0i-A/B/C/D/F
16i-B, 18i-B, 21i-B
30i, 31i, 32i
Description

FANUC FOCAS is a set of library files that can use to access the information from FANUC CNC controller.

The available information:

1. CNC status
2. Part count information
3. Program (name, number, size, modified date)
4. Spindle load
5. Position data
6. Tool & work offsets
7. Alarm number & text
8. PMC data
9. Feed Rate Overrides
10. and more….

FOCAS library is installed on the most FANUC i-series controllers and for some older version that is an option.

<table>
<thead>
<tr>
<th>Rare</th>
<th>Option</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>0i-A</td>
<td>0i-B/C</td>
<td>0i-D</td>
</tr>
<tr>
<td>16i-A</td>
<td>16i-B</td>
<td>30i</td>
</tr>
<tr>
<td>18i-A</td>
<td>18i-B</td>
<td>31i</td>
</tr>
<tr>
<td>21i-A</td>
<td>21i-B</td>
<td>32i</td>
</tr>
<tr>
<td>160i</td>
<td></td>
<td>300i</td>
</tr>
<tr>
<td>180i</td>
<td></td>
<td>310i</td>
</tr>
<tr>
<td>210i</td>
<td></td>
<td>320i</td>
</tr>
</tbody>
</table>
STEP 0: Confirm the FOCAS is installed on the controller

For 0i-A/B/C, 16i, 18i, 21i, 160i, 180i, 210i series controller, you need to confirm the FOCAS is installed on the controller or not.

- If you can’t find the parameter ETHRPM in the SYSTEM, the controller doesn’t support the network interface.
- If you can find the parameter EMBED in the ETHRPM, you can click the EMBED and it will appear the TCP/IP option and the next page will appear the FOCAS parameter.
- If there is no the parameter EMBED in the ETHRPM and there is the parameter BOARD, you can click the BOARD option and it should appear the TCP/IP option. You can search the FOCAS parameter in the next page. If there is no FOCAS option, you should ask FANUC to buy the FOCAS option.
- If there is only the PCMCIA option without FOCAS option in the ETHRPM, you can ask FANUC to buy the FOCAS option.
## STEP 1: FOCAS2/Ethernet Setting

![System Icon](image)

**EMBED -> COMMON & FOCAS2**

**FOCAS2 -> COMMON & FOCAS2**

### Table: Ethernet Settings

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAC Address</td>
<td>Embedded Ethernet MAC address</td>
</tr>
<tr>
<td>IP Address</td>
<td>Specify the IP address of the embedded Ethernet.</td>
</tr>
<tr>
<td>Subnet Mask</td>
<td>Specify a mask address for the IP addresses of the network.</td>
</tr>
<tr>
<td>Router IP Address</td>
<td>Specify the IP address of the router. Specify this item when the network contains a router.</td>
</tr>
<tr>
<td>Available Device</td>
<td>Enabled device of the embedded Ethernet. Either the embedded Ethernet port or the PCMCIA Ethernet card is displayed.</td>
</tr>
</tbody>
</table>
PORT NUMBER (TCP)
Specify a port number to be used with the FOCAS2/Ethernet function. The valid input range is 5001 to 65535.

PORT NUMBER (UDP)
Set this item to 0 when it is used as the FOCAS2/Ethernet function.

TIME INTERVAL
Set this item to 0 when it is used as the FOCAS2/Ethernet function.
Note:
The unit of the time interval is 10ms. The allowable range is between 10 and 65535. A time interval less than 100ms cannot be set.

AVAILABLE DEVICE
Enabled device of the embedded Ethernet.
Either the embedded Ethernet port or the PCMCIA Ethernet card is displayed.
Note:

The parameters for the embedded Ethernet port and the parameters for the PCMCIA Ethernet card are independent of each other.

Please make sure the available device is EMBEDDED if you want to use the embedded network interface.
STEP 2: FANUC FOCAS Connection Test

- First you can use the tool “Telnet” to test the FOCAS port is opened or not.
  telnet IP address port number
  EX: telnet 192.168.0.100 8193

- WebAccess/CNC FANUC connection (2016 Q4)
STEP 3: FANUC CNC networking function pages

Coordinate information & status display

Servo shaft loading
NC program List

PLC Register parameter
Tool offset parameter

Workpiece coordinate parameter