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OVI40 Short Specification

OVI40-SDR Components

The OVI40-SDR consists of the following components:

- UI Board
- Display und Touchscreen Module
- RF Board
- Housing

UI Board



OVI40 UI and display board (photo DF9EH)

UI board table of features:

PCB Dimensions:	186mm x 66mm
Processor:	STM32F76x (216 MHz Clock), optional STM32H743ZIT6 (400 MHz Clock, pin compatible with STM32F76x)
Audio Codec:	2 x WM8731 @ 96KHz (UHSDR currently using 48 kHz only), separate IQ and Audio (TX and RX possible simultaneously, RF board needs to support this)
Display:	3.5„ 480×320 as default, 3.2“ and 2.8„ supported
LCD Interface:	parallel and SPI supported, parallel used as default
Internal memory:	SPI-Flash (Option), SPI-RAM (Option)
External memory:	microSD card
Realtime clock:	integrated Realtime Clock (RTC) part of STM32 MCU, CR2032 Backup Battery
LEDs:	3
External connections:	Mini-USB Type B, USB-Host (USB-A), 3.5mm connector for microphone and PTT, 3.5mm connector for analog input, 3.5mm connector for analog output (line-out is independant from loudspeaker), 3.5mm connector for headset
Internal connections:	30pin connector (mcHF RF Board compatible), 6pin GPIO, 25pin connector (GPIOs, SPI, I2C), ST-Link V2 compatible Debug connector, Debug output, 2 x 4 Pin internal USB connections

Keys:	18 separate keys
Rotary encoders:	4 rotary encoders with integrated key function
Audio output:	Stereo, 2 x 3W at 2 x 4 Ohm with less than 1% THD+N

The 30pin header J1 is downward compatible with the mcHF RF boards up to and including RF board V0.6. OVI40 UI and mcHF RF board can be used together. An improved OVI40 RF Board is in development.

Display Board

Note: ToDo Photo

Display size:	3.5 inch
Display Type	TN
Resolution:	480 x 320
Controller:	ILI9846 (and compatible)
Human Interface:	Touchscreen
Interface:	SPI and Parallel

2.8 inch oder 3.2 inch 320 x 240 Touchscreen Displays mit IL9325 (or compatible) controller can also be used.

RF Board

Note: ToDo Photo and Data table

Housing

Note: ToDo GHousing text and data

OVI40 will not fit the current mcHF casings. In contrast to the mcHF, the OVI40 RF boards will have additional PCB boards plugged into them. It is assumed that these adapter boards may be up to 5 cm long. There will be OVI40 specific casings developped and provided who do not want to build their own housing. These housings will be developped after the OVI40 has been finished.

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Last update: **07.02.2018 14:41**