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# Quick Installation Instructions

(cbsQ1108-02)

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Product: **CSP EBox (Zebra/Eltron)**  
Host: **AS/400**  
Protocol: **PPR/PPD (TCP/IP for IPDS Data Streams)**

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## Before you start...

**!** These instructions are for users of OS/400 V3R7 or above. If you are running older versions of OS/400, please consult the manufacturer's Operator's Manual accompanying the product.

**!!** Please be aware, that IPDS printing over TCP/IP requires the licensed code PSF/400 (Print Service Facility/400) from IBM. If you do not have PSF/400 installed on your AS/400, jobs will not print.

To check if you have this utility loaded, type GO LICPGM, select option 10, and then search for an entry called Print Service Facility/400. See Appendix A of this document for more information.

**!!!** If you are running OS/400 V3R7 check for PTF: PSF/400 APAR SA44304 [DSPPTF – F4]

The remainder of this document consists of the following section:

1. Preparation/Worksheet
2. Creating a PSF Configuration Object
3. Creating a Printer Device Description
4. EBox Configuration
5. Starting the Communication

Appendix A: Checking for PSF/400

Appendix B: Menu Tree-Front Panel

## 1. Preparation/Worksheet

- 1.1. Select a static TCP/IP address for the EBox: \_\_\_\_\_

If the unit will be installed in a routed network, also determine the default gateway address \_\_\_\_\_ and the subnet mask \_\_\_\_\_.

**[!]** If you are using a DHCP server to automatically assign IP addresses to network devices, omit this step. Instead, refer to the printout of the menu tree (Appendix B.5.) and enable 'DHCP/BOOTP' services, then print a new configuration page to display the assigned IP address.

- 1.2. Choose a unique name for the printer attached to the EBox: \_\_\_\_\_

You will use this name to create a printer device description on the AS/400.

- 1.3. Choose a unique name for the PSF Configuration object: \_\_\_\_\_

You will use this name to create a PSF configuration object associated with the printer device description. A PSF configuration object holds additional parameters required for the proper processing of IPDS print jobs.

## 2. Creating a PSF Configuration Object

- 2.1. At the AS/400 command line, enter the command **CRTPSFCFG**. Press <F4> then <F11> to display the keywords.

```
Selection or command  
==> crtpsfcfg
```

- 2.2. Enter a name of your choice in the "PSF Configuration" (**PSFCFG**) field.  
2.3. Select the library (**LIBL**) **QGPL**.  
2.4. Set "IPDS Pass Through" (**IPDSPASTHR**) to **\*NO**.  
2.5. Review that "Activation Release Timer" (**ACTRLSTMR**) is set to **\*NORDYF**.  
2.6. Set "Release Timer" (**RLSTMR**) to **\*SEC30**. This parameter should be set to a value at least equal to the time out value on the printer. This is the time PSF/400 will maintain a session with the Print Server while there are no spooled files with a status of RDY.  
2.7. Set the Acknowledgment frequency (**ACKFRQ**) to **1**.

(Illustration on next page)

```

Create PSF Configuration (CRTPSFCFG)

PSF configuration . . . . . cbpsf      Name
  Library . . . . . ggp1      Name, *CURLIB
User resource library list . . . *JOBLIBL  *JOBLIBL, *CURLIB, *NONE
Device resource library list . . *DFT      Name, *DFT
      + for more values
IPDS pass through . . . . . *NO      *NO, *YES
Activate release timer . . . . . *nordyf  *NORDYF, *IMMED...
Release timer . . . . . *sec30      1-1440, *NOMAX, *SEC15...
Restart timer . . . . . *IMMED      1-1440, *IMMED
APPC and TCP/IP retry count . . 15      1-99, *NOMAX
Delay between APPC retries . . . 90      0-999
Automatic session recovery . . . *NO      *NO, *YES
Acknowledgment frequency . . . . 1      1-32767
Text 'description' . . . . . psf config obj for EBox attached printer
    
```

2.8. Press <Enter> to save the configuration.

### 3. Creating a Printer Device Description

- 3.1. At the AS/400 command line, enter the command **CRTDEVPRT**. Press <F4> then <F11> to display the keywords.

```
Selection or command
==> crtdevprt
```

- 3.2. Enter a name of your choice for the printer attached to the print server in the “Device Description” (**DEV**) field.
- 3.3. Set “Device Class” (**DEVCLS**) to **\*LAN**.
- 3.4. Set “Device Type” (**TYPE**) to **\*IPDS**.
- 3.5. Set “Device Model” (**MODEL**) to **0**.

```

                                Create Device Desc (Printer) (CRTDEVPRT)

Device description . . . . . DEV          cbsipds
Device class . . . . . DEVCLS           *lan
Device type . . . . . TYPE              *ipds
Device model . . . . . MODEL            0
```

- 3.6. Press <Enter> to reveal additional parameters.
- 3.7. Set “LAN Attachment” (**LANATTACH**) to **\*IP**.

```

                                Create Device Desc (Printer) (CRTDEVPRT)

Device description . . . . . DEV          > CBSIPDS
Device class . . . . . DEVCLS           > *LAN
Device type . . . . . TYPE              > *IPDS
Device model . . . . . MODEL            > 0
LAN attachment . . . . . LANATTACH      *IP
```

- 3.8. Press <Enter>.
- 3.9. Leave “Advanced function printing” (**AFP**) set to **\*Yes**.

```

                                Create Device Desc (Printer) (CRTDEVPRT)

Device description . . . . . DEV          > CBSIPDS
Device class . . . . . DEVCLS           > *LAN
Device type . . . . . TYPE              > *IPDS
Device model . . . . . MODEL            > 0
LAN attachment . . . . . LANATTACH      *IP
Advanced function printing . . . AFP     *YES
```

- 3.10. Press <Enter>.
- 3.11. Set “Port Number (**PORT**) to **5100** or change EBox to **5001**. *The PORT Number must be the same for the Host and the EBox or no printing will occur!!!*
- 3.12. Set “Font” (**FONT**) to **11** (or any other valid font ID value).
- 3.13. Set “Form Feed” (**FORMFEED**) to **\*AUTOCUT**.

```

                                Create Device Desc (Printer) (CRTDEVPRT)

Device description . . . . . DEVD          > CBSIPDS
Device class . . . . . DEVCLS          > *LAN
Device type . . . . . TYPE            > *IPDS
Device model . . . . . MODEL          > 0
LAN attachment . . . . . LANATTACH    *IP
Advanced function printing . . . AFP    *YES
Port number . . . . . PORT            5001
Online at IPL . . . . . ONLINE        *YES
Font:
  Identifier . . . . .                11
  Point size . . . . .                *NONE
Form feed . . . . . FORMFEED          *autocut
Separator drawer . . . . . SEPDRAWER  *FILE
Separator program . . . . . SEPPGM    *NONE
  Library . . . . .
Printer error message . . . . . PRTERMSG *INQ

```

More . . .

- 3.14. Press **F10** for additional parameters, then **page down**.
- 3.15. Set “Activation Timer” (**ACTTMR**) to **\*NOMAX**.
- 3.16. In the “Remote Location” (**RMTLOCNAME**) field, enter the TCP/IP address of the printer server (see Preparation/Worksheet 1.1.).

```

                                Create Device Desc (Printer) (CRTDEVPRT)

Message queue . . . . . MSGQ          *CTLD
  Library . . . . .
Activation timer . . . . . ACTTMR      *nomax
Image configuration . . . . . IMGCFG    *NONE
Maximum pending requests . . . . . MAXPNDRQS 6
Print while converting . . . . . PRTCUT   *YES
Print request timer . . . . . PRTRQSTMR *NOMAX
Form definition . . . . . FORMDF       F1C10110
  Library . . . . .                *LIBL
Remote location:
  Name or address . . . . .            129.0.1.104

```

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```

User-defined options . . . . . USRDFNOPT *NONE
+ for more values

```

More . . .

- 3.17. In the “User-Defined Object” (**USRDFNOBJ**) field, enter the name of the PSF Configuration Object created earlier (see 2.2.). Enter **QGPL** in the “Library” field. Enter **\*PSFCFG** as the “Object Type”.

```

                                Create Device Desc (Printer) (CRTDEVPRT)

User-defined object:           USRDFNOBJ
  Object . . . . .           cbpsf
  Library . . . . .           qgpl
  Object type . . . . .       *psfcfg
Data transform program . . . . USRDTATFM
  Library . . . . .           *NONE
User-defined driver program . . USRDRUPGM
  Library . . . . .           *NONE
Text 'description' . . . . .   TEXT           printer attached to EBox
-----
                                Additional Parameters
Remote network identifier . . . RMTNETID       *NETATR
Workstation customizing object WSCST           *NONE
  Library . . . . .           _____
                                                                More...
    
```

- 3.18. Press **<Enter>** to save the configuration.  
 3.19. The AS/400 host set up is complete.

## 4. EBox Configuration

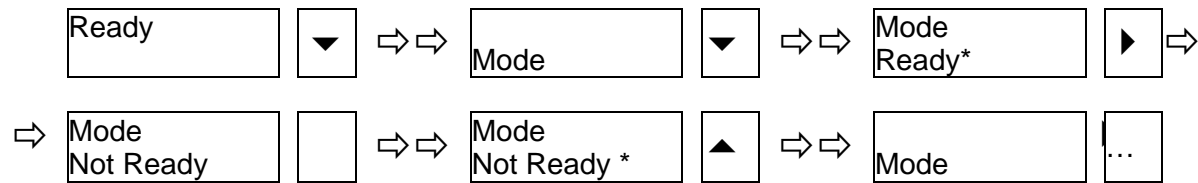
The minimum configuration consists of the following:

- TCP/IP addressing
- Code Page (Default Host Language)

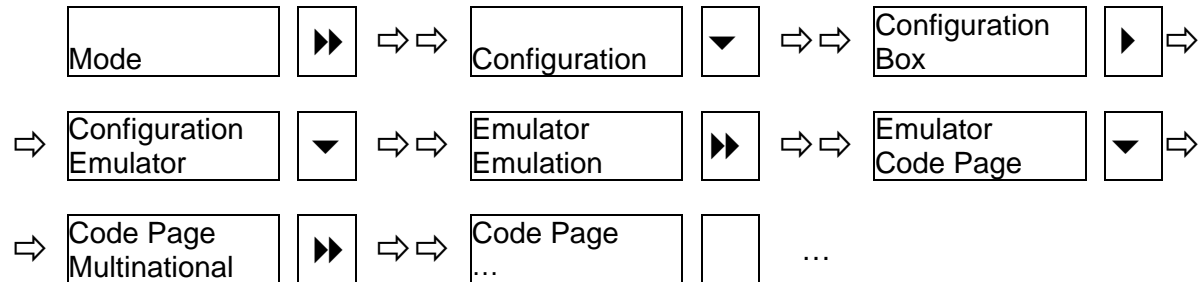
The above parameters should be set during the initial setup through the EBox' front panel menu. Additional configuration parameters can be reviewed and changed most easily from a web browser.

**! We strongly recommend you print Appendix B at this time, so you can navigate through the EBox' menu structure and select the desired options using the ◀ ▶ ▲ ▼ \* buttons.**

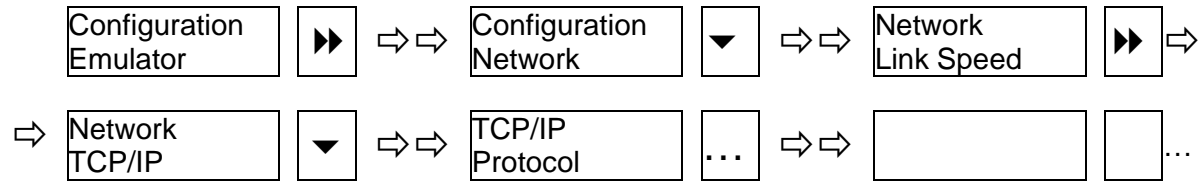
4.1. First, take the EBox off-line through the following button combination:



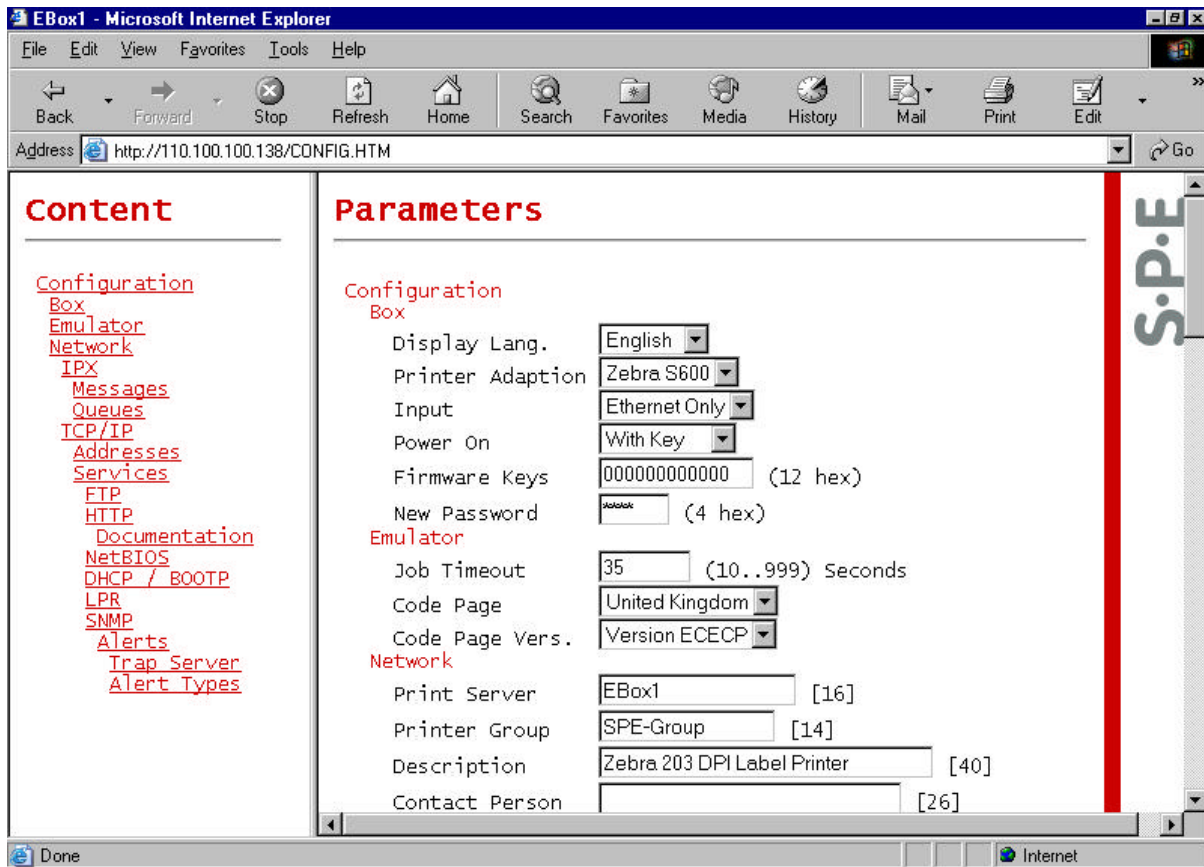
4.3. Next in the EBox' menu structure are the Code Page parameters. From the Mode menu, press ▶ several times until you reach the Configuration menu. Press ▼ to drop down to the "Configuration – Box" level and then ▶ to move across to the Emulator sub-menu and finally press ▼ to enter it. Press ▶ several times to display the Code Page parameters, ▼ to display the first option and ▶ repeatedly to scroll to the desired host language. Press ▶ to select that language.



- 4.4. Press **▲** twice to return to the “Configuration – Emulator” level. Then press **▶** repeatedly to move to the Network sub-menu and **▼** to enter it. Press **▶** to move to the TCP/IP sub-menu and **▼** to enter it. Review that the Protocol is active (**▼** then **▲** to back out) and set the Addresses (IP Address, Subnet Mask, and Gateway Address). When the address blocks are displayed, **▼** will allow you to move from block to block, **◀ ▶** will increment the displayed value, and **▲** will allow you to back out to the next higher menu level.



- 4.5. After setting the minimum configuration parameters make sure to return the EBox ‘READY’ mode (see step 4.1. above).
- 4.6. You should review and if necessary change additional parameters through your Internet browser. Simply enter the EBox’ TCP/IP address in the URL field and press <Enter>. [In this example the address is 110.100.100.138.] From the displayed screen you can access any other settings.





## 5. Starting the Communication

- 5.3. From the AS/400 command line, type **PING 'IP Address'**

where "IP Address" is the TCP/IP address of the EBox.

```
Selection or command
===> ping '128.0.1.104' █
```

If you are getting a "no response" result, confirm that the EBox has been configured with a unique IP address and the gateway/router as well as subnet mask are correct. Also verify the EBox is properly communicating with the hub (check the Line Sync light).

- 5.4. Vary on the printer device using the command **WRKCFGSTS \*DEV *printer device name* <Enter>**. Then place a <1> in front of the printer device and press <Enter>.

```
Selection or command
===> wrkcfgsts *dev cbsipds █
```

```
Opt  Description      Status      -----Job-----
1 █   CBSIPDS            VARIED OFF
```

- 5.5. Start the writer using the command **STRPRTWTR *printer device name* <Enter>**.

Disclaimer: This document does not replace the manufacturer's User's Guide. It provides quick and comprehensive installation instructions for the most common configurations of select products.

## Appendix A Checking for Print Service Facility/400

A.1. At the AS/400 command line type **GO LICPGM**, press <Enter>.

```
Selection or command
===> go licpgm
```

A.2. Select option **10**, press <Enter>.

```
Work with Licensed Programs                                     System:  S1036533

Manual Install
  1. Install all

Licensed Programs
  10. Display installed licensed programs
  11. Install licensed programs
  12. Delete licensed programs
  13. Save licensed programs

Secondary Languages
  20. Display installed secondary languages
  21. Install secondary languages
  22. Delete secondary languages

More...

Selection or command
===> 10
```

A.3. Locate a program called **Print Service Facility/400**.

```
Display Installed Licensed Programs                             System:  S1036533

Licensed  Installed
Program  Status   Description
5763SS1  *COMPATIBLE  OS/400 - Library QGPL
5763SS1  *COMPATIBLE  OS/400 - Library QUSRSYS
5763SS1  *COMPATIBLE  Operating System/400
5763SS1  *COMPATIBLE  OS/400 - Extended Base Support
5763SS1  *COMPATIBLE  OS/400 - Online Information
5763SS1  *COMPATIBLE  OS/400 - System/36 Environment
5763SS1  *COMPATIBLE  OS/400 - Example Tools Library
5763SS1  *COMPATIBLE  OS/400 - AFP Compatibility Fonts
5763SS1  *COMPATIBLE  OS/400 - Host Servers
5763SS1  *COMPATIBLE  OS/400 - GDDM
5763SS1  *COMPATIBLE  OS/400 - Print Services Facility/400
5763AF1  *COMPATIBLE  Advanced Function Printing Utilities/400
5763DCT  *COMPATIBLE  Language Dictionaries/400
5763DCT  *COMPATIBLE  Afrikaans Dictionary
```

## Appendix B Menu Tree – Front Panel

The following shows gives a brief overview of the menu structure.

Use ◀ ▶ to move left to right on any given level of the menu tree.

Use ▼ ▲ to move down or back up a level.

    indicates that a parameter option can be selected.

... (three dots) indicate that additional choices available are not listed.

### B.1. Overview & Ready/Not Ready Mode

Mode ▶	Power Off ▶	Status ▶	Service ▶	Configuration ▶		
▼	▼	▼	▼	▼		
Ready ▶ Not Ready ( )	... ( )	...	...	Box ▶	Emulator ▶	Network ▶
				▼	▼	▼
				See below	See below	See below

### B.3. Setting the Code Page

Configuration - Emulator			
▼			
Emulation ▶	Job Timeout ▶	Code Page ▶	...
▼	▼	▼	
... ( )	... ( )	Multinational ▶ United States ▶ Germany ▶ United Kingdom ▶ Italy ▶ France ▶ Belgium ▶ Denmark ▶ Sweden ▶ Portugal ▶ Spain ▶ Latin2 ( )	

### B.4. Setting the TCP/IP Addresses

Configuration – Network						
▼						
Link Speed ▶	Duplex ▶	TCP/IP ▶				
▼	▼	▼				
...	...	Protocol ▶	Addresses ▶			
		▼	▼			
		Inactive ▶ Active ( )	IP Address ▶	Subnet Mask ▶	Gateway Address ▶	... ▶
			▼	▼	▼	
			(#. #. #. #) ◀ ▶ ( )	(#. #. #. #) ◀ ▶ ( )	(#. #. #. #) ◀ ▶ ( )	

### B.5. Activating DHCP/BOOTP

Configuration – Network							
▼							
Link Speed ▶	Duplex ▶	TCP/IP ▶					
▼	▼	▼					
...	...	Protocol ▶	Addresses ▶	Applications ▶			
		▼	▼	▼			
		Inactive ▶ Active ... ( )	... ( )	LPR ▶	FTP ▶	HTTP ▶	DHCP/ BOOTP ▶
				▼	▼	▼	▼
				... ( )	... ( )	... ( )	Inactive ▶ Active ( )