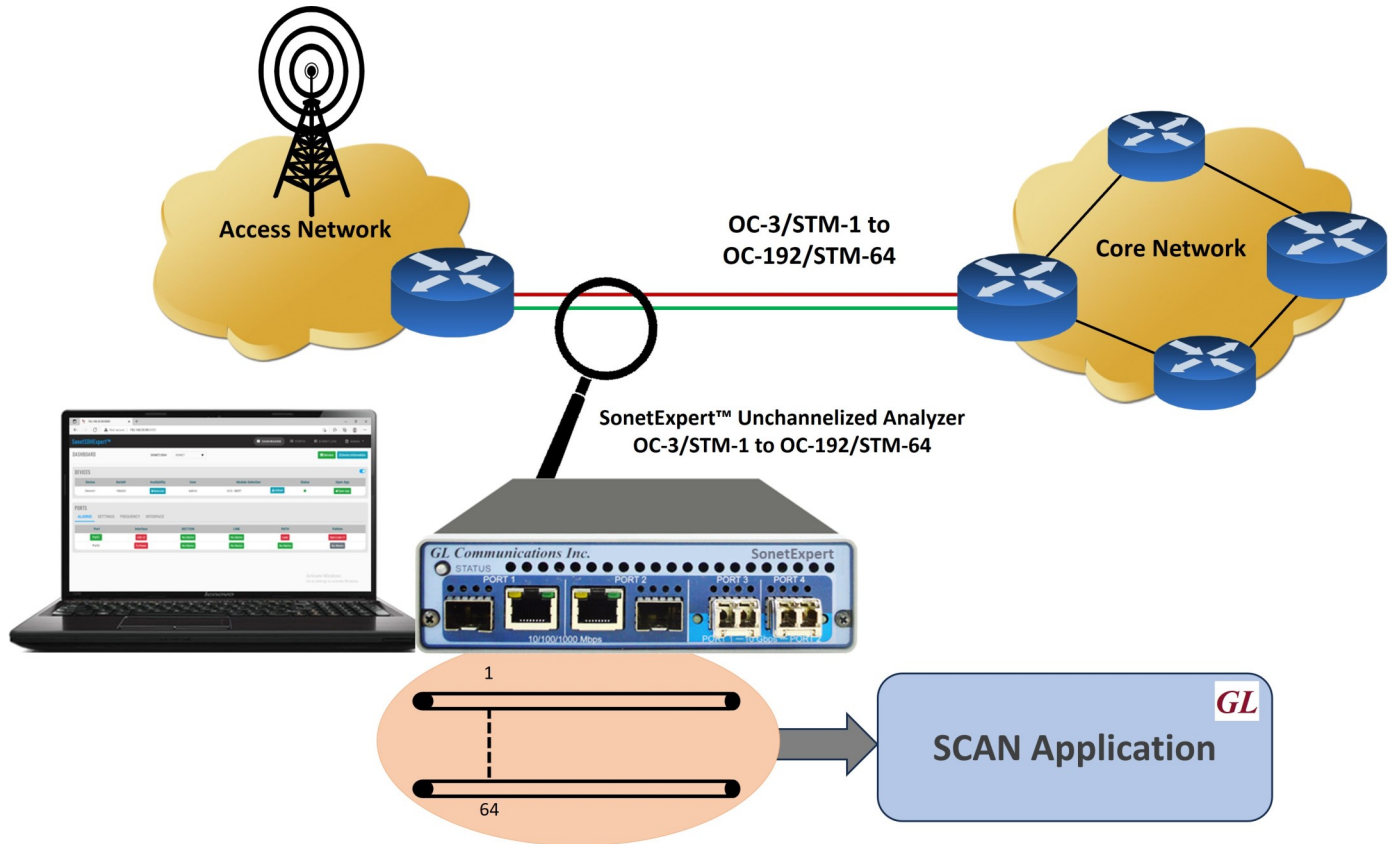


# SonetExpert™ (SDH) Unchannelized SCAN Application

(Scan incoming SONET/SDH traffic and identify the traffic structure)



## Overview

GL's SonetExpert™ Unchannelized application includes the SCAN feature which scans the incoming traffic on SONET/SDH interfaces, identifies and displays the traffic structure. The results of the SCAN application are displayed in an intuitive multi color graphical display, which clearly shows the sub channels within the main pipe. Traffic structure up to STS-3c is identified and displayed in the main display with different colors indicating equipped or unequipped channels. Upon clicking any equipped channel, further details of the subchannel like the sub structure up to the T1 E1 level is also displayed. The SCAN feature gives a complete overview of the incoming SONET/SDH traffic in an easy and intuitive graphical display. Helps technicians to quickly identify the structure of unknown SONET/SDH traffic.

## Main Features

- Scans the incoming traffic on SONET/SDH interfaces, identifies and displays the traffic structure
- Scan application supported on OC-3/STM-1, OC-12/STM-4, OC-48/STM-16 and OC-192/STM-64 rates
- Traffic structure up to STS-3c is identified and displayed in the main display, with different colors clearly indicating equipped or unequipped channels
- Provides complete overview of the incoming SONET/SDH traffic in an easy and intuitive graphical display and helps technicians to quickly identify the structure of unknown SONET/SDH traffic
- User selectable SONET or SDH terminology supported on both the ports independently

For more details on SCAN application, visit [SonetExpert™ Unchannelized Analyzer](#) webpage.

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## SCAN Application

SonetExpert™ scans incoming SONET/SDH traffic, analyzes the frames, detects and reports the traffic structure of the incoming traffic down to the T1 E1 level. It identifies the various sub pipes within the main pipe, and also the entire structure of each sub pipe down to the T1 E1 level.

- Graphical display of the traffic structure for easy visualization
- Identifies and displays sub channels down to T1 E1 level
- Indicates **Equipped (display channel details)** and **Unequipped** sub channels in different colors for easy identification
- User selectable SONET or SDH terminology supported on both the ports independently

Below are the results of scanning incoming traffic on OC-192. The SCAN displays that the OC-192 contains four OC-48 pipes within, and display details of each of the four OC-48s in a separate tab.

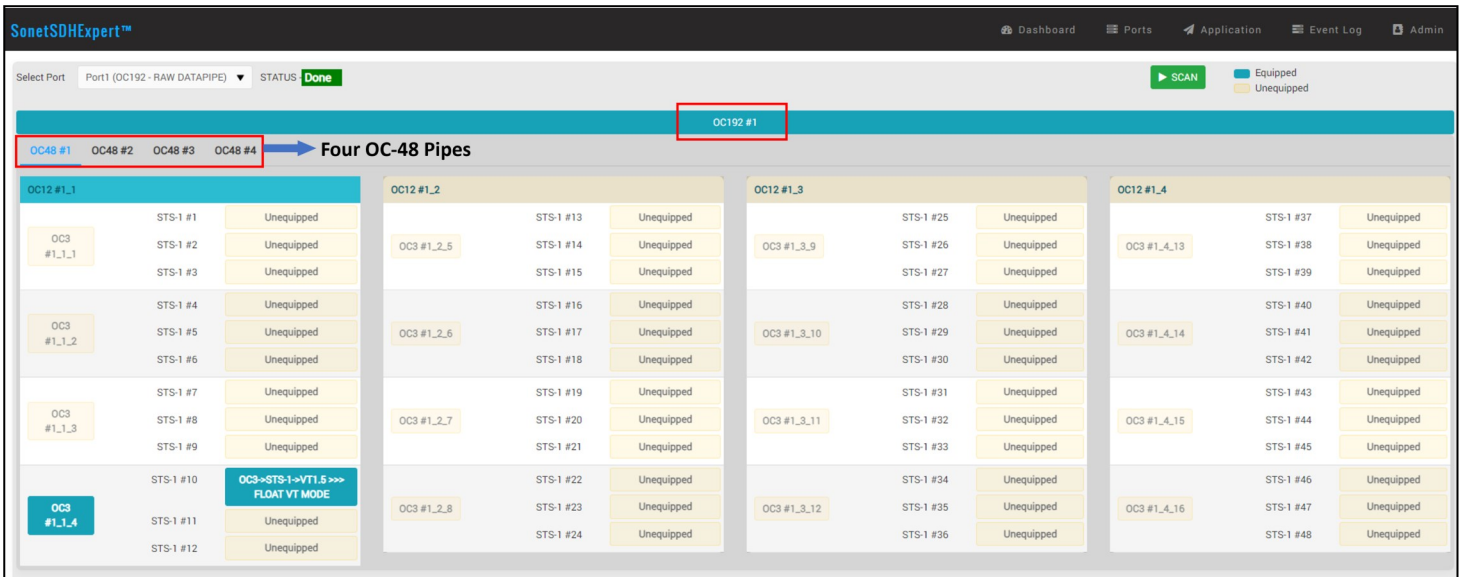


Figure: OC-48 in Separate Tab

## SCAN Application (Contd.)

- For each OC-48 further displays details of the OC-12s, and in turn details of the OC-3s within the OC-12s down to the STS-1 level.
- For each STS-1, it display the details of traffic structure contained within the STS-1.
- The equipped channels are marked as shown below.

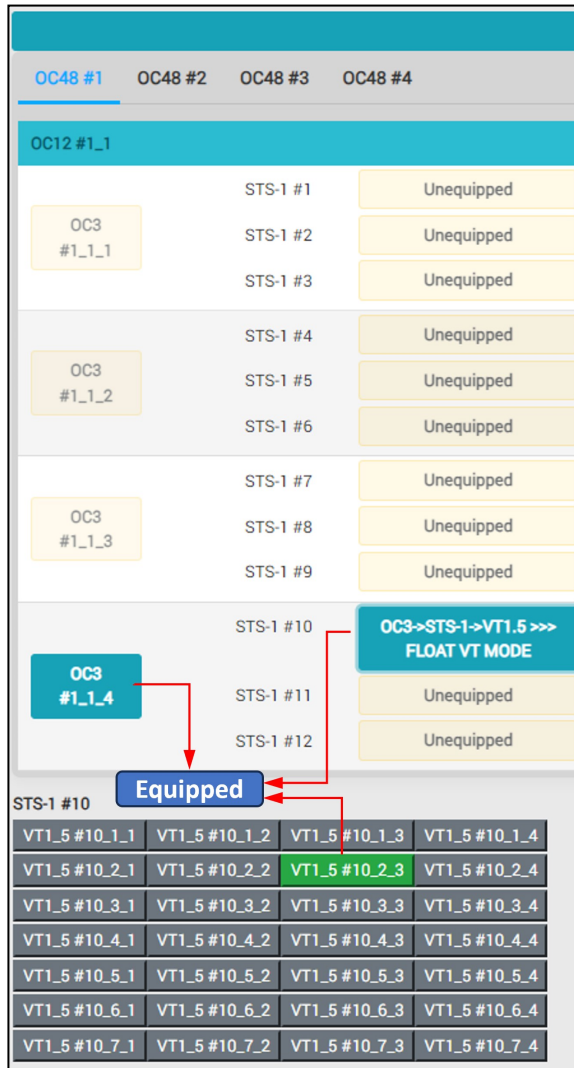


Figure: OC-48 Substructure

In this scenario, OC-48#1 contains an equipped channel -> OC-12 #1 (OC-12 #1\_1) -> OC-3 #4 (OC-3#1\_1\_4) -> STS-1 #1 (STS #10 overall STS numbering). The STS-1 #1 is equipped channel, which contains VT1.5s within it. Upon clicking the substructure button, the detailed substructure will be displayed. It shows twenty eight VT1\_5 channels and within it the VT1\_5 on Row2, column 3 is equipped as shown in **Green**. Unequipped channels are displayed in **Grey**.

The SCAN result also supports concatenated format. The below displays the concatenated OC-192 traffic with a single pipe containing STS-192C signal.

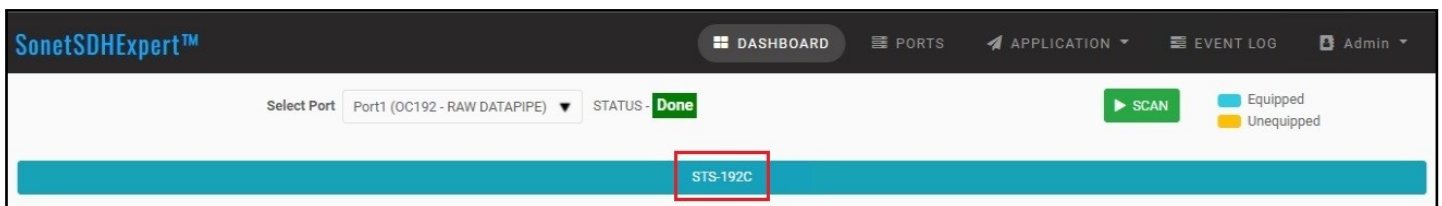


Figure: SCAN Results in Concatenated Format (OC-192)

## SCAN Application (Contd.)

The SCAN application provides option to change the terminology (SONET/SDH) at anytime. The below shows the SCAN result of SDH.

The screenshot shows the SonetSDHExpert interface with the following details:

- Header:** SonetSDHExpert™, Dashboard, Ports, Application, Event Log, Admin.
- Navigation:** Select Port: Port1 (STM64 - RAW DATAPIPE), STATUS: Done, SCAN button, Legend: Equipped (blue), Unequipped (yellow).
- Section:** Four STM16 Pipes (STM16 #1, #2, #3, #4).
- STM4 #1.1:** VC3 #1-12, STM1 #1.1\_1-4. VC3 #10 is highlighted with a blue box and contains the text: STM1->AUG1->AUG3->VC3->TUG2->TU11 >>> FLOAT VT MODE.
- STM4 #1.2:** VC3 #13-24, STM1 #1.2\_5-8.
- STM4 #1.3:** VC3 #25-36, STM1 #1.3\_9-12.
- STM4 #1.4:** VC3 #37-48, STM1 #1.4\_13-16.

Figure: STM-16s in Separate Tab

This figure provides a detailed view of STM16 #1:

- Navigation:** STM16 #1, STM16 #2, STM16 #3, STM16 #4.
- STM4 #1.1:** VC3 #1-12, STM1 #1.1\_1-4.
- VC3 #10:** Highlighted with a blue box, containing the text: STM1->AUG1->AUG3->VC3->TUG2->TU11 >>> FLOAT VT MODE.
- VC3 #10 Status:** A blue box labeled "Equipped" is connected to VC3 #10.
- Substructure Table (VC3 #10):**

C11 #10_1_1	C11 #10_1_2	C11 #10_1_3	C11 #10_1_4
C11 #10_2_1	C11 #10_2_2	C11 #10_2_3	C11 #10_2_4
C11 #10_3_1	C11 #10_3_2	C11 #10_3_3	C11 #10_3_4
C11 #10_4_1	C11 #10_4_2	C11 #10_4_3	C11 #10_4_4
C11 #10_5_1	C11 #10_5_2	C11 #10_5_3	C11 #10_5_4
C11 #10_6_1	C11 #10_6_2	C11 #10_6_3	C11 #10_6_4
C11 #10_7_1	C11 #10_7_2	C11 #10_7_3	C11 #10_7_4

Figure: STM-64 with Substructure

## Buyer's Guide

Item No	Product Description
<a href="#">SEU100</a>	SonetExpert™ Dual OC-3/12 STM-1/4 USB Unit <b>Accessories</b> Includes OC-3/OC-12/STM-1/STM-4 SFPs (customer preference of MM or SM) USB Cable 3.0 (1) Power adapter +12 Volts, 3 Amps (1)
<a href="#">SEU901</a>	SonetExpert™ Unchannelized BERT for OC-3/STM-1 and OC-12/STM-4 Rates
<a href="#">SEU902</a>	SonetExpert™ Unchannelized BERT for OC-3/STM-1, OC-12/STM-4, OC-48/STM-16, OC-192/STM-64 Rates
<a href="#">SEU300</a>	SonetExpert™ Unchannelized OC-3/STM-1/OC-12/STM-4 ATM Monitor, BERT, Tx/Rx Test
<a href="#">SEU301</a>	SonetExpert™ Unchannelized OC-3/STM-1/OC-12/STM-4 PoS Monitor, BERT, Tx/Rx Test
<a href="#">SEU302</a>	SonetExpert™ Unchannelized ATM Record Playback for OC-3/STM-1/OC-12/STM-4
<a href="#">SEU303</a>	SonetExpert™ Unchannelized PoS Record Playback for OC-3/STM-1/OC-12/STM-4
<a href="#">SEU304</a>	SonetExpert™ Unchannelized ATM Protocol Analysis for OC-3/STM-1/OC-12/STM-4
<a href="#">SEU305</a>	SonetExpert™ Unchannelized PoS Protocol Analysis for OC-3/STM-1/OC-12/STM-4
<a href="#">SEU503</a>	SonetExpert™ Unchannelized RAW Record Playback for OC-3/STM-1/OC-12/STM-4 includes SCAN feature
<a href="#">SEU315</a>	SonetExpert™ Unchannelized Packet Data Analysis (PDA) for PoS

Item No	Optional Applications
<a href="#">SEU110</a>	SonetExpert™ Upgrade to PXN100
<a href="#">SEU120</a>	SonetExpert™ Upgrade to PXN101
<a href="#">PXN100</a>	PacketExpert™ 10GX
<a href="#">PXN101</a>	10G option for PXN100
<a href="#">PXN00</a>	Optical Multiport Tap/Repeater
<a href="#">PXN01</a>	Multi-rate Multimode SFPs and FO Cables
<a href="#">PXN02</a>	Multi-rate Singlemode SFPs and FO Cables

For more information, visit [SonetExpert™ Unchannelized Analyzer](#) webpage.