

A LEGO Technic robot built with blue and orange beams, featuring a motor and various sensors. It is positioned on a wooden floor.A blurred background showing a green circuit board and some electronic components.

NETWORK COMMUNICATIONS ENGINEER

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OUTLINE

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ABOUT REALTEK

Realtek is a Taiwanese semiconductor company founded in 1987. They started by developing network chips and later became famous as audio codecs.

ENGINEERING DESIGN PROCESS(1)

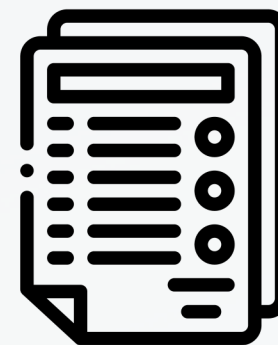
1

Requirements Analysis: Before commencing the design of a new product, Realtek conducts surveys and requirements analysis to understand the target needs, determining the type and features of the product they will develop.



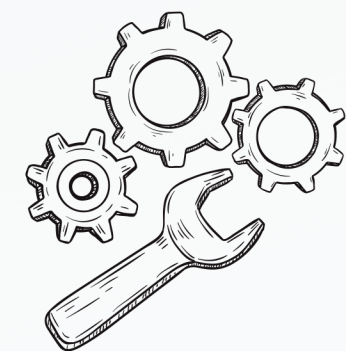
2

Specification Definition: Establish technical specifications for the product. This includes determining the chip's functions, performance, power consumption, and other relevant parameters.



3

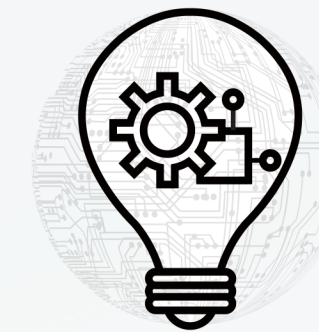
Architectural Design: The engineering team conducts system architecture design, determining how to translate specifications into the actual hardware and software structure. This is a critical design stage involving the fundamental structure and function allocation of the entire system.



ENGINEERING DESIGN PROCESS(2)

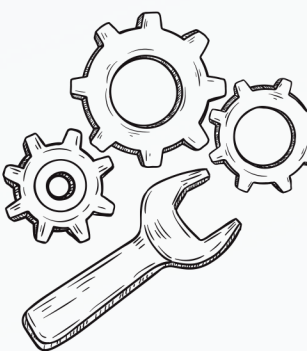
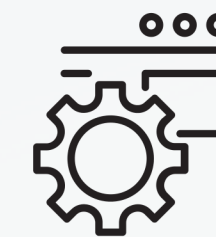
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Circuit Design: In the circuit design phase, engineers begin to design and implement the chip's circuits. They test various components to ensure they can accurately perform the functions specified in the specifications.



5

Software Development: For some multi-functional chips, relevant software, including firmware or other software components, needs to be developed to ensure the proper operation of the hardware.



ENGINEERING DESIGN PROCESS(3)

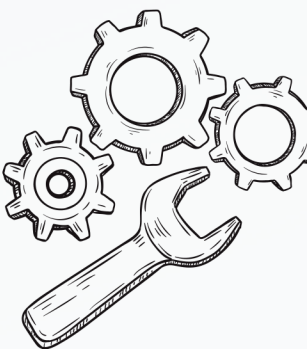
6

Verification and Testing: After the design is completed, the chip undergoes verification and testing, including functional tests, performance tests, and a series of validation steps to ensure that the chip meets specifications and operates reliably and stably.



7

Mass Production and Market Launch: Once the chip has successfully passed verification and testing, it can enter the mass production phase. Subsequently, the product will be launched into the market.



ABOUT US

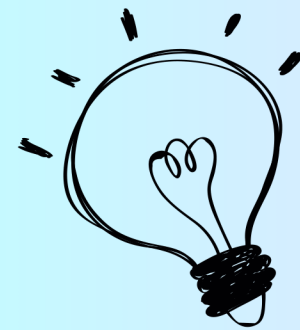
observe

Observation
questions



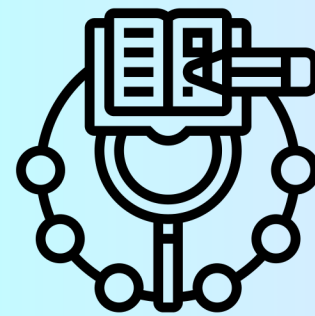
idea

List ideas for
improvement



test

Test every method



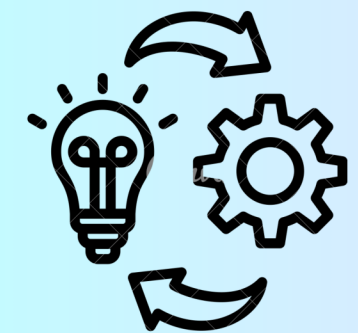
choose

Choose the most
efficient method



Implementation

Combination track
racing car



ABOUT VEX IQ

Vex IQ serve as tools for STEM education. Students will learn some knowledge such as mechanical design, programming, electronics and fostering skills in coding and creativity.

The VEX IQ project requires teamwork to achieve the goals of the robot, thereby cultivating cooperation and communication skills.

Learning robots can help us build the development capability and cultivate creative thinking to meet the future challenges.