

Building a functional ALU

Hello everyone! In this tutorial we'll focus on how the AI assistant in the ChipInventor platform can streamline your design process. We'll demonstrate these features by building a functional ALU, but our main goal is to highlight the powerful capabilities of the AI tool and how it simplifies development steps, offering intelligent suggestions and enabling you to quickly prototype digital circuits without getting lost in the details. Let's explore how AI can transform your design experience!

So, after logging in, click New Project on the navigation bar, and fill in the project details:

- **Name:** 16 bits ALU .
- **Description:** Implementing an ALU with AI.
- **Type:** OpenLane.

Click **Create Chip** to create the project.

Important: The desired ALU must be capable of performing fundamental 16-bit arithmetic and logic operations, including addition, subtraction, increment, decrement, AND, OR, and NOT. In addition, it must support control signals (zx, nx, zy, ny, f, no) to handle the input data (x, y) and select the appropriate operation, providing consistent outputs for each function.

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