



TCP/IP : Technical notes

There are many ETEL devices which allow direct connection through TCP/IP :

DSMAX2
DSGAT2
AccurET
UltimET TCP/IP

1. Connection to a DSMAX2

Due to technical problem, it is recommended to connect to DSMAX2 with a direct connection without passing through the network. For this, you have to install a dedicated network board into your PC.

Opening Connection

The general syntax, when opening an EDI driver is:

```
dsa_open_u(DSA_DEVICE *dev, char_cp url);
```

The parameter « url » specifies the type of driver to be used and has the following general syntax:

etb : <driver> :<axis>

For a connection to DSMAX2, the driver has the following syntax:

etn://<IP Address>:1131

Examples :

Opening drive 0 connected to a DSMAX2 with IP address 192.168.10.10:

```
DSA_DRIVE *drv = NULL;  
int err;
```

```
if (err = dsa_create_drive(&drv))
    goto _error;
if (err = dsa_open(drv, "etb:etn://192.168.10.10:1131:0");
    goto _error;
```

Opening DSMAX2 with IP address 192.168.10.10 itself:

```
DSA_DSMAX *dsm = NULL;
int err;

if (err = dsa_create_dsmax(&dsm))
    goto _error;
if (err = dsa_open(dsm, "etb:etn://192.168.10.10:1131:*");
    goto _error;
```

2. Connection to a DSGAT2

Both, direct connection or connection via network to a DSGAT2 are possible.

Opening Connection

The general syntax, when opening an EDI driver is:

```
dsa_open_u(DSA_DEVICE *dev, char_cp url);
```

The parameter « url » specifies the type of driver to be used and has the following general syntax:

etb : <driver> :<axis>

For a connection to DSMAX2, the driver has the following syntax:

etn://<IP Address>:1141

Examples :

Opening drive 0 connected to a DSGAT2 with IP address 192.168.10.10:

```
DSA_DRIVE *drv = NULL;
int err;

if (err = dsa_create_drive(&drv))
    goto _error;
if (err = dsa_open(drv, "etb:etn://192.168.10.10:1141:0");
    goto _error;
```

A DSGAT2 is a TEB bridge only. it is not possible to connect to the device itself as for DSMAX2.

3. Connection to an AccurET

Both, direct connection or connection via network to an AccurET are possible.

Only a single connection to an AccurET is allowed. You cannot have 2 applications connected to the same AccurET at the same time.

Opening Connection

The general syntax, when opening an EDI driver is:

```
dsa_open_u(DSA_DEVICE *dev, char_cp url);
```

The parameter « url » specifies the type of driver to be used and has the following general syntax:

etb : <driver> :<axis>

For a connection to an AccurET, the driver has the following syntax:

etn://<IP Address>[:1129]

You can specify the port (1129), but this is not necessary

Examples :

Opening an AccurET 0 with IP address 192.168.10.10, specifying the port:

```
DSA_DRIVE *drv = NULL;
int err;

if (err = dsa_create_drive(&drv))
    goto _error;
if (err = dsa_open(drv, "etb:etn://192.168.10.10:1129:0");
    goto _error;
```

Opening an AccurET 1 with IP address 172.22.10.110 without specifying the port:

```
DSA_DRIVE *drv = NULL;
int err;

if (err = dsa_create_drive(&drv))
    goto _error;
if (err = dsa_open(drv, "etb:etn://172.22.10.110:1");
    goto _error;
```

4. Connection to an UltimET

(From EDI 3.03A)

Both, direct connection or connection via network to an UltimET are possible.

Two applications can open the connection to the UltimET at the same time, but they have to use 2 different ports :1129(default) and 1128.

Opening Connection

The general syntax, when opening an EDI driver is:

```
dsa_open_u(DSA_DEVICE *dev, char_cp url);
```

The parameter « url » specifies the type of driver to be used and has the following general syntax:

etb : <driver> :<axis>

For a connection to an AccurET, the driver has the following syntax:

etn://<IP Address>[:1129 | :1128]

You can specify the port (1129 or 1128), but this is not necessary. If you don't specify the port, port 1129 is used.

Examples :

Opening a drive 0, connected through TransNET to an UltimET with IP address 192.168.10.10, using the port 1129:

```
DSA_DRIVE *drv = NULL;
int err;

if (err = dsa_create_drive(&drv))
    goto _error;
if (err = dsa_open(drv, "etb:etn://192.168.10.10:1129:0");
    goto _error;
```

Opening an UltimET itself with IP address 172.22.10.110 without specifying the port:

```
DSA_DSMAX *dsm = NULL;
int err;

if (err = dsa_create_dsmax(&dsm))
    goto _error;
if (err = dsa_open(dsm, "etb:etn://172.22.10.110:*");
    goto _error;
```

5. Using TCP/IP connection on Windows RTX

(From EDI 3.03A)

To use EDI, RTX TCP/IP stack must be started, even you do not use TCP/IP connection. To avoid error message, you have to specify a configuration file without any Ethernet board configured.

Example of RTX configuration file without any TCP/IP board :

```
[TCP/IP]
MemoryInK=256
TickInterval=200
MaxSockets=30
TimerPriority=66
NumStartupEvents=50
NumOfInterfaces=0
```

RTX cannot share the interrupts between PCI boards driven by Windows and PCI boards driven by RTX. You must also choose an interrupt that is exclusively used by the RTX board.