

The development board LDM-MAX7000-ZIFT100P160 is a printed circuit board, size 180x100x12 mm and prototypical field 80x100 mm (hole pitch 2.54 mm) with possibility of installment two types of expansion modules with ZIF panel LDM-MAX7000-ZIFT100 (housing TQFP-100, Fig. 4) and LDM-MAX7000-ZIFP160 (housing PQFP-160, Fig. 7). For this the board has four connectors XS2 – XS5. The development board is intended for prototyping devices designed on FPGA of the company Altera a family of MAX 7000S CPLD in the housing TQFP-100 (EPM7064S, EPM7128S and EPM7160S) and PQFP-160 (EPM7128S and EPM7160S). All inputs and outputs are installed in the panel FPGA displayed on the contact pads XS8 – XS11. The board has a connector XS6 (IDC-10MS) to connect a download cable LDM-USB-Blaster, LDM-PB 2.01 ByteBlasterMV or its analogs (in the mode JTAG). Power can be carried out by an external stabilized source with the voltage + 9 ... 12 V that is connected to the connector XS1. LEDs VD3 and VD4 are power indicators.

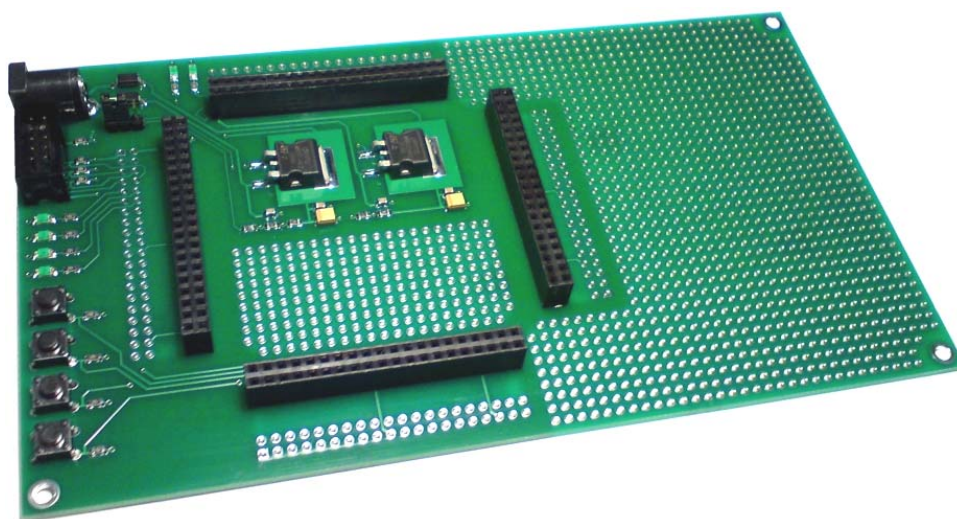
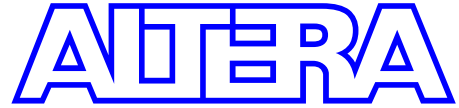
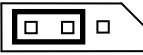
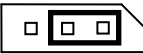
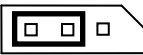
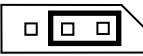
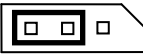
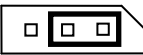



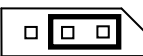


Fig. 1. General view of the development board LDM-MAX7000-ZIFT100P160

Linear voltage converter DA1 (LM317D2P) in the housing D2PAK transforms supply voltage to the voltage 5.V (VCCINT – core power FPGA), DA2 can be set to a voltage 5.0 V or 3.3 V (VCCIO – input/output power FPGA) it depends on switch position XS7 (Table 1).

Table 1

Main characteristics of development boards.

Type of FPGA	Voltage of core power FPGA VCCINT, V	Position XS7	Voltage of input/output power FPGA VCCIO, V	Number of pins in/out	Logic capacity
EPM7064STC100	5.0		5.0	68	1250
			3.3		
EPM7128STC100	5.0		5.0	84	2500
			3.3		
EPM7160STC100	5.0		5.0	84	3200
			3.3		
EPM7128SQC160	5.0		5.0	100	2500
			3.3		
EPM7160SQC160	5.0		5.0	104	3200
			3.3		

The development board is intended for prototyping devices designed on FPGA of the company Altera a family of MAX 7000S, for assembly completed devices by mounting necessary components on the prototypical field of the board, and also for programming the product line of chips FPGA with following mounting chips on specialized PCB boards. Use of LDM-MAX7000-ZIFT100P160 allows minimizing the implementation time of the product on the market.

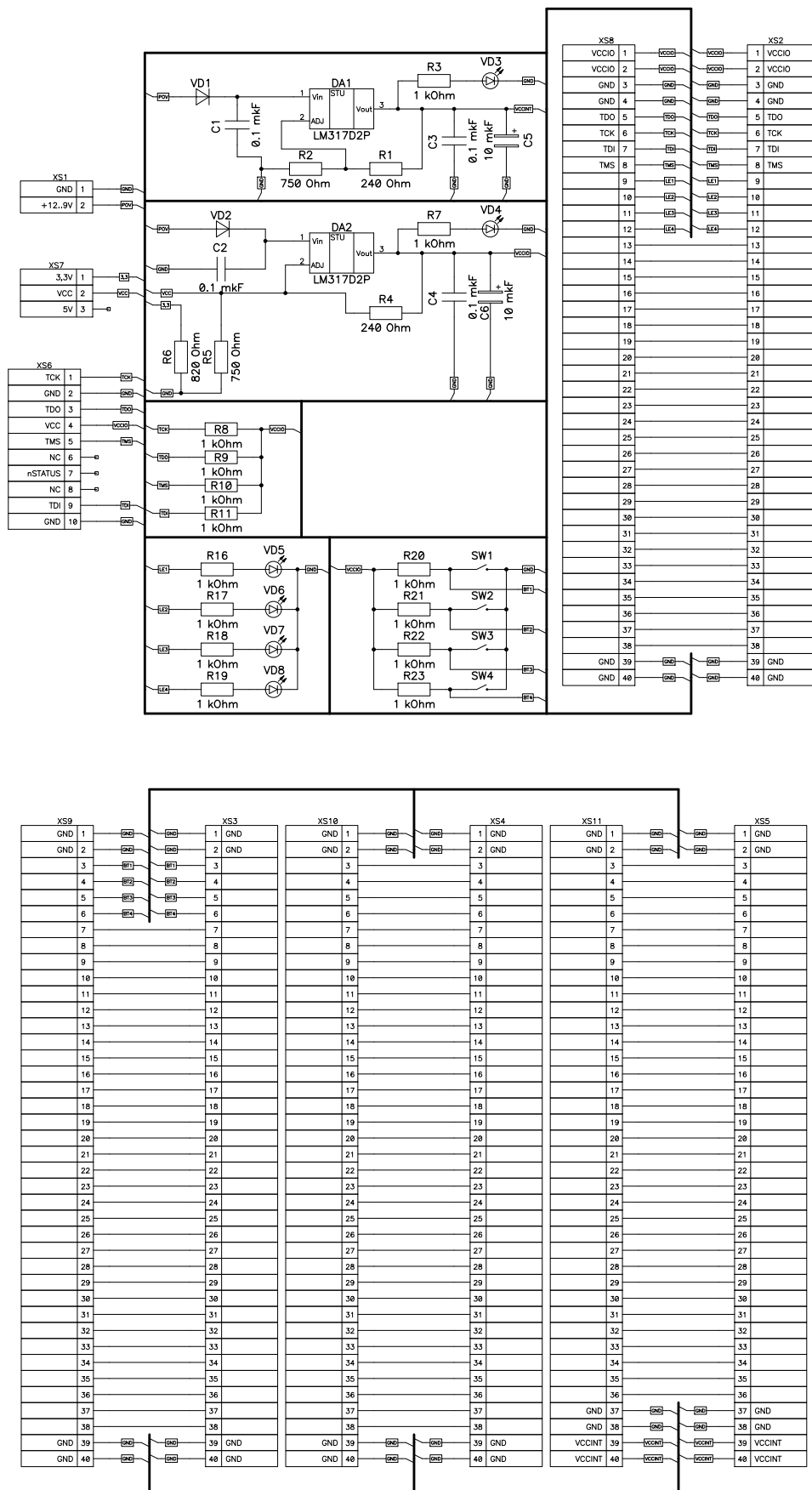


Fig. 2. The electrical scheme of LDM-MAX7000-ZIFT100P160

There are four LEDs VD5-VD8 and four buttons SW1-SW4 on the board which are connected with FPGA. It is intended for simplification of designing and can be useful during the test of project.

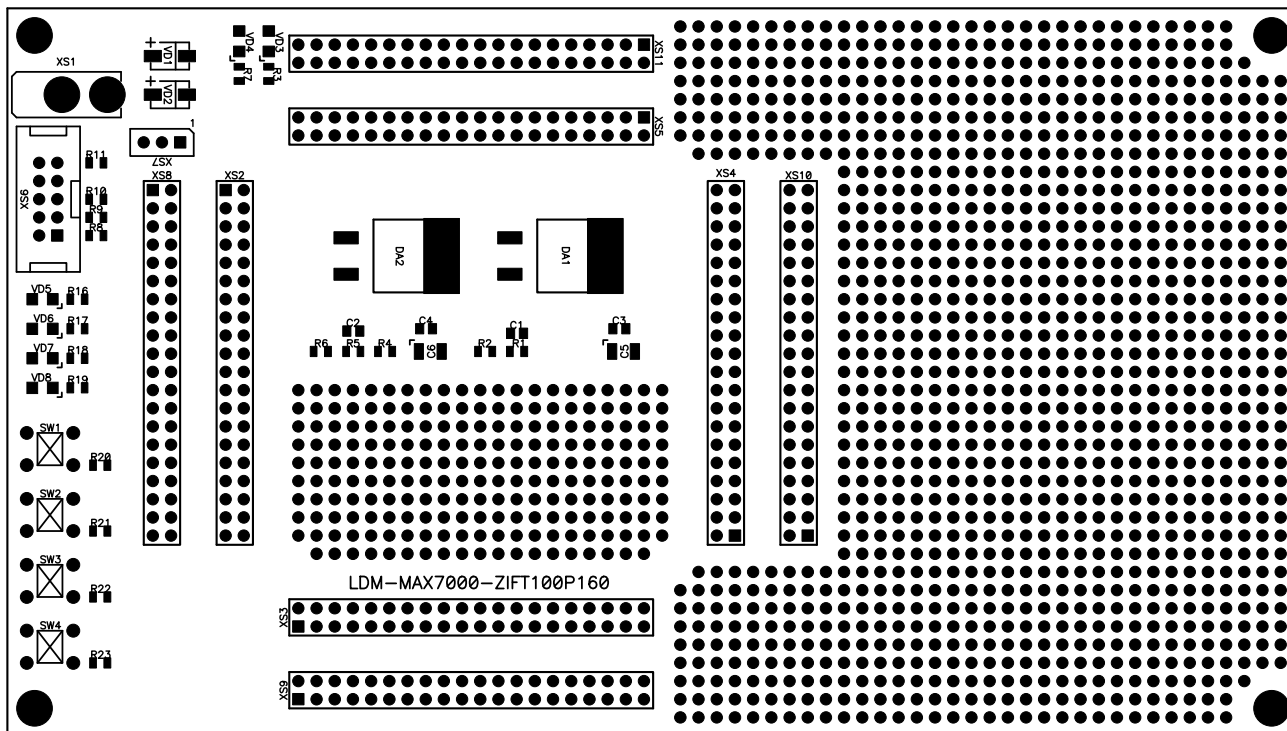


Fig. 3. Location of elements on the development board

LDM-MAX7000-ZIFT100P160

Packaging arrangements:

- The development board;
- Description of the development board;
- Examples of projects for Quartus II Web Edition Software;
- Description of the family of FPGA Altera.

Attention!!!

Expansion modules LDM-MAX7000-ZIFT100 and LDM-MAX7000-ZIFP160 are not in the packaging arrangement, theirs should be ordered additionally.

The Expansion Module LDM-MAX7000-ZIFT100

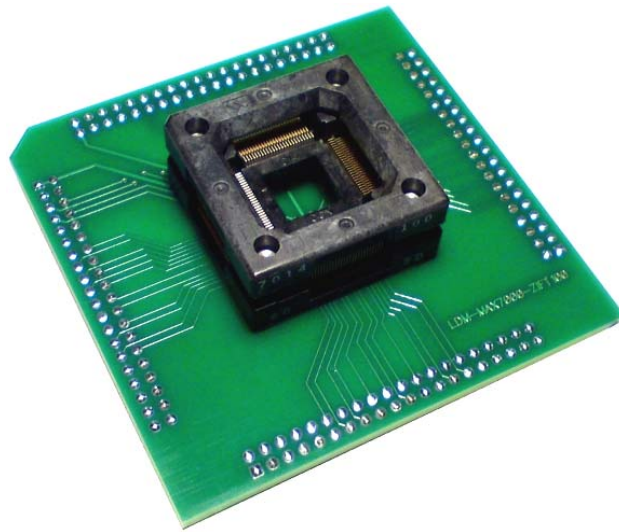


Fig. 4. General view of the expansion module LDM-MAX7000-ZIFT100

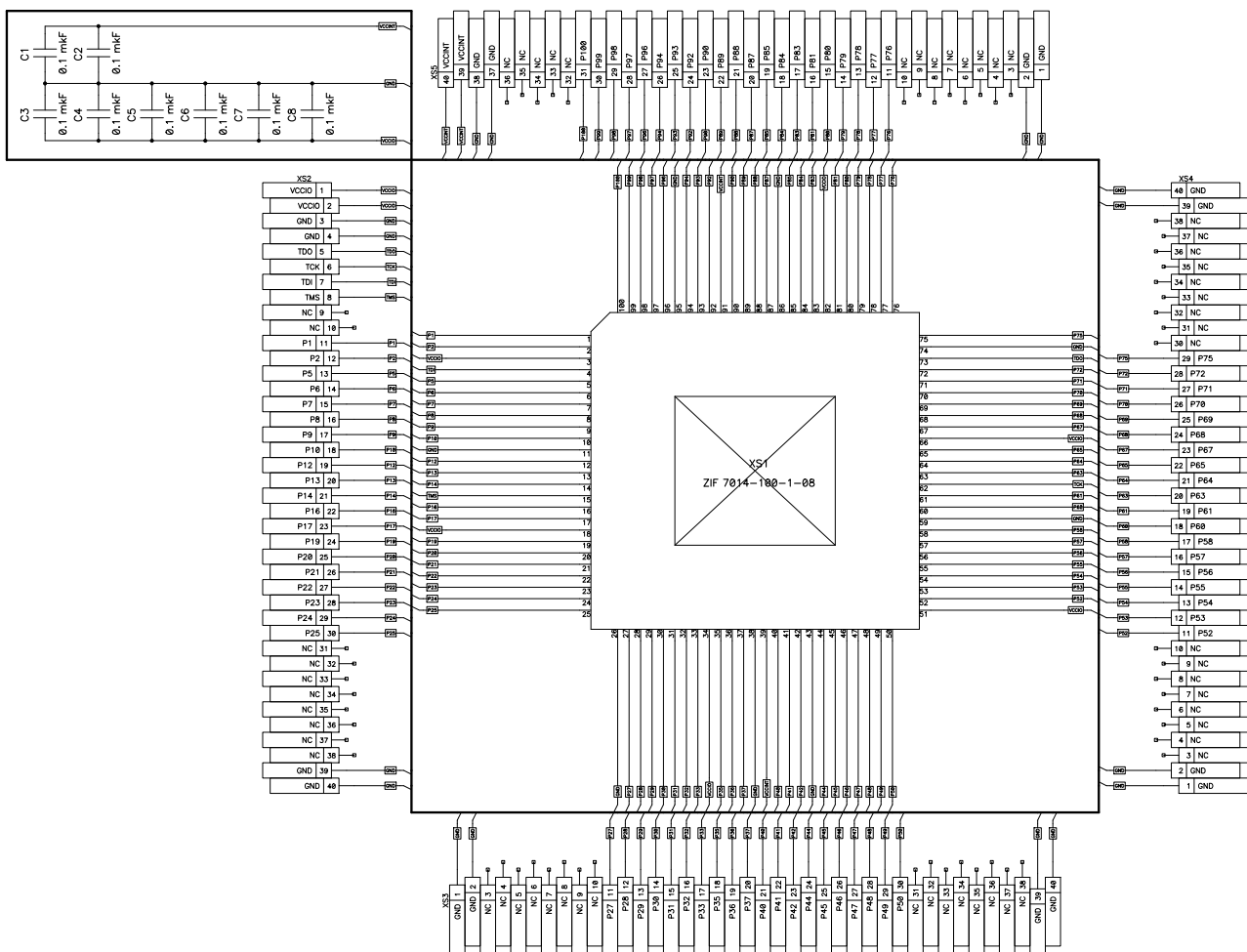


Fig. 5. The electrical scheme of the expansion module LDM-MAX7000-ZIFT100

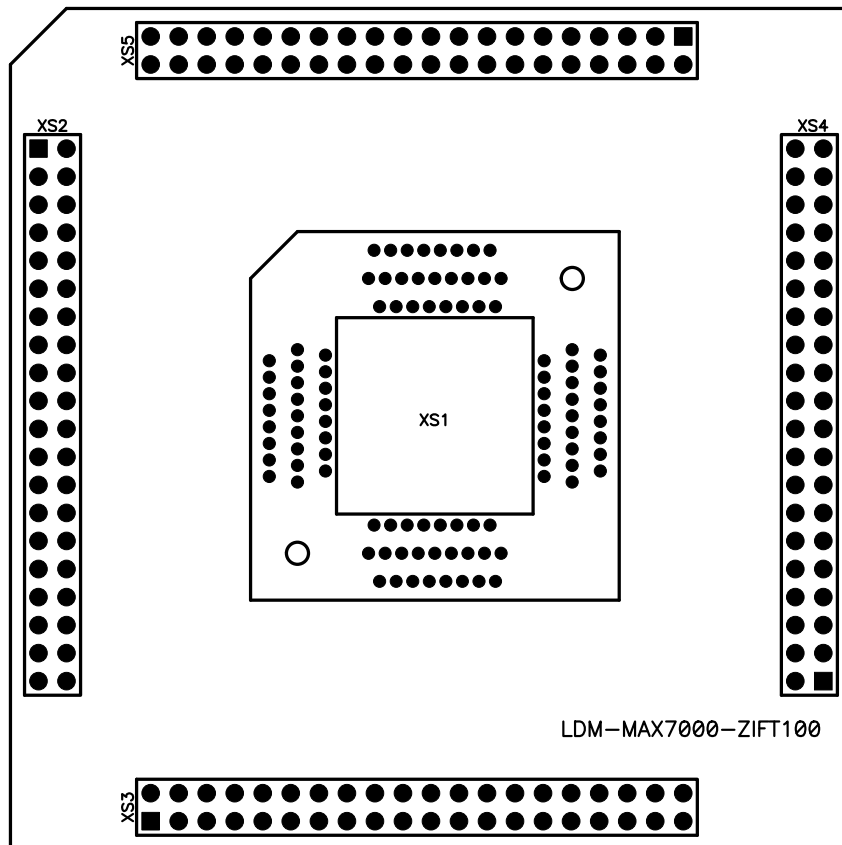


Fig. 6. Location of elements on the development board of the expansion module LDM-MAX7000-ZIFT100

Packaging arrangements:

- The expansion module LDM-MAX7000-ZIFT100.

The Expansion Module LDM-MAX7000-ZIFP160

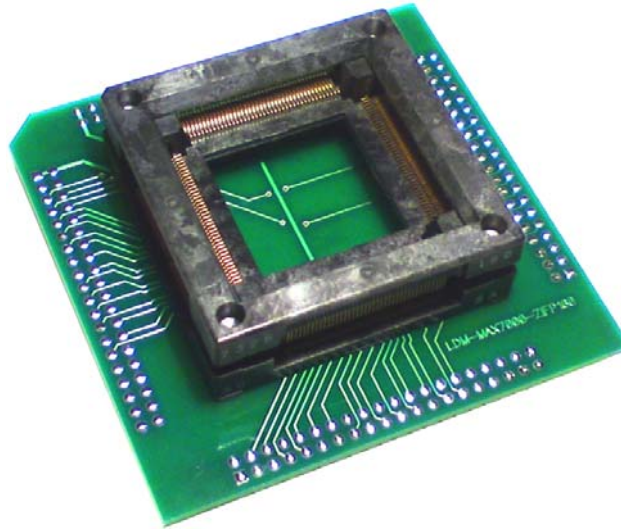


Fig. 7. General view of the expansion module LDM-MAX7000-ZIFP160

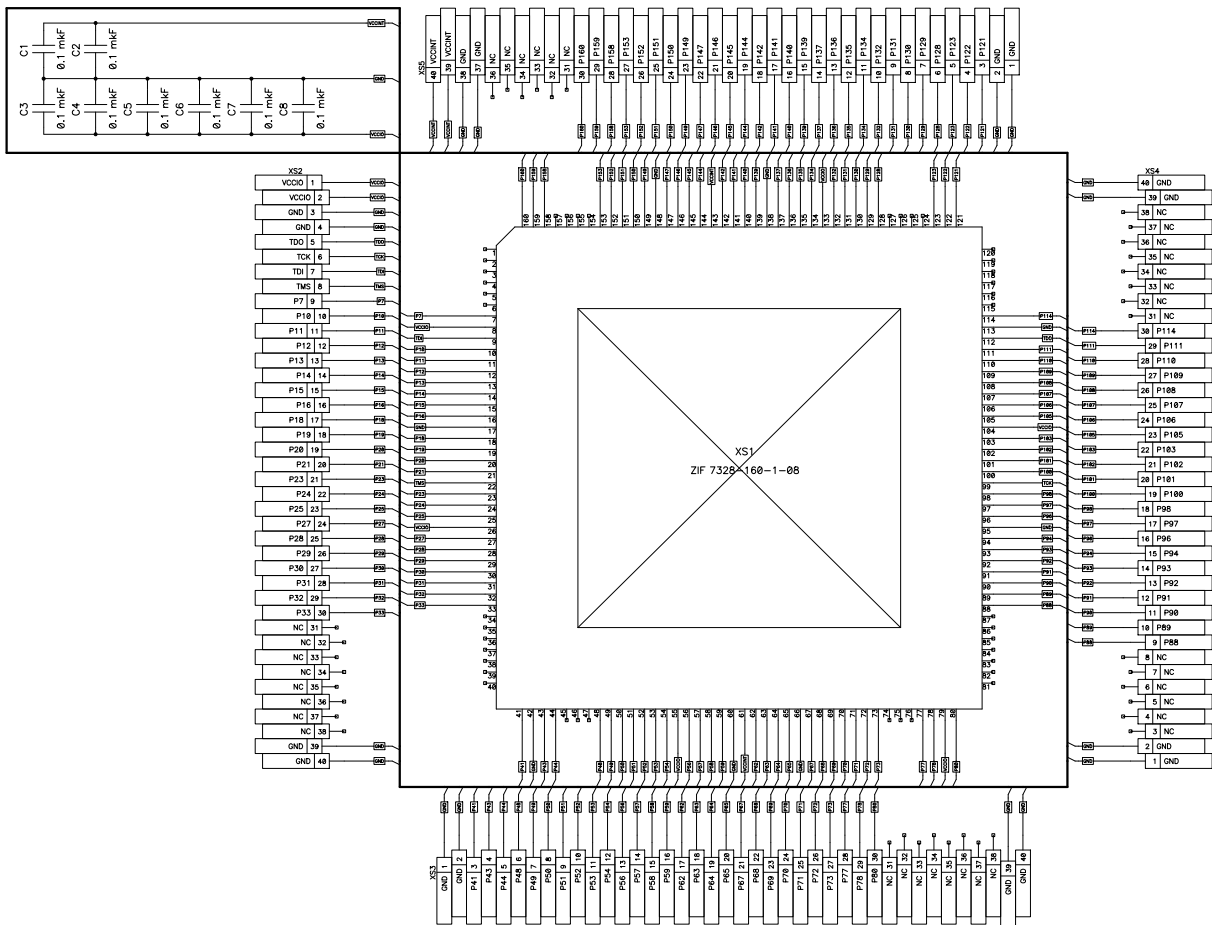


Fig. 8. The electrical scheme of the expansion module LDM-MAX7000-ZIFP160

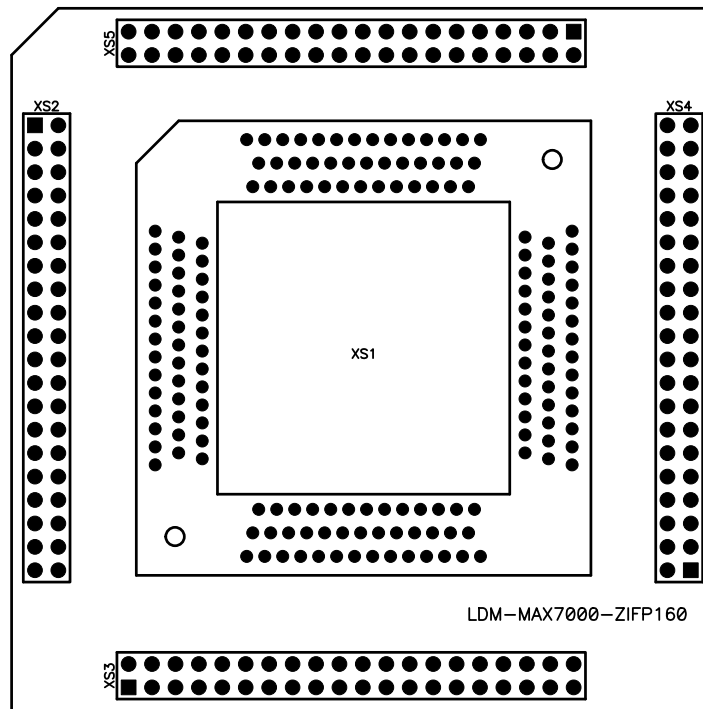


Fig. 9. Location of elements on the development board of the expansion module LDM-MAX7000-ZIFP160

Packaging arrangements:

- The expansion module LDM-MAX7000-ZIFP160.