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# FAQs for Commissioning uaGate 840D and dataFEED edgeConnector 840D

**data**



**FEED®**

## FAQs for Commissioning *uaGate 840D* and *dataFEED edgeConnector 840D*

### 1. Which Controller Types are Supported?

The controller types ***SINUMERIK 840D sl*** (*Solution Line*) and ***SINUMERIK 840D pl*** (*Power Line*) are supported.

Controllers of older types like ***SINUMERIK 840*** and ***SINUMERIK 840C*** are not compatible.

### 2. Which Software Versions are Supported?

***SINUMERIK 840D sl*** must have software version V2.7 or higher,

***SINUMERIK 840D pl*** must have software version V5.3 or higher.

Information regarding the support of other controller types and software versions can be provided upon request.

### 3. How to Connect a ***SINUMERIK 840D sl***?

***SINUMERIK 840D sl*** provides Ethernet interfaces, which can be used for connectivity purposes.

It must be ensured that the ***SINUMERIK 840D sl*** has been switched on and its communication settings are correct.

The ***SINUMERIK 840D sl*** provides various Ethernet interfaces (see Figure 1):

- The Ethernet interface X120 is used for connecting the automation network (operator panel interface).  
The interface X120 is not isolated by a firewall. Thus, ideally, ***uaGate 840D*** respectively ***dataFEED edgeConnector 840D*** is operated using this interface.  
The interface X120 in ***SINUMERIK 840D sl*** uses the fixed IP address 192.168.214.1. For connecting to the *MACHINE* network of the gateway respectively to the connector software network ***uaGate 840D*** respectively ***dataFEED edgeConnector 840D*** then should be configured using a fixed IP address as well (e.g. an IP address higher than 192.168.214.250).
- The Ethernet interface X127 serves exclusively as a service socket (service interface).  
The interface X127 cannot be used for connection purposes.
- The Ethernet interface X130 connects the controller to the factory network (company Ethernet).  
The interface X130 can be used as an alternative interface for connecting ***uaGate 840D*** respectively ***dataFEED edgeConnector 840D***. Here, however, the NCU firewall (port TCP/102) has to be enabled in *SINUMERIK Operate* to allow ***SIMATIC S7*** communication.



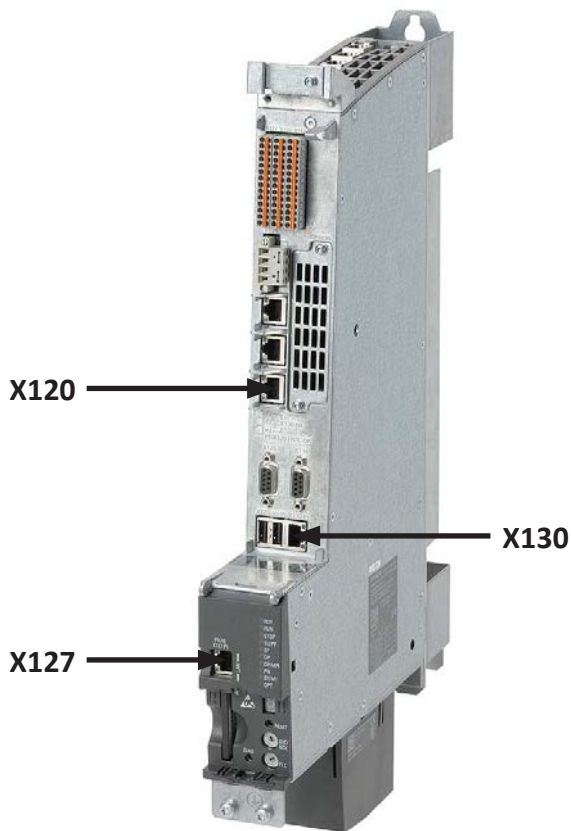


Figure 1: **SINUMERIK 840D sl** CNC Controller (without cover)  
(Source: Siemens)

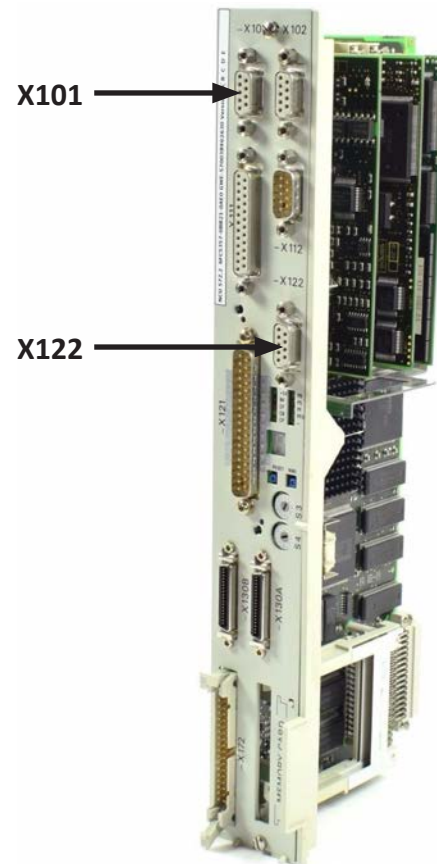


Figure 2: **SINUMERIK 840D pl** Plug-in Card  
(Source: Päbra)

## 4. How to Connect a **SINUMERIK 840D pl**?

**SINUMERIK 840D pl** does not provide an Ethernet interface. Thus, a D-Sub 9 connector plus an appropriate converter for transforming the SINUMERIK 840D-specific communication to Ethernet communication has to be used for connectivity purposes.

The Softing **echolink S7-compact** product supports the PG/MPI to Ethernet conversion and thus is a suitable converter product.

It must be ensured that the **SINUMERIK 840D pl** has been switched on and its communication settings are correct. Special attention has to be paid to a valid MPI address assignment, preventing double assignment of MPI addresses in the configuration at all costs. The individual configured addresses can be determined by checking the hardware configuration of the **SIMATIC STEP 7** project. Usually, the MPI address 30 is not used and thus can be assigned to **echolink S7-compact**.

The **SINUMERIK 840D pl** provides several D-Sub 9 connectors (see Figure 2):

- The D-Sub 9 connector X122 is used for connecting the programming or a remote maintenance device (PG interface).  
The interface X122 is recommended for connecting **echolink S7-compact**. **echolink S7-compact** requires its own 24 V power supply, since the connector X122 does not provide any voltage. If a connector is already connected here, **echolink S7-compact** can be plugged on top or in between.
- The D-Sub 9 connector X101 is used for connecting the control panel/operating panel (control panel interface) and is **not** recommended for the communication via **echolink S7-compact**.

## 5. How to Configure *echolink S7-compact* When Connecting to *SINUMERIK 840D pl?*

The *echolink S7-compact* configuration is performed in the appropriate configuration page (see Figure 3)

The important *echolink S7-compact* settings include:

- **IP Address**  
Address for reaching *echolink S7-compact*  
The IP address is freely selectable (e.g. 192.168.214.XXX), but has to be located in the *MACHINE* network of *uaGate 840D* respectively the *dataFEED edgeConnector 840D* network.
- **Baudrate**  
The transmission speed has to be set to 187.5 kBit/s.
- **Own Station Address**  
MPI address of *echolink S7-compact*  
**Important:**  
This address must not be used by another station.
- **Set Default Bus Parameters**  
Click on *MPI* button and use the default parameters.

Home   Configuration   Change Password	
Firmware version	NL50MPI V02.153.18.12.V1.52_release-5-gaated1e
Serial number / MAC Address	75281 00 02 A2 5C 0E B2
Network name	nl50mpi_75281
IBHNet port (port 1099 is always active)	0
Configuration with NetPro	<input type="checkbox"/>
DHCP	<input type="checkbox"/>
IP address	192.168.214.1
Subnet mask	255.255.255.0
Default gateway	0.0.0.0
Baudrate	187.5 kBit/s
Own station address	30
Highest station address	31
Set default bus parameters	MPI   PROFIBUS
Tslot_Init	415
Max. Tsdr	60
Min. Tsdr	20
Tset	12
Tqui	0
Gap factor	5
Retry limit	2
Ttr	16776960
Activate Time-of-Day Synchronization	<input type="checkbox"/>
NTP update interval (10 - 86400 seconds)	60
NTP Server 1 (IP address)	0.0.0.0
NTP Server 2 (IP address)	0.0.0.0
NTP Server 3 (IP address)	0.0.0.0
NTP Server 4 (IP address)	0.0.0.0
MPI/DP update interval	

Save configuration

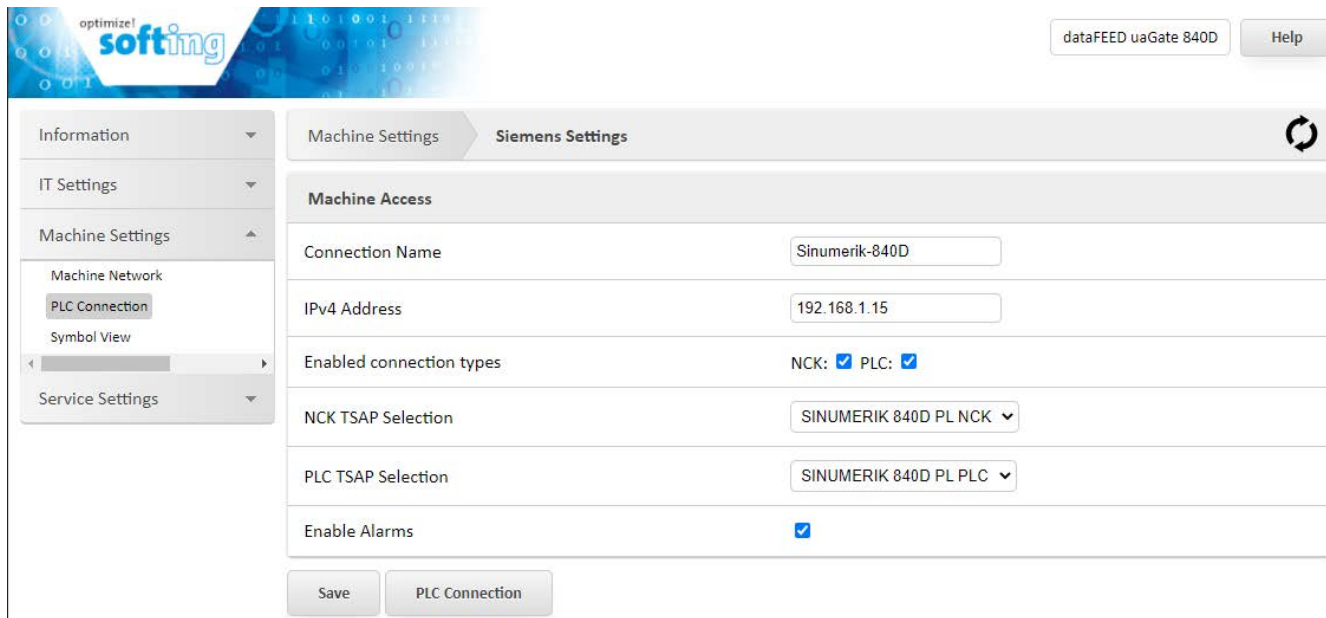
Figure 3: *echolink S7-compact* Configuration Screen  
(Source: Softing Industrial)

## 6. How to Configure *uaGate 840D* for Using *SINUMERIK 840D pl*?

For connecting *uaGate 840D* to a *SINUMERIK 840D pl* controller type (in comparison to a *SINUMERIK 840D sl* controller type) the main configuration differences are the *Transport Services Access Point* (TSAP) settings.

The *SINUMERIK 840D pl*-specific settings include (see Figure 4):

- **IPv4 Address**  
The IPv4 address must correspond to the IP address of *echolink S7-compact* (here: 192.168.1.15).
- **NCK TSAP Selection**  
*SINUMERIK 840D PL NCK* has to be selected in the dropdown menu.
- **PLC TSAP Selection**  
*SINUMERIK 840D PL PLC* has to be selected in the dropdown menu.



The screenshot displays the configuration interface for *uaGate 840D*. The top bar includes the *softing* logo and the text "optimize!". The main navigation pane on the left lists "Information", "IT Settings", "Machine Settings", "Machine Network", "PLC Connection", "Symbol View", and "Service Settings". The "PLC Connection" option is selected. The main content area is titled "Machine Settings" and "Siemens Settings". It contains a "Machine Access" section with the following fields:

Machine Access	
Connection Name	Sinumerik-840D
IPv4 Address	192.168.1.15
Enabled connection types	NCK: <input checked="" type="checkbox"/> PLC: <input checked="" type="checkbox"/>
NCK TSAP Selection	SINUMERIK 840D PL NCK
PLC TSAP Selection	SINUMERIK 840D PL PLC
Enable Alarms	<input checked="" type="checkbox"/>

At the bottom of the configuration area are "Save" and "PLC Connection" buttons.

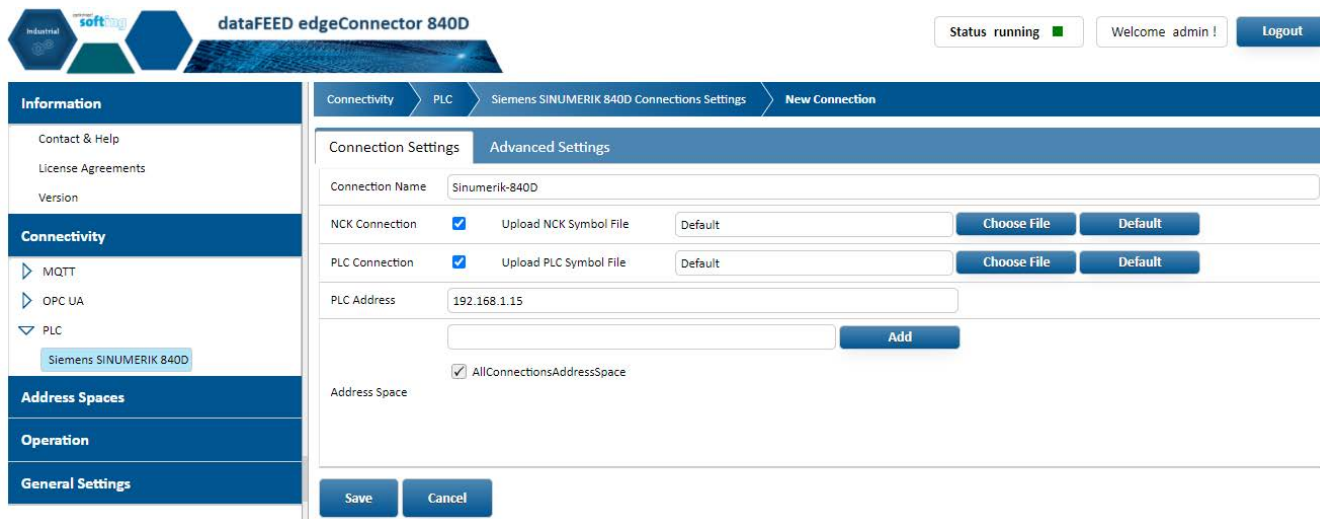
Figure 4: *uaGate 840D* Machine Settings/PLC Connection Configuration Screen  
(Source: Softing Industrial)

## 7. How to Configure *dataFEED edgeConnector 840D* for Using *SINUMERIK 840D pl*?

For connecting *dataFEED edgeConnector 840D* to a *SINUMERIK 840D pl* controller type (in comparison to a *SINUMERIK 840D sl* controller type) the main configuration differences are the *Transport Services Access Point* (TSAP) settings.

The *SINUMERIK 840D pl*-specific settings include (see Figures 5 and 6):

- *PLC Address*  
The PLC address must correspond to the IP address of *echolink S7-compact* (here: 192.168.1.15).
- *NCK TSAP Selection*  
*SINUMERIK 840D PL NCK* has to be selected in the dropdown menu.
- *PLC TSAP Selection*  
*SINUMERIK 840D PL PLC* has to be selected in the dropdown menu.

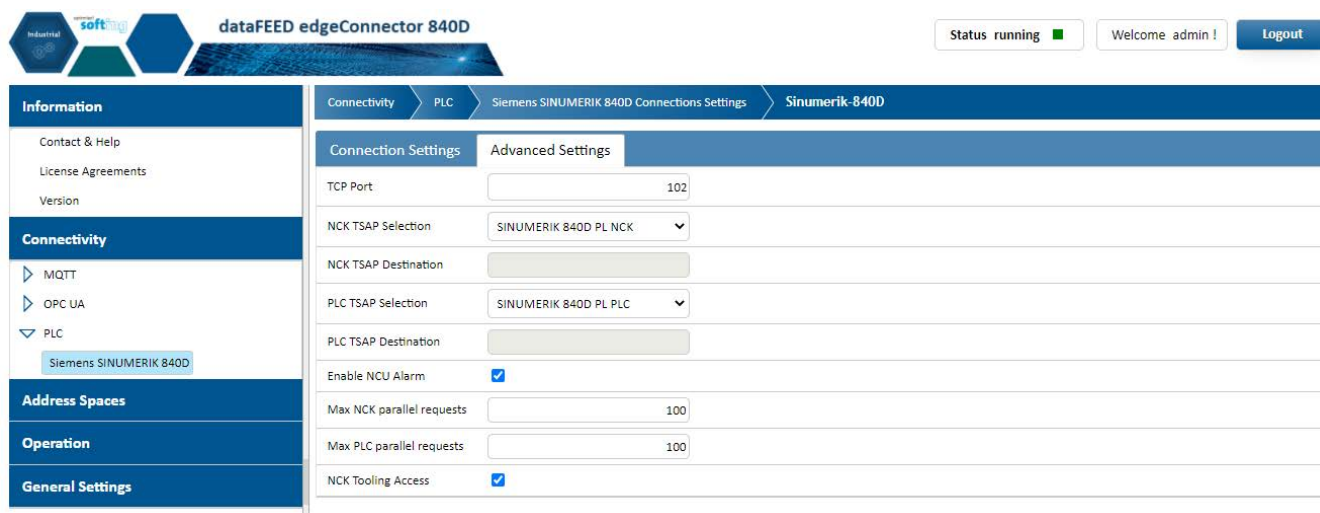


The screenshot shows the *dataFEED edgeConnector 840D* web interface. The left sidebar contains a navigation menu with sections: Information, Connectivity, Address Spaces, Operation, and General Settings. Under *Connectivity*, the *PLC* section is expanded, showing *Siemens SINUMERIK 840D*. The main content area is titled *Siemens SINUMERIK 840D Connections Settings* and includes a *New Connection* button. The *Connection Settings* tab is active, showing the following fields:

- Connection Name*: Sinumerik-840D
- NCK Connection*: ☒ Upload NCK Symbol File (Default) [Choose File] [Default]
- PLC Connection*: ☒ Upload PLC Symbol File (Default) [Choose File] [Default]
- PLC Address*: 192.168.1.15 [Add]
- Address Space*: ☒ AllConnectionsAddressSpace

At the bottom are *Save* and *Cancel* buttons. The top right shows *Status running*, *Welcome admin !*, and *Logout*.

Figure 5: *dataFEED edgeConnector 840D* Connectivity/PLC/Siemens SINUMERIK 840D Configuration Screen, Tab *Connection Settings*  
(Source: Softing Industrial)



The screenshot shows the *dataFEED edgeConnector 840D* web interface, specifically the *Advanced Settings* tab. The left sidebar is the same as in Figure 5. The main content area is titled *Sinumerik-840D* and shows the following settings:

- TCP Port*: 102
- NCK TSAP Selection*: SINUMERIK 840D PL NCK
- NCK TSAP Destination*: [Empty field]
- PLC TSAP Selection*: SINUMERIK 840D PL PLC
- PLC TSAP Destination*: [Empty field]
- Enable NCU Alarm*: ☒
- Max NCK parallel requests*: 100
- Max PLC parallel requests*: 100
- NCK Tooling Access*: ☒

The top right shows *Status running*, *Welcome admin !*, and *Logout*.

Figure 6: *dataFEED edgeConnector 840D* Connectivity/PLC/Siemens SINUMERIK 840D Configuration Screen, Tab *Advanced Settings*  
(Source: Softing Industrial)



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