

TE0747 - MicroVault



TE0747 is a MicroSD Card sized (over-sized in length) Programmable Platform capable to be used as Google Project Vault device or as generic SD Card Emulation Device. TE0747 can also be used with custom Protocols or switched device that can be accessed as SD Card first to transfer files to on-board NAND, then later the microSD card edge terminals can be used as user I/O for other purposes.

Feature	Google geophyte	TE0747	MicroSD
Size	6 by 10 cm (approximate)	11 x 28 x 3 mm	11 x 15 x 0.7 mm
FPGA	Artix A100T	Artix A35T (or A50T)	ASIC
NAND	1 GBit (128 MByte)	1 Gbit (max 4 GBit)	up to 128 GByte
User I/O	>= 9	4 (+3 inputs)	none
SD Protocol	SD no UHS modes	SD no UHS	SD, UHS
Custom Protocol	possible	possible	no
iSDIO	possible (not implemented)	possible	possible
Power supply	external	from microSD pins	from microSD pins

Comparison table

Features

- Micro-SD Connector Compatible - (note: extended size)
- Xilinx Artix FPGA A35T (optional: A50T)
- 2 MByte boot Flash
- 1GBit NAND Flash (optional: 4Gbit)
- MEMS Oscillator for system clock
- One User LED
- Ambient light and proximity sensor
- 10 pin debug and I/O connector
 - 1.8V supply and logic levels
 - JTAG (can also use as 3 input only pins)
 - 4 User I/O

MicroVault Development Kit (Standard)

Content

- TE0747 MicroVault (A35T, 1 Gbit NAND)
- TE0790 USB JTAG and UART
- TE0791 Cable adapter for 10 pin JST Cable
- TE0791 PCB with JST connector for user I/O extensions

- JST 0.6 mm 10 pin Cable
- USB SD Card Reader
- MicroSD to SD Adapter