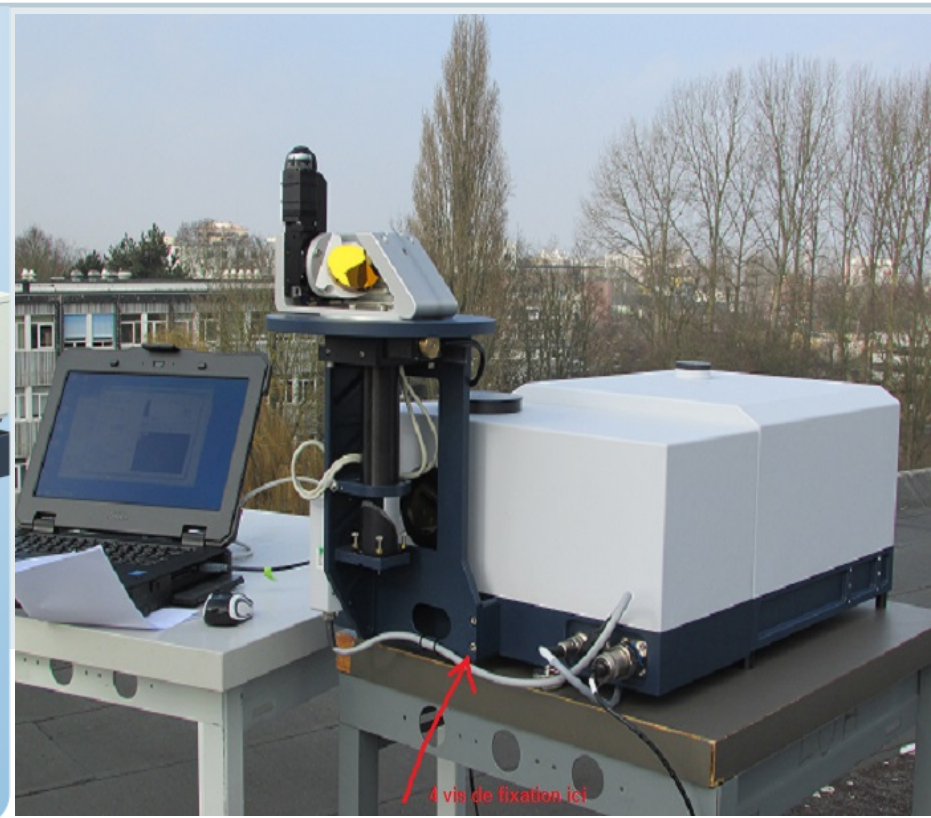
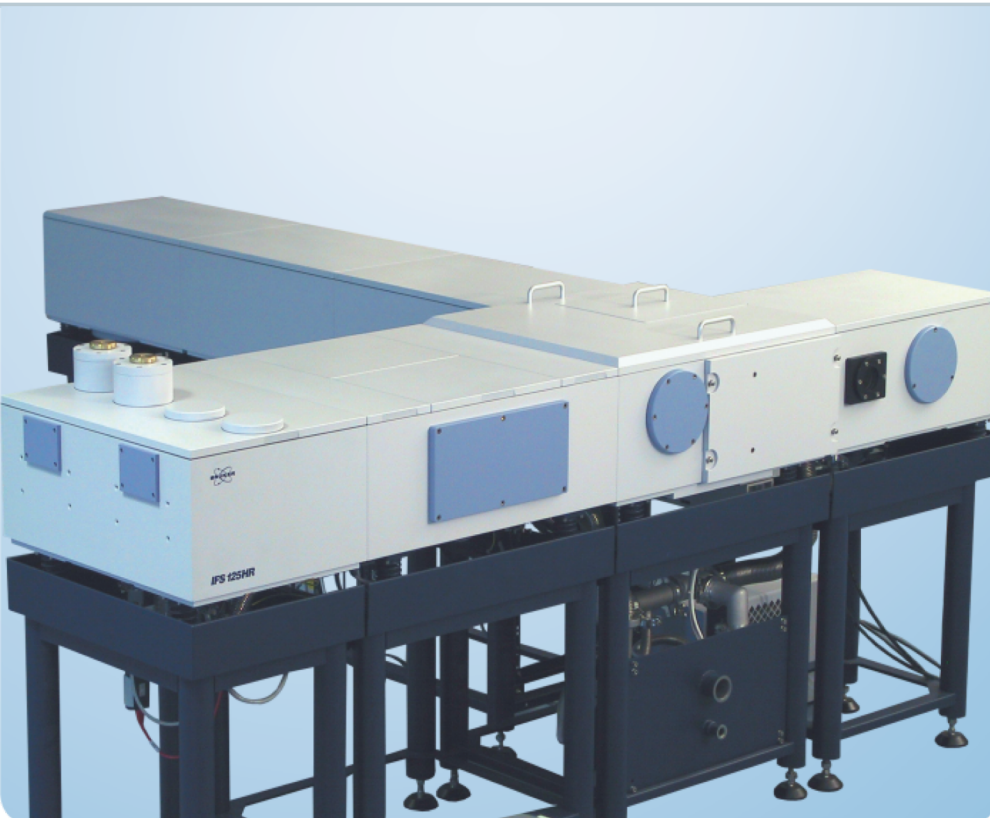


IRWG & TCCON Meeting May 2019 IFS 125 & EM27/SUN Features and Issues under Windows 7 & Windows 10



Gregor Surawicz , Bruker Optik



Latest OPUS Version 8.2

- Opus Version 7.8 and higher run under
- Windows 10 as well as under Windows 7

Latest OPUS Version 8.2

OPUS Latest Release

OPUS 8.2

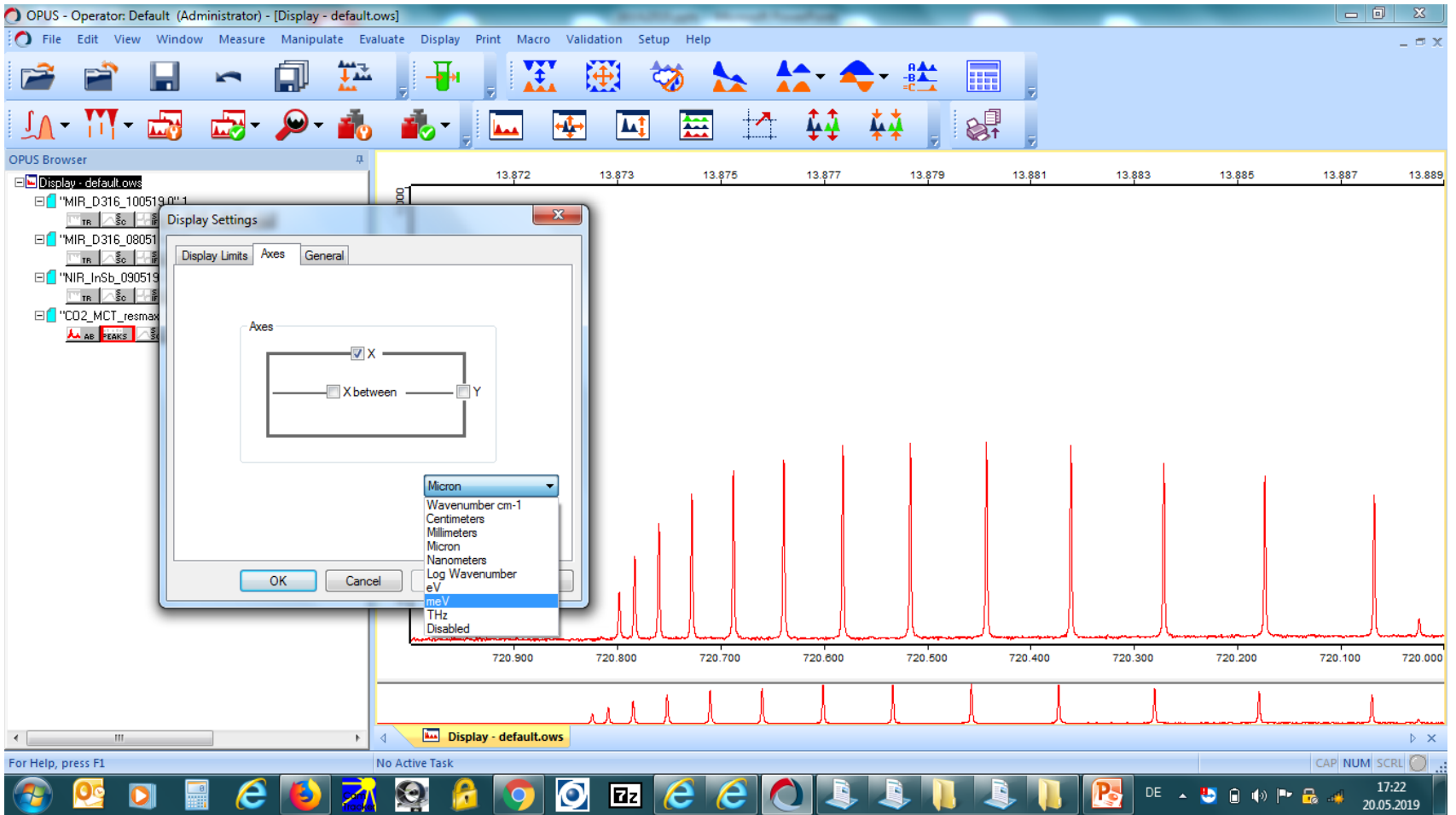
Version 8.2 is the latest release of OPUS, the leading software for measurement, processing and evaluation of IR, NIR and Raman spectra, compatible with Windows 10 and Windows 7. Besides many detail improvements for optimized work flow OPUS 8.2 marks the next generation of compliant software for spectroscopic measurements and data analysis.

Characteristic features include:

- **Protected Data Pool:** Permanent storage and protection against deletion, renaming, loss of the complete set of electronic records, e.g. measurement parameters, spectra and evaluation results.
- **Comprehensive "Global Audit Trail"** with filtering options, e.g. for a smart audit trail review.
- **Next level User and Signature Management and Access Control:** consistent separation of administrative and operative responsibilities, double check for release signature and configurable password complexity.
- **Full compliance to FDA's Data Integrity guidelines and cGMP requirements** e.g. 21 CFR Part 11.
- **Comprehensive implementation of ALCOA+ principle**
- **Test routines for Mid-IR spectrometers (transmission and ATR) compliant with new Supplement 8.7 of the European Pharmacopoeia, chapter 2.2.24.**



OPUS



Latest Firmware for M16 Electronics VSN 2.485

IFS125 HR SN_#119 Configuration & Diagnostics Report

[Back](#) [Refresh](#) [Print](#)

Flange board

Instrument Type	IFS125 HR
Instrument Serial Number	#119
Manufacture Date	20/11/14
Firmware Version	16
Engineering Change Level	0
Location	Burnaby
Owner Company	Simon Fraser Univ.
Postal address	8888 University Drive
City	Vancouver
Country	Canada

General info

Current Date	Thu, 03 May 2018 10:02:14
Last power up date	Wed, 02 May 2018 17:47:48
Parameter File	c:/ews/pa000020.bin (Basic PA for M15E 1.1) saved on Wed, 12 Oct 2016 13:57:43
Second Parameter File	c:/ews/pbhr0012.bin (I125 Version 1.1) saved on Tue, 18 Oct 2016 07:51:13
Options Parameter File	c:/ews/pomo2100.bin (Mot21 slow gsur) saved on Wed, 30 Mar 2016 21:45:48
Options Parameter File	c:/ews/posfu012.bin (I125 Version 1.4 SFU_Ca-gsur) saved on Thu, 03 May 2018 00:43:42
Real Time Diagnostic Applet File	rtdiag40.jar
Max Data Rate	160000
Max Data Rate Overdrive	1.05
Max Resolution	0.00165
Max PLL	2
Max XAS	8
Xa Step	1
Laser Wavelength	15798.01450000
Focal Length	418
Absolute Peak Position	1663639

Runtime info

Total run time Instrument	3 years, 127 days, 21 hours, 5 mn
Time elapsed since last power up	16 hours, 14 mn

Owner info

Current client	10.10.0.2
Last owner	HP-CZC4270STR@10.10.0.2
Are above addresses identical?	Yes
Is an OPUS currently connected?	Yes
IF configuration authentication	Disabled

User infos from EWS.INI

No entry

Embedded Web Server

EWS16 Firmware Version	2.485 Apr 4 2017
EWS16 CPU	AMD Geode GX-MMX
Base RAM (KB)	632
Free RAM (KB)	124

Owner info

Current client	10.10.0.137
Last owner	XPS1@10.10.0.137
Are above addresses identical?	Yes
Is an OPUS currently connected?	Yes
IF configuration authentication	Disabled

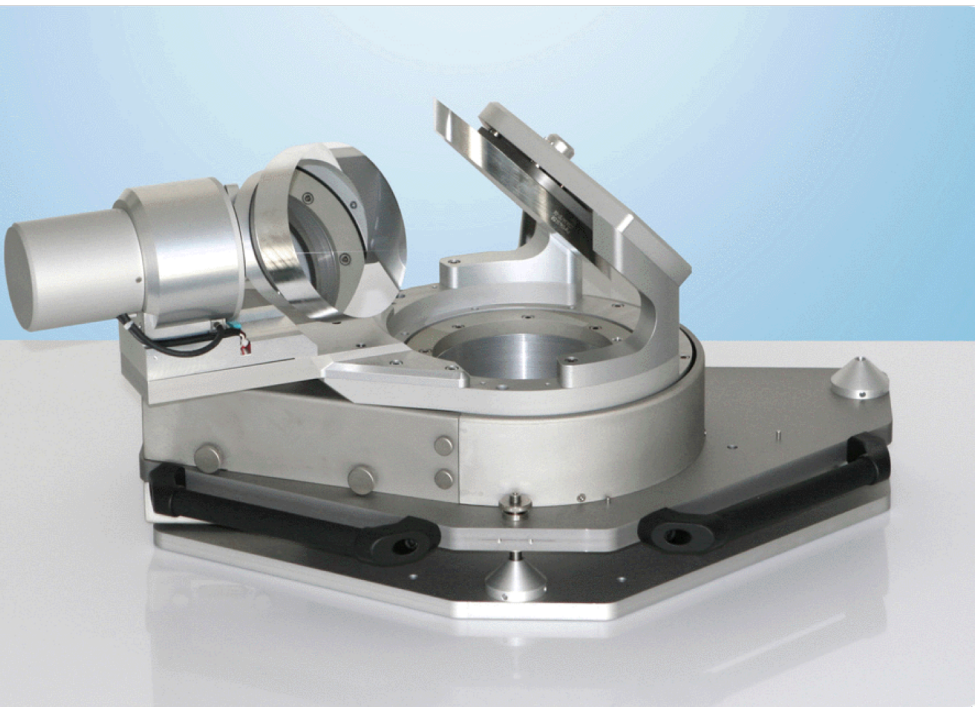
User infos from EWS.INI

No entry

Embedded Web Server

EWS16 Firmware Version	2.485 Apr 4 2017
EWS16 CPU	AMD Geode GX-MMX
Base RAM (KB)	632
Extended RAM (KB)	121536
IP Address in file c:/ews/tcpip.ini (Dec)	10.10.0.1
IP Subnet Mask in file c:/ews/tcpip.ini (Dec)	255.255.255.0
GATEWAY in file c:/ews/tcpip.ini (Dec)	0.0.0.0
Hardware MAC ID (Hex)	00 D0 C9 EF 0F 6F
TCPIP Settings from	c:/ews/tcpip.ini
Communication Format Code	CC2
EWS DIP Switch 1	DOWN
EWS DIP Switch 2	DOWN
EWS DIP Switch 3	DOWN
EWS16 Board Serial Number	000000

A547N Solar Tracker **issues**



Solar Tracker:

- Pointing and tracking mode
- Large cross-section: 150mm
- Mirrors with good corrosion protection available (plated gold)
- NTP time synchronization
- Optional GPS module
- **CamTracker module**



New CamTracker module

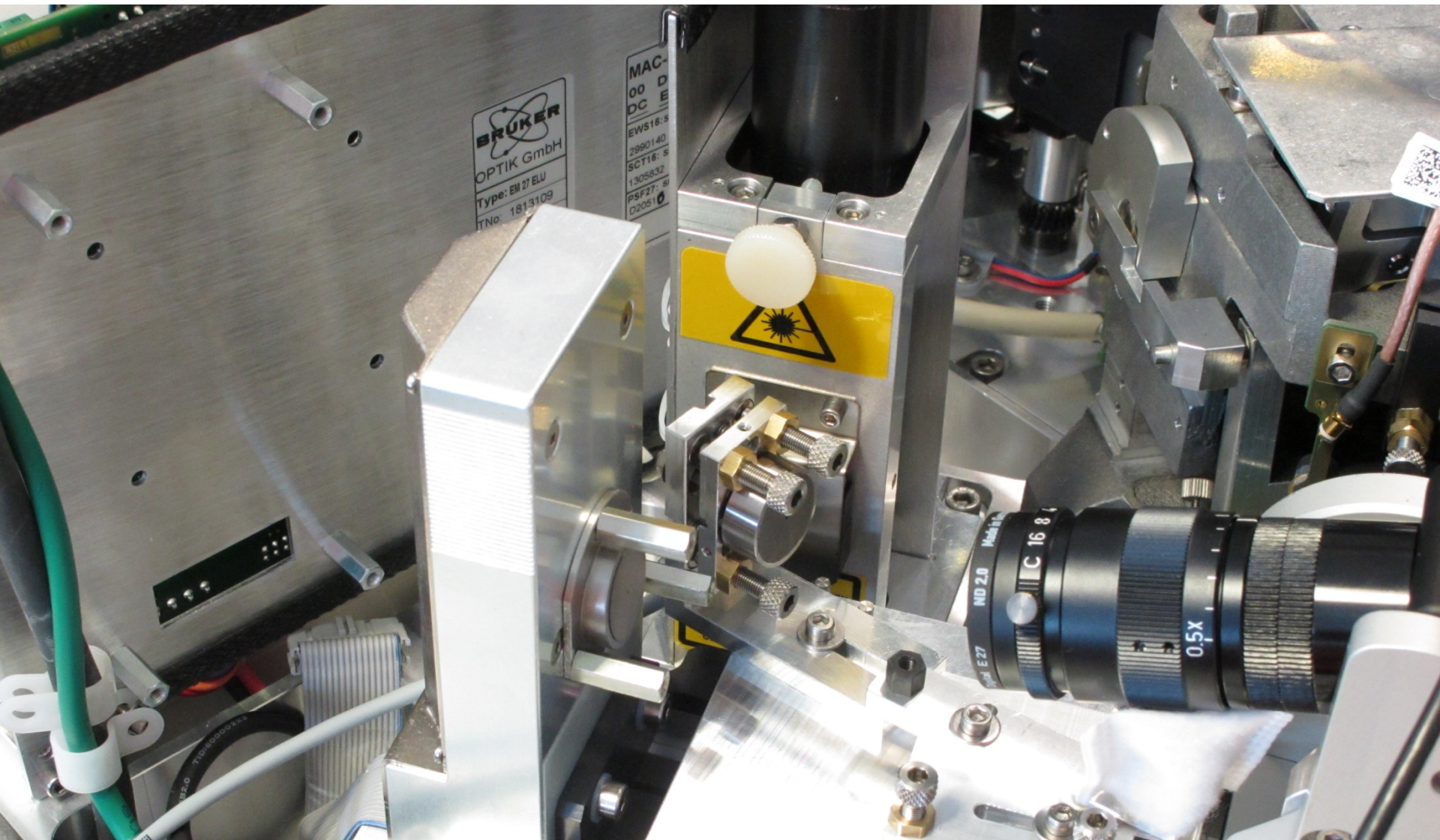
- Direct observation of the sun spot on the aperture with a camera
- Licensed from Forschungszentrum Karlsruhe (KIT)



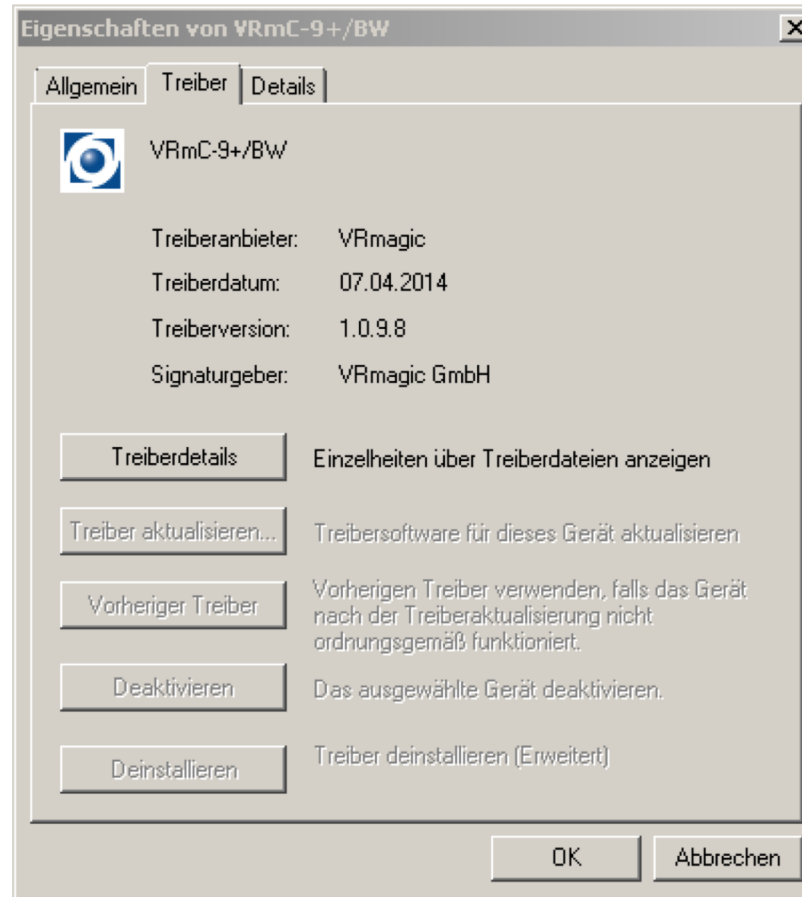
Advantages to quadrant diode:

- No alignment error
- No beam obscuration
- Higher precision

EM27/SUN



Driver for VR-magic camera



ST 74FE480E59EF EWS Solar Tracker Main 2.260

Send Tracker Mode One Level Up Help Reset Shutdown Read STRACK.INI Auto-Reload Refresh

Direct Command Entry Menu

Send command line Change Log level to

ST 74FE480E59EF Solar Tracker Data

PREVIOUS MODE:	<input type="text" value="Position Local"/>	MOTOR DIRECTION:	<input type="text"/>
CURRENT MODE:	<input type="text" value="Position Local"/>	AZI SPEED DAC:	<input type="text" value="8"/>
FLIP:	<input type="text" value="Left Flip Position"/>	ELE SPEED DAC:	<input type="text" value="5"/>
GEO POSITION:		AZI VOLTAGE:	<input type="text" value="18,580"/>
Azimuth:	<input type="text" value="0,000°"/>	ELE VOLTAGE:	<input type="text" value="18,774"/>
Elevation:	<input type="text" value="0,000°"/>		
LOCAL POSITION:		Intensity x1:	<input type="text" value="53"/>
Azimuth:	<input type="text" value="0,000°"/>	Intensity x2:	<input type="text" value="53"/>
Elevation:	<input type="text" value="0,000°"/>	Intensity y1:	<input type="text" value="66"/>
COUNTER VALUES:		Intensity y2:	<input type="text" value="68"/>
Azimuth:	<input type="text" value="0"/>	Intensity Dx:	<input type="text" value="48"/>
Differ. Azimuth:	<input type="text" value="0"/>	Intensity Dy:	<input type="text" value="62"/>
Elevation:	<input type="text" value="0"/>	Total Intensity:	<input type="text" value="60"/>
Differ. Elevation:	<input type="text" value="0"/>	Tracker Diode Gain:	<input type="text" value="0"/>
UTC Date/Time:	<input type="text" value="2016/05/25 21:32:57 GPS 7 satellites"/>	Clouds:	<input type="text" value="0"/>
Message:	<input type="text" value="INIT failed!"/>	Cloud Dtc Threshold:	<input type="text" value="0"/>
		Cloud Detector State:	<input type="text" value="OFF"/>

ST 74FE480E59EF Solar Tracker Local Mode

Tracker Positions:

Saved Local Position 1: 135.29 ; 138.46

Saved Local Position 2: 132.94 ; 32.61

Motor State:

Tracker Options:

FLP Flip Position Solartracker

SMF Step Mode Flag

Change Tracker Position manual:

< : 0.05° Steps

 <<<: 1.0° Steps

IRWG & TCCON Meeting June 2016

by Gregor Surawicz

Required Settings for running
the Solar Tracker Java Applet
under
Windows 7 / Windows 10
for Java 1.8.x



Search

Download Help

HELP RESOURCES

- [Installing Java](#)
- [Remove Older Versions](#)
- [Disable Java](#)
- [Using Java](#)
- [General Questions](#)
- [Mobile Java](#)
- [Security](#)
- [Support Options](#)



Get Help Now!

How do I install Java ?

Choose the Operating System for instructions to install Java:

- [Windows](#)
- [Mac](#)
- [Linux](#)
- [Solaris](#)

Windows Download and Installation

Downloading and installing Java is easy and free. There are a couple ways by which you can get Java for Windows

- Online download
- Offline download

Online

Manual installation downloads an IFTW (Install From The Web) executable program file and requires minimum user intervention. When you run this program, it fetches all the required files from the web, so you must remain connected to the Internet during the installation.

- Administrative permission is required in order to install Java on Microsoft Windows.
- If you face difficulty using the online download option, try the offline download option.

» [Instructions to download and install Java for Windows online](#)

Offline

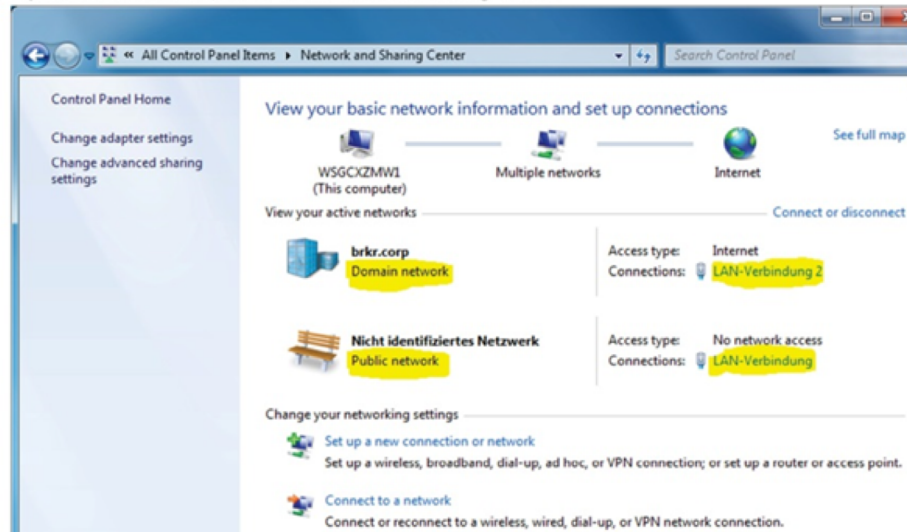
Offline installation requires you to download an executable file available at the manual Java download page, which includes all the files needed for the complete installation at the user's discretion. There is no need to remain connected to the Internet during the installation. The file can also be copied to and installed

Required Settings for running the Solar Tracker Java Applet under Windows 7 and Java 1.8.x

If the text boxes in the Java Applet of the Solar Tracker Main page remain empty, the UDP network traffic is blocked either by the Windows Firewall or by the Java security policy.

The Windows 7 Firewall blocks all inbound traffic by default. A new security rule must be defined to overcome this:

1. Check to which *Profile* the Ethernet interface belongs, to which the Solar Tracker is connected:
 - a. Open *Control Panel* , then *Network and Sharing Center*



The right column of table *View your active networks* shows the physical connections. If there is more than one, identify the one to which the Solar tracker is connected.

By clicking on a connection, then *Properties*, you see more details; here it is called *LAN-Verbindung*. In the left column the corresponding *profile* is listed, here *Public network*.

Note: the connections are only shown, if there is a physical connection established.

2. Open *Control Panel* , then *Windows Firewall*
 - a. Click *Advanced settings*. A new window opens, on the left click *Inbound Rules*.
 - b. On the right, click *New rule...*
 - c. The Rule Wizard pops up, select radio button *Custom*, click *Next >*
 - d. Select *All programs*, click *Next >*
 - e. Select *Protocol type: UDP* (from the drop down list), select *All Ports*, click *Next >*

Windows Firewall with Advanced Security

File Action View Help

Windows Firewall with Advanced Security

- Inbound Rules
- Outbound Rules
- Connection Security Rules
- Monitoring

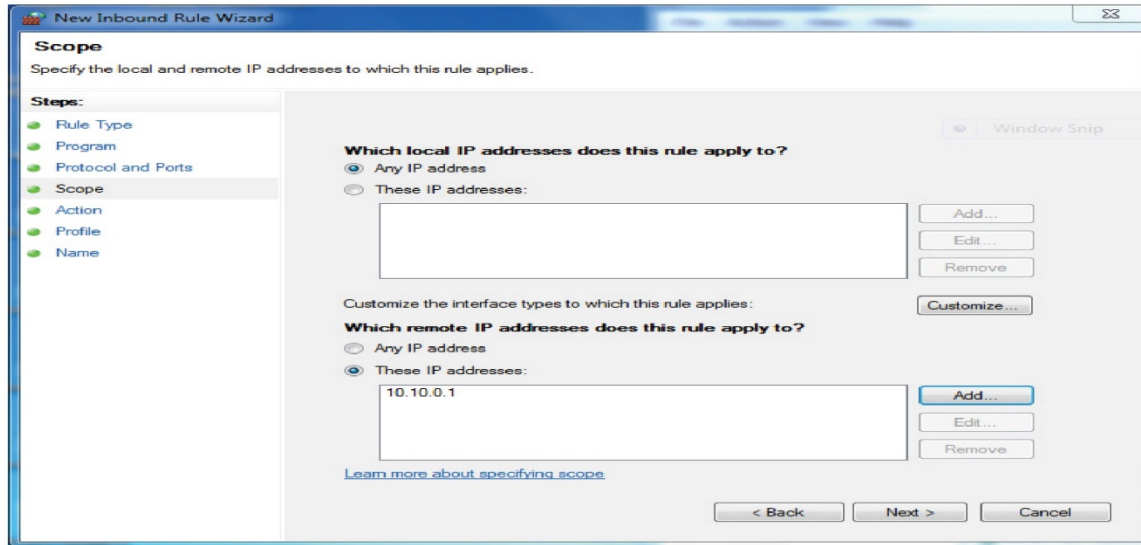
Name	Group	Profile	Enabled	Action	Override	Program	Local Address	Remote Address	Protocol
Microsoft OneNote		Domain	Yes	Allow	No	C:\Progr...	Any	Any	TCP
Microsoft OneNote		Domain	Yes	Allow	No	C:\Progr...	Any	Any	UDP
Microsoft SharePoint Workspace		Domain	Yes	Allow	No	C:\Progr...	Any	Any	TCP
Microsoft SharePoint Workspace		Domain	Yes	Allow	No	C:\Progr...	Any	Any	UDP
SMC Service		Domain	Yes	Allow	No	C:\Progr...	Any	Any	TCP
SMC Service		Domain	Yes	Allow	No	C:\Progr...	Any	Any	UDP
SNAC Service		Domain	Yes	Allow	No	C:\Progr...	Any	Any	TCP
SNAC Service		Domain	Yes	Allow	No	C:\Progr...	Any	Any	UDP
SolarTrackerUDP		Public	Yes	Allow	No	Any	Any	10.10.0.9, 10.10.0.1	UDP
Teamviewer Remote Control Application		Domain	Yes	Allow	No	C:\Progr...	Any	Any	UDP
Teamviewer Remote Control Application		Public	Yes	Allow	No	C:\Progr...	Any	Any	UDP
Teamviewer Remote Control Application		Public	Yes	Allow	No	C:\Progr...	Any	Any	TCP
Teamviewer Remote Control Application		Domain	Yes	Allow	No	C:\Progr...	Any	Any	TCP
Teamviewer Remote Control Service		Domain	Yes	Allow	No	C:\Progr...	Any	Any	UDP
Teamviewer Remote Control Service		Domain	Yes	Allow	No	C:\Progr...	Any	Any	TCP
Teamviewer Remote Control Service		Public	Yes	Allow	No	C:\Progr...	Any	Any	UDP
Teamviewer Remote Control Service		Public	Yes	Allow	No	C:\Progr...	Any	Any	TCP
wbxcOEx (64Bit)		All	Yes	Allow	No	C:\Progr...	Any	Any	Any
wbxcOEx (x86)		All	Yes	Allow	No	C:\Progr...	Any	Any	Any
BlackBerry Blend Desktop Invoke-Proxy	BlackBerry Blend Invoke-Pro...	All	Yes	Allow	No	C:\Progr...	Any	Any	TCP
BlackBerry Link MDNS Service (TCP)	BlackBerry Link MDNS Service	All	Yes	Allow	No	mDNSRe...	Any	Any	TCP
BlackBerry Link MDNS Service (UDP)	BlackBerry Link MDNS Service	All	Yes	Allow	No	mDNSRe...	Any	Any	UDP
BlackBerry Link Service (Nginx)	BlackBerry Link Peer-to-Pee...	All	Yes	Allow	No	C:\Progr...	Any	Any	TCP
BlackBerry Link Tunnel Manager (TCP)	BlackBerry Link Peer-to-Pee...	All	Yes	Allow	No	tunmgr.e...	Any	Any	TCP
BlackBerry Link Tunnel Manager (UDP)	BlackBerry Link Peer-to-Pee...	All	Yes	Allow	No	tunmgr.e...	Any	Any	UDP
BranchCache Content Retrieval (HTTP-In)	BranchCache - Content Retr...	All	No	Allow	No	SYSTEM	Any	Any	TCP
BranchCache Hosted Cache Server (HTT...	BranchCache - Hosted Cach...	All	No	Allow	No	SYSTEM	Any	Any	TCP
BranchCache Peer Discovery (WSD-In)	BranchCache - Peer Discove...	All	No	Allow	No	%system...	Any	Local subnet	UDP
Connect to a Network Projector (TCP-In)	Connect to a Network Proje...	Private...	No	Allow	No	%System...	Any	Local subnet	TCP
Connect to a Network Projector (TCP-In)	Connect to a Network Proje...	Domain	No	Allow	No	%System...	Any	Any	TCP

Actions

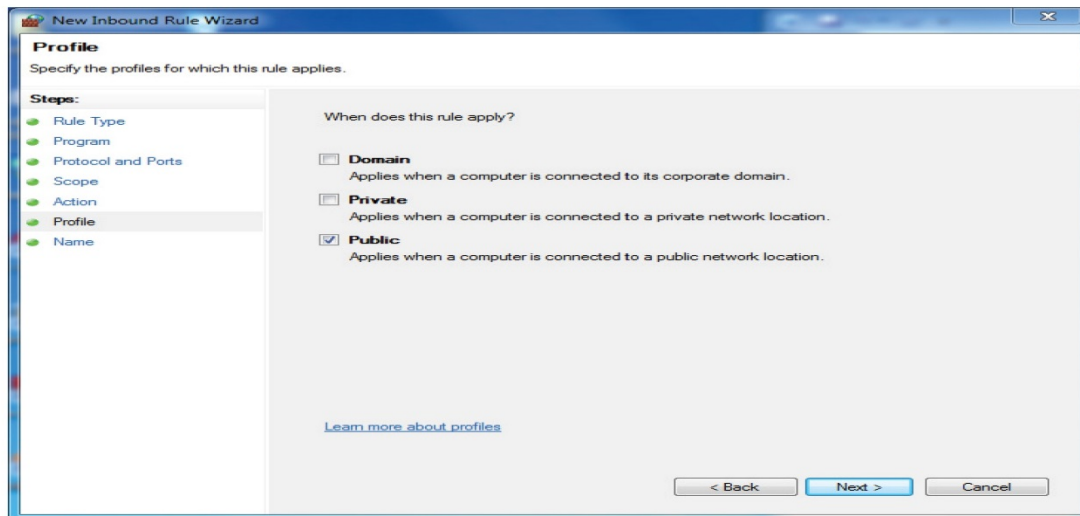
- Inbound Rules
- New Rule...
- Filter by Profile
- Filter by State
- Filter by Group
- View
- Refresh
- Export List...
- Help
- SolarTrackerUDP
 - Disable Rule
 - Cut
 - Copy
 - Delete
 - Properties
 - Help

EM27S... Libraries JAVA20... IMG_88... Windo... Windo... Windo... Windo... Windo... Windo... DE 17:47 20.05.2019

- f. For the *local IP addresses*, select *Any IP address*. For the *remote IP addresses*, select *These IP addresses*, click *Add...*



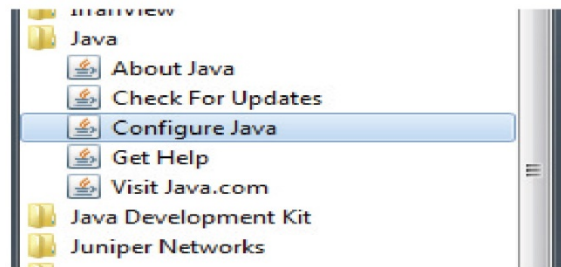
- g. Enter the Solar Tracker's IP address in list box *This IP address or subnet*, here 10.10.0.1 (or whatever address it has). Click *OK*, then click *Next >*
- h. Select *Allow the connection*, click *Next >*
- i. Set checkmark on the *profile* you found in step 1 (here *Public*), uncheck all other profiles, click *Next >*



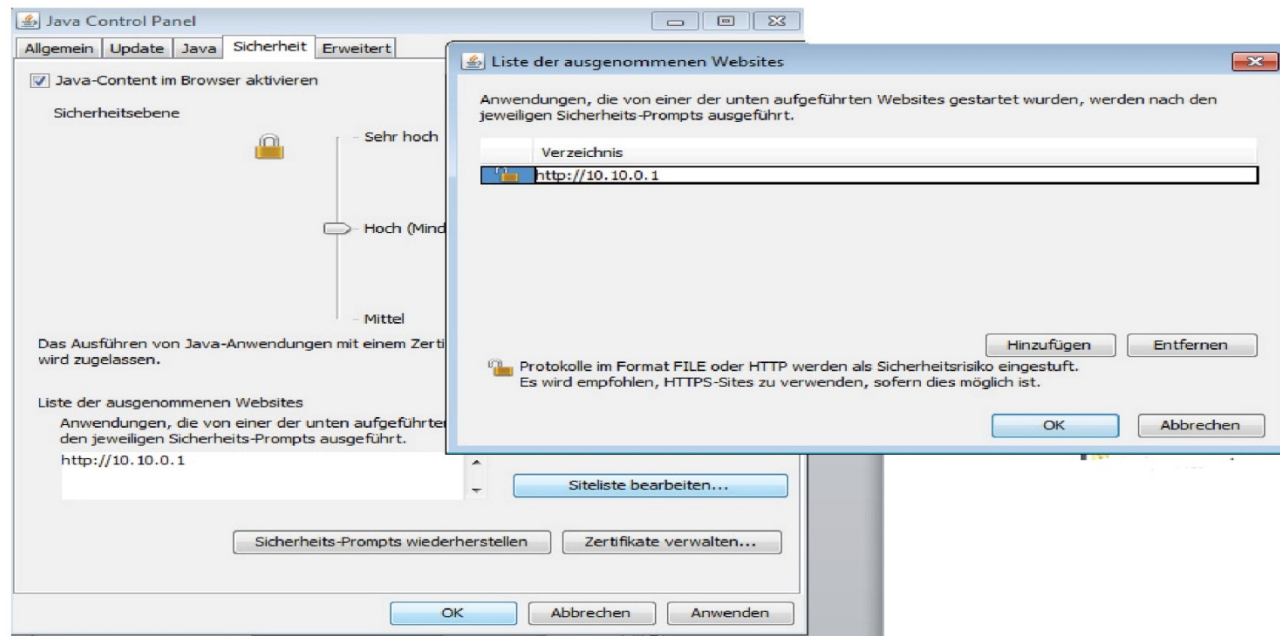
- j. Enter a name, here *SolarTrackerUDP*, then click *Finish*.

The Java 1.8.x security policy is very restrictive, so a number of permissions must be defined:

3. Add a permission to Java:
 - a. Start -> All Programs -> Java -> Configure Java

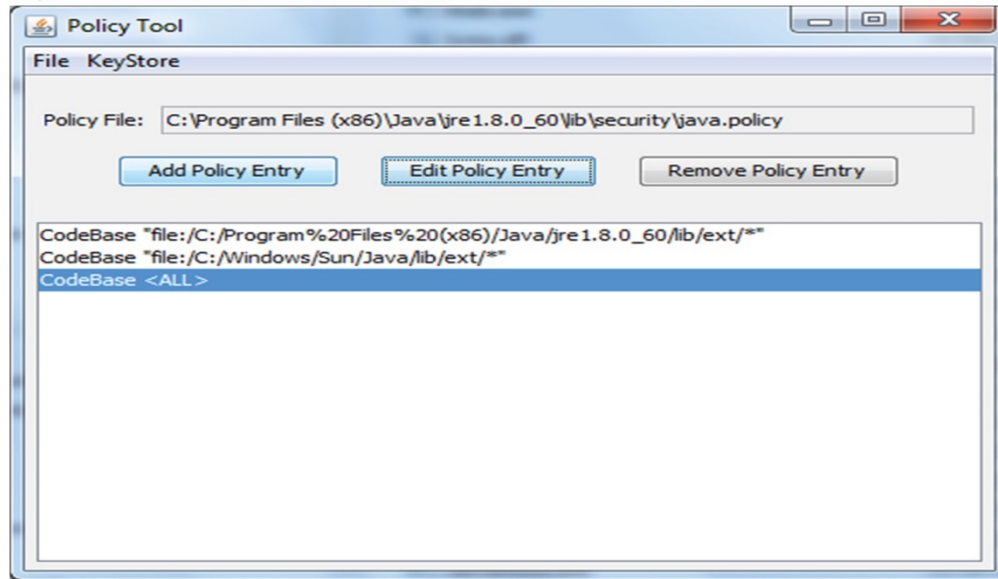


- b. In tab "Security" click on "edit site list" and add the IP of your solar tracker to add it as an exception

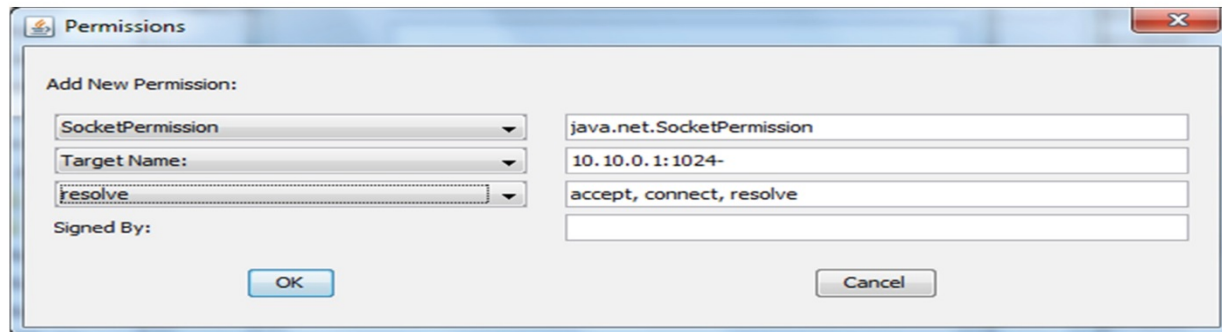


- c. You may repeat step b. for all different IP addresses your Solar Tracker may ever use.

4. Add permissions to the java.policy file (paths assuming Win 7 and Java 32bit):
 - a. Browse to C:\Program Files (x86)\Java\jre1.8.xxx\bin\policytool.exe
Right click on the .exe file -> Run as administrator



- b. In policytool.exe go to menu: File -> Open
Find directory 'lib\security' (probably you have to go up one directory level first).
Select the file 'lib\security\java.policy' and open it.
- c. Click 'Add Policy Entry'
- d. Click 'Add Permission'



- e. Select 'SocketPermission' from drop-down list.
- f. Enter target name in the right edit field: 10.10.0.1:1024-
(If your tracker has a different IP, use whatever address it has. Add :1024 and the minus sign at the end!)
- g. Actions: select 'accept', then 'connect', and finally 'resolve'. Click OK.

- h. You may repeat steps d. to g. for all different IP addresses your tracker may ever use.
- i. Finally click 'Done'.

Now the permissions to execute the CamTracker program must be entered:

- j. Click 'Add Policy Entry'
- k. Click 'Add Permission'
- l. Select 'FilePermission' from drop-down list.
- m. Enter target name in the right edit field:
Absolute path to the directory where you have installed the CamTracker program
e.g.: C:\Program Files (x86)\Bruker\CamTracker
or: C:\Users\xxx\CamTracker (assuming xxx is your user name)
(A list of allowed paths can be found in SetupWin.txt on the CamTracker installation disk)
- n. Actions: select 'read'. Click OK.
- o. Click 'Add Permission'
- p. Select 'FilePermission' from drop-down list.
- q. Enter target name in the right edit field:
Absolute path to the directory of the CamTracker program, terminated by *
e.g.: C:\Program Files (x86)\Bruker\CamTracker\
respectively: C:\Users\xxx\CamTracker* (assuming xxx is your user name)
- r. Actions: select 'execute'. Click OK.

In case the CamTracker program is located in the user home directory (like in the second example above), another permission must be entered:

- s. Click 'Add Permission'
- t. Select 'PropertyPermission' from drop-down list.
- u. Enter target name in the right edit field: user.home
(exactly this term, no matter what your actual user name is)
- v. Actions: select 'read'. Click OK.

- w. Finally click 'Done'.
- x. Go to menu: File -> Save.
A message box will inform you about success (or failure) of the operation.
- y. Close the policy tool.

NOTE:

If Java is updated, the new version will use a default java.policy file again. So either all the steps above have to be repeated for the new version, or the java.policy file from the previous version must be copied to the *lib\security* directory of the new version.

- 5. Open the main web site of your Solar Tracker. When a java-applet shall be loaded from any of the sites defined as an exception in step 3.b, a prompt will appear, asking for confirmation to start the applet. Please do so.
- 6. When you switch to CamTracker mode, another prompt will appear. Here you have to click on the checkbox, that you accept the risk, before you can run the applet. This applet is used to start the CamTracker program automatically, whenever CamTracker mode is entered.



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