



## BACnet P2 – quick start

Configuration of the BACnetP2 gateway is done via the BACnet interface.

1. Connect to the BACnetP2 using the BACnet who-is command.  
The root device object instance is 2,700,000
2. Explore the device object.  
The initial device objects should be as shown.

|            |                      |   |                                  |
|------------|----------------------|---|----------------------------------|
| CSV1       | Driver version       | Purpleswift apogee P2 library version 2.0.0.001 | Driver version                   |
| CSV2       | Last Result          | Please set Driver Link Protocol. (MSV1)         | Result of last user command      |
| MV1        | Driver Link Protocol | None  | P2 over RS485 or Ethernet option |
| DEV2700000 | BACnetP2 00          | Operational                                     | Gateway Device and Router        |

3. Set the required link protocol using MSV1.  
For RS485 operation set MSV1 value to 2

|            |                      |  |                                  |
|------------|----------------------|--|----------------------------------|
| CSV1       | Driver version       | Purpleswift apogee P2 library version 2.0.0.001                  | Driver version                   |
| CSV2       | Last Result          | Driver Link Protocol saved. (MSV1) Please reload device objects. | Result of last user command      |
| MV1        | Driver Link Protocol | P2 over RS485  | P2 over RS485 or Ethernet option |
| DEV2700000 | BACnetP2 00          | Operational  | Gateway Device and Router        |

Note that CSV2 is used to provide useful hints.

4. Reload the device objects.  
Several device objects should now be accessible as show.

|      |                               |  |  |
|------|-------------------------------|--|--|
| AI13 | P2 Packets per sec            | 0 /s   | P2 Packets per sec                     |
| AI14 | P2 Load                       | 0 %  | P2 Load                                |
| AI15 | P2 COVs per sec               | 0 /s   | P2 COVs per sec                        |
| AI16 | P2 CRC errors                 | 0  | P2 CRC errors                          |
| AI17 | P2 Rx lagging errors          | 0  | P2 Rx lagging errors                   |
| AI18 | Dropped from P2 network count | 0  | Dropped from P2 network count          |
| AV1  | P2 address                    | 98   | Our address on the BLN                 |
| AV2  | P2 BAUD                       | 0  | Use 0 to select auto BAUD rate.        |
| BV1  | Driver Enable                 | Disabled   | Enable P2 communications               |
| BV2  | Logout                        | Logged In  | Disable configuration editing          |
| CSV1 | Driver version                | Purpleswift apogee P2 library version 2.0.0.001                  | Driver version                         |
| CSV2 | Last Result                   | Driver Link Protocol saved. (MSV1) Please reload device objects. | Result of last user command            |
| CSV3 | P2 Driver Status              | System OFF.  | P2 Driver Status                       |
| CSV4 | P2 Network uptime             |  | P2 Network uptime                      |
| CSV5 | System Resources              | Free=0.702 Gb, Used=3.153 Gb, CPU=0.0 %, Disk=17.760 Gb          | System Resources                       |
| CSV6 | Driver buffers                | P2 System settings saved. MaxArray(0%) MaxBuffer(0%)             | Driver buffers                         |
| CSV7 | Driver ID                     | {58684-49121-77007-00E2-07B9}                                    | Driver ID used to generate licence key |

- (Optional) Set the BAUD rate using AV2  
A value of zero (0) is used to allow the driver to auto BAUD rate detect.

|     |               |          |                                 |
|-----|---------------|----------|---------------------------------|
| AV1 | P2 address    | 98       | Our address on the BLN          |
| AV2 | P2 BAUD       | 57600    | Use 0 to select auto BAUD rate. |
| BV1 | Driver Enable | Disabled | Enable P2 communications        |

- Set the RS485 port using CSV11  
This is the linux system name for the RS485 hardware port.  
The default /dev/ttyUSB0 is the usual port when a USB RS485 adaptor is used.

|       |                      |                     |  |
|-------|----------------------|---------------------|--|
| CSV10 | Login                | <ALREADY LOGGED IN> | Enter password to enable configuration e |
| CSV11 | RS485 port           | /dev/ttyUSB0        | Linux system name for RS485 port.        |
| MV1   | Driver Link Protocol | P2 over RS485       | P2 over RS485 or Ethernet option         |

- Start the driver by setting the Driver Enable using BV1

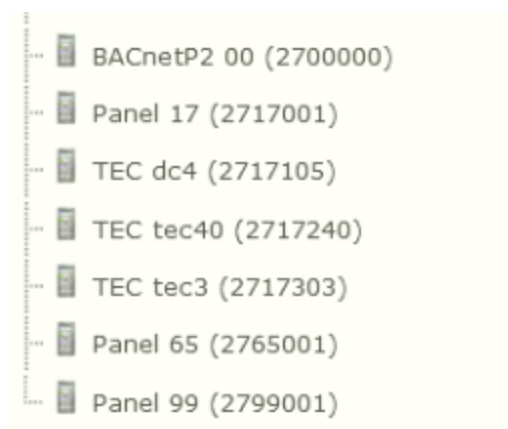
|      |                  |   |                                 |
|------|------------------|---|---------------------------------|
| AV2  | P2 BAUD          | 57600   | Use 0 to select auto BAUD rate. |
| BV1  | Driver Enable    | Enabled   | Enable P2 communications        |
| BV2  | Logout           | Logged In                                       | Disable configuration editing   |
| CSV1 | Driver version   | Purpleswift apogee P2 library version 2.0.0.001 | Driver version                  |
| CSV2 | Last Result      | Driver Enable saved. (BV1)                      | Result of last user command     |
| CSV3 | P2 Driver Status | System busy... auto BAUD, trying BAUD=57600     | P2 Driver Status                |

Note that CSV3 provides info on what the driver is doing.

- Wait while the P2 driver auto maps the apogee system. This may take several minutes.  
When CSV3 displays "System ready" then the mapping is complete.

|      |                  |               |                  |
|------|------------------|---------------|------------------|
| AI1  | Panels found     | 5             | Panels found     |
| AI2  | Panels online    | 2             | Panels online    |
| AI3  | Points found     | 151           | Points found     |
| AI4  | TECs found       | 3             | TECs found       |
| AI5  | TECs online      | 3             | TECs online      |
| CSV3 | P2 Driver Status | System ready. | P2 Driver Status |

Note that during the mapping process several device objects will be created. One for each apogee panel and one for each TEC device found on the P2 network.



9. You may now explore each of the new device objects.

|          |                   |            |
|----------|-------------------|------------|
| AI100001 | tec3:ROOM TEMP    | 23.4489 °C |
| AI100004 | tec3:RM STPT DIAL | 23.4489 °C |
| AI100007 | tec3:AUX TEMP     | 3.33556 °C |
| BI300001 | tec3:DI OVRD SW   | OFF        |
| BI300004 | tec3:DI 2         | OFF        |
| BI300007 | tec3:DI 3         | OFF        |

Note that each P2 point is mapped to 4 BACnet objects.

|          |                           |            |                      |
|----------|---------------------------|------------|----------------------|
| AI100001 | tec3:ROOM TEMP            | 23.4489 °C |                      |
| AV100002 | tec3:ROOM TEMP_\$COV      | 0          | COVs per minute < 20 |
| MV100002 | tec3:ROOM TEMP_\$PRIORITY | NONE       |                      |
| MV100003 | tec3:ROOM TEMP_\$STATUS   | FAILED     |                      |

10. Info required for software licence.

- 1) Number of Panels (AI1)
- 2) Number of TECs (AI4)
- 3) Driver ID (CSV7)
- 4) Configuration password required (not changeable once licence is issued)

|      |                |   |  |
|------|----------------|---|--|
| AI1  | Panels found   | 5   | Panels found                           |
| AI4  | TECs found     | 3   | TECs found                             |
| CSV7 | Driver ID      | {58684-49121-77007-00E2-07B9}   | Driver ID used to generate licence key |
| CSV8 | Licence Key    |   | Licence key in use                     |
| CSV9 | Licence Status | No valid licence found. Demo mode active. Driver disable in 247394 seconds. | Licence validation                     |

Please email the above info to [bacnetp2@purpleswift.com](mailto:bacnetp2@purpleswift.com)

11. Activate the licence using CSV8.

|      |                |  |  |
|------|----------------|--|--|
| CSV7 | Driver ID      | {58684-49121-77007-00E2-07B9}                                | Driver ID used to generate licence key |
| CSV8 | Licence Key    | {P2 INSTANCE(01) PANELS(005) TECS(3) 50492-66245-85745-509F} | Licence key in use                     |
| CSV9 | Licence Status | Licence OK.  | Licence validation                     |

Note that once the licence has been activated the driver configuration will become password protected using the password supplied in 10.4 above.

12. Login / Logout. Use CSV10 to Login and use BV2 to logout.

|       |        |                     |  |
|-------|--------|---------------------|--|
| BV2   | Logout | Logged In           | Disable configuration editing                  |
| CSV10 | Login  | <ALREADY LOGGED IN> | Enter password to enable configuration editing |

