

NTDS I/O Analyzer

Introduction

Sabtech's NTDS I/O ANALYZER is a portable system that allows you to easily capture the data exchanged between two actively communicating NTDS devices. The ability to see what is actually happening on an NTDS channel is a key factor in verifying both hardware and software performance. Anyone who has experienced unexpected interface problems on an NTDS system can tell you about the serious impact it can have to costs and schedules. The NTDS I/O ANALYZER helps you avoid this by providing the visibility you need to quickly analyze interface timing relationships, protocol, throughput, and data integrity. The ANALYZER is an invaluable tool to help you successfully develop and maintain NTDS systems.

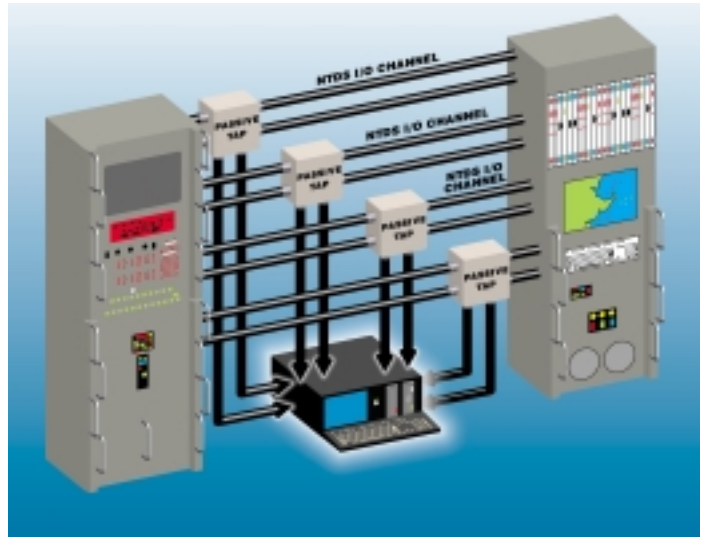
Capabilities

The ANALYZER can monitor any combination of NTDS Type A, B, C, H, D, or E channels. It connects to the input and output cables of an NTDS channel and passively "listens" to communications without interfering. Data collected by the ANALYZER is available for immediate viewing or it can be stored for later analysis. Each word captured is tagged with a high-resolution time-stamp with accuracy within 200 nanoseconds, making it easy to measure real-time performance.

The ANALYZER can be configured to monitor communications on up to 8 NTDS cables in any combination of inputs or outputs. NTDS Type selection (A, B, C, H, D, or E) is made in groups of 2, allowing you to *concurrently* monitor up to 4 different NTDS channel types. Each port can capture and time-stamp 24,000 32-bit words in a single snapshot. Operator entries and captured data can be displayed or printed in decimal, hexadecimal, or octal format.



NTDS I/O ANALYZER



NTDS I/O ANALYZER CAN MONITOR UP TO FOUR ACTIVE NTDS CHANNELS

Triggering

Each port has separate trigger controls allowing them to operate independently but they can also be paired together to monitor the input and output of a typical NTDS channel. Each group of two ports can be set to START ON TRIGGER, CENTER ON TRIGGER, STOP ON TRIGGER, or FREE RUN. A trigger point is set by entering a TRIGGER and MASK value and selecting the NTDS word type to trigger on, either DATA, COMMAND, or BOTH.

START ON TRIGGER - Collection starts when the trigger condition is met and continues until the 24 Kword buffer is filled. When displayed, the trigger word will be the first word in the buffer.

STOP ON TRIGGER - Collection starts immediately and continues indefinitely until the trigger condition is met. When displayed, the trigger word will be the last word in the buffer.

CENTER ON TRIGGER - Collection starts immediately and continues indefinitely until the trigger condition is met. Collection continues until the 24 Kword buffer is filled. When displayed, the trigger word will be in the middle of the buffer.

FREE RUN - Collection starts immediately and continues indefinitely until stopped by the operator. Trigger conditions are ignored.

More Than a Diagnostic Tool

The ANALYZER's remarkable versatility can be used effectively in a variety of ways:

- To monitor system performance during peak loads or to optimize code
- To develop and debug new interfaces and protocols
- To evaluate timing and sequence relationships between devices or subsystems
- To certify software deliveries for compliance to specifications
- To integrate new equipment into a system
- Reverse engineer an undocumented protocol or IDS
- To collect data for analysis during shipboard exercises
- As a diagnostic tool for interface troubleshooting

Remote Access

An advanced feature of the ANALYZER is its ability to be remotely controlled. Using the optional LAN or modem interface, all analyzer controls and displays can be accessed from a remote system, giving you immediate access to data for offsite analysis. From your desktop, you can remotely control an ANALYZER connected in the lab down the hall or halfway around the world.

Make Cable Connections Fast

Cable connections are easy to make with NTDS I/O ANALYZER Tap interface modules (sold separately). Parallel and serial Tap interface modules come with your choice of military standard NTDS connectors. Simply disconnect the cables from the device under test and plug them directly into the Tap interface module. Cable jumpers (sold separately) are then connected from the Tap interface module to the device. See the ACCESSORIES SECTION of this catalog.

Options and Custom Configurations

The NTDS I/O ANALYZER can be configured to achieve the right balance of features and cost for your application. The basic configuration allows for monitoring of 1 NTDS channel (2 cables). Capability can be added to monitor up to 3 more channels. The standard internal hard drive can be upgraded or replaced with virtually any commercially available device. Removable hard drives or rewritable optical drives are especially useful when collected data is classified and is subject to security controls for storage and transmission.

Other options include a 10/100Base-TX Ethernet port, modem for remote access, and a rugged transport case with room for the ANALYZER, 1 NTDS Tap interface module, and cables. Custom NTDS I/O ANALYZER configurations are available upon request.



ANALYZER SCREEN

System Features

- Capture high speed NTDS data on parallel and serial NTDS channels
- High-speed design assures proper operation at highest data transfer rates
- Monitors up to four NTDS I/O channels (8 cables) concurrently
- Portable industrial grade enclosure with built-in carrying handle
- 1.44 MB floppy drive & internal hard drive for data storage
- Time-stamps captured data with 200 Ns accuracy
- Detachable PC-style keyboard with touch-pad
- Optional remote control capability via LAN or modem
- Optional rugged transport case available
- Optional 10/100Base-TX Ethernet port
- Easy-to-use menu-driven user interface
- Parallel printer port
- Custom configurations available
- Dual-scan color LCD display
- Easy to connect and setup

Specifications & Ordering Information

NTDS Interface: Parallel, Type A, B, C or H (MIL-STD-1397C) Serial, Type D or E	Printer Port: Parallel
Tap Interface Modules:	Weight: 15.9 kg (35 lbs)
<i>Parallel Connectors:</i> M81511 (85 pin AN/UYK-7 type) M28840 (92 pin AN/UYK-43 type) D38999 (79 pin AN/UYK-44 type)	Supply Power: 120 VAC, 60 Hz (standard) 220 VAC, 50 Hz (option)
<i>Serial Connectors:</i>	Power Consumption: 200 W
NTDS Type D: BNC isolated 75Ω Coaxial	Operating Temperature: 0° - 55° C (32° - 131° F)
NTDS Type E: Non-isolated 50Ω Triaxial	Relative Humidity: 5% to 90% (noncondensing)
Disk Storage: 1.44 MB floppy drive Internal hard drive	Part Numbers: 1 Channel - BA-48601-00 2 Channel - BA-48602-00 3 Channel - BA-48603-00 4 Channel - BA-48604-00

Specifications subject to change without notice

Contact our Sales Department at (714) 692-3800 to request your free copy of a NTDS I/O ANALYZER demo disk. The 10 minute demo walks you through ANALYZER setup, controls, and displays. Quickly see for yourself just how versatile and easy it is to use.