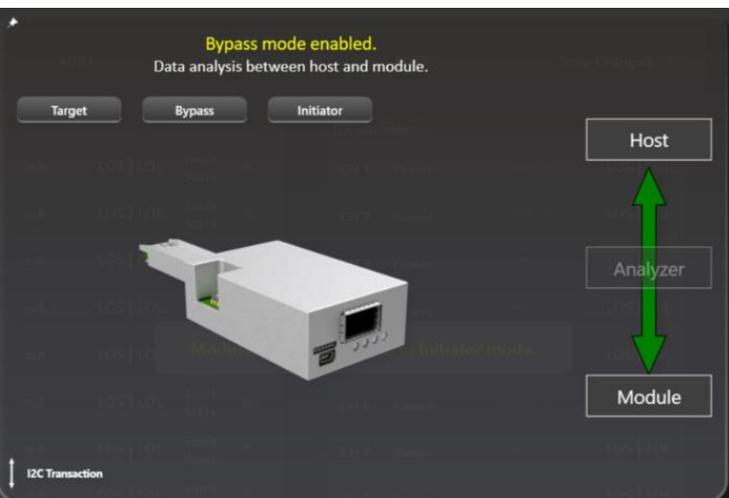


Nexus GUI

Quick Overview

Nexus GUI

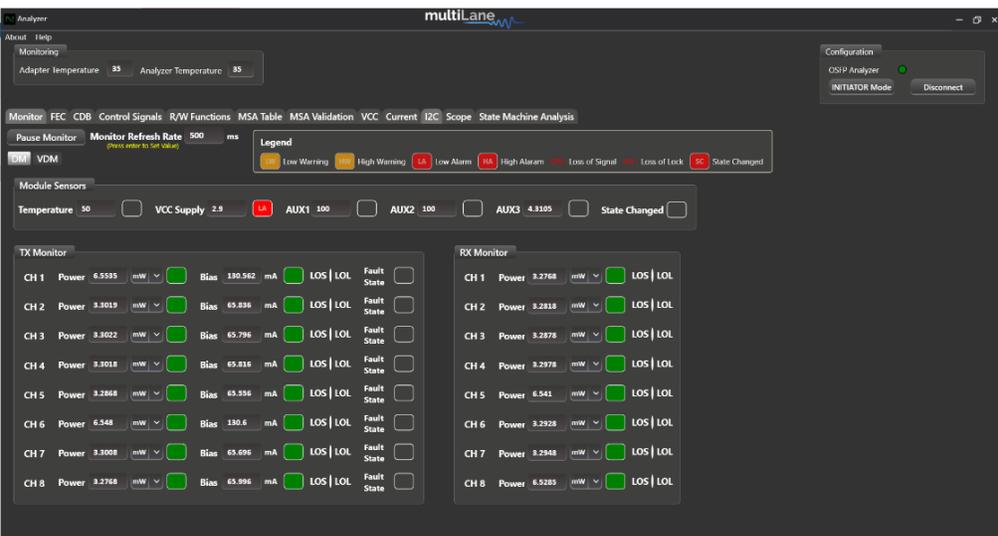
Nexus GUI Features	Description
Monitor Tab	Diagnostic and Versatile Diagnostic Monitoring
FEC Tab	Monitor FEC status on their module.
Common Data Block (CDB) Tab	Update their module firmware.
Control Signals	Access to low-speed signals in three different modes
R/W Functions Tab	I2C read/write operations
MSA Table Tab	Gives the user access to their module memory.
MSA Validation Tab	Full CMIS/SFF register sweep.
VCC Tab	Continuous VCC Supply measurements.
Current Tab	Continuous and in-rush current measurements.
I2C Tab	I2C packets capturing and packet details analysis.
Scope Mode Tab (any 2 signals at realtime ideal to detect root cause of issues)	SCL, SDA, VCC and Current measurements.
State Machine Analysis Tab	State Machine, Data Path State Machine, and Module State Behavior tests available.



Nexus operates in three modes:

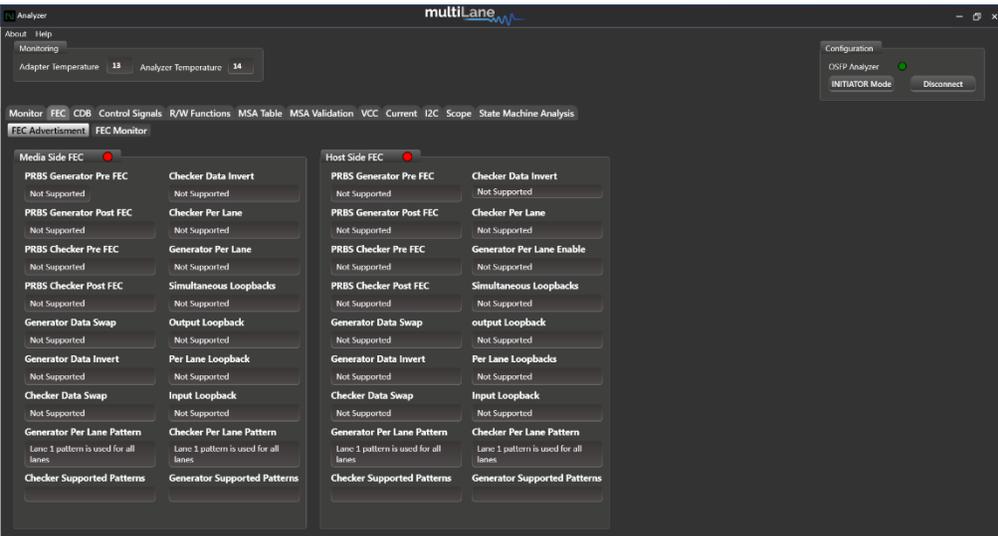
- Target mode: the analyzer acts as a module for a host DUT
- Initiator mode: the analyzer acts as a host for a module DUT
- Bypass mode: the analyzer monitors exchange between host and module.

Nexus Features by Application



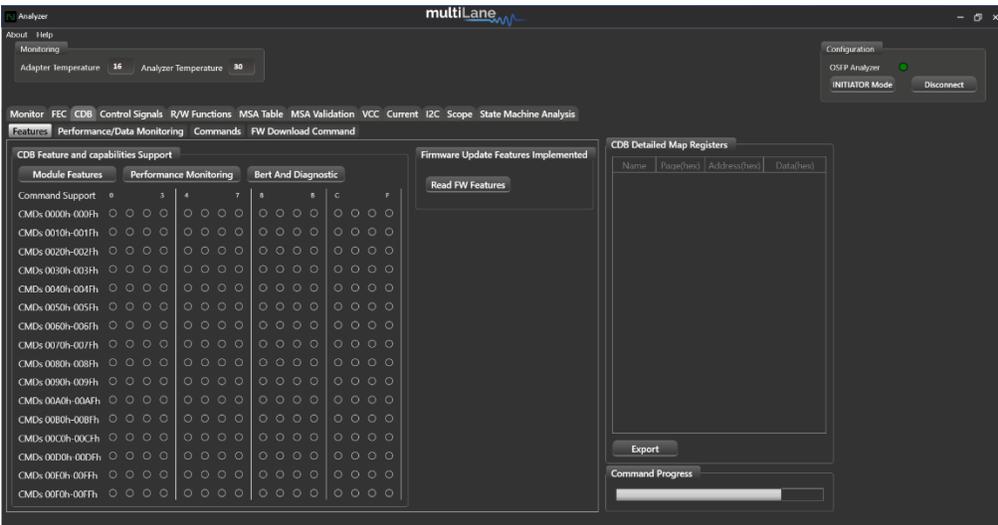
Digital and Versatile Diagnostic Monitoring:

- Module monitoring interface
- Color coded high alarms/ high warnings.
- Color coded low alarms/ low warnings.
- Indexing available for alarms and warnings



FEC Advertisement and Monitoring:

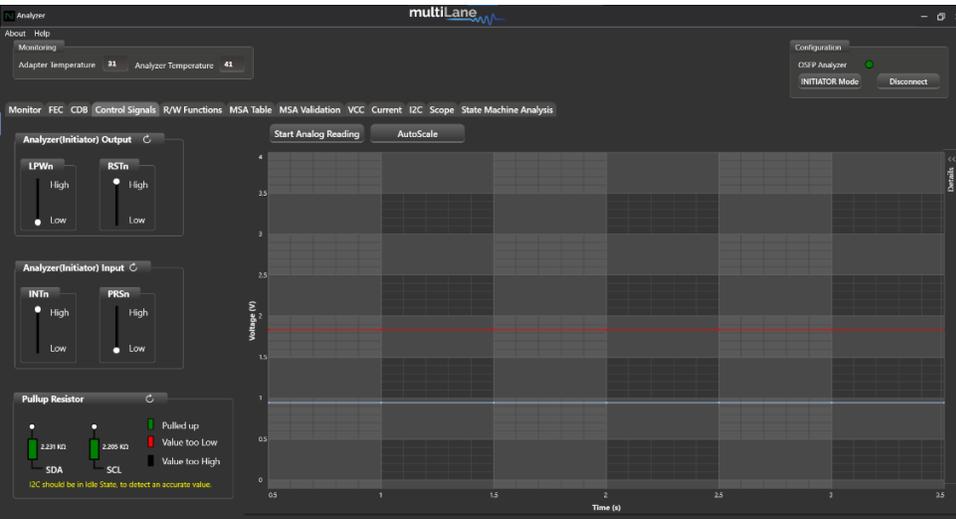
- FEC advertisement for transceiver characteristics
- Access to post FEC
- FEC Monitoring interface for BER, error count, and SNR
- Reads FEC diagnostics from module, implements MSA formatting and presents final BER data



Common Data Block Management (CDB):

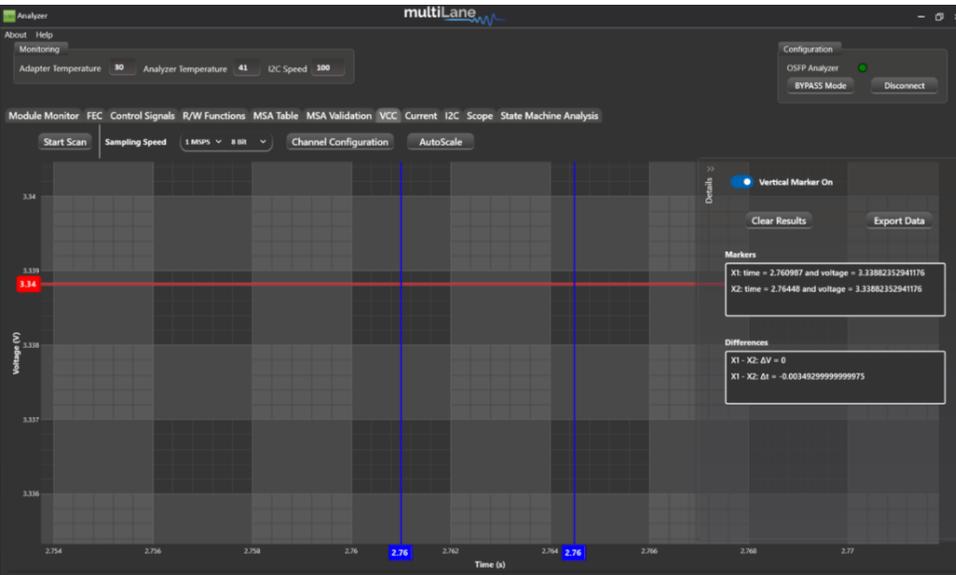
- Upgrade module firmware
- Performance Monitoring using CDB

Communication interface between Host and Module



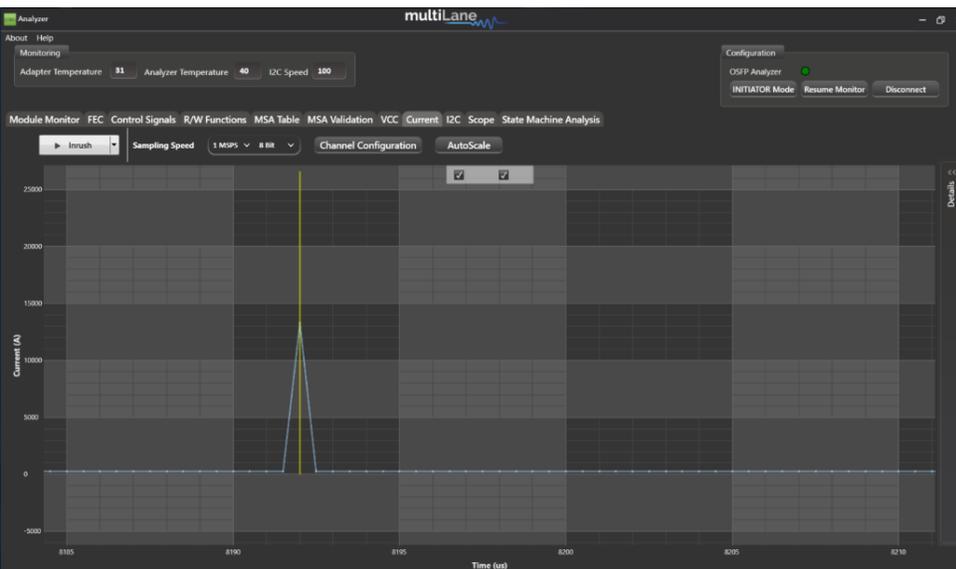
Control Signals:

- INTn/PRSn and LPWn/RSTn
 - Read/ drive control signals
 - Analog sampling of signals in real time
- Graph features vertical and horizontal markers.
- Pull up resistors
- Ability to export/import data
- Access to low-speed signals in three different modes: initiator, target and bypass.



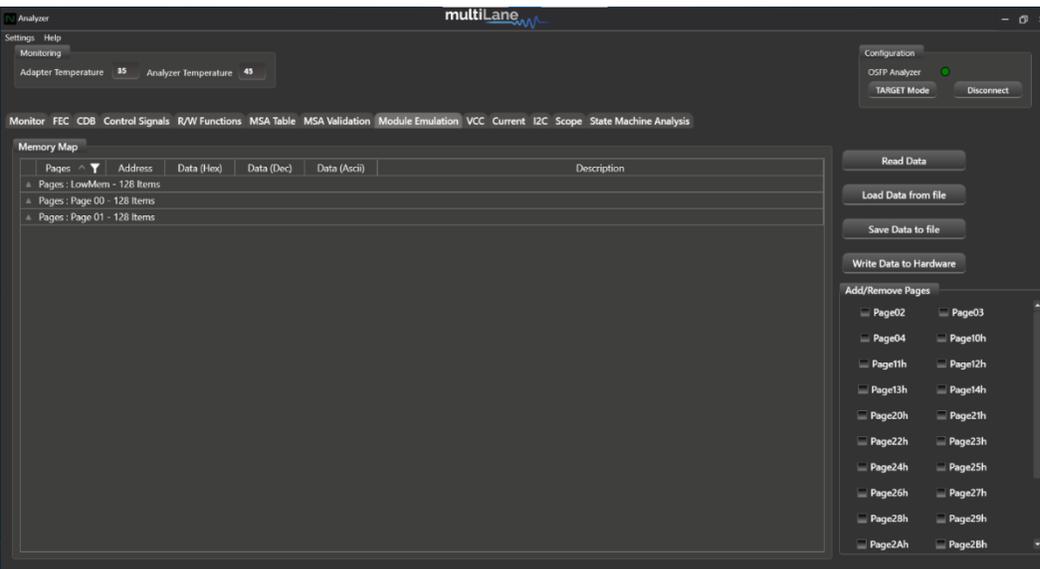
Voltage measurements

- +/-5 mv accuracy
- Different sampling speeds available
- Graph features vertical and horizontal markers.
- Ability to export/import data
- Ideal for monitoring voltage drops, and voltage noise measurements.



Current measurements:

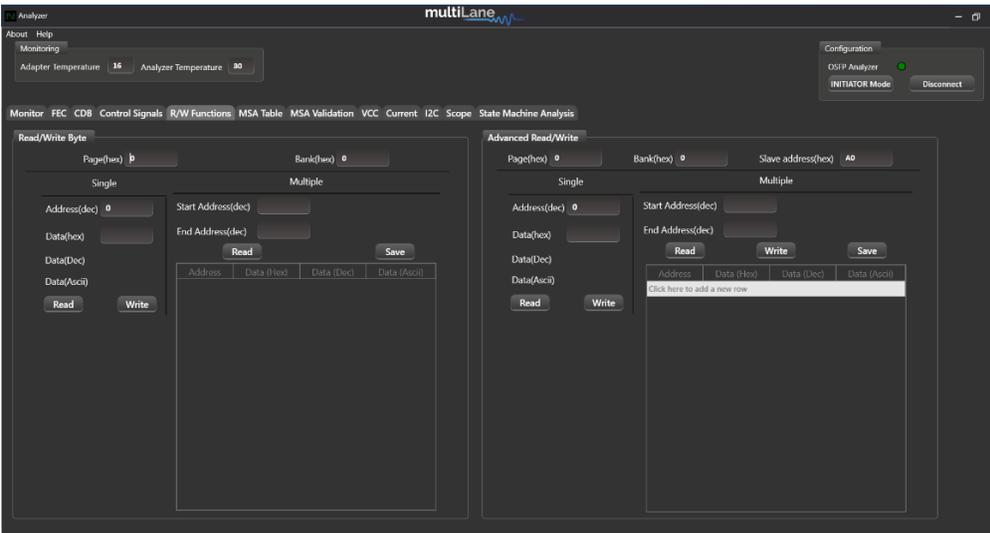
- Continuous measurements
- In-rush measurements
- Different sampling speeds available
- Graph features vertical and horizontal markers.
- Ability to export/import data



Module Emulation:

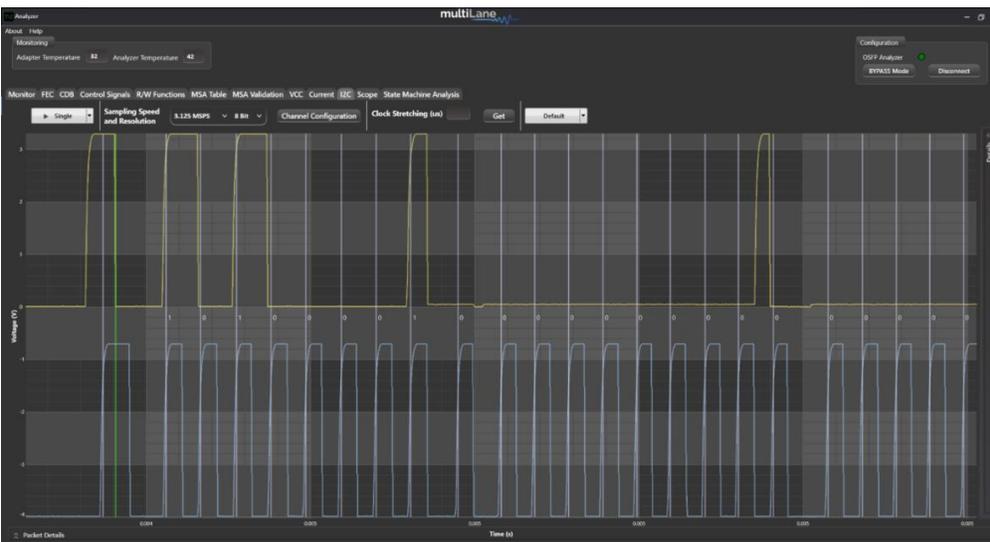
- Works in Target mode
- Emulate module memory as per CMIS
- Validate host register access

Validate and debug I2C communication:



I2C Read/Write operations:

- Single byte read/write operations
- Multiple byte read operations
- Advanced R/W

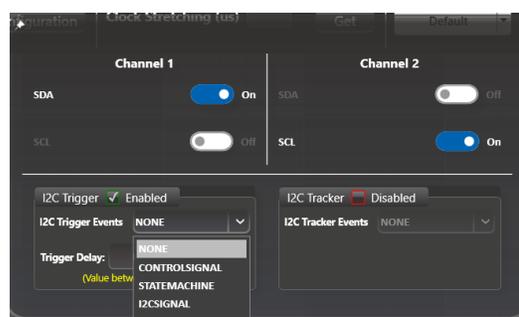


I2C communication between the host and module:

- Single and continuous captures
- I2C trigger and tracking events
- Different sampling speeds available
- Represent SCL, SDA, ACK/NACK, and I2C edges graphically
- Graph features vertical and horizontal markers.

I2C Trigger events:

- Control Signals:
 - Module Interrupt
 - Module Present
 - Reset
 - Low Power
- State Machine
- I2C Signal:
 - Start
 - Stop



I2C Tracker events:

- Read
- Write

