STAC-T1 Test Setup

The diagram documents the proposed setup for an upcoming STAC-T1 test. A vendor's tick-to-trade appliance is being tested with STAC-T1. Timestamping is done with the vendor's measurement product. A 2-port SF X2522 NIC cards is installed in the Test Workstation to provide order responses and a second timestamping solution to validate the vendor measurement product using a loopback test. During loopback tests, STAC will do one run with the Vendor Measurement Solution Product and one run using the Solarflare card to capture the "A" stream. The two runs will be validated to ensure that all packets are captured / timestamped and that measurements are within tolerance.

OM3 fiber connects the components. Cable lengths between each point is documented in table 1.
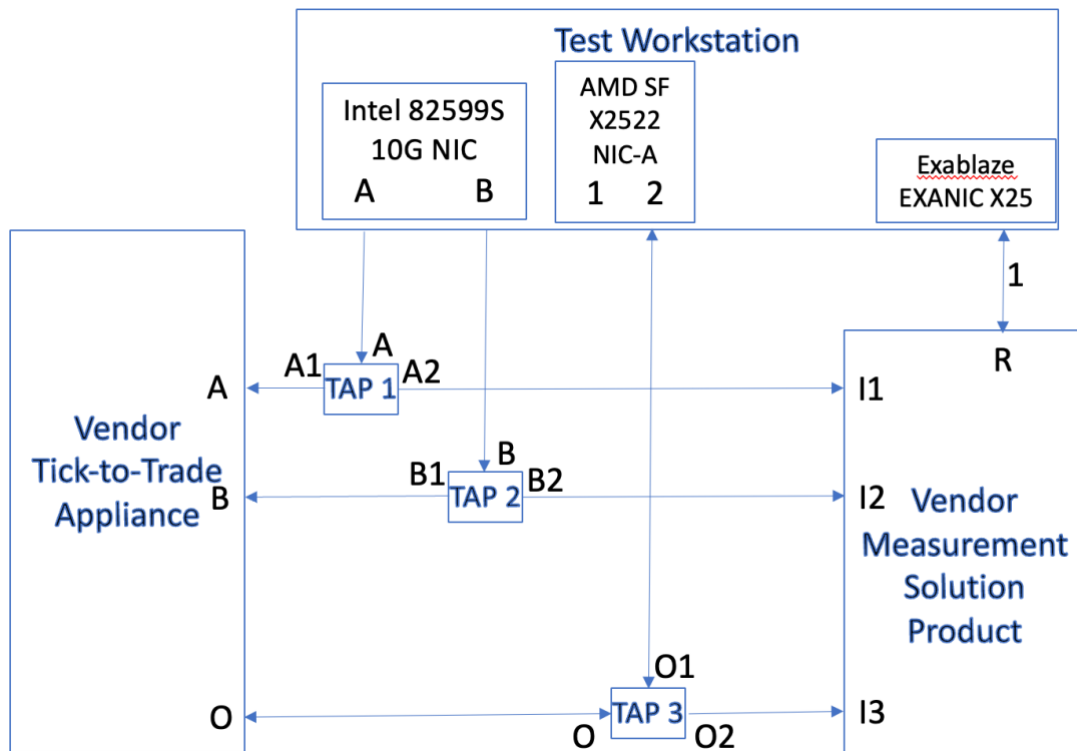

Figure 1 Proposed Test Setup for STAC-T1 Test

The table below documents the cable lengths at each measurement point.

Table 1 Cable lengths of test setup

Connection	Length		Connection	Length		Connection	Length
A	1		B	1		O	1
A1	1		B1	1		O1	2
A2	1		B2	1		O2	1
A3	3		B3	3		O3	3
A4	3		B4	3		O4	1

Bill of Materials

Manufacturer / Equipment	Model	Serial Number	Configuration/Explanation
Vendor Tick to Trade Appliance (SUT)			
Vendor Measurement Solution			
Tap (1- 3)	Garland Optical OM4502		Dual Tap with 50% split. Each tap port has A, B and M connections. A&B are normal two-way connections where TX data in each is copied to M
Test Workstation	HP Z6 G5 A Workstation Desktop PC	Ubuntu Version: Ubuntu 22.04.4 LTS, Linux Kernel: 5.15.0-116-generic,	Processor: AMD Ryzen Threadripper PRO 7945WX 12-Cores, Memory: 2 * (M321R4GA3PB0-CWMJJ, Size: 32GiB, Type: DDR5) Disk: MTFDKBA1T0TFH-1BC1AABHA, Size: 953,9G
Intel 520 NIC	Intel 82599ES 10-Gigabit SFI/SFP+ NIC	5.15.0-116-generic 0x00015e0b	Data replay
SF2522 NIC	Solarflare Xtremescale X2522 (SFC9250)	5.3.18.1012 7.4.4.1000	Responder traffic Capture & validation runs during loopback test
ExaNIC	Exablaze ExaNIC X25	2.7.4-git NA	