Windows versions.

4.2 Support

For answers to common questions, troubleshooting steps and further documentation visit our Bluetechnix support website or using the direct link: https://support.bluetechnix.at/wiki/Sentis ToF-P510

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5 Product History

5.1 Version Information

5.1.1 Sentis3D-M520 (Sentis-ToF-P510)

Version	Release date	Firmware Version
X-Grade	Nov 2014	

Table 5.1: Overview of product changes

Additional information can be found at http://support.bluetechnix.com

5.2 Anomalies

Version	Date	Description
0.0.0		No anomalies reported yet.

Table 5.2: Product anomalies

Additional information can be found at http://support.bluetechnix.com

5.3 Document Revision History

Version	Date	Document Revision
1	2015 10 09	First draft
2	2015 11 11	Fotos updated
3	2016 04 06	Renaming of camera in Sentis3D-M520

Table 5.3: Revision history

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