



Toolkit setup & Application download for MI-21 system

Project Number – XXXX

Report – XXXX

INDUSTRIAL CONTROLS GROUP
WOODWARD GOVERNOR COMPANY
FORT COLLINS, COLORADO, USA

PROPRIETARY

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1. OVERVIEW

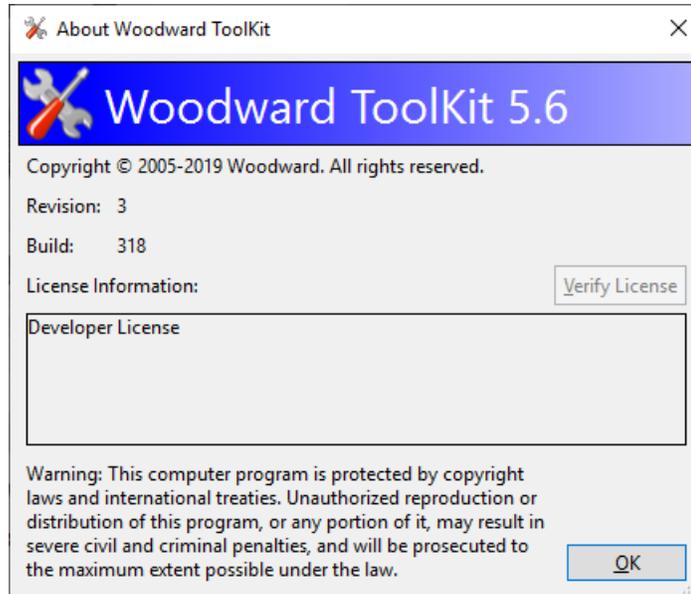
The purpose of this document is defined what communication setup need to MI-21 system use SECM70 with the Toolkit. It can be support XCP by CAN communication. SECM70 controller can be available CAN1 and CAN2 channel. CAN1 is use for J1939 communication, CAN2 use for xCP for toolkit t communication

This documents also have how can set up CAN communication, how can download application program and setting files.

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2.1.3 Toolkit Preparation

- ToolKit 5.6.318.3



2.1.4 Application file downloading

SECM70 required application software download for update application software

- WTOOL
- SID
- DLL

2.1.5 CAN set up for communication

Channel	XCP	Baud Rate	Command ID	Response ID	Remarks
CAN1	XCP (1DAQ)	250K	188C0BF9	188BF90B	Same as Boot mode ID
CAN2	XCP1 (6DAQ)	500K	188C0CF9	188BF90C	Same as Green module ID
	XCP2 (1DAQ)		188C0CFA	188BF90E	No Change

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2.1.5.1 GREEN MODULE and USED MOUDLE OF SECM70

If you have the Green module of SECM70, load application follows by 2.1.5.2, if you have normal SECM70 it will follow 2.1.5.3. because same SECM70 has two different CAN2 Channel

2.1.5.2 Green module (Factory version)

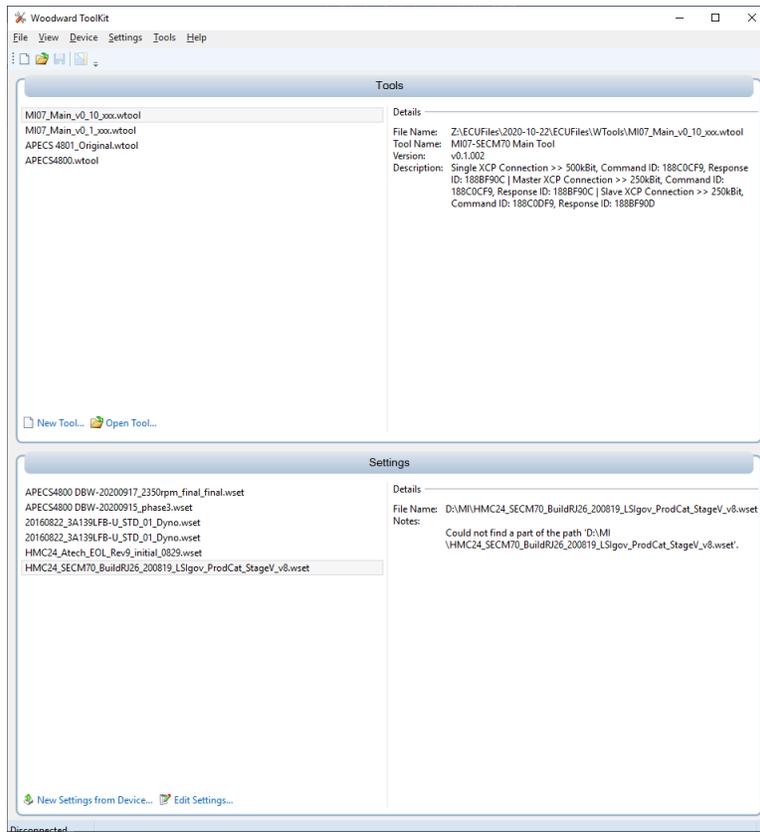
Nothing has been loaded Software application after factory shipment is GREEN MODULE

In the case of green module, software downloading is according to the following method.

SECM 70 - 1751-6772, SECM70 MI-1702 CONTROL MODULE - 5642 DEV

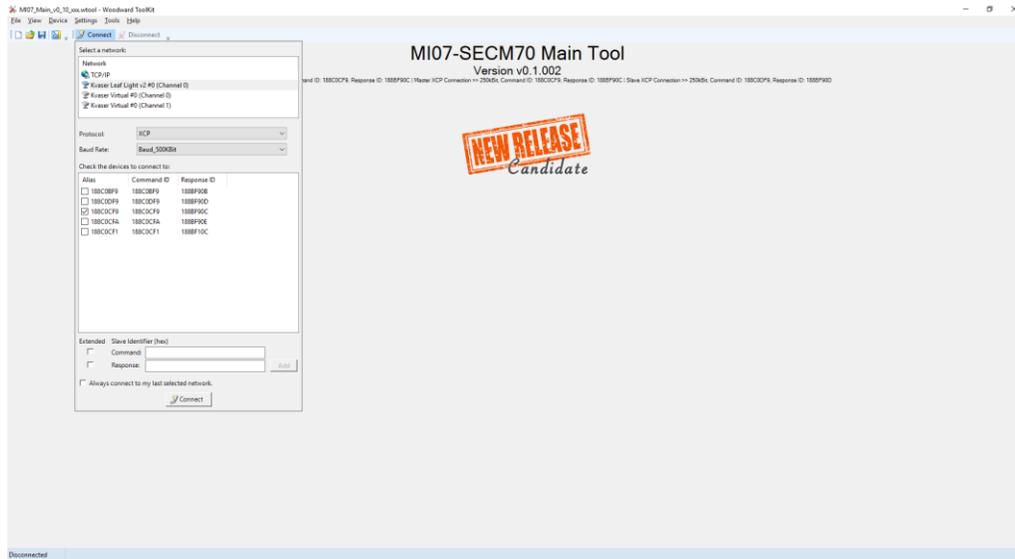
- **CAN channel - CAN bus 2**
- **Baud Rate - 500k baud**
- **Command: 188C0CF9**
- **Response: 188BF90C**

Open Toolkit program and select WTOOL files “MI07_Main_V0_10_xxx.wtool.

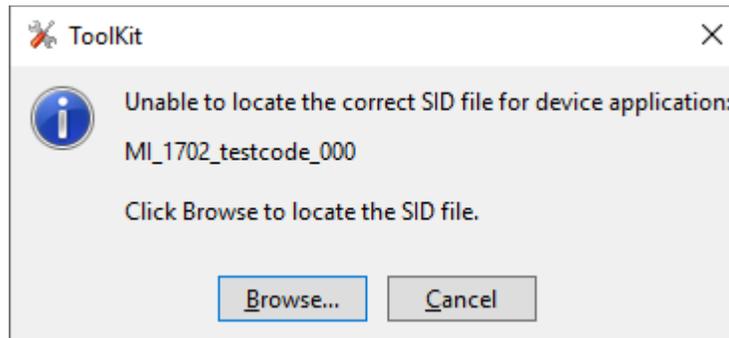


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Click drop down menu to “Connection” and connect to command ID **188C0CF9** and response ID **188BF90C**

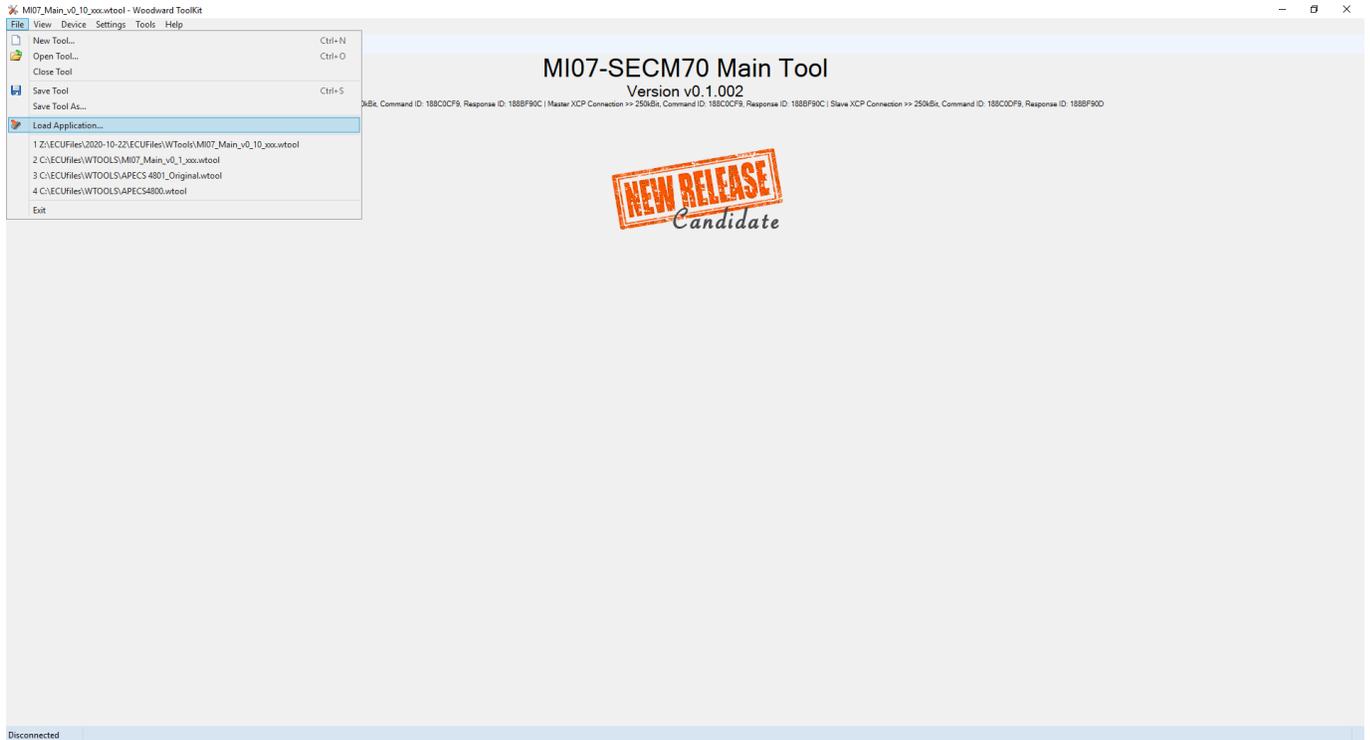


MI_1702_testcode_000.sid file notification popup, Green module has a special SID file from manufacture, so this notification mean is it has been loaded factory test software.



It is required new application software download for MI-21, drop down menu and click “Load Application”

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Selected target .WAPP files that latest version of application files you have. And click next

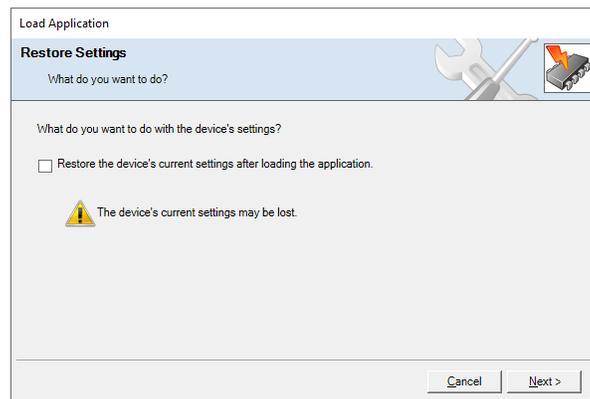
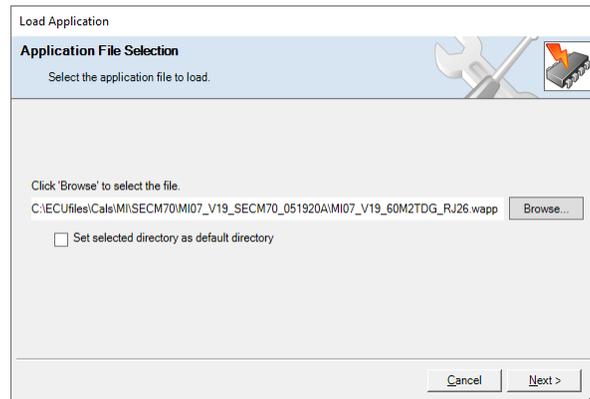
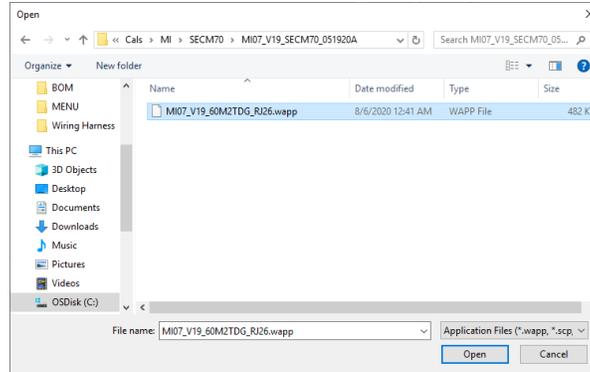
TITLE

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Selected command ID **188C0CF9** and response ID **188BF90C**

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Load Application

Network Selection

Select the network to connect with.

Select a network:

- Network
- TCP/IP
- Kvaser Leaf Light v2 #0 (Channel 0)
- Kvaser Virtual #0 (Channel 0)
- Kvaser Virtual #0 (Channel 1)

Protocol: XCP

Baud Rate: Baud_500Kb/s

Check the devices to connect to:

Alias	Command ID	Response ID
<input type="checkbox"/> 188C0BF9	188C0BF9	188BF90B
<input type="checkbox"/> 188C0DF9	188C0DF9	188BF90D
<input checked="" type="checkbox"/> 188C0CF9	188C0CF9	188BF90C
<input type="checkbox"/> 188C0CFA	188C0CFA	188BF90E
<input type="checkbox"/> 188C0CF1	188C0CF1	188BF10C

Extended Slave Identifier (hex)

Command:

Response:

Load Application

Select Device

Select the device to work with and press Next.

Device	Status
-188C0CF9	Connected

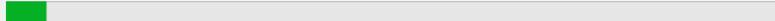
Start to WAPP files download. **DO NOT KEY OFF / POWER OFF ON SECM70 DURING SOFTWARE DOWNLOAD.**

Load Application

Loading Application

Please wait

Connecting on Kvaser Leaf Light v2 #0 (Channel 0).

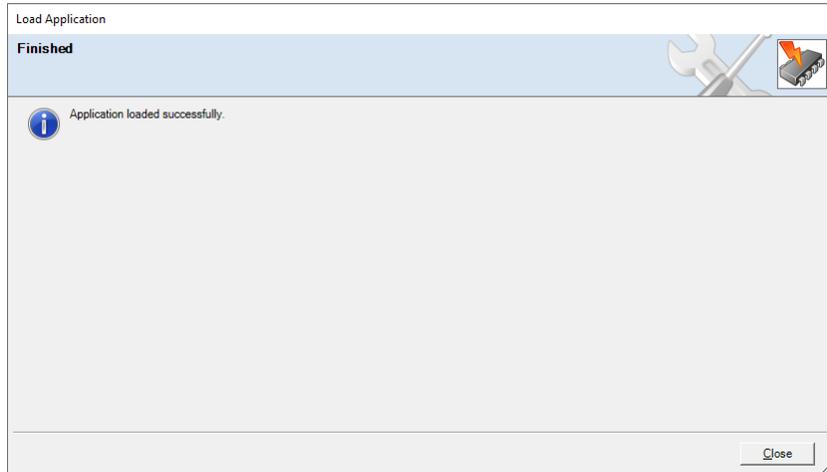


Writing to Memory...

25 KB of 492.604 KB

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Download completed, when successfully download completed, there is need to KEY OFF for finished SW download procedure.



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2.1.5.3 Normal SECM70 SW download

2.1.5.4 . WAPP and WSET files download

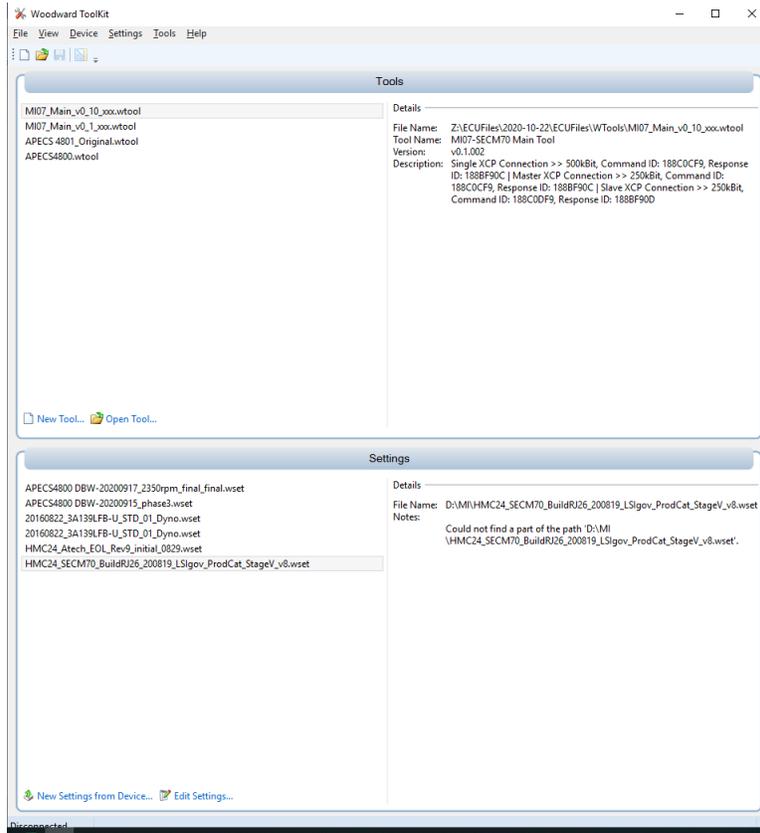
A WAPP file is a file that contains basic software information and structure. WSET is a file that has its own settings for each engine.

Sometimes WAPP files and WSET files are combined and distributed, and sometimes distributed separately.

When the above two files are distributed separately, the WAPP file and the WSET file must be downloaded in twice.

2.1.5.4.1 WAPP download

Open Toolkit program and select WTOOL files “MI07_Main_V0_10_xxx.wtool.



Click drop down menu to “Connection” and connect to selected command ID **188C0CF9** and response ID **188BF90C**

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Select a network:

Network

-  TCP/IP
-  Kvaser USBcan Professional HS/H #0 (Channel 0)
-  Kvaser USBcan Professional HS/H #0 (Channel 1)
-  Kvaser Virtual #0 (Channel 0)
-  Kvaser Virtual #0 (Channel 1)

Protocol:

Baud Rate:

Check the devices to connect to:

Alias	Command ID	Response ID
<input checked="" type="checkbox"/> 188C0CF9	188C0CF9	188BF90C
<input type="checkbox"/> 188C0BF9	188C0BF9	188BF90B
<input type="checkbox"/> 188C0DF9	188C0DF9	188BF90D
<input type="checkbox"/> 188C0CFA	188C0CFA	188BF90E
<input type="checkbox"/> 188C0CF1	188C0CF1	188BF10C

Extended Slave Identifier (hex)

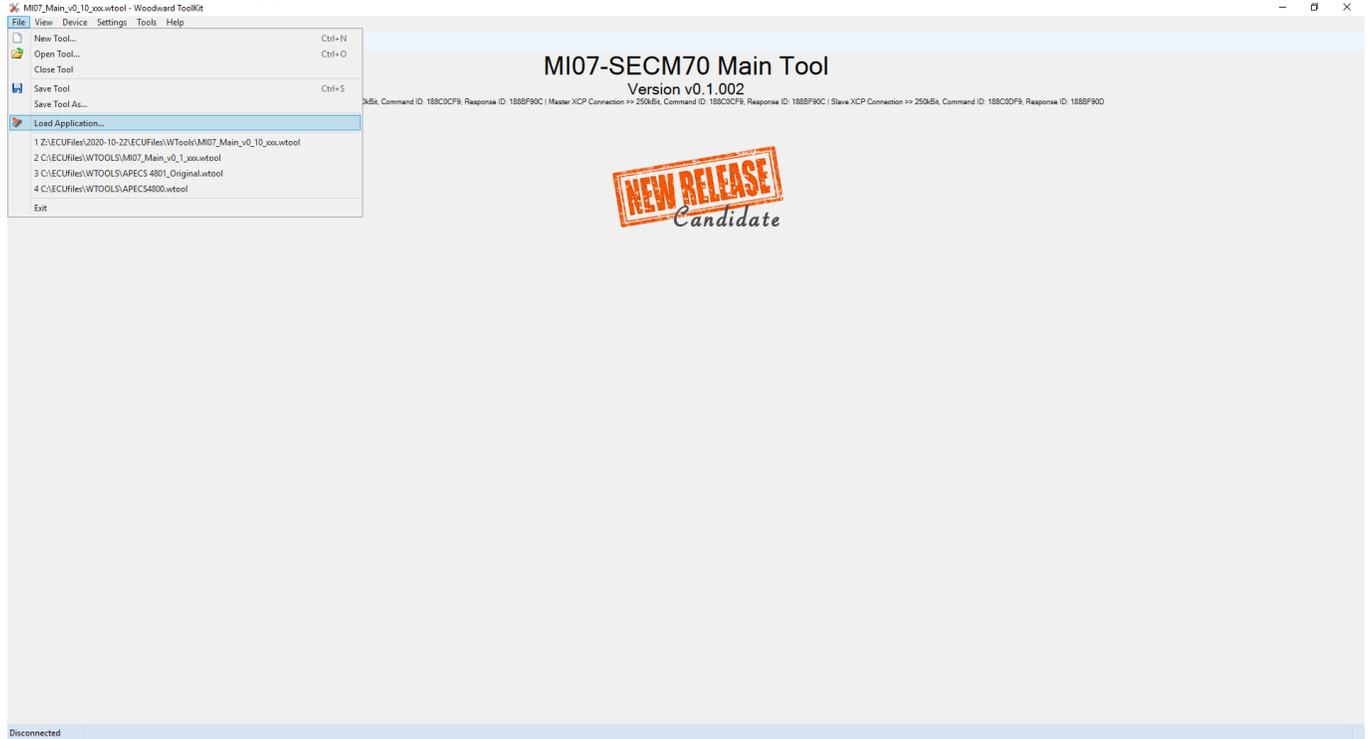
Command:

Response:

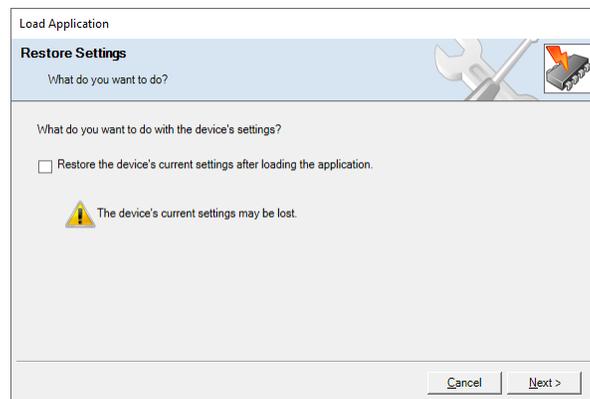
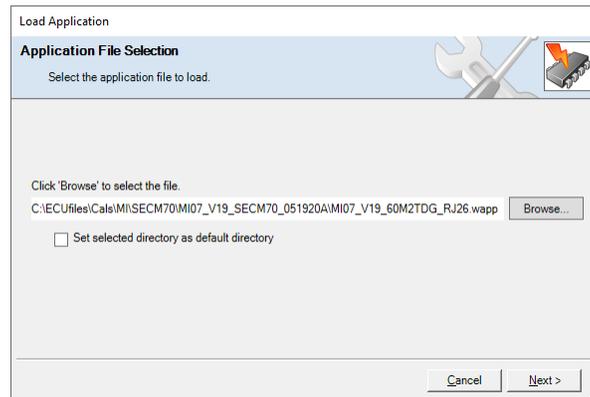
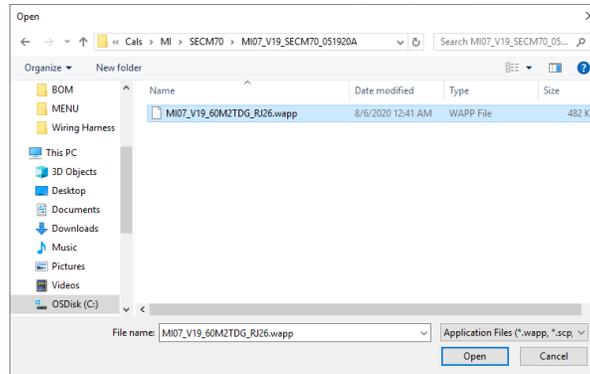
Always connect to my last selected network.

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It is required new application software download for MI-21, drop down menu and click "Load Application"



Selected target **.WAPP** files and click next

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Load Application

Network Selection

Select the network to connect with.

Select a network:

- Network
- TCP/IP
- Kvaser USBcan Professional HS/H #0 (Channel 0)
- Kvaser USBcan Professional HS/H #0 (Channel 1)
- Kvaser Virtual #0 (Channel 0)
- Kvaser Virtual #0 (Channel 1)

Protocol: XCP

Baud Rate: Baud_500Kba

Check the devices to connect to:

Alias	Command ID	Response ID
<input type="checkbox"/> 188C0BF9	188C0BF9	188BF908
<input type="checkbox"/> 188C0DF9	188C0DF9	188BF90D
<input type="checkbox"/> 100C0CF9	100C0CF9	188BF90C
<input type="checkbox"/> 188C0CFA	188C0CFA	188BF90E
<input checked="" type="checkbox"/> 188C0CF1	188C0CF1	188BF10C

Extended Slave Identifier (hex)

Command:

Response:

Load Application

Select Device

Select the device to work with and press Next.

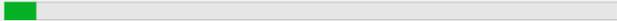
Device	Status
-188C0CF1	Connected

Load Application

Loading Application

Presse wait

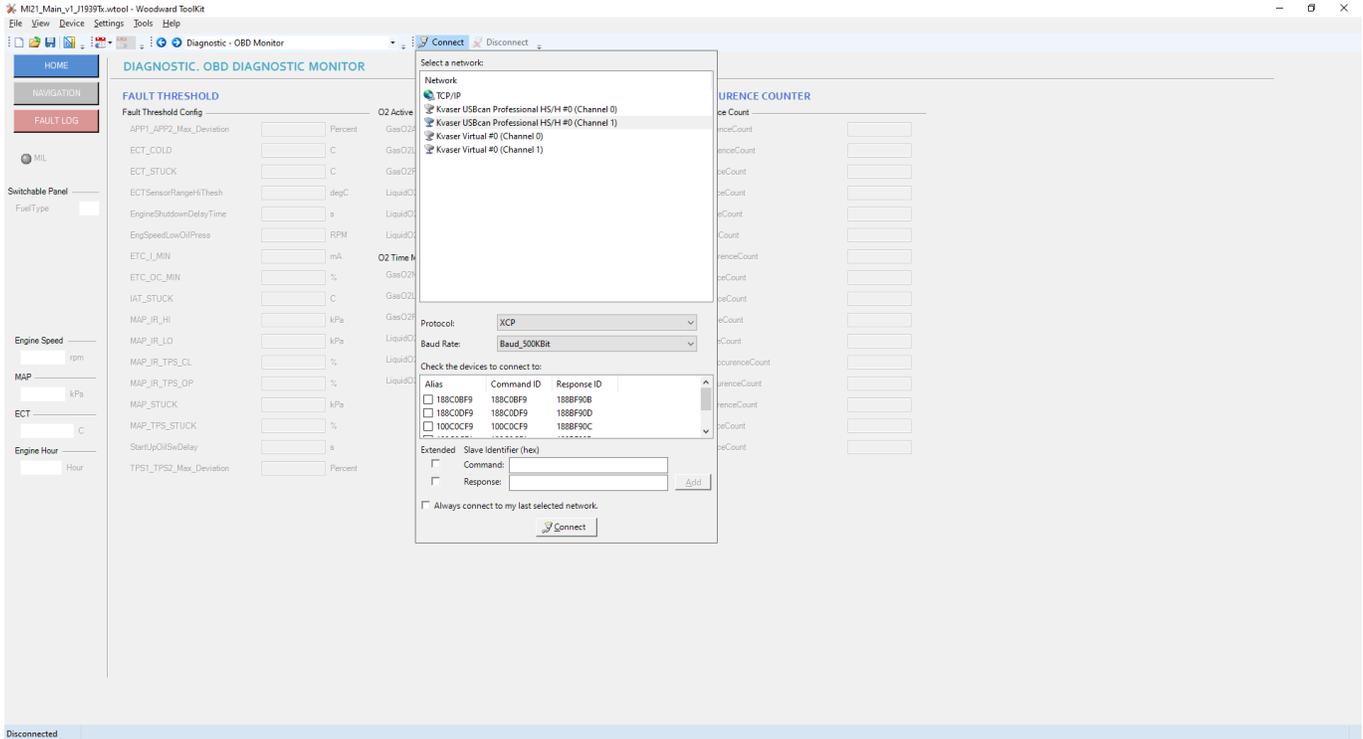
Connecting on Kvaser Leaf Light v2 #0 (Channel 0).



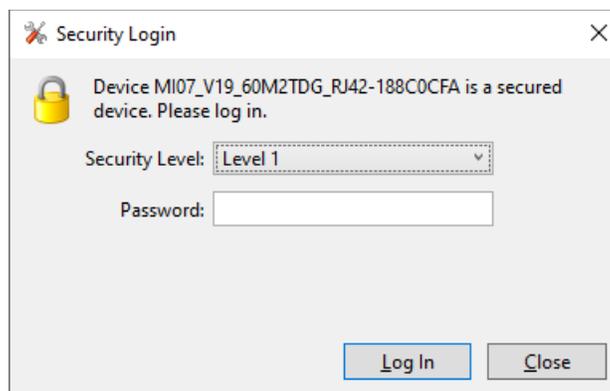
Writing to Memory...

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Download completed, when successfully download completed, there is need to KEY OFF for finished SW download procedure. **DO NOT KEY OFF / POWER OFF ON SECM70 DURING SOFTWARE DOWNLOAD.**

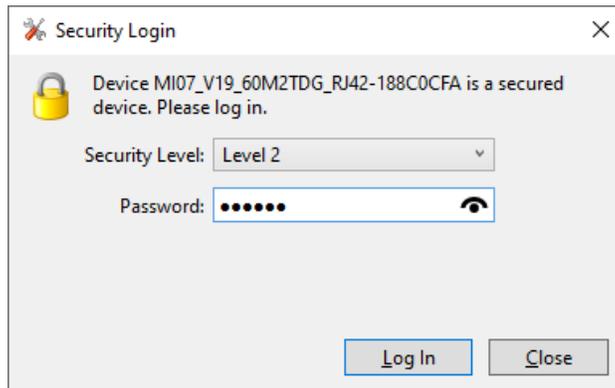
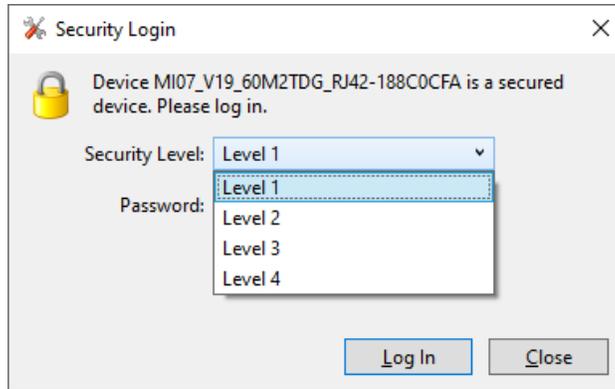
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When you request communication with SECM70, there is required PASSWORD.

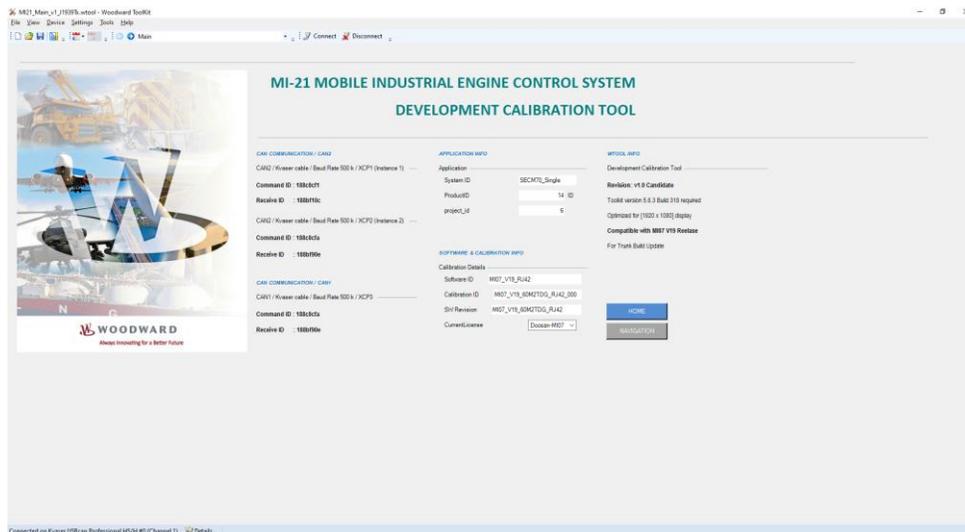


First, you can connect by selecting the appropriate level for each field engineer level 1, laboratory level 2, etc. and then entering the appropriate password.

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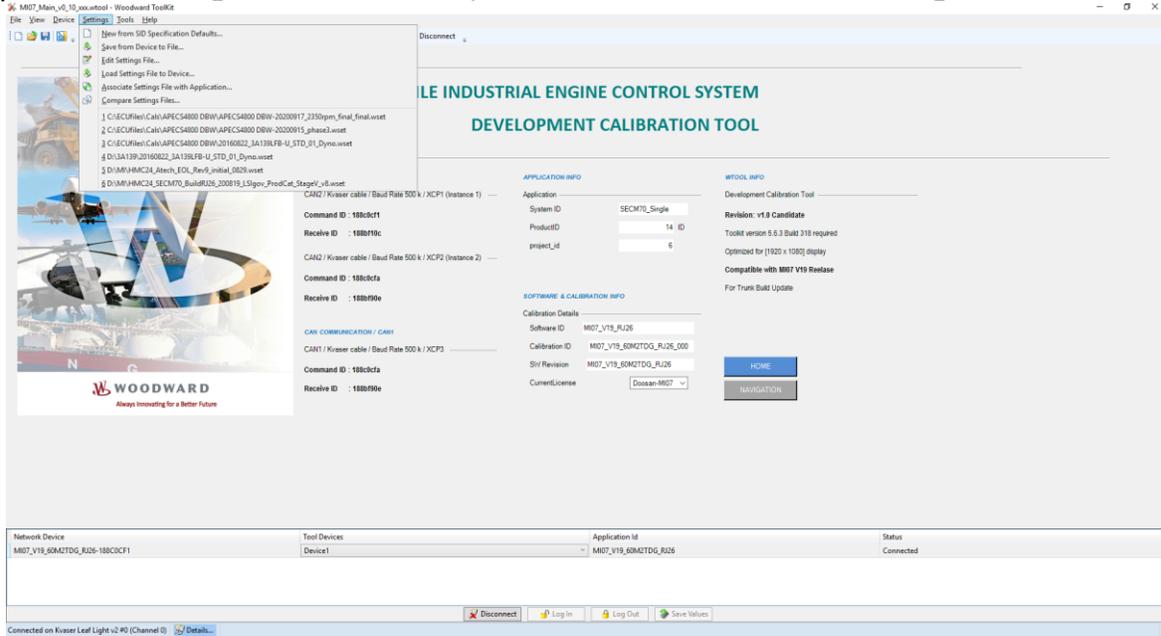
After completing security login, communication is activated, and you can check the contents of parameters.



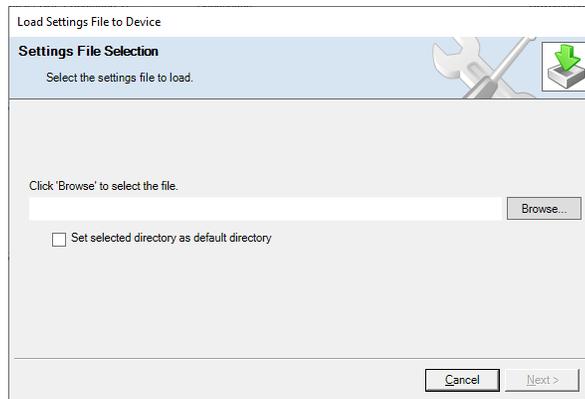
	<h1>Toolkit setup manual</h1>	Document Number	
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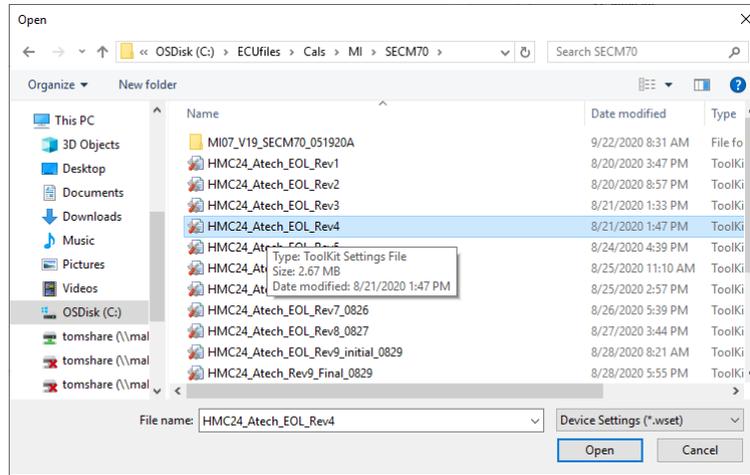
2.1.5.4.2 WSET download

It is required new setting files for MI-21, drop down menu and click “Load Setting File to Device”

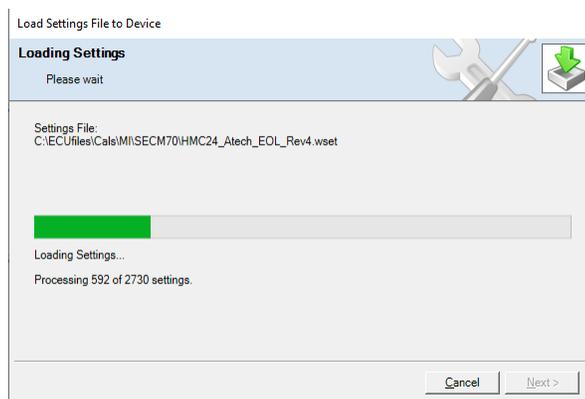
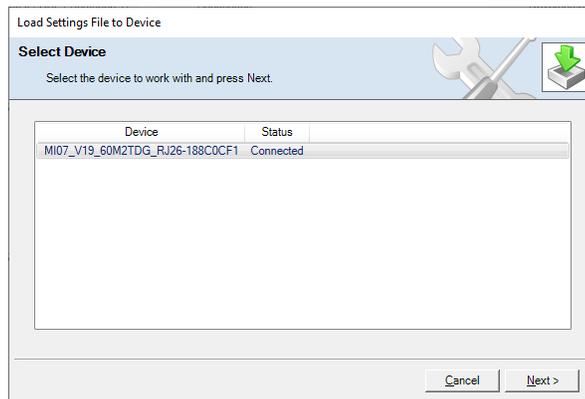


Selected target .WSET files and click next

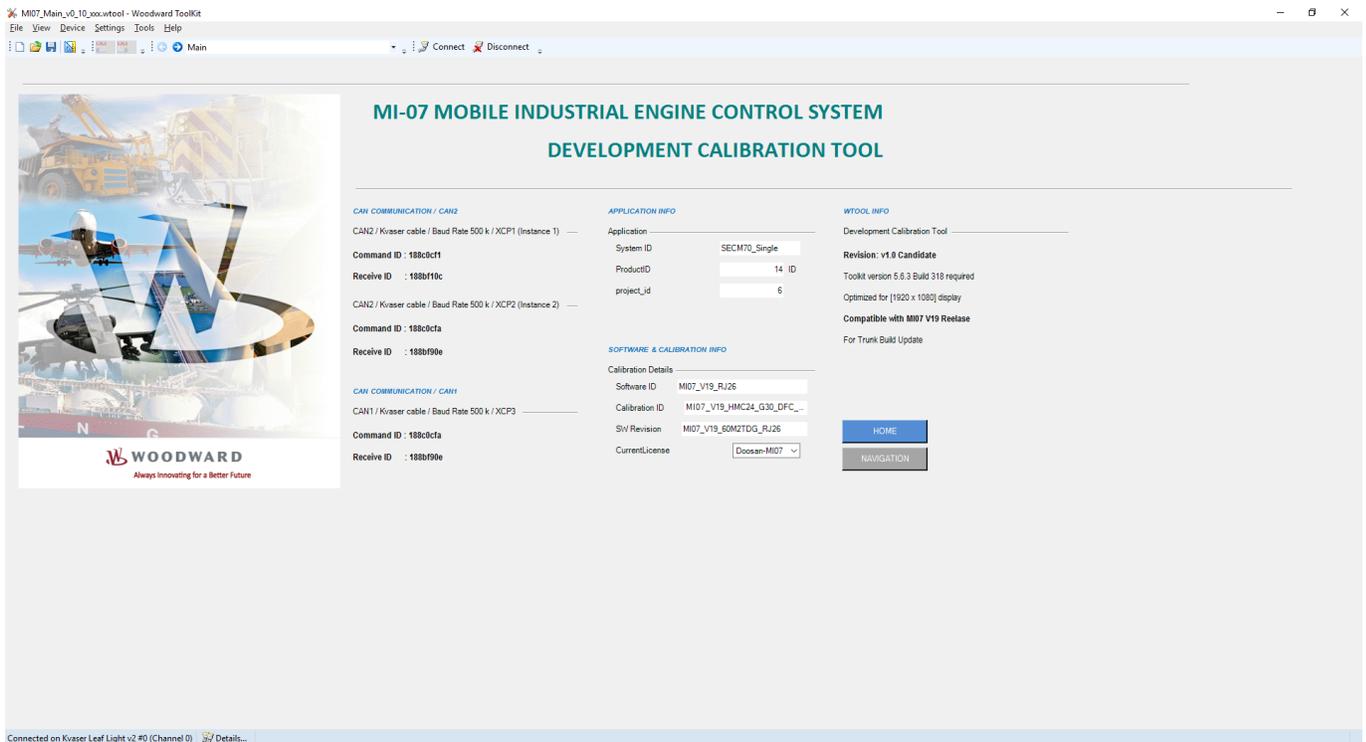
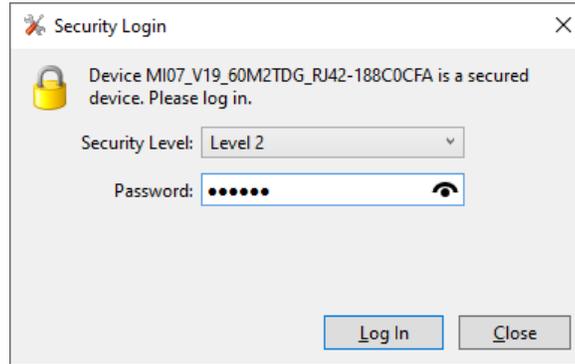
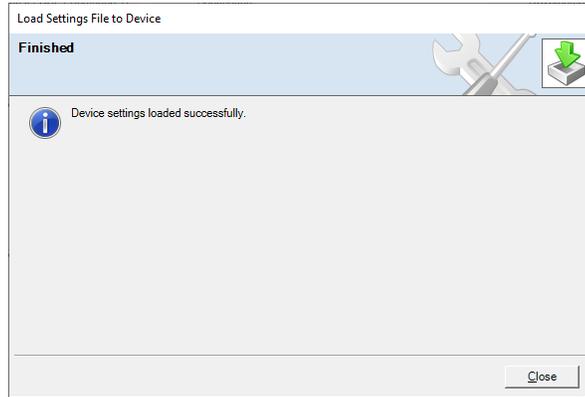


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Check CAN2 Channel communication



Download completed, when successfully download completed, there is need to KEY OFF for finished SW download procedure. **DO NOT KEY OFF / POWER OFF ON SECM70 DURING SOFTWARE DOWNLOAD.**

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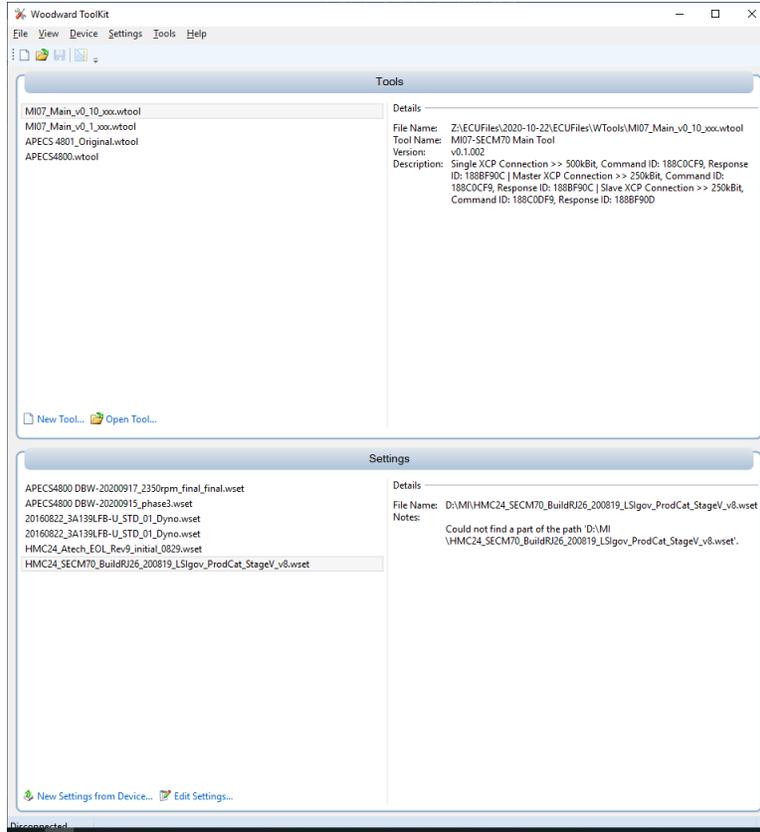
	<h2>Toolkit setup manual</h2>	Document Number	
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2.1.5.5 . Only WAPP download

WAPP files and WSET files are combined and distributed. When the only one WAPP files are distributed, the WAPP be downloaded in ones.

2.1.5.5.1 WAPP download

Open Toolkit program and select WTOOL files “MI07_Main_V0_10_xxx.wtool.



Click drop down menu to “Connection” and connect to selected command ID **188C0CF9** and response ID **188BF90C**

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Select a network:

Network

-  TCP/IP
-  Kvaser USBcan Professional HS/H #0 (Channel 0)
-  Kvaser USBcan Professional HS/H #0 (Channel 1)
-  Kvaser Virtual #0 (Channel 0)
-  Kvaser Virtual #0 (Channel 1)

Protocol:

Baud Rate:

Check the devices to connect to:

Alias	Command ID	Response ID
<input checked="" type="checkbox"/> 188C0CF9	188C0CF9	188BF90C
<input type="checkbox"/> 188C0BF9	188C0BF9	188BF90B
<input type="checkbox"/> 188C0DF9	188C0DF9	188BF90D
<input type="checkbox"/> 188C0CFA	188C0CFA	188BF90E
<input type="checkbox"/> 188C0CF1	188C0CF1	188BF10C

Extended Slave Identifier (hex)

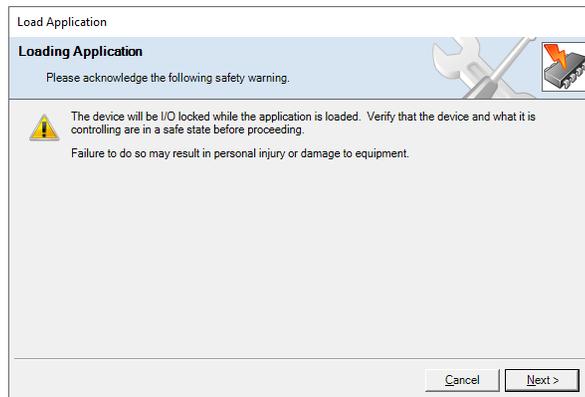
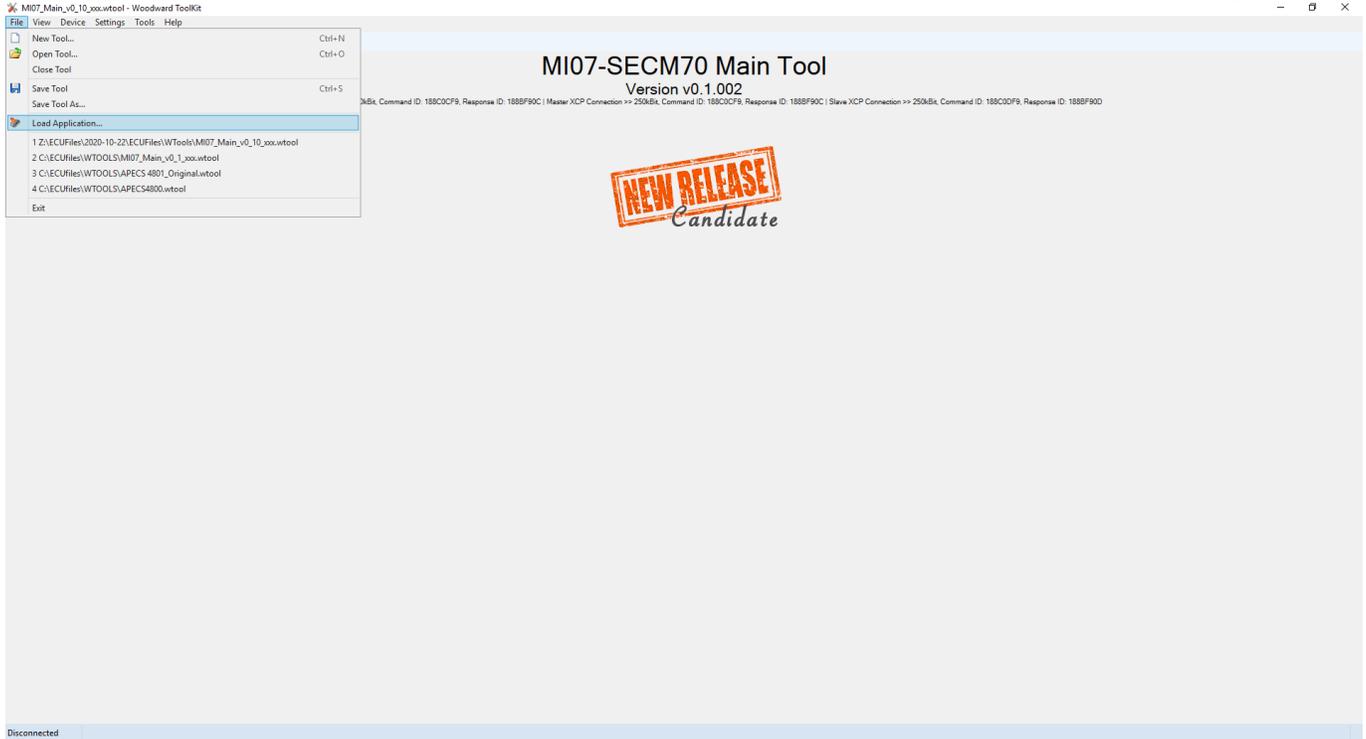
Command:

Response:

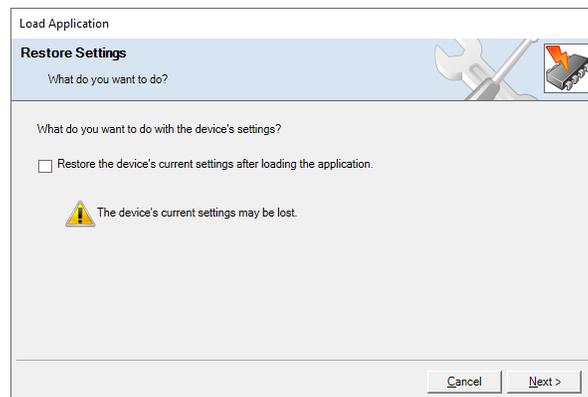
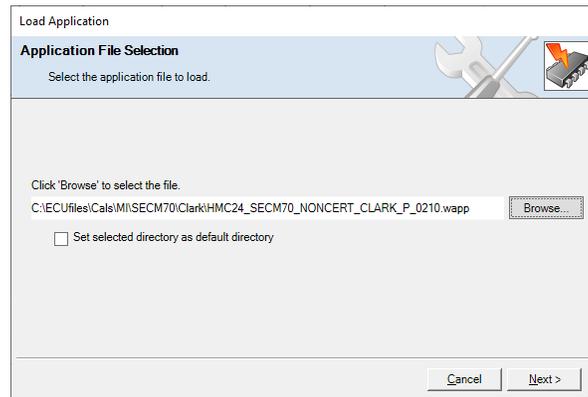
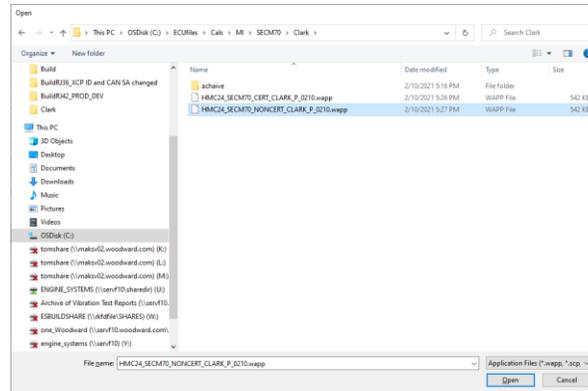
Always connect to my last selected network.

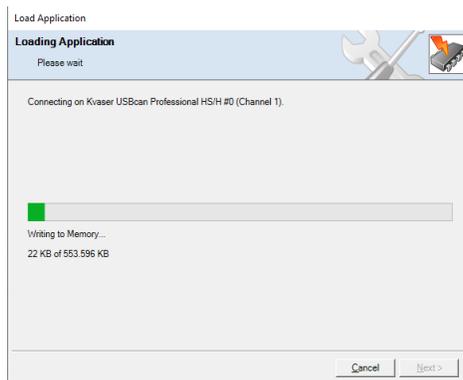
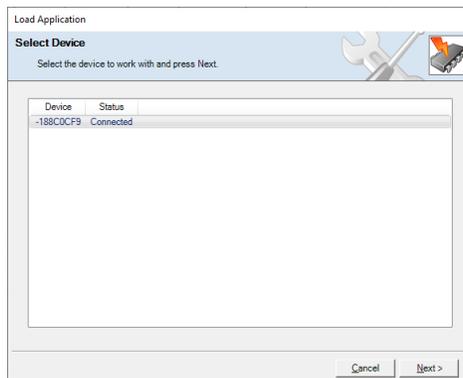
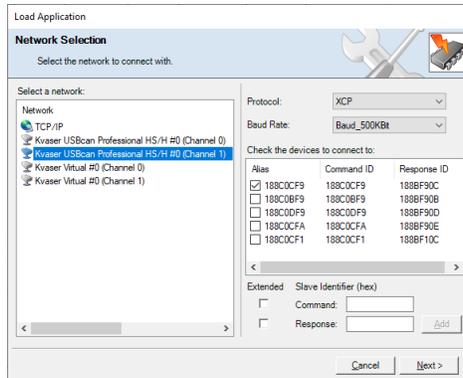
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It is required new application software download for MI-21, drop down menu and click "Load Application"



Selected target **.WAPP** files and click next

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Download completed, when successfully download completed, there is need to KEY OFF for finished SW download procedure. **DO NOT KEY OFF / POWER OFF ON SECM70 DURING SOFTWARE DOWNLOAD.**

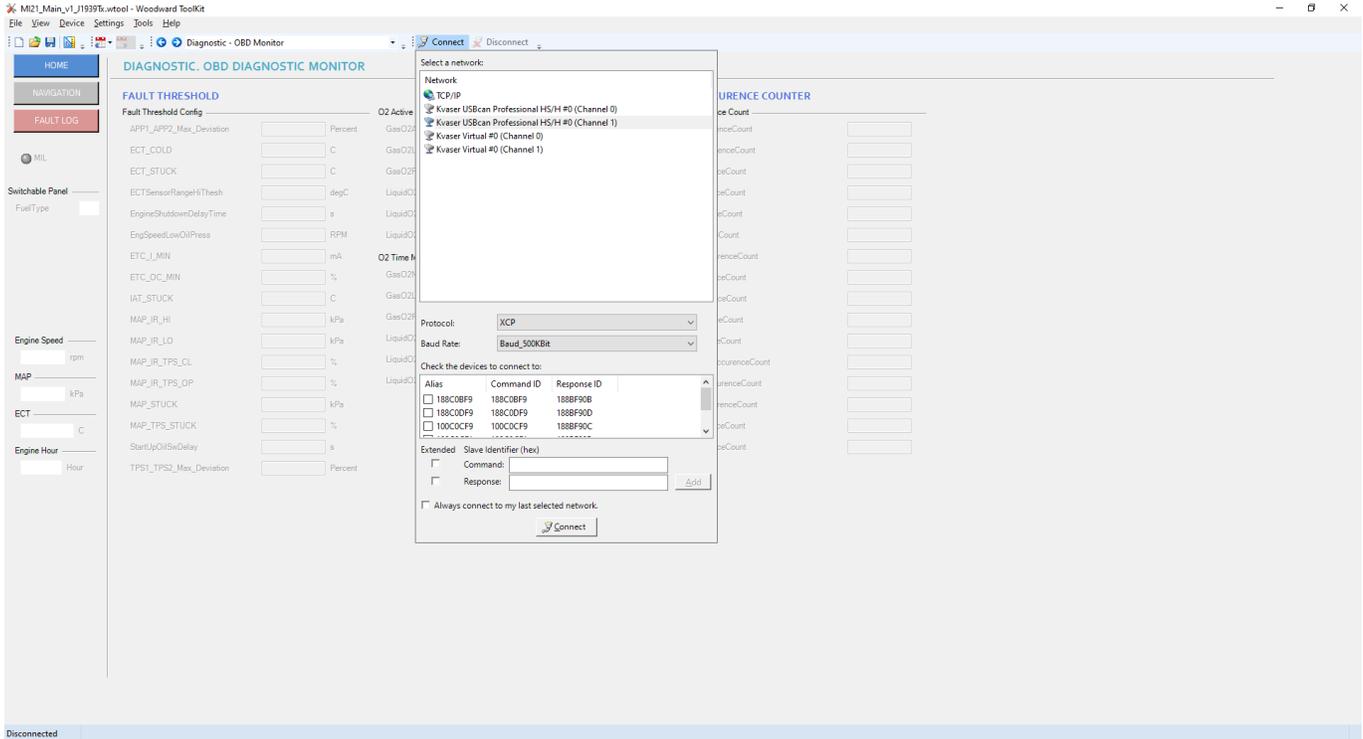
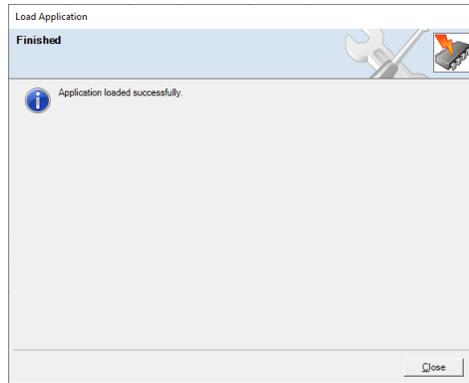
TITLE

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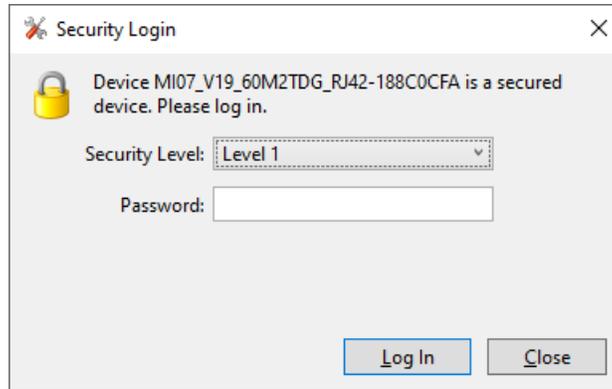
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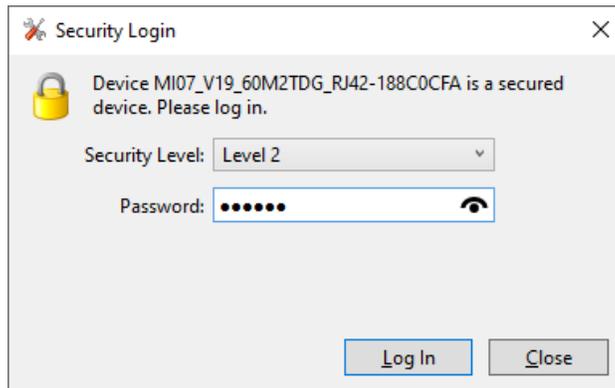
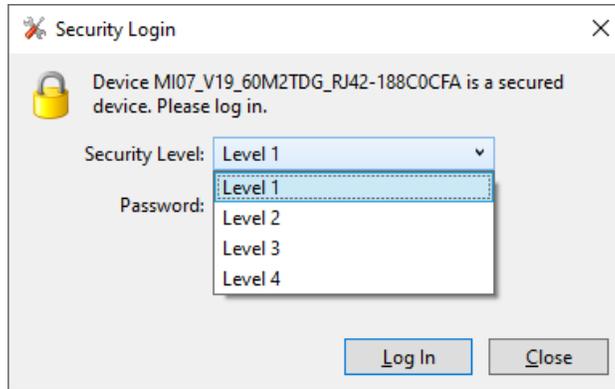
When you request communication with SECM70, there is required PASSWORD.

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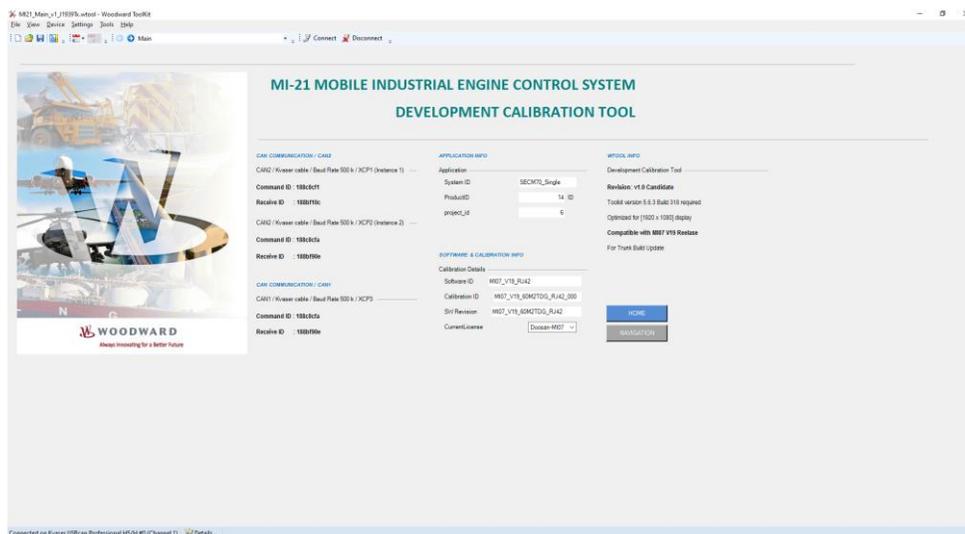


First, you can connect by selecting the appropriate level for each field engineer level 1, laboratory level 2, etc. and then entering password.

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After completing security login, communication is activated, and you can check the contents of parameters.



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2.2 Merge setting tool

2.2.1 Preparation