Inhaltsverzeichnis

TCE Tinycore Linux Project englisch

 Für die deutsche Version dieses Projekts >>hier klicken<<

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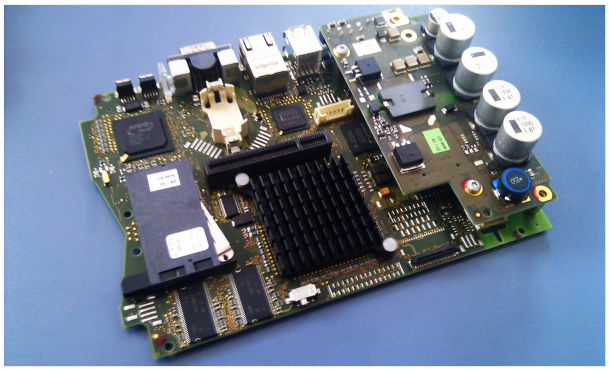
Intro


500MHz LowPower industrial PC

This hamradio software project is based on TCE - Tinycore Linux, an embedded software system used on plattforms like industrial pc, ALIX and others, and offers

- multimode
- multibaud
- multichannel

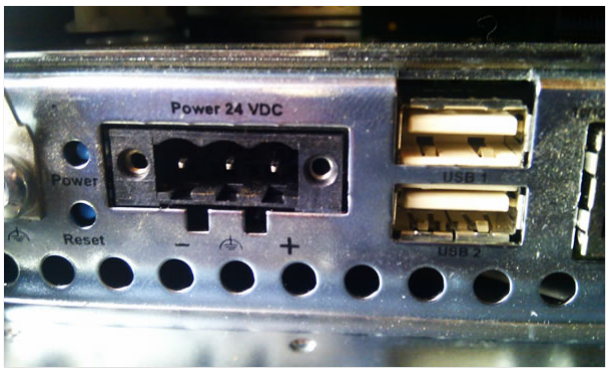
services and possibilities like

- Packet Radio,
- BBS,
- APRS,
- Radiosonde tracker,
- lightning log,
- small webserver,
- SVX-Link (Echolink)

especialy 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

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

Hardware



polarity industrial PC

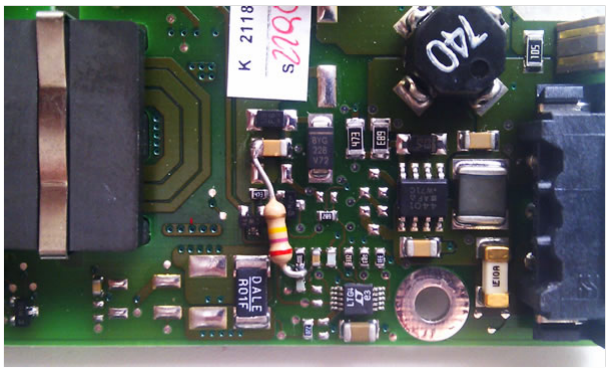
DH2IW Wolfgang, OE2WAO Mike and OE5DXL Chris are doing first experiments with discarded industrial pc hardware, a 500MHz AMD Geode CPU with up to 256MB of RAM, and a minimal power input of <5Watt (for remaining stock ask OE2WAO).

But every other hardware plattform like ALIX, Raspberry Pi or similar will do.
The operating system is placed on a CF memory card (>32MB).

A 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 on one sound card.

Connections and conversion of the 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 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.



power supply conversion 12V

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.

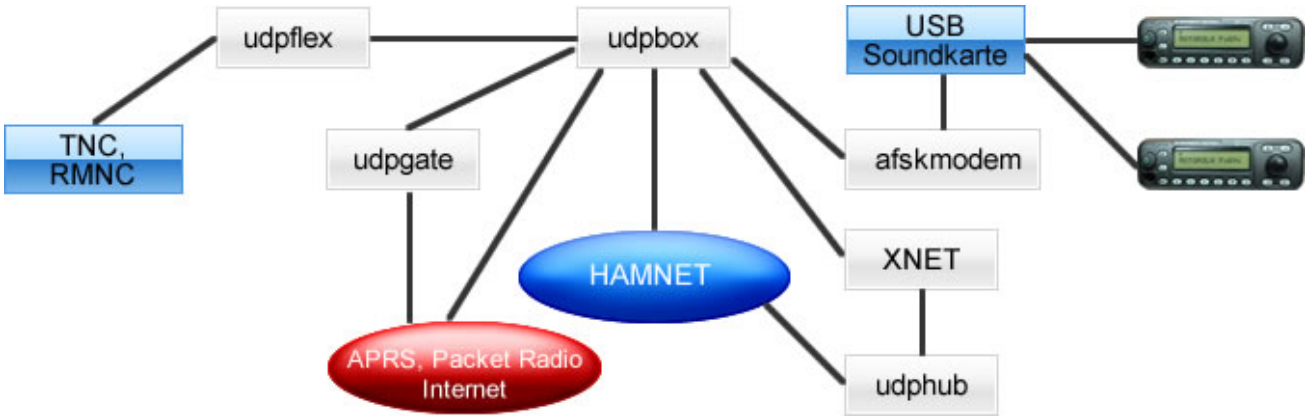
Soundcard

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.

Software schematic



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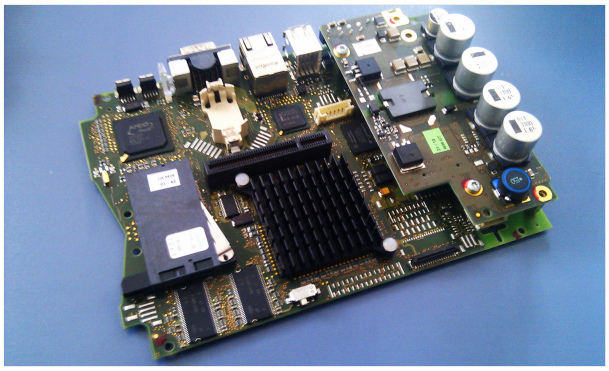
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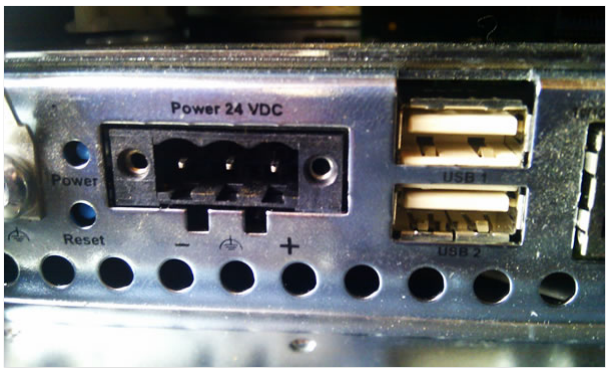

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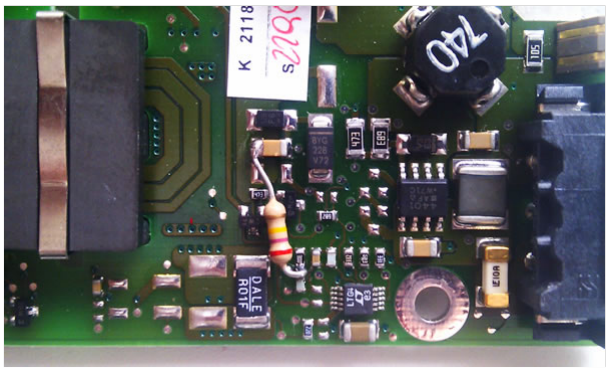

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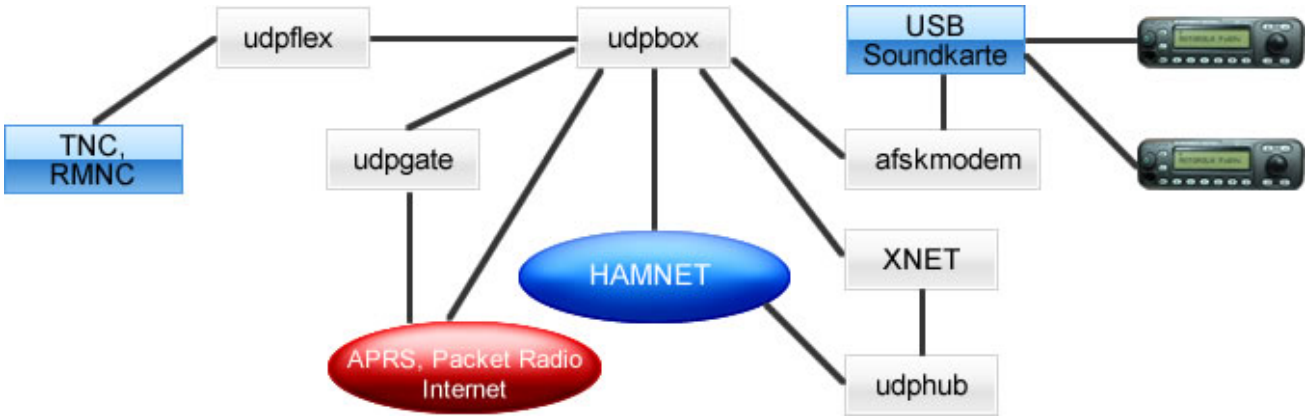

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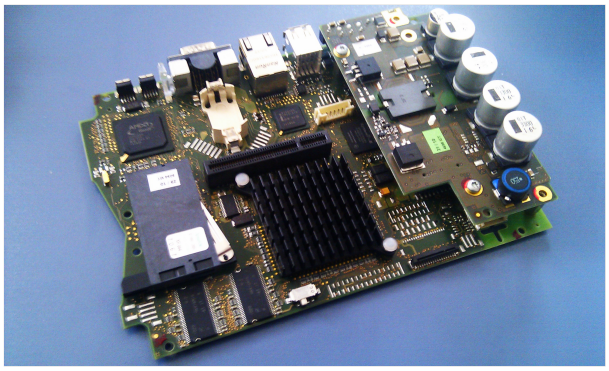
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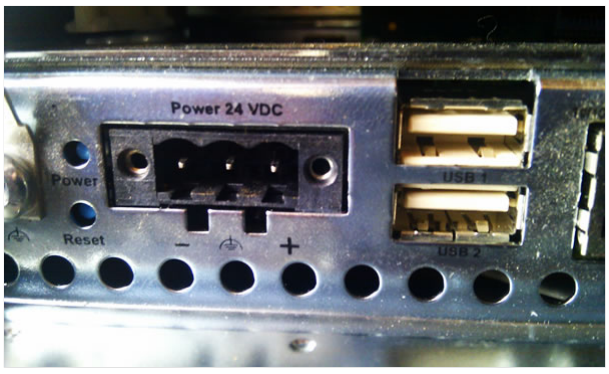

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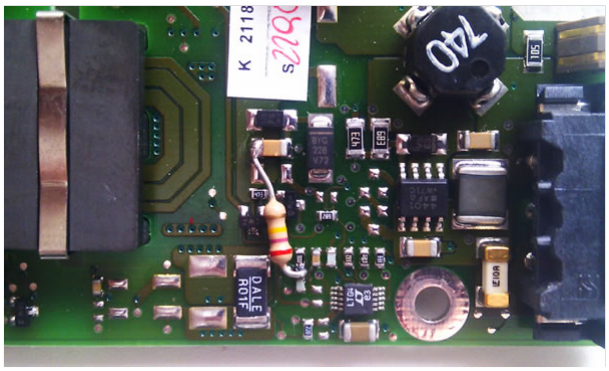

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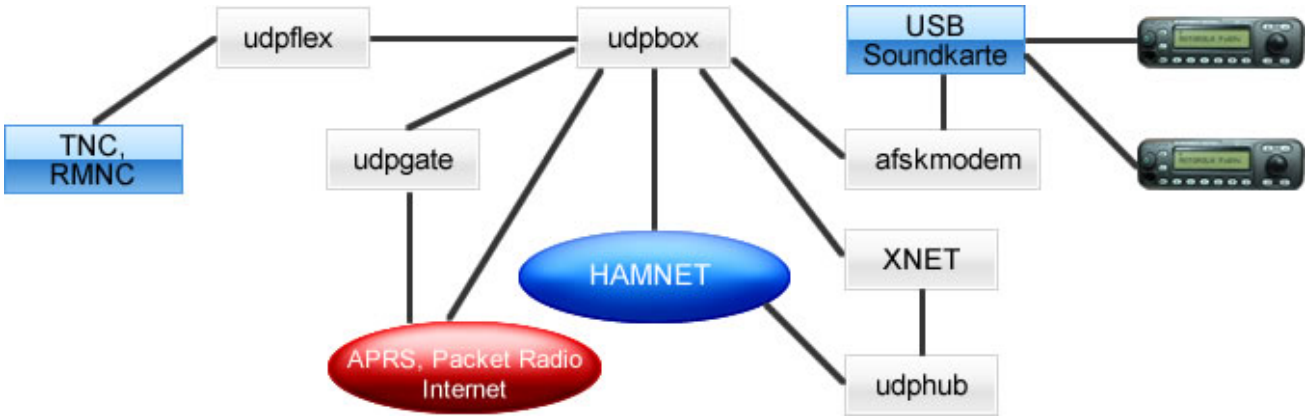

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