

Feature	Non-Automatic	Automatic
Variable lifetime	Static	Local to each call
Reentrancy	Not Safe	Safe
Recursive function Support	No	Yes
Memory allocation	Once	Per Function
Default Behavior Verilog	Yes	No

Example Code:

Non-Automatic	Automatic
<pre>function [7:0] increment; input [7:0] a; reg [7:0] temp; begin temp = a + 1; increment = temp; end endfunction</pre>	<pre>function automatic [7:0] multiply_add; input [7:0] a, b; reg [7:0] temp; begin temp = a * b; multiply_add = temp + 1; end endfunction</pre>