



DSP - digital signal processor of new generation



NDI Foundation



From Ukraine



Innovative Products and Technologies

Summary of the technology

The project offers new assembler, that's High level assembler and New core of processor's architecture. The invention is new generation device for signals processing.

The proposed assembly language is based on a formulaic recording of mathematical operations, which greatly improves the process of creating programs and their debugging. Program language maximally adapted to the processing of data arrays, tables, etc.

Temporary programming costs are reduced repeatedly and commensurate with programming in C, and in some cases even less, and resulted with efficient assembly code.

Developed prototype of core DSP implemented and successfully tested.

Complete set for work with the processor and software: simulator, compiler, debugger system tests, library routines etc.

Prepared patent applications, including patent applications for DSP core architecture and instruction set, as well as some of the functional blocks.

The developed core can be a base for a number of circuits intended for different applications.

The proposed architecture of the core is not the final possible product. Currently the architecture of the microcontroller and the next version of DSP core with a flexible architecture and programming language are under development.

Details of the Technology Offer

The team that created the project consists from scientists from National Academy of science of Ukraine, that have many years of experience in the development of devices and information processing systems for various purposes (mainly in the direction of defence technologies). The proposed solution is a fundamentally new technology in the field of digital signal processing.





DSP market in the world is wide and varied, at the same time **offered DSP and a complete set of software for the processor is a solution that repeatedly reduces time spent on programming**, DSP has the **optimum core architecture**, which allows **maximum use of components and blocks of the processor**, that is. e. increase productivity. **These specifications are not approached by the leading market players of DSP market.**

Applicability of technology in various fields/industries

Dual-use technology.

It can be widely used in network communications and mobile communications, audio and video processing, automotive electronics, radar and sonar, radiolocation systems, process control etc.

Existing analogues

The main producers in the market: Texas Instruments, Qualcomm, Freescale, Analog Devices, NXP, STMicroelectronics etc.

There are several options for the final product:

- sale of licenses for the use of intellectual property for scheme of core: the sale of licenses is possible after completion of the seed phase of the project;
- Sale of cores on chips of programmable logic;
- Sale of the systems on a chip;
- Start fab for the production of processors, chips, microcontrollers;
- Manufacture chips in the opponent's base (fabless)

Full testing of the processor core for all possible operations was passed successfully (results available by request).

Intellectual property status

Other forms of protection

design patent





Other forms of protection

trade secret

Current development status

Working prototypes

Commercially available technologies

Desired business relationship

Technology selling

Joint ventures

New technology applications

Technology Owner



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Science and Technology Park from Ukraine

Related Keywords

Electronics, IT and Telecomms, Electronics, Microelectronics, Digital Systems, Digital Representation, Electronics Related Market, Some other electronics related

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