




```
harsh@Harshs-MacBook-Air UART_Verification_env % verilator --trace --binary TB_uart.sv baud_rate_generator.sv transmitter.sv reciever.sv
```

```
brew/Cellar/verilator/5.036/share/verilator/include/verilated.cpp
```

```
c++ -Os -I/opt/homebrew/opt/openjdk@11/include -I. -MMD -I/opt/homebrew/Cellar/verilator/5.036/share/verilator/include -I/opt/homebrew/Cellar/verilator/5.036/share/verilator/include/vltstd -DVM_COVERAGE=0 -DVM_SC=0 -DVM_TIMING=1 -DVM_TRACE=1 -DVM_TRACE_FST=0 -DVM_TRACE_VCD=1 -DVM_TRACE_SAIF=0 -faligned-new -fbracket-depth=4096 -fcf-protection=none -Xclang -fno-pch-timestamp -Qunused-arguments -Wno-bool-operation -Wno-c++11-narrowing -Wno-constant-logical-operand -Wno-non-pod-varargs -Wno-parentheses-equality -Wno-shadow -Wno-sign-compare -Wno-tautological-bitwise-compare -Wno-tautological-compare -Wno-uninitialized -Wno-unused-but-set-parameter -Wno-unused-but-set-variable -Wno-unused-parameter -Wno-unused-variable -DVL_TIME_CONTEXT -std=gnu++20 -c -o verilated_vcd_c.o /opt/homebrew/Cellar/verilator/5.036/share/verilator/include/verilated_vcd_c.cpp
```

```
c++ -Os -I/opt/homebrew/opt/openjdk@11/include -I. -MMD -I/opt/homebrew/Cellar/verilator/5.036/share/verilator/include -I/opt/homebrew/Cellar/verilator/5.036/share/verilator/include/vltstd -DVM_COVERAGE=0 -DVM_SC=0 -DVM_TIMING=1 -DVM_TRACE=1 -DVM_TRACE_FST=0 -DVM_TRACE_VCD=1 -DVM_TRACE_SAIF=0 -faligned-new -fbracket-depth=4096 -fcf-protection=none -Xclang -fno-pch-timestamp -Qunused-arguments -Wno-bool-operation -Wno-c++11-narrowing -Wno-constant-logical-operand -Wno-non-pod-varargs -Wno-parentheses-equality -Wno-shadow -Wno-sign-compare -Wno-tautological-bitwise-compare -Wno-tautological-compare -Wno-uninitialized -Wno-unused-but-set-parameter -Wno-unused-but-set-variable -Wno-unused-parameter -Wno-unused-variable -DVL_TIME_CONTEXT -std=gnu++20 -c -o verilated_timing.o /opt/homebrew/Cellar/verilator/5.036/share/verilator/include/verilated_timing.cpp
```

```
c++ -Os -I/opt/homebrew/opt/openjdk@11/include -I. -MMD -I/opt/homebrew/Cellar/verilator/5.036/share/verilator/include -I/opt/homebrew/Cellar/verilator/5.036/share/verilator/include/vltstd -DVM_COVERAGE=0 -DVM_SC=0 -DVM_TIMING=1 -DVM_TRACE=1 -DVM_TRACE_FST=0 -DVM_TRACE_VCD=1 -DVM_TRACE_SAIF=0 -faligned-new -fbracket-depth=4096 -fcf-protection=none -Xclang -fno-pch-timestamp -Qunused-arguments -Wno-bool-operation -Wno-c++11-narrowing -Wno-constant-logical-operand -Wno-non-pod-varargs -Wno-parentheses-equality -Wno-shadow -Wno-sign-compare -Wno-tautological-bitwise-compare -Wno-tautological-compare -Wno-uninitialized -Wno-unused-but-set-parameter -Wno-unused-but-set-variable -Wno-unused-parameter -Wno-unused-variable -DVL_TIME_CONTEXT -std=gnu++20 -c -o verilated_threads.o /opt/homebrew/Cellar/verilator/5.036/share/verilator/include/verilated_threads.cpp
```

```
python3 /opt/homebrew/Cellar/verilator/5.036/share/verilator/bin/verilator_includer -DVL_INCLUDE_OPT=include VTB_uart.cpp VTB_uart__024root__DepSet_hbea8fa7e__0.cpp VTB_uart__024root__DepSet_he5c4e0aa__0.cpp VTB_uart__main.cpp VTB_uart__Trace__0.cpp VTB_uart__024root__Slow.cpp VTB_uart__024root__DepSet_hbea8fa7e__0__Slow.cpp VTB_uart__024root__DepSet_he5c4e0aa__0__Slow.cpp VTB_uart__Syms.cpp VTB_uart__Trace__0__Slow.cpp VTB_uart__TraceDecls__0__Slow.cpp > VTB_uart__ALL.cpp
```

```
c++ -Os -I/opt/homebrew/opt/openjdk@11/include -I. -MMD -I/opt/homebrew/Cellar/verilator/5.036/share/verilator/include -I/opt/homebrew/Cellar/verilator/5.036/share/verilator/include/vltstd -DVM_COVERAGE=0 -DVM_SC=0 -DVM_TIMING=1 -DVM_TRACE=1 -DVM_TRACE_FST=0 -DVM_TRACE_VCD=1 -DVM_TRACE_SAIF=0 -faligned-new -fbracket-depth=4096 -fcf-protection=none -Xclang -fno-pch-timestamp -Qunused-arguments -Wno-bool-operation -Wno-c++11-narrowing -Wno-constant-logical-operand -Wno-non-pod-varargs -Wno-parentheses-equality -Wno-shadow -Wno-sign-compare -Wno-tautological-bitwise-compare -Wno-tautological-compare -Wno-uninitialized -Wno-unused-but-set-parameter -Wno-unused-but-set-variable -Wno-unused-parameter -Wno-unused-variable -DVL_TIME_CONTEXT -std=gnu++20 -c -o VTB_uart__ALL.o VTB_uart__ALL.cpp
```

```
echo "" > VTB_uart__ALL.verilator_deplist.tmp
```

```
c++ -Wl,-U,___Z15vl_time_stamp64v,-U,___Z13sc_time_stampv verilated.o verilated_vcd_c.o verilated_timing.o verilated_threads.o VTB_uart__ALL.a -pthread -l pthread -o VTB_uart
```

```
rm VTB_uart__ALL.verilator_deplist.tmp
```

```
- Verilator Report: Verilator 5.036 2025-04-27 rev UNKNOWN.REV
```

```
- Verilator: Built from 0.079 MB sources in 5 modules, into 0.071 MB in 11 C++ files needing 0.000 MB
```

```
- Verilator: Walltime 4.207 s (elab=0.001, cvt=0.005, bld=4.196); cpu 0.010 s on 1 threads
```

```
● harsh@Harshs-MacBook-Air UART_Verification_env % ./obj_dir/VTB_uart
```

```
[TB] Sending 0xA5
```

```
[TB] Received: 0xA5
```

```
- TB_uart.sv:77: Verilog $finish
```

```
- Simulation Report: Verilator 5.036 2025-04-27
```

```
- Verilator: $finish at 1ms; walltime 0.037 s; speed 32.401 ms/s
```

```
- Verilator: cpu 0.037 s on 1 threads; allocated 0 MB
```

```
✈ harsh@Harshs-MacBook-Air UART_Verification_env %
```