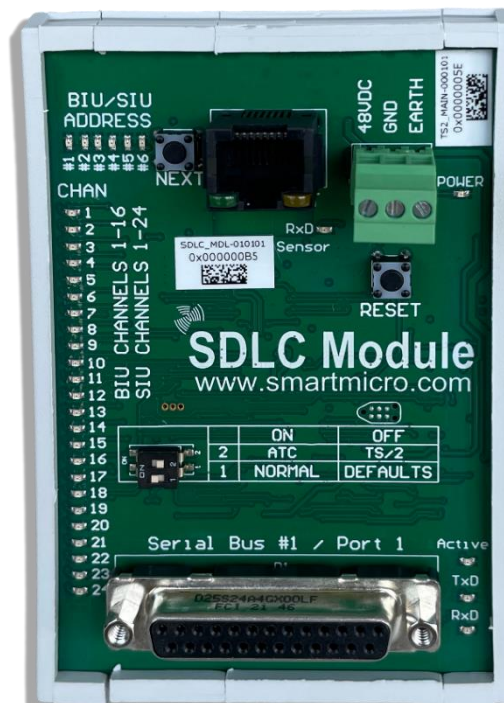


USER MANUAL SDLC MODULE

TRAFFIC MANAGEMENT ACCESSORY

SDLC MODULE



s.m.s, smart microwave sensors GmbH
In den Waashainen 1
38108 Braunschweig
Germany

Phone: +49 531 39023-0
Fax: +49 531 39023-599
info@smartmicro.de
www.smartmicro.com

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1 REFERENCE DOCUMENTS

No.	Document Name	SVN-ID	Notes
[1]	TMIB2 User Manual.pdf		
[2]	COM HUB Sync PLC User Manual.pdf		
[3]			
[4]			
[5]			

Table 1: Reference documents

2 SDLC WEB INTERFACE

2.1 CONFIGURATION WITH FIRMWARE V2.1.63 AND OLDER

The SDLC Module has the default IP 10.0.0.215. The PC has to be in the same Ethernet subnet with an IP address which is different to 10.0.0.215.

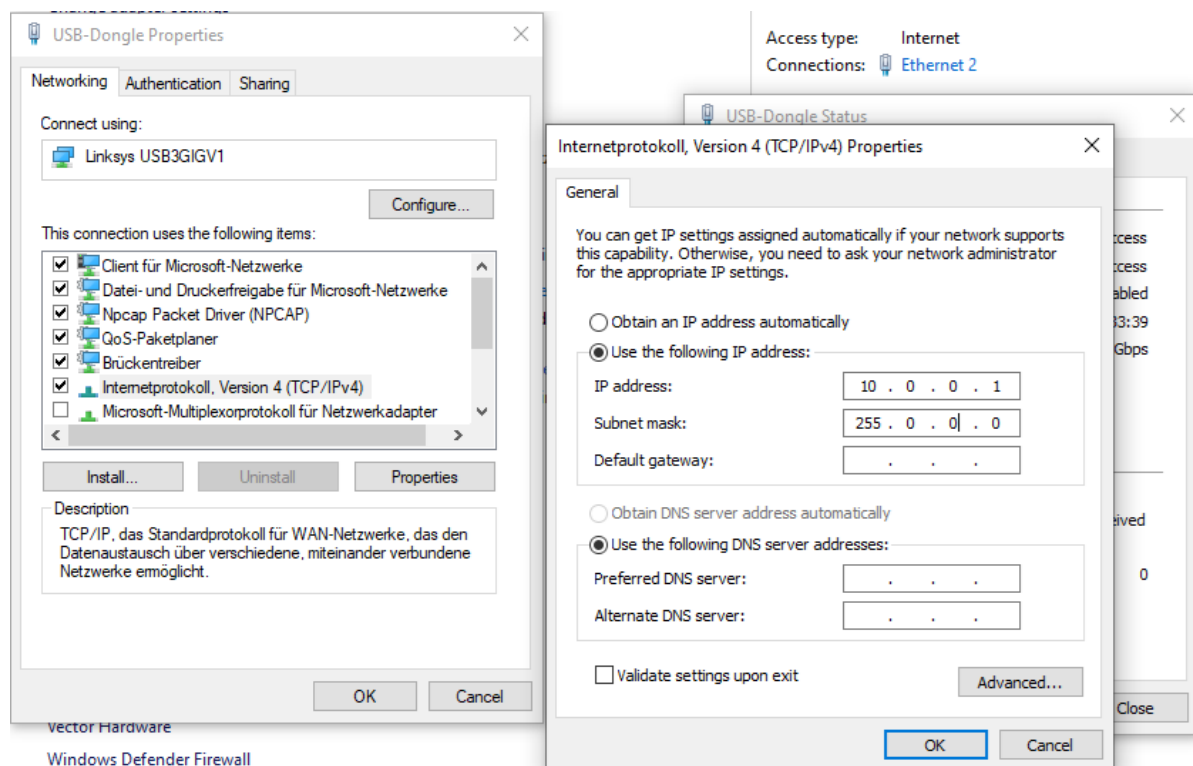


Figure 2-1 Changing IP Address of PC

The Traffic Web UI of the SDLC Module is the reachable with 10.0.0.215.

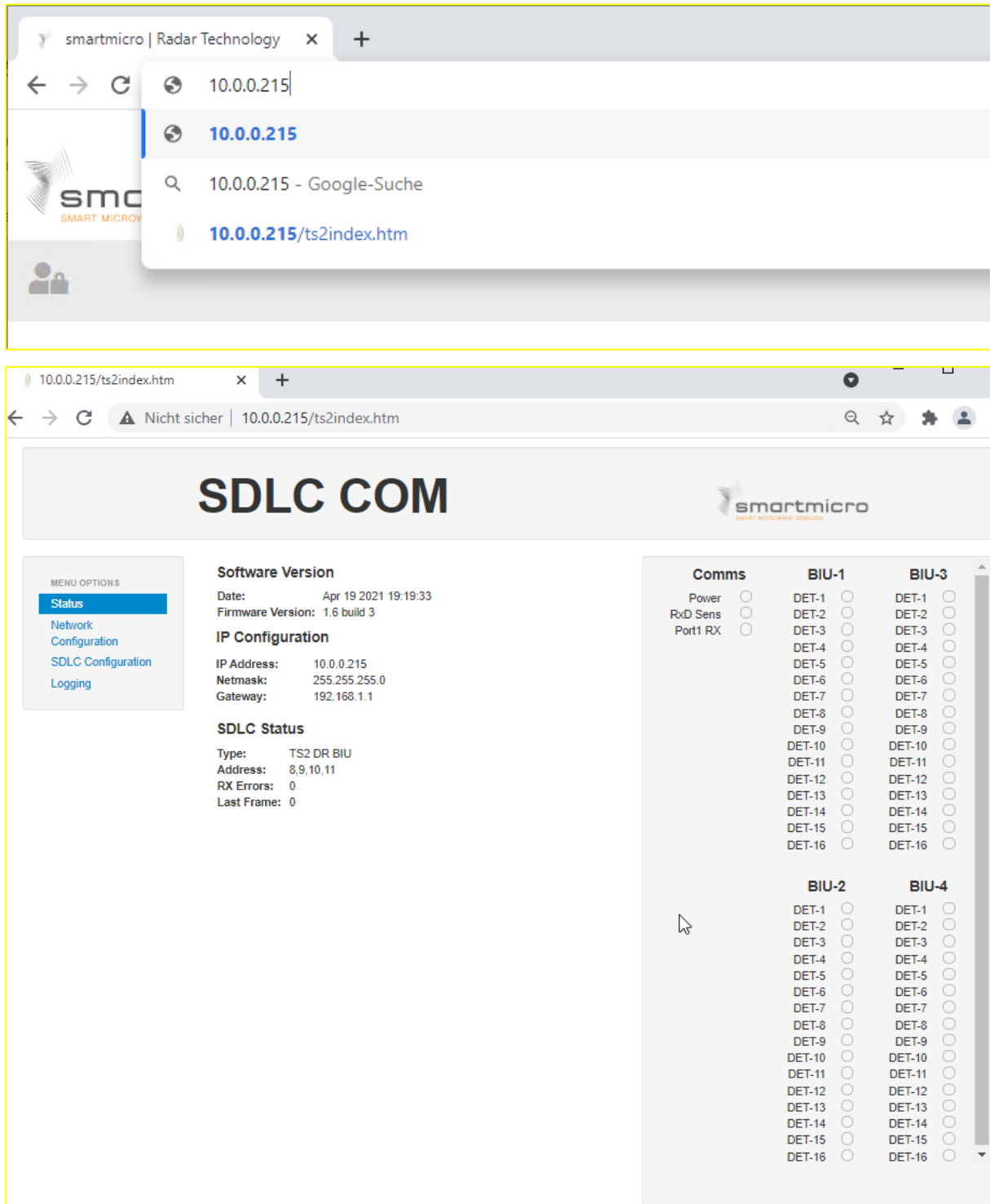


Figure 2-2 Main status screen

2.2 CONFIGURATION WITH FIRMWARE V2.3 AND NEWER

Since the SDLC Module can be used with the COM HUB Sync PLC the default IP is 192.168.11.3. The PC has to be in the same Ethernet subnet with an IP address which is different to 192.168.11.3.

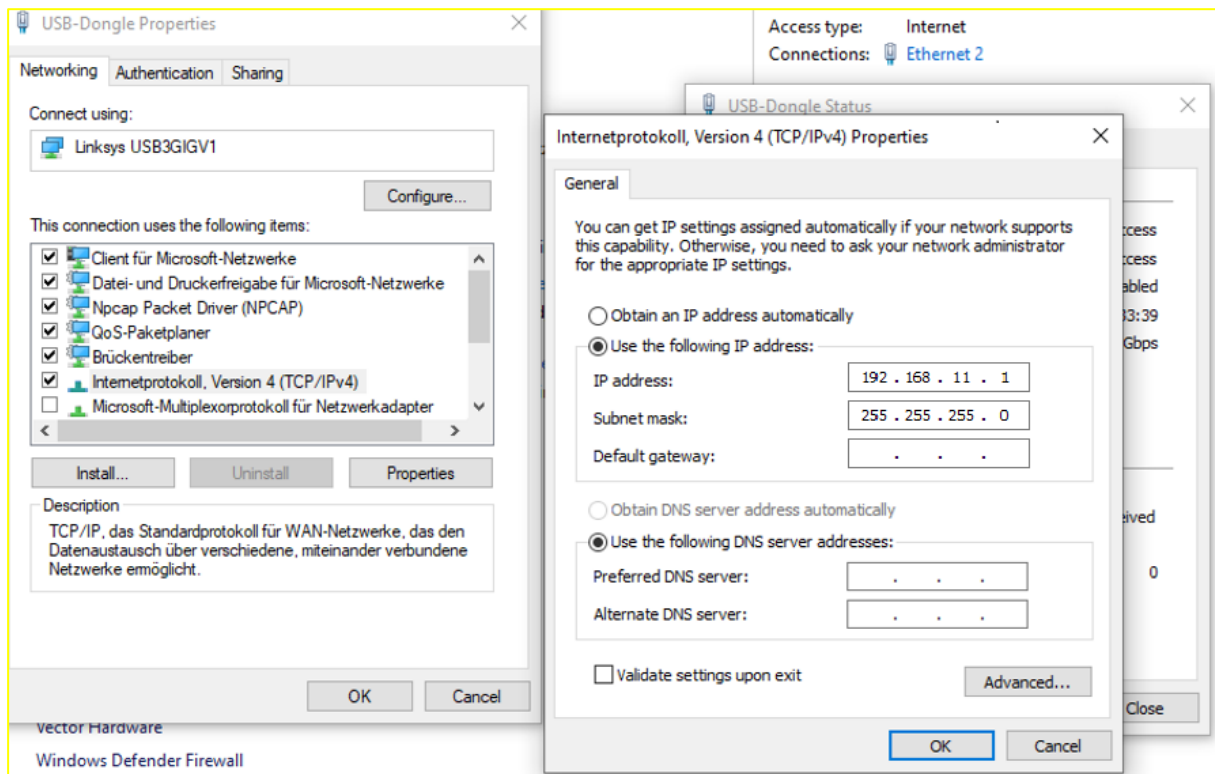
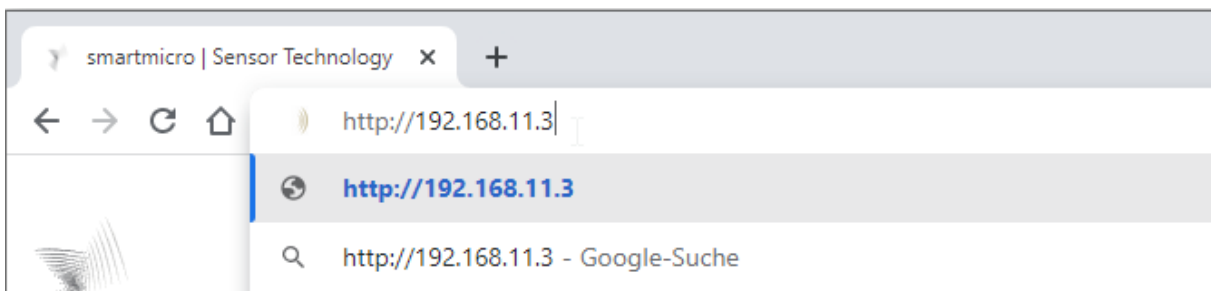


Figure 2-3 Changing IP Address of PC

The Traffic Web UI of the SDLC Module is the reachable with 10.0.0.215.





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2.3 MAIN SCREEN

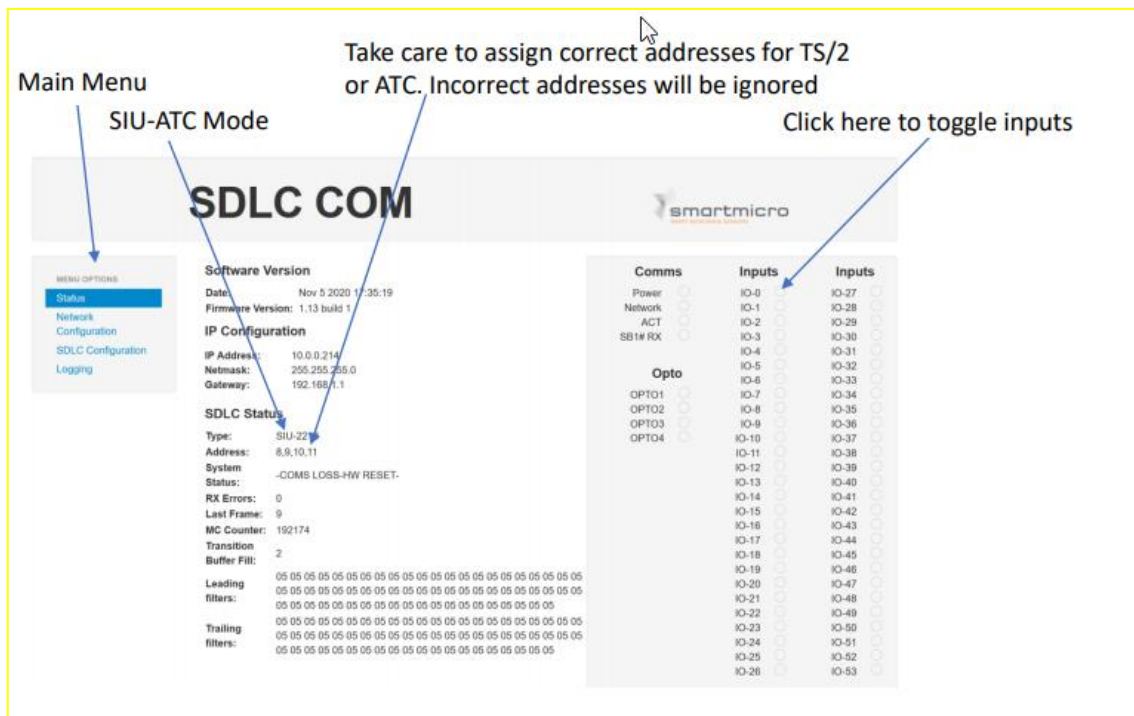


Figure 2-5 Main screen in SIU ATC mode

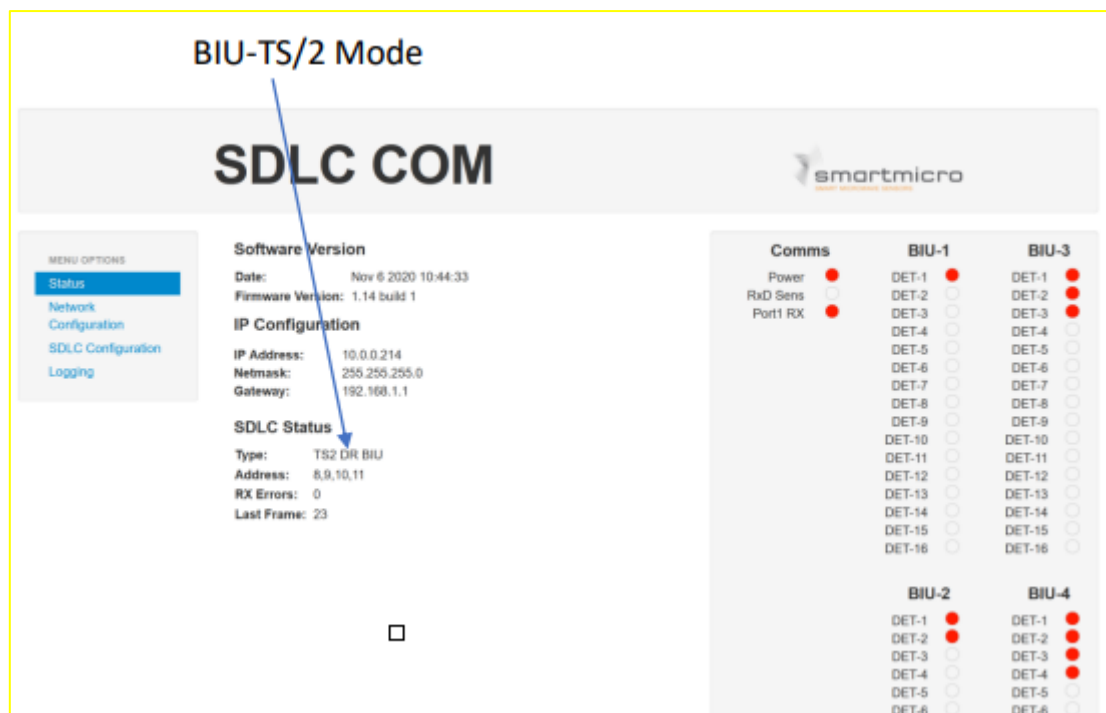
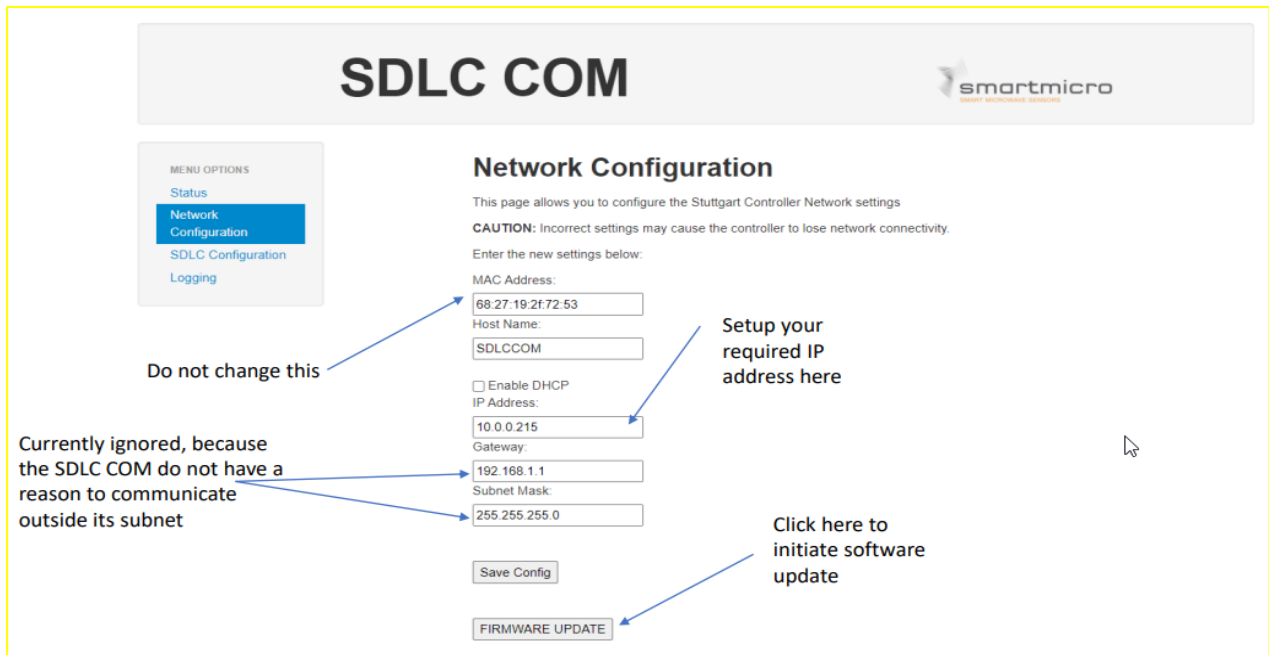


Figure 2-6 Main screen in TS/2 mode

2.4 NETWORK CONFIGURATION



SDLC COM

Network Configuration

This page allows you to configure the Stuttgart Controller Network settings

CAUTION: Incorrect settings may cause the controller to lose network connectivity.

Enter the new settings below:

MAC Address: 68:27:19:2f:72:53

Host Name: SDLC COM

☐ Enable DHCP

IP Address: 10.0.0.215

Gateway: 192.168.1.1

Subnet Mask: 255.255.255.0

Save Config

FIRMWARE UPDATE

Annotations:

- Do not change this (points to MAC Address)
- Setup your required IP address here (points to IP Address)
- Click here to initiate software update (points to FIRMWARE UPDATE)
- Currently ignored, because the SDLC COM do not have a reason to communicate outside its subnet (points to Gateway and Subnet Mask)

Figure 2-7 Network view screen

2.5 SDLC PORT CONFIGURATION

SDLC MODULE

www.smartmicro.com

MENU OPTIONS

- Status
- Network
- Configuration
- SDLC Configuration**
- Logging
- RAW Frame

SDLC Configuration

This page allows you to configure the Stuttgart Controller SDLC Settings

Enter the new settings below:

SDLC Mode:

☒ TS2

☐ ATC

This setting cannot be changed here if your converter is fitted with a DIP switch selector.

SDLC Address (eg 8,9,10,11,12,13):

8,9,10,11

☒ Enable Failsafe

Enter addresses separated by commas. Invalid formats will be rejected when saving

ATC:

Address 9, 10, 11, 12, 13 allowed. I/O 1-24 Assigned to each address in order. If you configure for example Address 9,13: The converter will translate SIU I/O 0-23 from Address 9 to Input 1-24 of the converter and SIU I/O 0-23 of Address 13 to Input 24-47 of the converter. Up to 64 Inputs are allowed on the converter.

Note that SIU #1 = Address 9, SIU #2 = Address 10, etc

TS2:

Address 8, 9, 10, 11 allowed. I/O 1-16 Assigned to each address in order. If you configure for example Address 8,10: The converter will translate BIU I/O 1-16 from Address 8 to Input 1-16 of the converter and BIU I/O 1-16 of Address 10 to Input 17-32 of the converter. Up to 64 Inputs are supported on the converter, allowing all 64 I/O over all BIU channels.

Note that BIU #1 = Address 8, BIU #2 = Address 9, etc

If you change this, it will only be until next power cycle. This does not change the SDLC bitrate. Rather change mode using DIP switch.

Set addresses. 1-4 for BIU and 1 for SIU. Separate with comma. Invalid addresses will be ignored.

The SDLC module expects the communication within 1000ms and less than 2000ms. After 2000ms all outputs must be set, and the unit will enter failsafe mode producing calls on all input detects. Please deactivate this Failsafe mode if the SDLC module is connected on a TMIB2.

Figure 2-8 SDLC configuration screen

The screenshot shows the SDLC COM web interface. The main title is "SDLC COM" with the SmartMicro logo on the right. A left sidebar contains a "MENU OPTIONS" section with links for Status, Network Configuration, SDLC Configuration, and Logging. The main content area displays several data sections: "SIU Counts" (Last Comms: 1996, Refresh: 49), "Date/Time received from Controller Unit" (2020/10/06 10:00:13), "Error Counts" (all zero), and "Received Frame Counts" (a table of frame counts). Annotations with arrows point to specific data points: "Date/Time received from Controller in TS/2 mode" points to the date/time; "Count number of times this page is reloaded and data is refreshed" points to the "Refresh" value; "This should not increment other than the moment when you plug in/out the SDLC cable" points to the "Last Comms" value; and "The controller can decide what it wants to read. This is the number of times the controller has requested each frame" points to the "Received Frame Counts" table.

SDLC COM

smartmicro

MENU OPTIONS

- Status
- Network Configuration
- SDLC Configuration
- Logging

SIU Counts

Last Comms(ms): 1996
Refresh: 49

Date/Time received from Controller Unit

2020/10/06 10:00:13

Error Counts

Short Frame Error: 0
Control Error: 0
CRC Error: 0
Idle Error: 0
Framing Error: 0
Long Frame Error: 0
Unknown Frames: 0

Received Frame Counts

0: MMU Load Switch Drivers	85961
9: Date/Time Broadcast	2027
20: Call Data Request	20273
21: Call Data Request	1062
22: Call Data Request	1061
23: Call Data Request	20273
24-27: BIU Reset/Diagnostic Request	4270
40: BIU Service Request	0

Date/Time received from Controller in TS/2 mode

Count number of times this page is reloaded and data is refreshed

This should not increment other than the moment when you plug in/out the SDLC cable

The controller can decide what it wants to read. This is the number of times the controller has requested each frame

Designed by Stuttgart Inc

3 MULTI-SENSOR CONNECTION WITH TMIB2

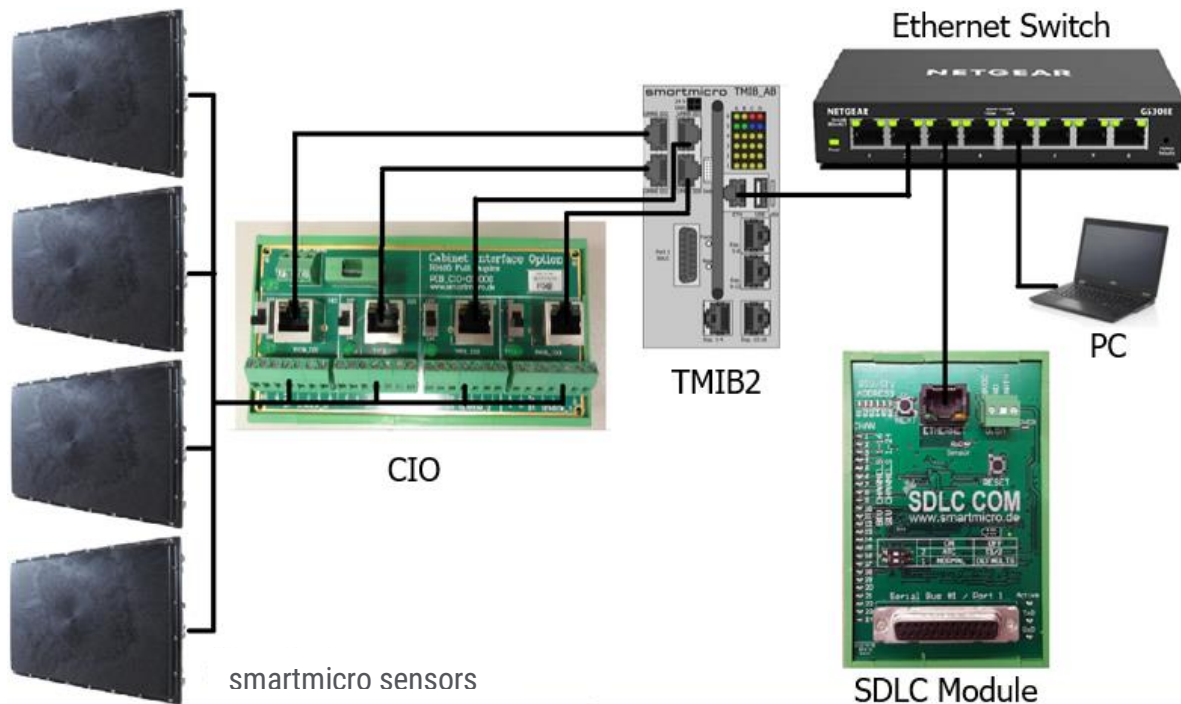


Figure 3-1 Connection with four sensors and TMIB2

A typical smartmicro sensor system consists of up to 4 sensors, which are usually connected to a Cabinet Interface Option (CIO). The CIO Module is directly connected to the TMIB2. The SDLC Module together with an additional user PC are connected to the TMIB2 over an Ethernet switch.

3.1.1 TMIB2 CONFIGURATION

The used TMIB2 have to have firmware version v1354 or higher.

The TMIB2 is reachable over the private IP address area 192.168.11.2 or since v1354 via 10.0.0.111. The PC which is configured for a connection with the SDLC Module is then also able to reach the TIMB2. (see 2 SDLC Web Interface, regarding IP configuration)

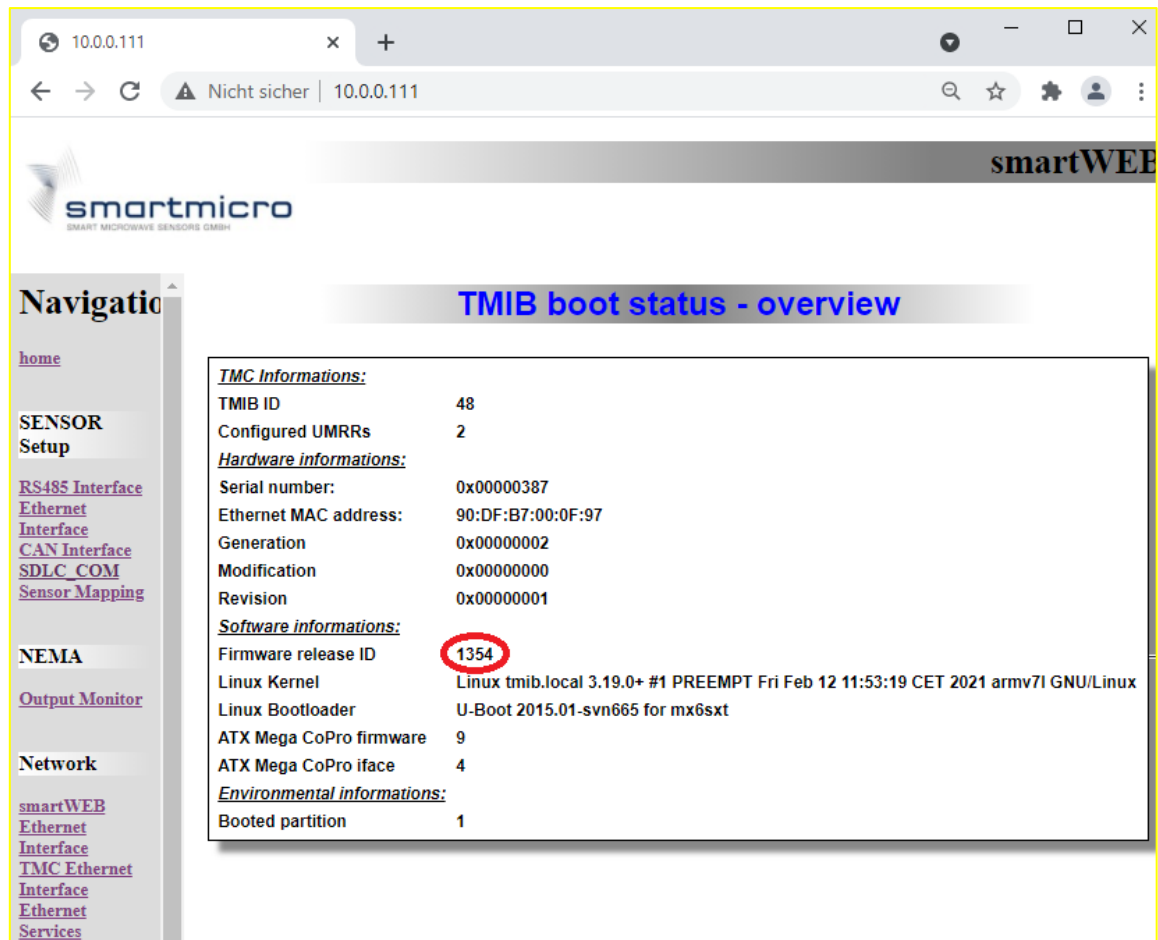


Figure 3-2 Start screen of the TIMB2 Traffic Web UI

If an older version is installed on the TMIB2, please ask the smartmicro support to get the latest version.

Only firmware version 1354 or later can communicate with the SDLC Module.

It has the special Traffic Web UI tab to configure the communication address of the SDLC Module.

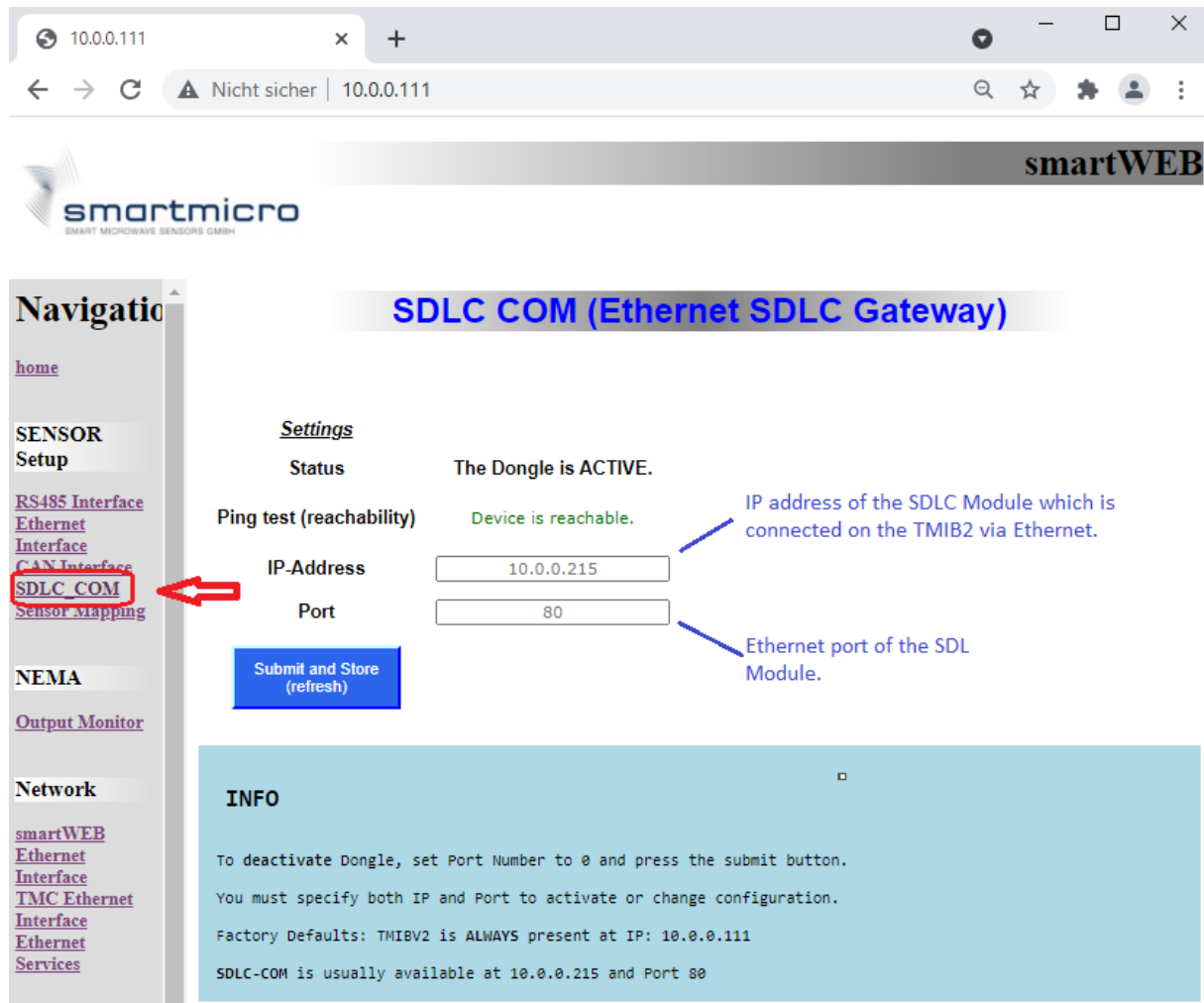


Figure 3-3 SDLC Module configuration in TMIB2

If the "Ping test" fails, please enter the IP address of the SDLC Module and activate the communication with the port number 80. To deactivate the communication between SDLC Module and TMIB2, please enter port number 0.

Further information regarding TMIB2 is described in the documentation[1].

4 MULTI-SENSOR CONNECTION WITH COM HUB SYNC PLC



Figure 4-1 Connection with four sensors and COM HUB Sync PLC and SDLC Module

The COM HUB Sync PLC is a central device in the sensor system. All sensors and the SDLC Module are directly connected. The user has its own Ethernet port to connect a PC.

Further information regarding COM HUB Sync PLC is described in the documentation [2].

4.1 FIRMWARE UPDATE

In an update of the SLC Module is available, please load it to the PC and connect it to the Traffic Web UI of the SDLC Module via browser.

On the status screen you can see the firmware version, which is currently installed.

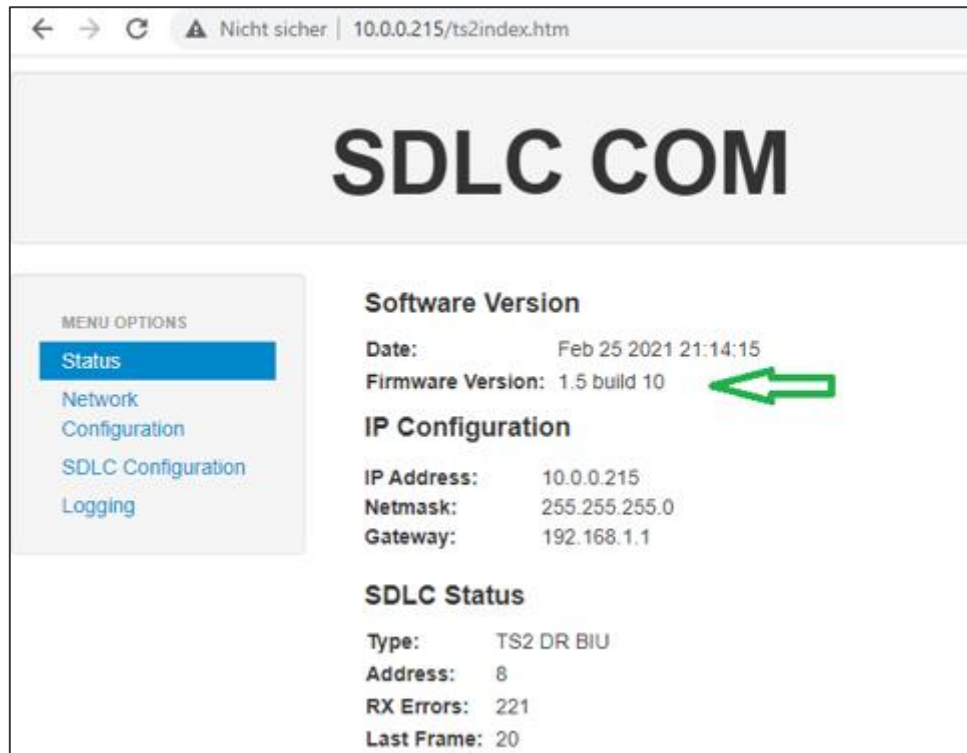


Figure 4-2 Firmware version on the status screen

Now start the programming tool which comes together with the firmware version and load the new firmware.

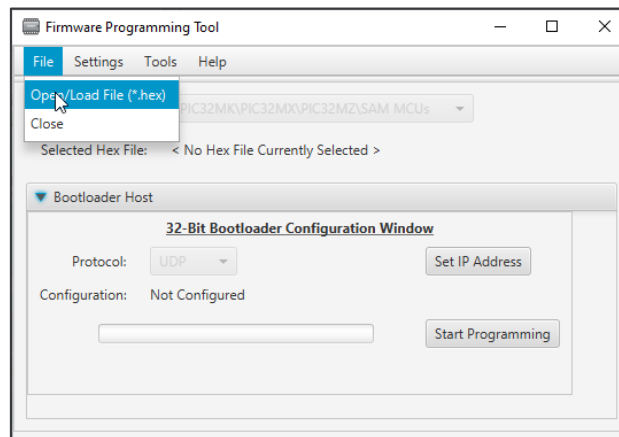


Figure 4-3 Programming Tool

Prepare the tool with the IP address of the Bootloader of the SDLC Module, which is **192.168.11.4**. Click on “Set IP Address” to open the UDP settings.

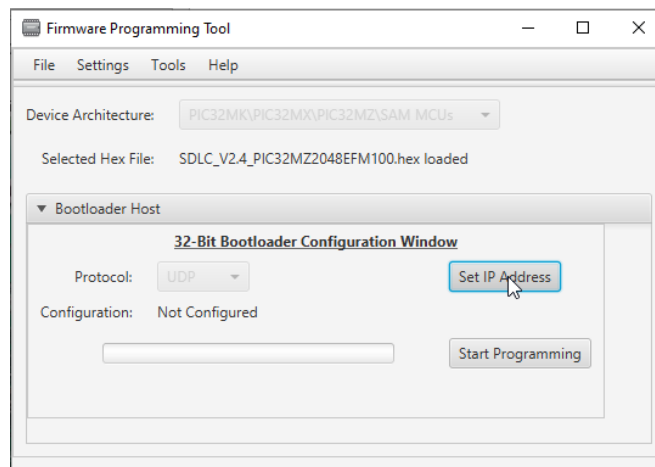


Figure 4-4 IP Addressing for the Bootloader

Enter the 192.168.11.4 as the address. The Port number is 6234 and should not be changed.

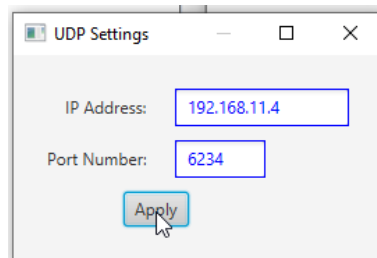


Figure 4-5 UDP Settings

Now go back to the browser to the “Network configuration” tab. There is a button for “Firmware Update”. After clicking this button, the SDLC Module goes into the Bootloader mode. The connection between TMIB2 or Traffic Controller and SDLC Module will be closed.

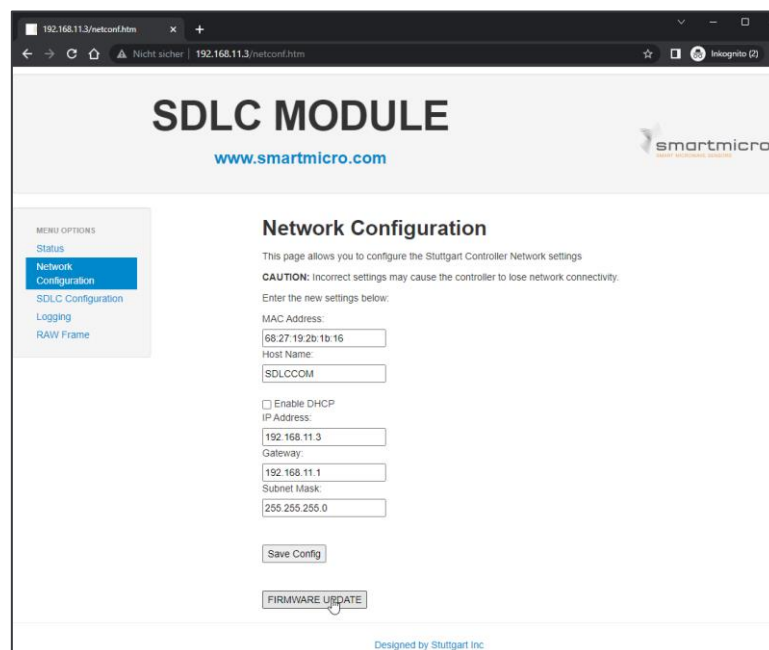


Figure 4-6 Network Configuration with Update Button

With the click on this button, the Bootloader is active. Now please follow the UDP/IP Bootloader instructions.

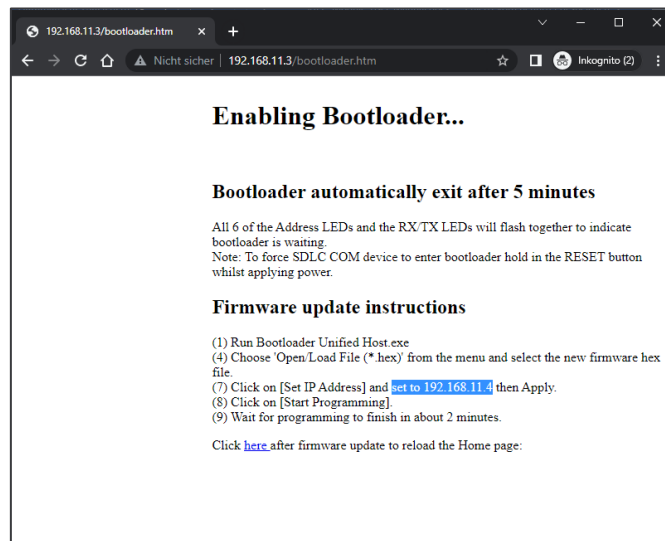


Figure 4-7 Bootloader Mode and Instructions

Go back to the programmer tool and click on "Start Programming".

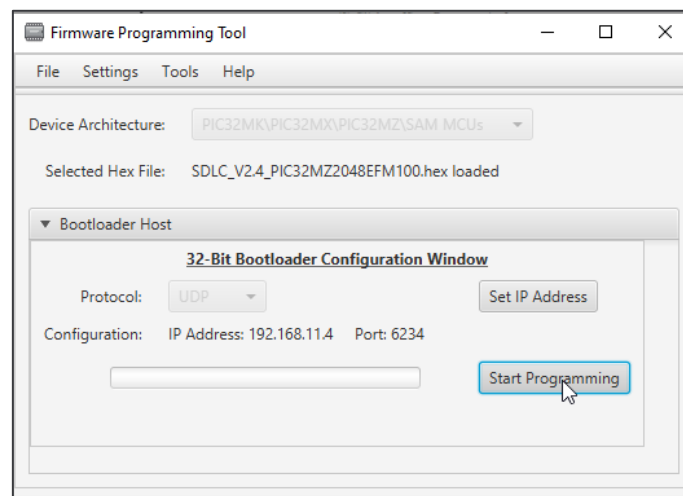


Figure 4-8 Programmer Tool

A new console window should be open, which gives feedback about the update process.

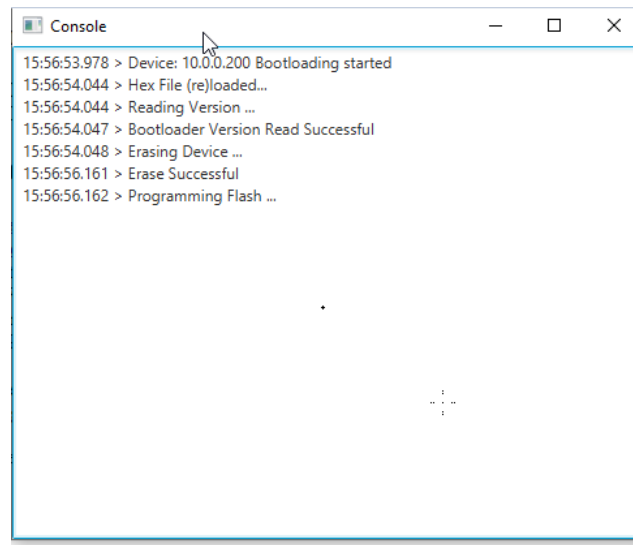


Figure 4-9 Programming of the flash started

Please be careful to not interrupt the power.

If the last information is the programming chain being completed, then the update process is done and the SDLC Module runs with the new firmware after the restart.

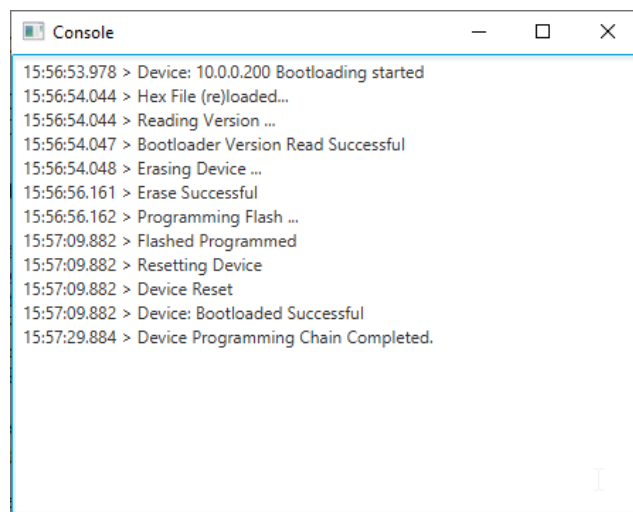


Figure 4-10 Programming chain completed

The status screen should now show the updated firmware version.

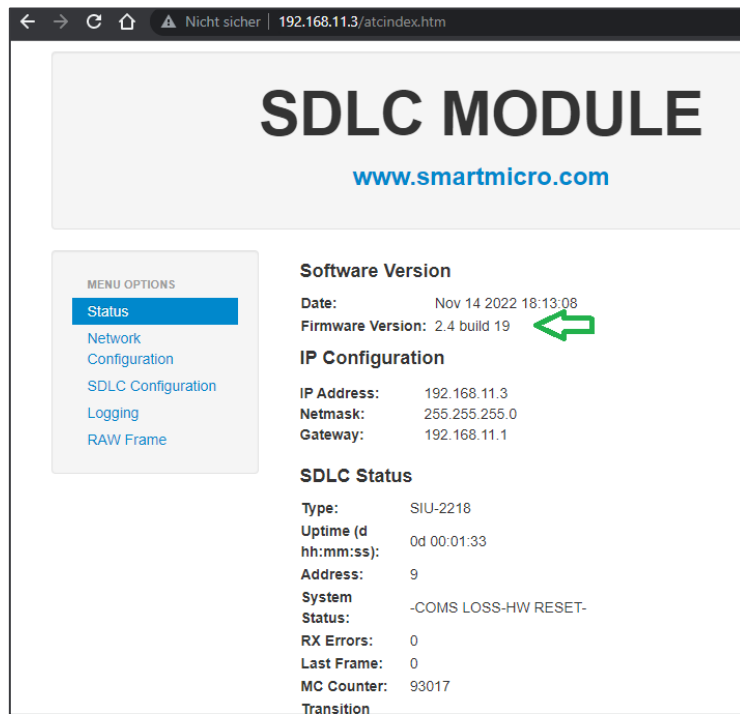


Figure 4-11 Status screen with updated firmware version

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