INSTALLATION GUIDE

Junghanns.NET singleE1 ISDN CARD

HELLO!

MY NAME IS BILL AND I WILL GUIDE YOU THROUGH THE INSTALLATION OF JUNGHANNS.NET SINGLEE1 CARD.

THANK YOU FOR CHOOSING A JUNGHANNS.NET ISDN INTERFACE CARD!

PREPARING THE INSTALLATION:

PLEASE MAKE SURE THAT YOU HAVE THE **LINUX KERNEL SOURCES** OF YOUR PRESENT KERNEL INSTALLED AND CONFIGURED PROPERLY ON YOUR SYSTEM.

BRISTUFF REQUIRES THE FOLLOWING PACKAGES INSTALLED ON YOUR SYSTEM:

FOR SUSE LINUX:

- **gcc**
- **OpenSSL**
- **OpenSSL-dev**
- **wget**

```
Installation with YaST
```
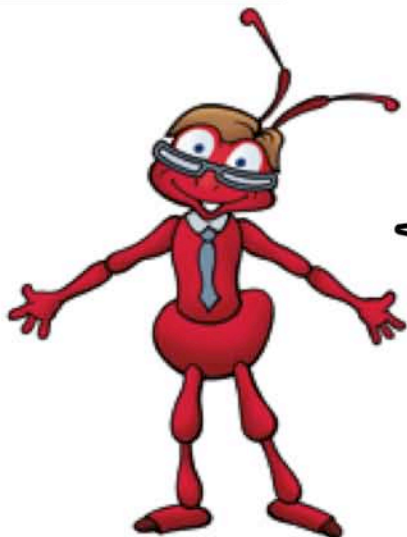
FOR DEBIAN:

- **build-essential**
- **libncurses5-dev**
- **libssl-dev**
- **wget**

```
Server:~ # apt-get install build-essential
libncurses5-dev libssl-dev wget
```

ADDITIONALLY YOUR COMPUTER HAS TO BE CONNECTED TO THE INTERNET.

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TASK SUMMARY:

TO INSTALL THE JUNGHANNS.NET SINGLEE1 CARD, YOU HAVE TO FOLLOW THESE GENERAL STEPS:

1. CONFIGURE THE JUMPER SETTINGS ON YOUR JUNGHANNS.NET SINGLEE1 CARD

2. INSTALL THE JUNGHANNS.NET SINGLEE1 CARD IN YOUR COMPUTER

3. INSTALL THE DRIVERS AND CONFIGURE THE CARD FOR YOUR OPERATING SYSTEM

1. JUMPERSETTINGS

SO LET'S START WITH THE JUMPERSETTINGS!

THE FOLLOWING JUMPERS MUST BE CONFIGURED ON THE CARD:

1. NT/TE SETTINGS.
2. TERMINATION OF S/T INTERFACE.
3. CARD SWITCHES
4. PINOUT

NOTE: FOR MOST USERS ONLY NT/TE SETTINGS ARE IMPORTANT TO LET THE CARD WORK PROPERLY.

WARNING:

ENSURE THE RIGHT SETTING OF JUMPERS TO PREVENT DAMAGE ON YOUR ISDN AND COMPUTER EQUIPMENT.
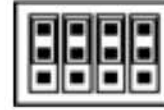
SINGLEE1 MINIPCI ISDN CONFIGURATION OVERVIEW

TE SETTINGS
SET ALL JUMPERS TO THE BOTTOM TO SELECT TE MODE FOR THIS PORT

NT SETTINGS
SET ALL JUMPERS TO THE TOP TO SELECT NT MODE FOR THIS PORT
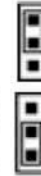
TERMINATION OF S/T INTERFACE (100Ω)

LEFT SWITCH ON: TERMINATION 75Ω
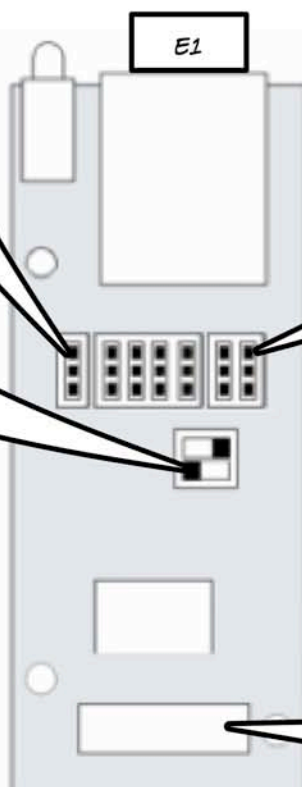
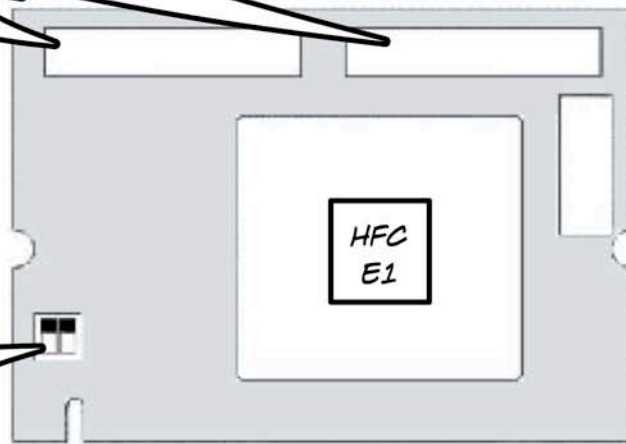RIGHT SWITCH ON: TERMINATION 120Ω

E1

PINOUT

E1 PINOUT (1,2,4,5)

S2M PINOUT (3,4,5,6)

CONNECTORS FOR THE RJ45 BOARD

MINIPCI CONNECTOR
CONNECTOR FOR THE MINIPCI CARD

HFC E1

CARD ID SWITCHES
DIP SWITCHES 1 AND 2 CAN BE USED TO SET THE CARD ID (VERY USEFUL FOR REMOTELY IDENTIFYING INDIVIDUAL CARDS)

CARD ID CONFIGURATION
ON THE LEFT YOU FIND THE FRIST SWITCH AND ON THE RIGHT THE SECOND.

Card-ID	0	1	2	3
SW 1	OFF	ON	OFF	ON
SW 2	OFF	OFF	ON	ON

TOP VIEW OF THE CARD

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2. INSTALLATION IN YOUR COMPUTER

YOU NEED:
- THE JUNGHANNS.NET ISDN INTERFACE CARD YOU WANT TO INSTALL
- THE RJ45 CONNECTORBOARD
- AN ANTI-STATIC WRISTBAND
- A PHLLIPS-HEAD SCREWDRIVER
- A FREE MINIPCI SLOT*

* PLEASE DEACTIVATE THE IRQ-SHARING

1. OPEN THE CASE
2. LOCATE THE FREE MINIPCI SLOT AND GENTLY INSERT THE MINIPCI CARD INTO THE SLOT
3. PRESS DOWN FIRMLY THE CARD UNTIL YOU HEAR THE PINS CLICK INTO PLACE
4. IF THE CARD IS PLACED CORRECTLY, YOU CAN CONNECT THE MINIPCI CARD TO THE RJ45 CONNECTORBOARD
6. CLOSE THE CASE

JUST BUILD IN YOUR MINIPCI CARD

WARNING:

ENSURE YOU TURNED OF THE DEVICE AND REMOVED ALL CABLES FROM THE BACK BEFORE OPENING THE CASE!

ALWAYS PICK UP THE CARD BY ITS METAL BRACKET AND THE OUTER EDGE OF THE SILICON BOARD AND TAKE CARE NOT TO TOUCH ANY GOLD CIRCUITRY!

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3. CONFIGURE AND INSTALL THE DRIVERS

AT FIRST FIND OUT THE LATEST BRISTUFF DRIVER VERSION AT OUR WEBSITE:

http://www.junghanns.net/en/download.html

TO INSTALL THE BRISTUFF DRIVERS FOR YOUR CARD PLEASE LOGIN TO YOUR COMPUTER AS **ROOT.**

IN THE FOLLOWING STEPS YOU REPLACE "<VERSION>" WITH THE LATEST VERSION NUMBER, E.G. 0.3.0-PRE-1y-q

CHANGE THE DIRECTORY TO /usr/src/ :

```
Server:~ # cd /usr/src/
```

DOWNLOAD THE BRISTUFF DRIVERS:

```
Server:~ # wget http://www.junghanns.net/downloads/
bristuff-<version>.tar.gz
```

EXECUTE THE "TAR" COMMAND TO DECOMPRESS THE DRIVER FILES:

```
Server:~ # tar xvf bristuff-<version>.tar.gz
```

NOW RUN THE FOLLOWING COMMANDS TO INSTALL THE BRISTUFF AND ASTERISK DRIVERS:

```
Server:~ # cd /usr/src/bristuff-<version>/
Server:~ # ./install.sh
```

DURING THE INSTALLATION YOU HAVE TO PRESS <ENTER> A FEW TIMES. IF THERE WERE NO ERRORS DURING THE INSTALLATION PROCESS THE INSTALLATION HAD BEEN SUCCESSFULL.

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4. COPY THE CONFIGURATION FILES

NOW WE NEED TO COPY SOME CONFIGURATION FILES. COPY THE CWAIN/ZAPATA.CONF TO /ETC/ASTERISK AND COPY THE CWAIN/ZAPTEL.CONF FILE TO /ETC

```
Server:~ # cd /usr/src/bristuff-<version>/
Server:~ # cp cwain/zapata.conf /etc/asterisk
Server:~ # cp cwain/zaptel.conf /etc
```

THE INSTALLATION OF THE DRIVERS IS COMPLETED AT THIS POINT. NOW WE ARE ABLE TO LOAD THE DRIVERS.

TO LOAD THE DRIVERS WE HAVE TO RUN THE FOLLOWING COMMANDS:

```
Server:~ # modprobe cwain
Server:~ # ztcfg
```

IF THE DRIVERS WERE INSTALLED CORRECTLY, THE LIGHTS ON THE CARD WILL TURN ON AFTER YOU HAVE LOADED THE DRIVERS.

WARNING:

IF YOU HAVE ANY OTHER ZAPTEL DEVICE IN YOUR MACHINE THEN MAKE SURE THAT ZTCFG ONLY RUNS ONCE! (OR RUN ZTCFG -S AND THEN ZTCFG AGAIN)

TO START YOUR ASTERISK CLI JUST RUN THE FOLLOWING COMMAND:

```
Server:~ # asterisk -vvvgc
```

SO WE ARE DONE AND ALL I HAVE TO SAY IS HAVE FUN AND GOOD BYE. SEE YOU NEXT TIME, YOUR ANT BILL.