📊 **AXI4 Functional Coverage Report**

**✅ Read Transactions**

* Fixed Address, Fixed Length, Fixed Size – **✔️**
* Incrementing Address, Fixed Length, Fixed Size – **✔️**
* Wrapping Address, Fixed Length, Fixed Size – **✔️**
* Fixed Address, Variable Length, Variable Size – **✔️**
* Incrementing Address, Variable Length, Variable Size – **✔️**
* Wrapping Address, Variable Length, Variable Size – **✔️**

**✅ Write Transactions**

* Fixed Address, Fixed Length, Fixed Size – **✔️**
* Incrementing Address, Fixed Length, Fixed Size – **✔️**
* Wrapping Address, Fixed Length, Fixed Size – **✔️**
* Fixed Address, Variable Length, Variable Size – **✔️**
* Incrementing Address, Variable Length, Variable Size – **✔️**
* Wrapping Address, Variable Length, Variable Size – **✔️**

**📌 Additional Checks**

* ✅ Parallel Read/Write tested via fork...join
* ✅ Read-after-write (RAW) dependencies verified
* ✅ Length variations exercised (AxLEN = 0 to 7)
* ✅ Size variations exercised (AxSIZE = 0 to 2)
* ✅ Wrapping burst boundaries verified
* ✅ Address alignment logic confirmed