**Coding Standards Version 2**

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*Coding Standards*

1. The project is to be implemented in System Verilog Hardware Description Language.
2. Heading of all source files should include a file name, module description and top-level context.
3. File names
   1. All files to be saved as .sv files
   2. All file names will be prefixed with can\_.
   3. File names will be the same as the module entity name.
   4. File names should only use lower-case characters.
4. Ports and signals:
   1. Ports and signals shall have their names present in code with all lower-case characters.
   2. Upper-case characters are reserved for parameter variables and constants.
   3. Should not use inout ports.
   4. Use “i\_” prefix for input ports followed by a short description of the source module and then the port name. (i.e. i\_cr\_fifodata for an input from the configuration registers)
   5. Use “o\_” prefix for output ports followed by a short description of the destination module and then the port name.
   6. Ports and signals shall use *logic* type.
   7. *Logic* assignments shall be bit specific. (i.e. 1’b1 for one bit)
   8. For active-low signals, the signal name shall be appended with “\_n” postfix.
   9. For port declarations, add comment with port’s usage/function in the module.
   10. Limit of one port or signal declaration per line.
5. Processes and Sequential Statements
   1. Include a comment that describes the process or statement functionality.
   2. All processes should include a tag that serves as a short summary of its function.
   3. Provide spaces between statement declarations and sensitivity lists.
   4. Sensitivity lists should not include complex logical functions.
   5. “clk” is reserved for oscillator driver signals.
   6. Sensitivity list of a synchronous process only includes reset and clock two signals.
   7. Each clock signal shall have "clk" designation as part of its name
6. Maximum of one module per file (module or a testbench, not both).
7. Usage of “\_” is limited to spaces between words unless otherwise specified in these standards.
8. Usage of “tab” character(‘\t’) in code files is prohibited, use 4 ’spaces’ instead.
9. Use “ ! “ for single bit.
10. Use “ ~ ” for bitwise.