Odyssey-2 technical characteristics

👤 admin   🔖 Без рубрики   🕐 Сен, 10, 2017   💬 No Comments

The block diagram of the device is shown in the picture.
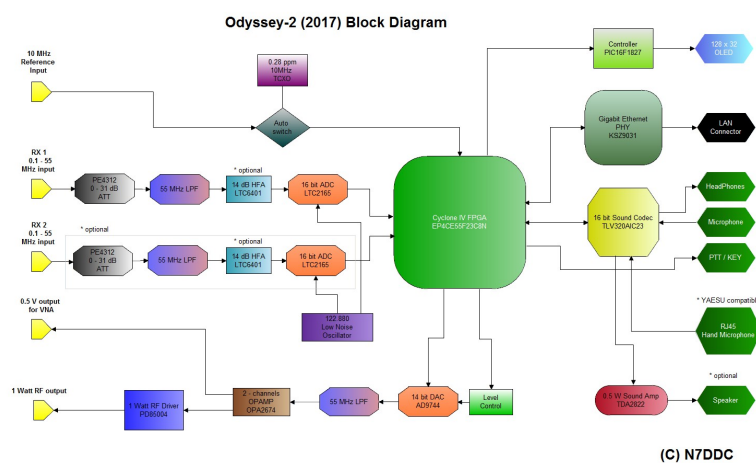
General characteristics:

The board size is 160 x 83.5mm, it is suitable for installation in a Hammond 1455R1601 housing, shortened to 80mm.

- Power supply 7-13 Volts, reverse polarity and overvoltage protection
- The current consumption with a power supply of 12 volts — 350 mA, with a 1-watt output driver — 500 mA
- Connection to the computer — LAN, Gigabit Ethernet or 100Mbits (depends on the firmware)
- Connectors for headphones, microphone, CW manipulator — Mini Jack 3.5mm
- Connector for connecting a hand-held microphone (tangents) — RJ-45, compatibility with Yaesu
- RF Connectors — SMA-F
- External device control connector — DB15-F

Receiving unit characteristics:

- The type of ADC is 16 bits LTC2165, one or two independent receive channels
- Channel separation — 95 dB (10 MHz)
- Sampling rate 122.880 MHz
- The range of received frequencies is 0.1-55 MHz
- Number of independent receivers — 4 — 7 (depending on the firmware)
- Sensitivity MDS (500) -127 dB, with the installed HFA -134 dB
- Attenuator 0-30 dB, 1 dB step
- The Blocking Dynamic Range is 122 dB *
- The dynamic range limited by phase noise (RMDR) is 115 dB *
- The frequency stability provided by the built-in reference oscillator is 0.280 ppm
- The available width of the panadapter is 48-1536 kHz (depending on the firmware)
- * The measurement procedure differs from the generally accepted

Transmitting unit characteristics:

- Operating frequency range 1-55 MHz
- The output voltage on the VNA connector (at a load of 50 Ω) is 0.5 Volts Peak
- The output voltage at the 1W connector (at 50 Ohm load) is 10 Volts Peak
- Linearity of the signal from the output of VNA, IMD3 -70 / -65 dB
- Linearity of the signal from the output 1W, IMD3 -40 dB *
- The maximum width of the transmitted signal is 48 — 96 kHz (depending on the firmware)* Preliminary data

Additional features:

The ability to connect an external stable reference oscillator 10 MHz, a logic level of 3.3-5 volts, meander.

The ability to measure the output power and the reflected signal level, SWR measurement, using the built-in 12-bit low-frequency ADC.

Four control lines for additional devices, the input and output of control of the transmission mode, output of the control of the auto tuner, the output for controlling the switching to the second antenna.

Serial data bus for decoders with 16 outputs, allowing to realize control of power amplifier board ALEX type.
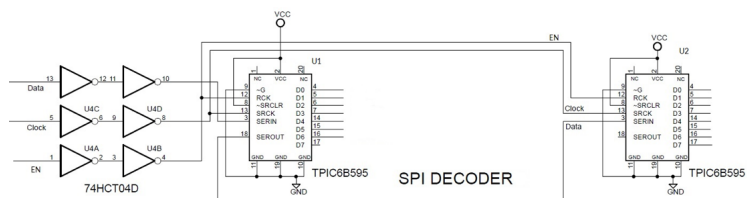
OLED display with a resolution of 128 x 32, controlled by a microcontroller (currently not used).

The Yahoo discussion group...