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TCE Tinycore Linux Project englisch

[Versionsgeschichte interaktiv durchsuchen](#)

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Version vom 30. April 2013, 10:20 Uhr (Quelltext anzeigen)

[OE2WAO](#) ([Diskussion](#) | [Beiträge](#))

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Aktuelle Version vom 8. Januar 2023, 15:01 Uhr (Quelltext anzeigen)

[OE2WAO](#) ([Diskussion](#) | [Beiträge](#))

Markierung: [Visuelle Bearbeitung](#)

(14 dazwischenliegende Versionen desselben Benutzers werden nicht angezeigt)

Zeile 1:

==Intro==

[[Bild:PPC.jpg|thumb|500MHz LowPower industrial PC]]

This hamradio software project is based on [http://www.tinycorelinux.com TCE - Tinycore Linux], an embedded software system used on plattformen like industrial pc, ALIX and others, and offers **services and possibilities like**

***packet radio,**

***APRS,**

***lightning log,**

***small webserver,**

***SVX-Link (Echolink)**

Zeile 1:

[[Datei:Deutschland-flagge.gif]] Für die deutsche Version dieses Projekts [[TCE Tinycore_Linux_Projekt | >>hier klicken<<]]

==Intro==

[[Bild:PPC.jpg|thumb|500MHz LowPower industrial PC]]

This hamradio software project is based on [http://www.tinycorelinux.com TCE - Tinycore Linux], an embedded software system used on plattformen like industrial pc, ALIX and others, and offers

*** Packet Radio - (multichannel /multibaud e.g. 1k2 2k4 4k8 9k6..)**

***APRS - UDPGATE (IGATE, also multibaud, e.g. 1k2 and 9k6)**

***LoRa APRS (NEW!) incl. Mic-E**

***SAMNET**

***lightning detection**

***Radiosondes RX (weather balloon tracker)**

***small web servers**

***Weather station with different sensors**

			+ *SVX Link (Echolink)
			+ *WINLINK Global Radio Email (RMS Packet)
			+ *Switching and measuring center
			+
	especially in networks like HAMNET and similar. 	especially in networks like HAMNET and similar. 	
	One goal is a minimum on material expenditure and also a minimal current consumption, followed by a maximum of features	One goal is a minimum on material expenditure and also a minimal current consumption, followed by a maximum of features	
	More information on the hamradio TCE - tinycore linux project coming here soon	More information on the hamradio TCE - tinycore linux project coming here soon	
-			
	==Hardware==	==Hardware==	
	[[Bild:12v-anschluss.jpg thumb polarity industrial PC]]	[[Bild:12v-anschluss.jpg thumb polarity industrial PC]]	
-	DH2IW Wolfgang, OE2WAO Mike and OE5DXL Chris are doing first experiments with discarded industrial pc hardware, a 500MHz AMD Geode CPU with up to 256MB of RAM, and a minimal power input of <5Watt (for remaining stock ask [http://www.oe2wao.info OE2WAO]). 	+ DH2IW Wolfgang, OE2WAO Mike and OE5DXL Chris are doing experiments with discarded industrial pc hardware, a 500MHz AMD Geode CPU with up to 256MB of RAM, and a minimal power input of <5Watt (for remaining stock ask [http://www.oe2wao.info OE2WAO]). 	
-	The operating system is placed on a CF memory card (>32MB). 		
-	A USB soundcard is used for AFSK mods. One special character of working devices is a 3rd connector beside microphone and line out, the line in. Because these device are real stereo and make it possible to operate two separate channels on one sound card.	+ But every other hardware plattform like ALIX, Raspberry Pi or similar will do. 	

	+ The operating system is placed on a CF /SD memory card (>32MB).

- ===Connections and conversion of the used industrial pc===	+ If available the internal, or in other cases an USB soundcard is used for operating AFSK/FSK modulation. One special character of working devices is a 3rd connector beside microphone and line out, the line in. Because these device are real stereo and make it possible to operate two separate channels even on one sound card.
	+ + ===Connections and conversion of our used industrial PC===
[[Bild:12v-umbau.jpg thumb power supply conversion 12V]]	[[Bild:12v-umbau.jpg thumb power supply conversion 12V]]
There are several connectors (COM, USB, network) on the frontside of our panels, as you can see. For correct polarity it is important to connent the + pole to the right pin of the 3pol power supply connector, the pin which is closer to the USB ports. The negative pole is the left pin.
	There are several connectors (COM, USB, network) on the frontside of our panels, as you can see. For correct polarity it is important to connent the + pole to the right pin of the 3pol power supply connector, the pin which is closer to the USB ports. The negative pole is the left pin.

Zeile 27: That we can use it with our 12V power supply, we have to do a little modification. Just add a 270k Ohm resistor on the bottom side of the power supply as shown in the picture.	Zeile 37: That we can use it with our 12V power supply, we have to do a little modification. Just add a 270k Ohm resistor on the bottom side of the power supply as shown in the picture.
	+ ===Soundcard=== + If there is no onboard sound available, you can use a USB soundcard instead. Suggested types you can find [[Geeignete Soundkarten here]].

[illegible]

Aktuelle Version vom 8. Januar 2023, 15:01 Uhr



Für die deutsche Version dieses Projekts [>>>hier klicken<<](#)

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Intro

This hamradio software project is based on [TCE - Tinycore Linux](#), an embedded software system used on platforms like industrial pc, ALIX and others, and offers

- Packet Radio - (multichannel/multibaud e. g. 1k2 2k4 4k8 9k6..)
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- LoRa APRS (NEW!) incl. Mic-E
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- Switching and measuring center

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One goal is a minimum on material expenditure and also a minimal current consumption, followed by a maximum of features

More information on the hamradio TCE - tinycore linux project coming here soon



500MHz LowPower industrial PC

Hardware

DH2IW Wolfgang, OE2WAO Mike and OE5DXL Chris are doing experiments with discarded industrial pc hardware, a 500MHz AMD Geode CPU with up to 256MB of RAM, and a minimal power input of <5Watt (for remaining stock ask [OE2WAO](#)).

But every other hardware platform like ALIX, Raspberry Pi or similar will do.

The operating system is placed on a CF/SD memory card (>32MB).



polarity industrial PC

If available the internal, or in other cases an USB soundcard is used for operating AFSK/FSK modulation. One special character of working devices is a 3rd connector beside microphone and line out, the line in. Because these device are real stereo and make it possible to operate two separate channels even on one sound card.

Connections and conversion of our used industrial PC

There are several connectors (COM, USB, network) on the frontside of our panels, as you can see. For correct polarity it is important to connect the + pole to the right pin of the 3pol power supply connector, the pin which is closer to the USB ports. The negative pole is the left pin.

The normal board supply is 24V. That we can use it with our 12V power supply, we have to do a little modification. Just add a 270k Ohm resistor on the bottom side of the power supply as shown in the picture.



Soundcard

If there is no onboard sound available, you can use a USB soundcard instead. Suggested types you can find [here](#).

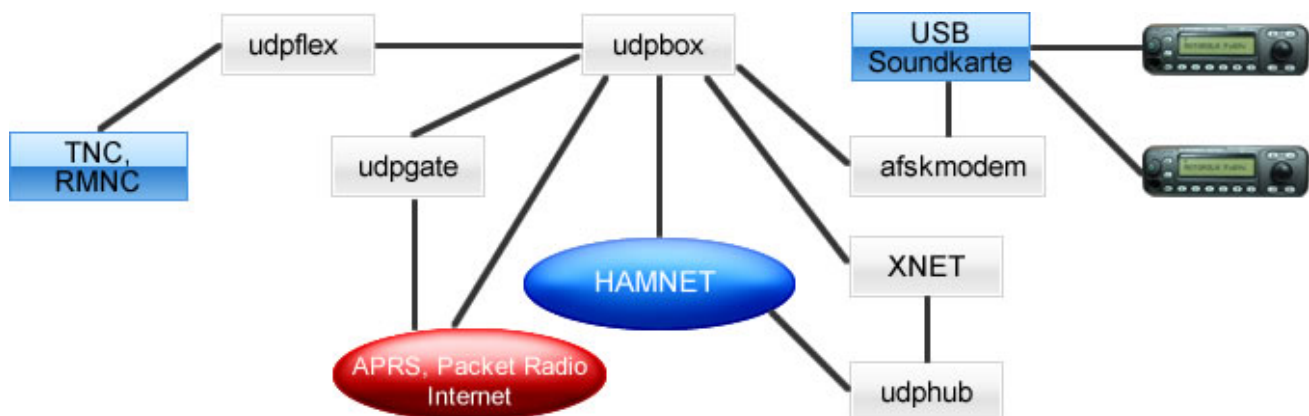
Software

A ready-to-use software image is located on the [OE2WAO Server](#) (e.g. tc455x-128.zip means version 4.55 with GUI on 128MB data drive)

There is also a version for raspberry pi hardware in test, and available soon.

DL1NIX has created a wiki on installation and operating the dxlToolchain <http://dxlwiki.dl1nux.de/> (german)

Software schematic



Help

If you need help on configuring the software packages you can contact OE5DXL on packet radio convers channel 501.