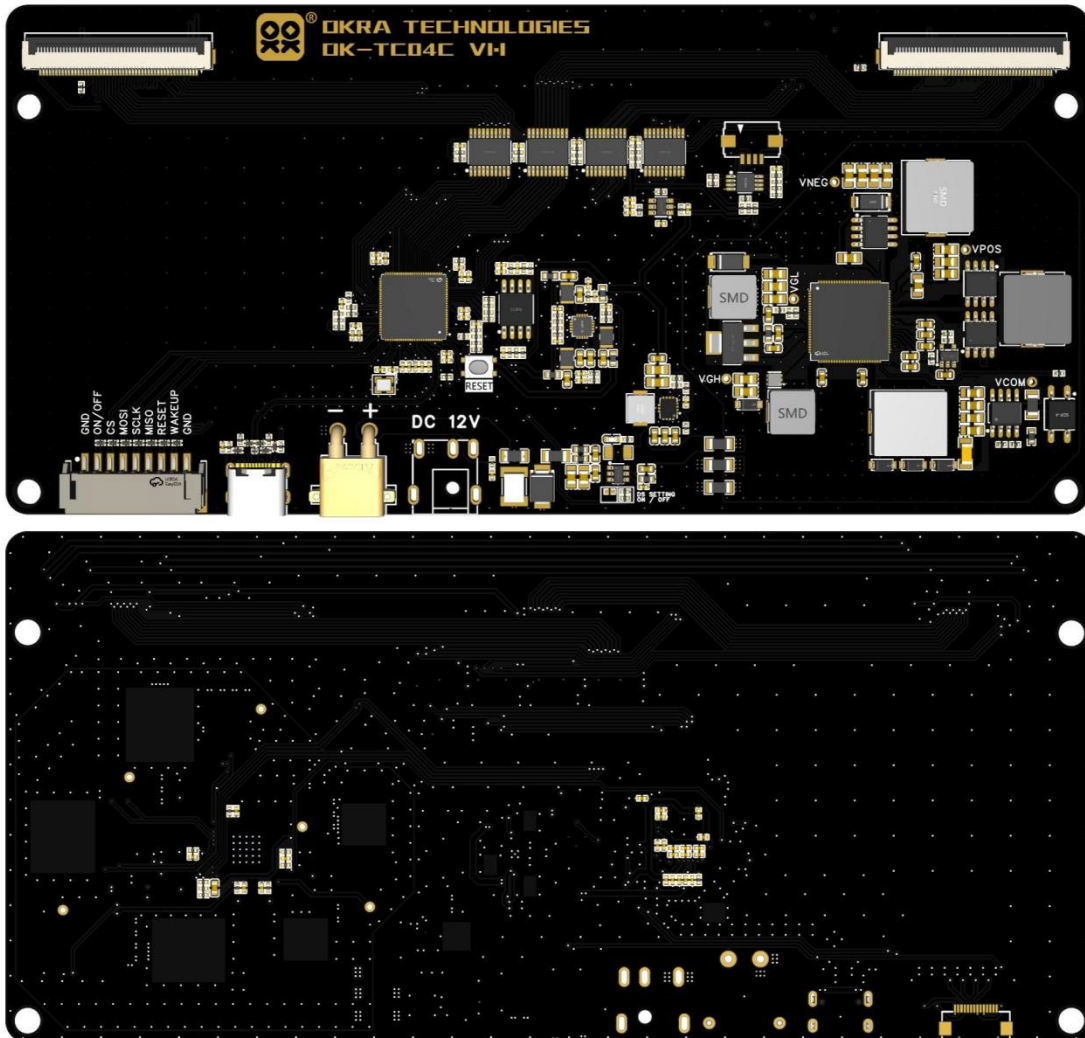


OK-TC04C V1.1 Specs

Forward

- OK-TC04C V1.1 is an evaluation board specifically designed and developed by [Shanghai OKRA Technologies CO., LTD (<https://www.okratechnologies.com>) for 42inch E-paper display (ED420TTx). It can also be used as a finished motherboard or T-con board.



Product Features

- Based on E Ink T2000 ink screen timing control chip.
- Onboard PMIC chip for E-paper displays, providing Source, Gate, and VCOM voltages to the screen.
- Onboard power electronic switch allows for complete power shutdown of the TCon board and screen via host computer I/O.
- Onboard USB, SPI, and other host computer interfaces enable adaptation to various application scenarios.
- High-quality four-layer PCB with immersion gold plating ensures high reliability and withstands harsh operating environments.
- Onboard temperature sensor eliminates the need for an external sensor board.

E Ink T2000 Specifications

Functions	T2000
Support Maximum Panel Resolution	3200x2400@120Hz, 3840x2160@120Hz
Package Size	10x10mm QFN104
Memory Size	256/512 Mb with SiP
Sleep Power	2.2mW
Gallery/Kaleido Rendering	yes
mini-LVDS	12 pairs
TTL Data Bus	8/16/24
Real-Time image copy	yes
USB	USB 3.0 / 2.0
SPI	Standard SPI / Dual / Quad SPI. 1 host & 1 device
I2C	up to 1Mbps. 1 host & 1 device

Functions	T2000
MIPI-DSI	4 lanes. up to 1Gbps/lanes, RGB format supported.
GPIO	Used for Power Control and Status reading.

Supported EPD model

- 42inch: BW

IO and buttons

- OK-TC04C V1.1 board has an onboard Reset button for the T2000.
- The USB-C port can be used for screen refresh or firmware upgrades for the T2000.
- The SPI interface is used for connecting to a host computer.

Power supply

- OK-TC04C V1.1 is powered by a 12V DC interface (5.5x2.1 specification), with a peak current of <math><2A@12V</math> during screen refresh.
- The 5V power supply for the USB-C port is not connected to the system.
- The T-con board power is off by default and can be controlled via I/O. It can also be forcibly turned on by inserting a USB-C port.

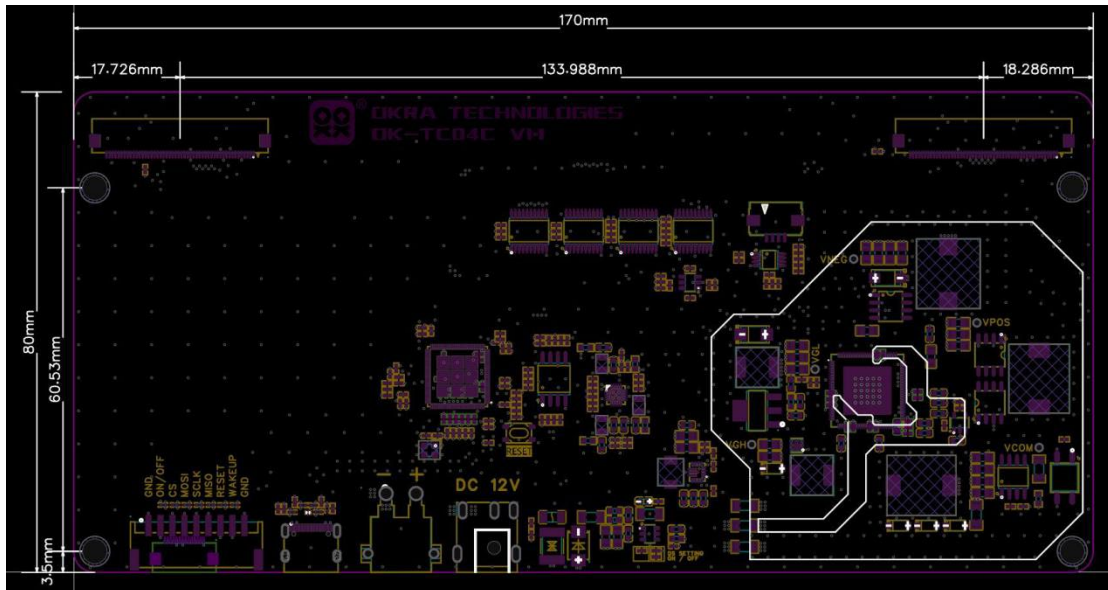
Host computer adaptation

Platform	OS	Contents Provided	Supported Interface	Remark
X86	Windows 10 +	Demo AP executable.	USB	for demo only
X86/ARM	Linux	Source Code & Libraries	USB	

Platform	OS	Contents Provided	Supported Interface	Remark
SOC	RTOS	Source Code & Libraries	SPI	Slide Show Firmware

Outline dimension

OK-TC04C V1.1 OD is 170x80mm, with a plate thickness of 1.6mm, and M3 mounting holes.



Design and Quality

- Onboard OCP and OVP circuits to fully protect the electrical safety of core components and the E-paper display
- Four-layer board design
- Hole plugging and immersion gold plating
- All-black PCB
- TG155 board material

Shipping List

- OK-TC04C driver board
- 12V 2A power supply
- FFC cable x4