

Set up PLC for EIP Generic Ethernet Module Communication to SLS

[Link to Video Demonstration](#)

CONTROL/COMPACTLOGIX COMMS

GMCCUTCHEON NOTES 9/11/2024

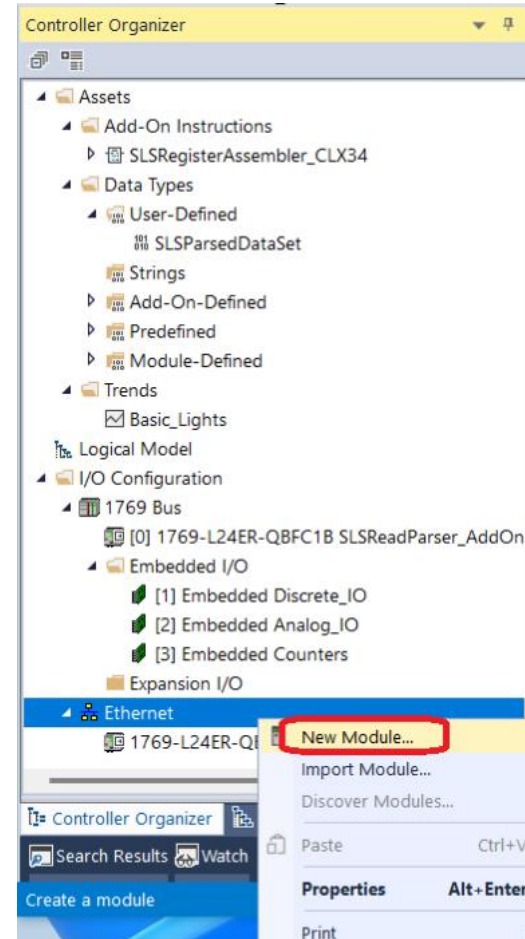


Add Generic Ethernet Module

- This example uses a CompactLogix 1769-L24ER-QBFC1B v36 PLC and Studio5000 Logix Designer Mini Edition to demonstrate connecting the SLS instrument to an Allen Bradley PLC via EIP.
- The SLS instrument EIP settings for this example:
- IP address: 10.10.10.55
- Subnet Mask: 255.255.255.0
- *NOTE: Some AB PLC controller models/configurations require this module addition to be completed 'OFFLINE' then downloaded to the PLC.

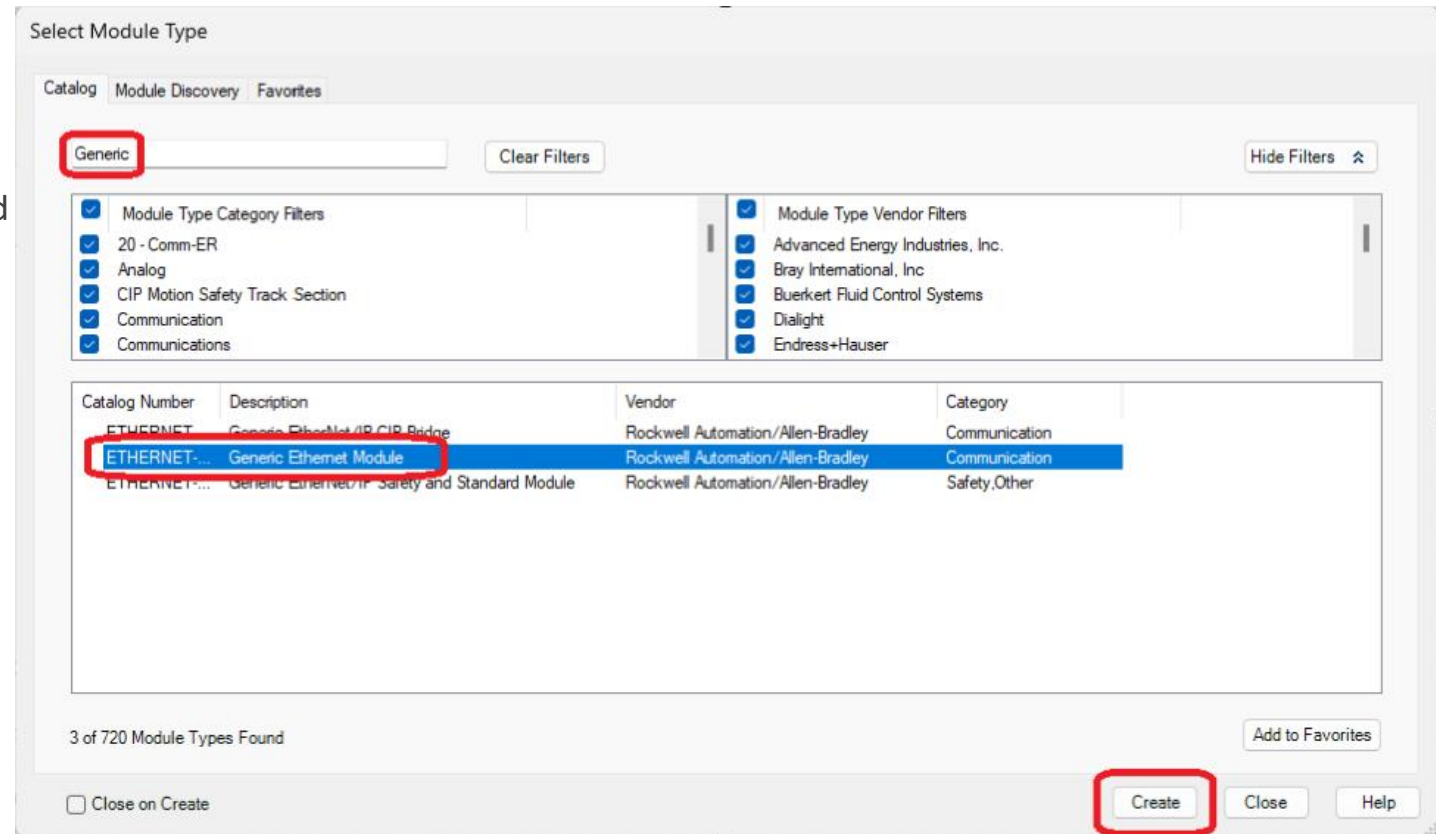
Add Generic Ethernet Module (cont.)

- Right-click 'Ethernet' in the Studio5000 Controller Organizer and select the 'New Module' menu item.



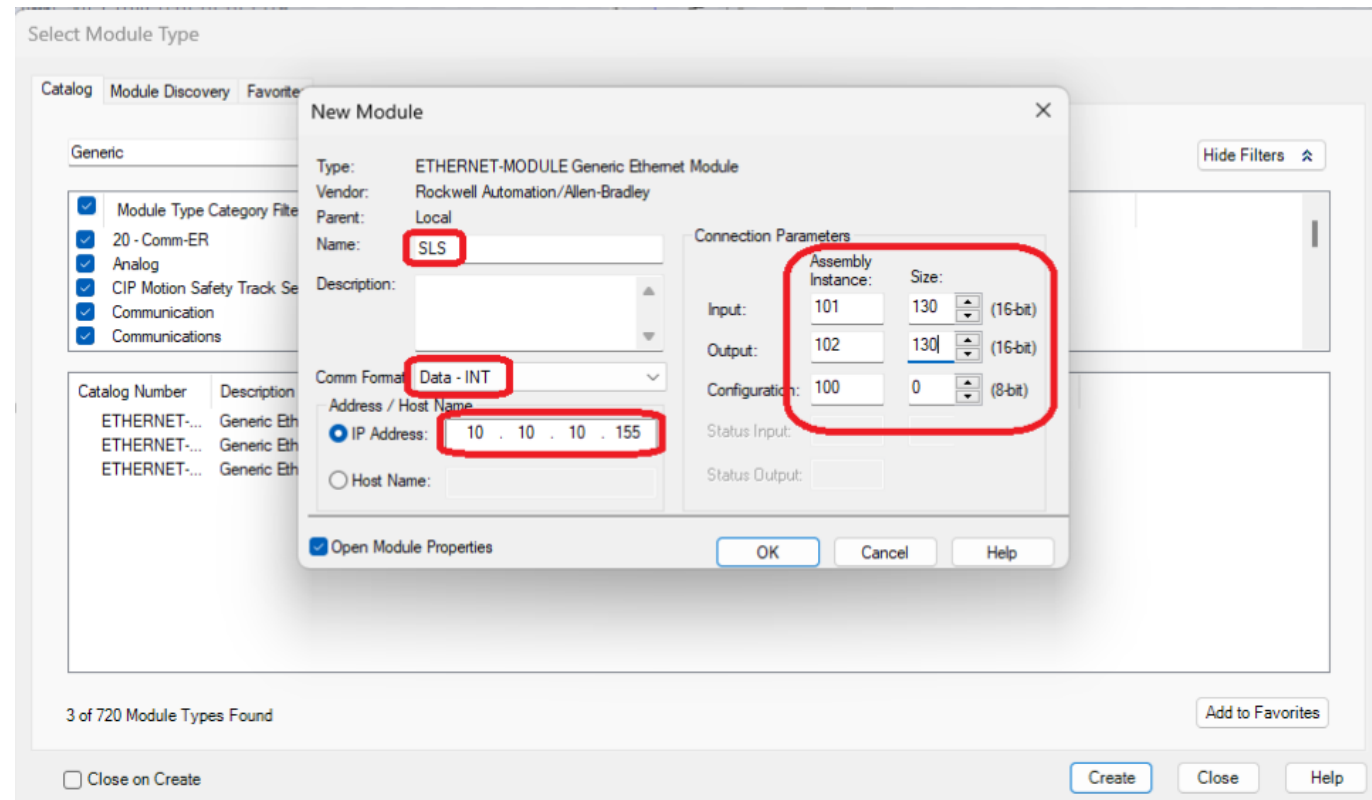
Add Generic Ethernet Module (cont.)

- Type “Generic” into the search textbox and select “Generic Ethernet Module”.
- Click <Create>.



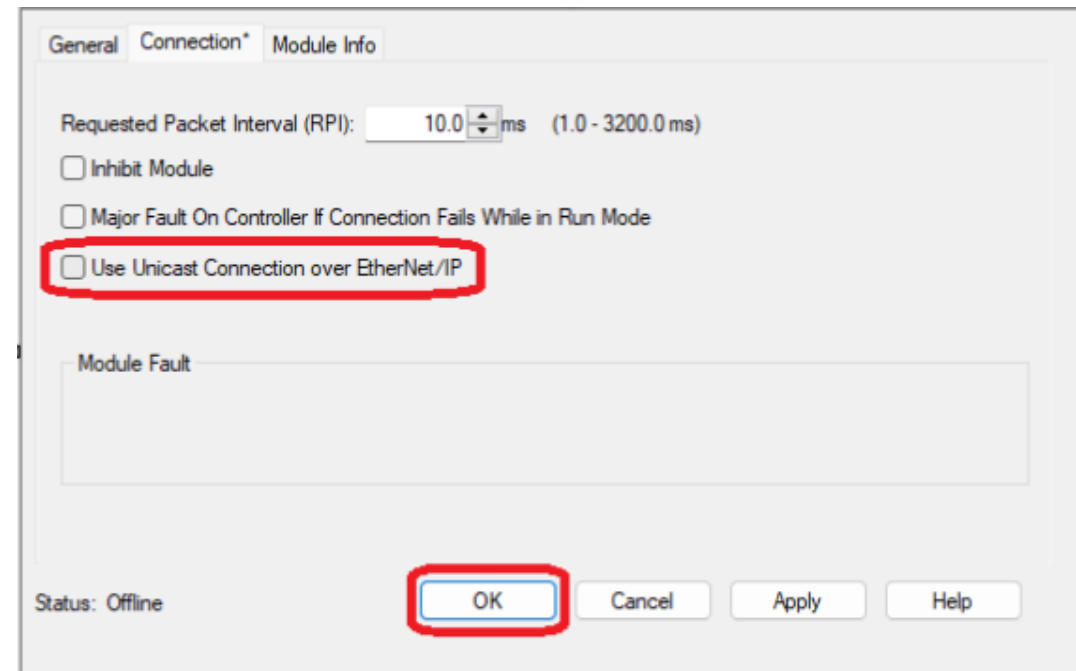
Add Generic Ethernet Module (cont.)

- Name the module. In this example 'SLS'. The controller tags automatically created to manage the data from this module will use this name (ie SLS:I.Data).
- Change the Comm Format to INT.
- Add the EIP IP address for the SLS instrument. In this example '10.10.10.155'.
- Enter the Connection Parameters as shown on the screenshot.
- Click <OK>.



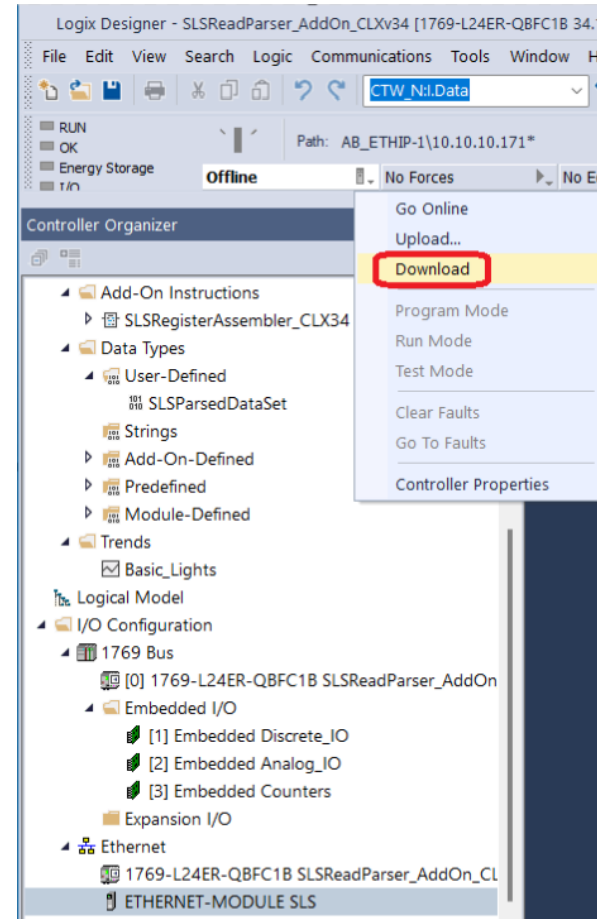
Add Generic Ethernet Module (cont.)

- The Module Properties window will open.
- Insure that 'Use Unicast Connection over EtherNet/IP' is NOT CHECKED.
- Click <OK>.



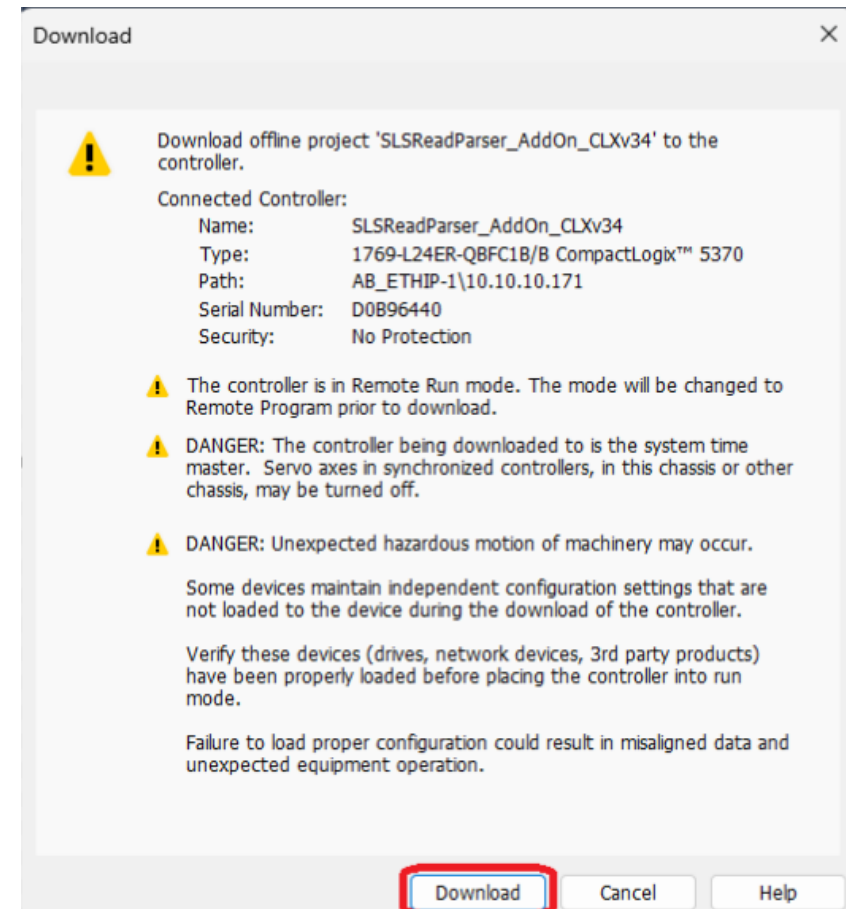
Download to PLC If Required

- The module has been configured.
- Download the changes to the PLC by clicking the arrow on the 'Controller Status' dropdown menu and selecting the 'Download' menu item.



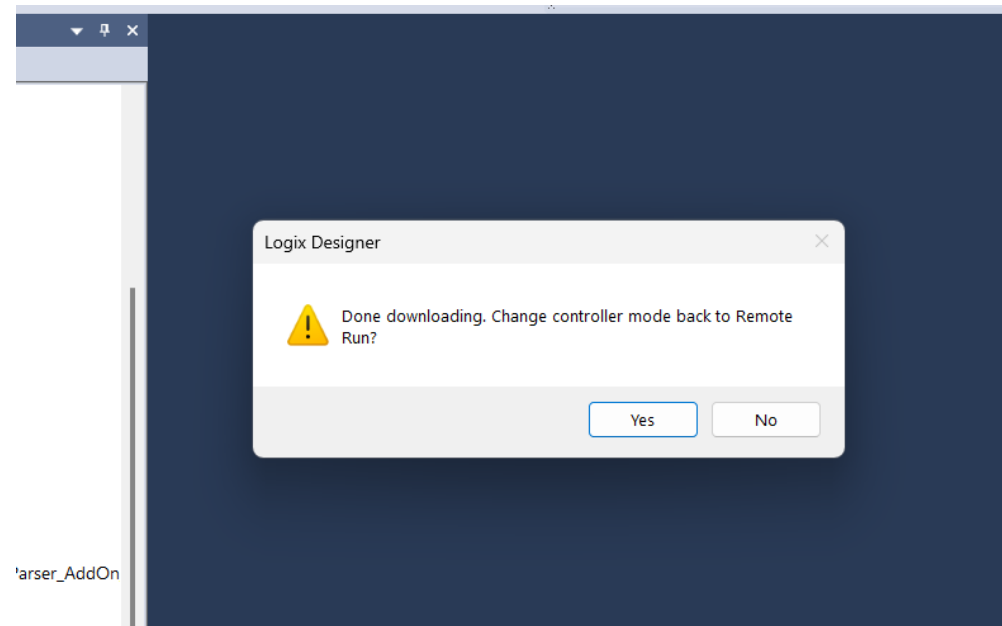
Download to PLC If Required (cont.)

- A window will come up asking you to confirm the download.
- Click <Download>.



Download to PLC If Required (cont.)

- When the download is complete a window will come up asking you if you want to put the controller back in run mode.
- Click <Yes>.



Viewing Raw Data From SLS

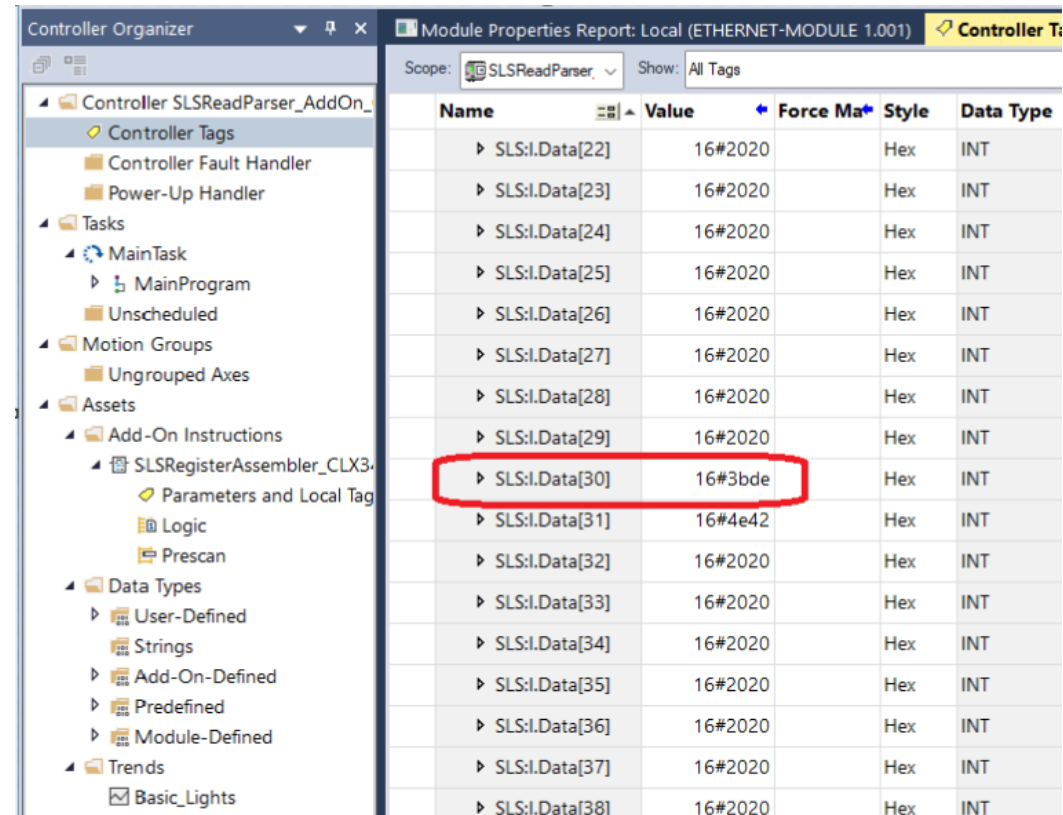
- Once the PLC is in Run Mode, open the 'Controller Tags' window. Expand the module input tags. Change the display style of the 'Data' array (SLS:I.Data in this case) to 'Hex'. If this list is expanded, the 130 received bytes are displayed.

The screenshot displays the 'Controller Tags' window in Siemens SIMATIC Manager. The left pane shows the 'Controller Organizer' with the 'Controller Tags' folder expanded. The right pane shows a table of tags for 'SLS:I.Data' with columns for Name, Value, Force, Ma, Style, and Data Type. The 'Style' column is set to 'Hex'.

Name	Value	Force	Ma	Style	Data Type
SLS:I.Data	{...}	{...}		Hex	INT[130]
SLS:I.Data[0]	16#0000			Hex	INT
SLS:I.Data[1]	16#0000			Hex	INT
SLS:I.Data[2]	16#2020			Hex	INT
SLS:I.Data[3]	16#2020			Hex	INT
SLS:I.Data[4]	16#2020			Hex	INT
SLS:I.Data[5]	16#2020			Hex	INT
SLS:I.Data[6]	16#2020			Hex	INT
SLS:I.Data[7]	16#2020			Hex	INT
SLS:I.Data[8]	16#2020			Hex	INT
SLS:I.Data[9]	16#2020			Hex	INT
SLS:I.Data[10]	16#2020			Hex	INT
SLS:I.Data[11]	16#2020			Hex	INT
SLS:I.Data[12]	16#2020			Hex	INT
SLS:I.Data[13]	16#2020			Hex	INT
SLS:I.Data[14]	16#2020			Hex	INT
SLS:I.Data[15]	16#2020			Hex	INT
SLS:I.Data[16]	16#2020			Hex	INT
SLS:I.Data[17]	16#2020			Hex	INT
SLS:I.Data[18]	16#2020			Hex	INT
SLS:I.Data[19]	16#2020			Hex	INT
SLS:I.Data[20]	16#2020			Hex	INT
SLS:I.Data[21]	16#2020			Hex	INT
SLS:I.Data[22]	16#2020			Hex	INT
SLS:I.Data[23]	16#2020			Hex	INT

Viewing Raw Data From SLS (cont.)

- Scroll down to element 30 (SLS:I.Data[30] in this example).
- This is the element that the raw data for the station 1 resistance is mapped to.
- That value will be continuously updating if the connection is intact.



Controller Organizer

Module Properties Report: Local (ETHERNET-MODULE 1.001)

Scope: SLSReadParser Show: All Tags

Name	Value	Force Ma	Style	Data Type
▸ SLS:I.Data[22]	16#2020		Hex	INT
▸ SLS:I.Data[23]	16#2020		Hex	INT
▸ SLS:I.Data[24]	16#2020		Hex	INT
▸ SLS:I.Data[25]	16#2020		Hex	INT
▸ SLS:I.Data[26]	16#2020		Hex	INT
▸ SLS:I.Data[27]	16#2020		Hex	INT
▸ SLS:I.Data[28]	16#2020		Hex	INT
▸ SLS:I.Data[29]	16#2020		Hex	INT
▸ SLS:I.Data[30]	16#3bde		Hex	INT
▸ SLS:I.Data[31]	16#4e42		Hex	INT
▸ SLS:I.Data[32]	16#2020		Hex	INT
▸ SLS:I.Data[33]	16#2020		Hex	INT
▸ SLS:I.Data[34]	16#2020		Hex	INT
▸ SLS:I.Data[35]	16#2020		Hex	INT
▸ SLS:I.Data[36]	16#2020		Hex	INT
▸ SLS:I.Data[37]	16#2020		Hex	INT
▸ SLS:I.Data[38]	16#2020		Hex	INT