

**vhdl2verilog**

**QueenField**

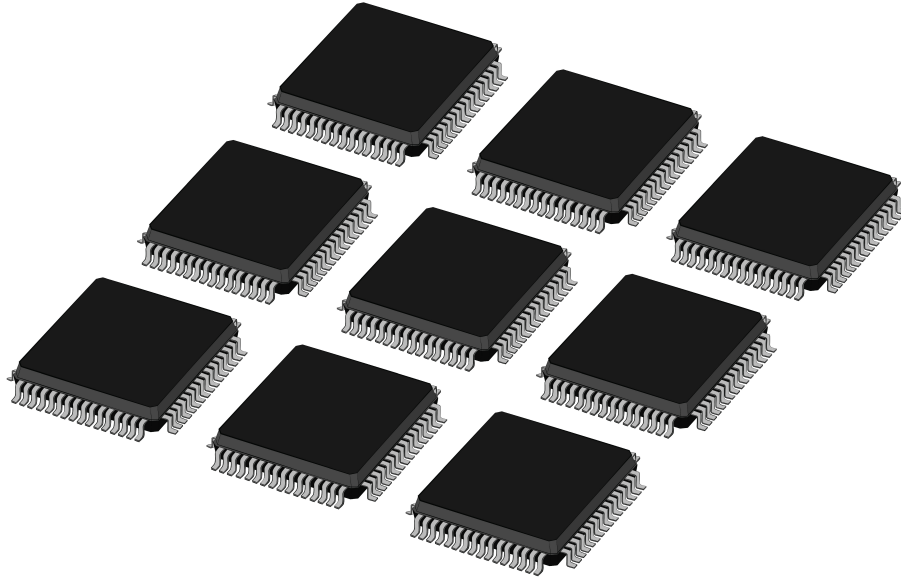


Figure 1: QueenField

## 1. INTRODUCTION

A Hardware Description Language (HDL) is a specialized computer language used to describe the structure and behavior of digital logic circuits. It allows for the synthesis of a HDL into a netlist, which can then be synthesized, placed and routed to produce the set of masks used to create an integrated circuit.

## 2. PROJECTS

```
.1. module_definitions
.1.1. module_items
.1.1.1. data_type_declarations
.1.1.2. module_instances
.1.1.3. primitive_instances
.1.1.4. generate_blocks
.1.1.5. procedural_blocks
.1.1.6. continuous_assignments
.1.1.7. task_definitions
.1.1.8. function_definitions
```

- .1.1.9. specify\_blocks
- .1.2. port\_declarations
- .2. data\_type\_declarations
  - .2.1. net\_data\_types
  - .2.2. variable\_data\_types
  - .2.3. other\_data\_types
  - .2.4. vector\_bit\_selects\_and\_part\_selects
  - .2.5. array\_selects
  - .2.6. reading\_and\_writing\_arrays
- .3. module\_instances
- .4. primitive\_instances
- .5. generate\_blocks
- .6. procedural\_blocks
  - .6.1. procedural\_time\_controls
  - .6.2. sensitivity\_lists
  - .6.3. procedural\_assignment\_statements (=continuous\_assignments)
  - .6.4. procedural\_programming\_statements
    - .6.4.1. if\_part
    - .6.4.2. case\_part
    - .6.4.3. casex\_part
    - .6.4.4. casez\_part
    - .6.4.5. for\_part
    - .6.4.6. while\_part
    - .6.4.7. repeat\_part
    - .6.4.8. forever\_part
    - .6.4.9. disable\_part
- .7. continuous\_assignments
- .8. operators
- .9. task\_definitions
- .10. function\_definitions
- .11. specify\_blocks
  - .11.1. pin\_to\_pin\_path\_delays
  - .11.2. path\_pulse\_detection
  - .11.3. timing\_constraint\_checks
- .12. user\_defined\_primitives
- .13. common\_system\_tasks\_and\_functions
- .14. common\_compiler\_directives
- .15. configurations
- .16. synthesis\_supported\_constructs

### 3. WORKFLOW

```
source install.sh
```

```
cd test
```

```
source test-msp430.sh
source test-riscv.sh
```