

ATVS

Amano Time Validation System

*Where Accurate,
Reliable & Secure
Time Synchronization
is Essential*



Hardware Features – PIX 3000xN & PIX 3000xNT

- Maintain time within 4/10th of a second over a 24-hour period once synchronized
- Time imprint format includes seconds per OATS NASD/SEC Rule 6953 requirements
- Prints through up to 6 multiple-part carbonless copies
- Capable of printing dealer alphanumeric identification
- Full power reserve permits clock operation in the event of power outage
- Quick and easy ribbon cartridge replacement
- Direct-connect or Ethernet time validation units

Benefits

- Assures financial institutions full OATS NASD/SEC Rule 6953 compliancy, NYSE Rule 132A, FDA 21 CFR Part 11.
- Amano time stamp will continue to function and maintain time as a stand-alone unit, even if it does not receive synchronization from the provided host software.
- The PIX 3000 Series is the highest quality OATS compliant time stamp available.
- Log files maintained automatically on hard drive where computer software is installed which could be e-mailed, saved or printed as desired.
- Convenient system support provided by visible alarms on time stamp imprint & LCD display should synchronization not occur.
- Provides a solution for industry sectors requiring strict adherence to accurate time keeping practices.

ATVS LIST OF CUSTOMERS

Fortune 500 Investment Company

Installation and support for the offices located in Los Angeles, San Francisco, Dallas, Philadelphia, Miami, Palm Beach, Chicago, Atlanta, Houston and Buenos Aires. The installation included 8 to 50 time stamps per site. Amano also configured, deployed and supported the host infrastructure for each site.

Fortune 500 Insurance Company

Installation of 1 to 16 time stamps per site over 39 offices across the United States. The time stamps were supported via a depot service. A central software deployment allowed control and monitoring of the time stamps across the network.

Fortune 500 Global Financial Company

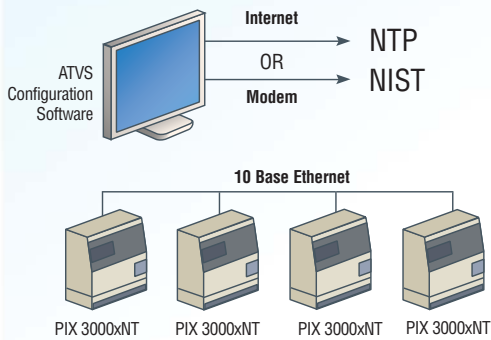
Amano provided approximately 800 time stamps centrally managed over the client's network in offices across the United States. The project included the management, configuration and implementation assistance for the initial deployment.

TYPICAL USER/MARKET

- **Bank**
- **Investment Broker**
- **NASDAQ Trader**
- **Manufacturing**
- **Healthcare**
- **Emergency Call Centers**

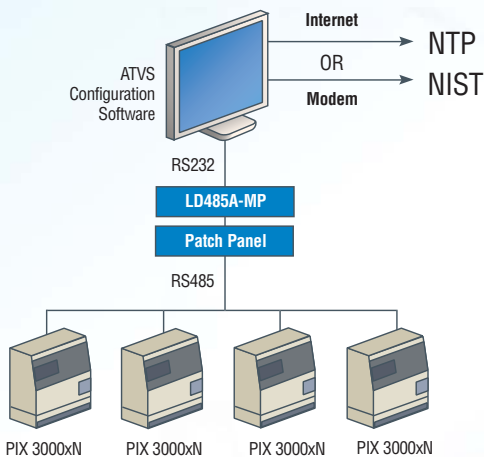


PIX 3000xNT Network Configuration



The TCP/IP solution is a “true” Ethernet time stamp solution. It does not simply attach to a network workstation, as with other so called TCP/IP solutions. Each PIX 3000xNT time stamp has an internal NIC and is given an IP address for synchronization over your network. The network software ATVS Configuration Software is installed on a server on your network. The PIX 3000xNT time stamps are then deployed anywhere on your network. Each time stamp requires an active available network port set to 10 half communication speed, with network connectivity back to the single software ATVS Configuration Software installation.

PIX 3000xN Serial Configuration



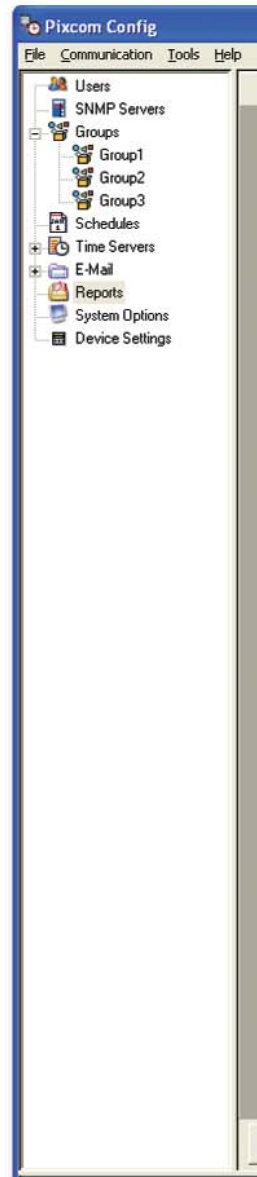
The serial broadcast solution utilizes the same ATVS Configuration Software installed on your own server as the host, but, uses the PIX 3000xN time stamps. Instead of transmitting the signal to each clock over your network via TCP/IP, the signal would be transmitted via the 9-pin serial port of the single server. This in turn would attach to provided line drivers and patch panels to the office cabling infrastructure on the trading floor going out to the clocks on the floor. The end-user can utilize standard CAT5 or better grade, straight cable—no special wiring required. The PIX 3000xN and PIX 3000xNT can co-exist on the same server.



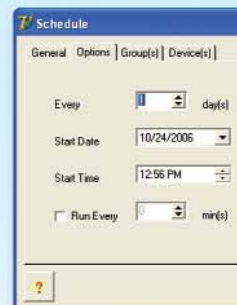
Software Features— ATVS Configuration Software

- Event notification through SNMP traps*
- Automatic time synchronization to an official time source
- Multiple communication options to time validation units
- NTP (Network Time Protocol) synchs clocks to a time reference over a data network
- NIST (National Institute of Standards & Technology) synchronization workstation via modem
- Direct synchronization to the time source rather than to a computer workstation
- Login security with configurable rights to sections of application
- Software supports two communication options and validation units:
 - PIX 3000xN clocks via Serial RS485 direct connection
 - PIX 3000xNT clocks via Ethernet TCP/IP network connection
- Full OATS compliance with stand-alone units not linked to a PC
- Complete server-based solution, not on individual trader computers
- Reports including status/error, transaction log, and configuration settings
- Unlimited synchs per day for improved accuracy
- E-mail notification of clock status and/or failure to synchronize time to chosen recipients*
- Synchronization logging data maintained per OATS Rule 6953 requirements
- Runs as a Windows® service to perform synchs*
- Compatible with Windows® NT / 98 / 2000(ME) / 2003 / XP / Vista

* Enterprise version only



Scheduled Reports



Daily Report

Transaction Report

3/12/2007

Sample Reports

3/12/2007 9:32:43 AM: Manual Sync : Trying to connect to server: Rom
3/12/2007 9:32:43 AM: Manual Sync : Server Rom Address time-a.timefreq.bldrdoc.gov resolved
3/12/2007 9:32:43 AM: Manual Sync : Connecting to IP address 132.163.4.101
3/12/2007 9:32:43 AM: Manual Sync : Connected to server Rom time-a.timefreq.bldrdoc.gov
3/12/2007 9:32:43 AM: Manual Sync : Deviation Error From Time Server: Rom = 00:59:39.210
3/12/2007 9:32:43 AM: Manual Sync : Synchronize Retry #1
3/12/2007 9:32:43 AM: Manual Sync : Trying to connect to server: Rom
3/12/2007 9:32:43 AM: Manual Sync : Server Rom Address time-a.timefreq.bldrdoc.gov resolved
3/12/2007 9:32:43 AM: Manual Sync : Connecting to IP address 132.163.4.101
3/12/2007 9:32:44 AM: Manual Sync : Connected to server Rom time-a.timefreq.bldrdoc.gov
3/12/2007 8:33:05 AM: Manual Sync : Time From Server: Rom : 03/12/2007 08:33:05
3/12/2007 8:33:05 AM: Manual Sync : Deviation From Time Server: Rom = 00:59:39.185
3/12/2007 8:33:12 AM: Manual Sync : Failed to send E-Mail: Template1
3/12/2007 8:33:12 AM: Manual Sync : Transmitting time and date to pix: Group1Device1 (192.168.1.6)
3/12/2007 8:33:12 AM: Manual Sync : Socket connected to IP Address : 192.168.1.6
3/12/2007 8:33:15 AM: Manual Sync : Transmitted time and data to IP Address : 192.168.1.6
3/12/2007 8:33:16 AM: Manual Sync : Successfully sync time to device: Group1Device1 (192.168.1.6) Est.Latency = -4 (m)
3/12/2007 8:33:16 AM: Manual Sync : Socket connected to IP Address : 192.168.1.6
3/12/2007 8:33:16 AM: Manual Sync : Socket disconnected from IP Address : 192.168.1.6
3/12/2007 8:33:21 AM: Manual Sync : Failed to send E-Mail: Template3
3/12/2007 8:35:56 AM: Manual Sync : Trying to connect to server: Rom
3/12/2007 8:35:56 AM: Manual Sync : Server Rom Address time-a.timefreq.bldrdoc.gov resolved
3/12/2007 8:35:56 AM: Manual Sync : Connecting to IP address 132.163.4.101
3/12/2007 8:35:57 AM: Manual Sync : Connected to server Rom time-a.timefreq.bldrdoc.gov
3/12/2007 8:35:57 AM: Manual Sync : Deviation Error From Time Server: Rom = -00:00:02.781
3/12/2007 8:35:57 AM: Manual Sync : Synchronize Retry #1
3/12/2007 8:35:57 AM: Manual Sync : Trying to connect to server: Rom
3/12/2007 8:35:57 AM: Manual Sync : Server Rom Address time-a.timefreq.bldrdoc.gov resolved
3/12/2007 8:35:57 AM: Manual Sync : Connecting to IP address 132.163.4.101
3/12/2007 8:35:58 AM: Manual Sync : Could not receive information from server: Rom time-a.timefreq.bldrdoc.gov
3/12/2007 8:35:59 AM: Manual Sync : Successfully sent E-Mail for template: Template1
3/12/2007 8:35:59 AM: Manual Sync : Could not receive information from server: Rom time-a.timefreq.bldrdoc.gov
3/12/2007 8:38:17 AM: Manual Sync : Trying to connect to server: ntp-ua.usno.navy.mil
3/12/2007 8:38:18 AM: Manual Sync : Server ntp-ua.usno.navy.mil Address ntp-ua.usno.navy.mil resolved

Time Server

General

Name: TS2

Server Type: NIST (US)

IP Address / Host Name: 0.0.0.0

Phone Number:

Com Port: 1

Max Deviation: 1500

Last Successful Sync: Never

Last Sync Attempt: Never

Description:

Report Profile

General | Advanced

Range: Today Date Range

Start: Date 1/1/2007 Time 12:00 AM

End: Date 1/1/2007 Time 11:59 PM

Schedule

General | Options | Group(s) | Device(s)

Recur every 1 week(s) on: Sunday Monday Tuesday Wednesday Thursday Friday Saturday All Week

Start Date: 10/23/2006

Start Time: 04:33 PM

Weekly Report

Schedule

General | Options | Group(s) | Device(s)

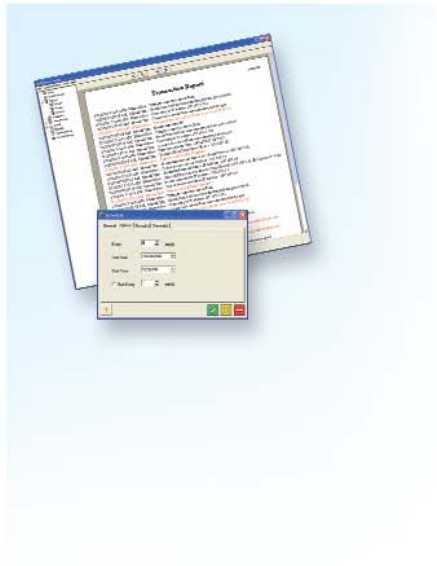
Day: 1 of every 1 month(s)

Start Date: 10/24/2006

Start Time: 03:45 PM

Monthly Report

ATVS Feature and Capability Comparison



SOFTWARE

- Full Order Audit Trail System (OATS) compliance
- Automatic time synchronization to official source
- Complete client/server based solution
- Central host computer synchronizes time
- Stand-alone time stamps not linked to workstation
- Each individual workstation requires time software
- Time stamp/printer connected to workstations
- Dedicated Master Clock required for synch
- Serial communication RS485/dedicated wiring
- Multiple communication options to validation units
- Ethernet communication TCP/IP/existing network
- Time source via modem NIST
- Time source via internet NTP
- Log-in security with configurable application rights
- Clock lock security against unauthorized users
- Selectable number of synchs per day (2 min. required)
- Clock synch runs as Windows® Service
- Status, transaction, and configuration reports
- Synchronization log data maintained
- Email notification of clock status/failure
- Event notification through SNMP traps
- Full SQL database ODBC for extracting data
- Easy software setup Wizard®
- Professional installation required
- End-user installation possible



HARDWARE

- Selectable imprint format including seconds
- Failure to receive time signal notification
- Prints alphanumeric custom comments
- Easy ribbon cartridge replacement
- Automatic and/or manual print activation
- Prints through up to 6 carbonless copies
- Full power reserve in power outage event
- Maintains time within 4/10th seconds per day

<i>DocuClock</i>	<i>Simplex</i>	<i>Widmer</i>	<i>Amano</i>
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¹ Widmer WAN solution requires MasterClock; software on each client PC, Time stamp connected to PC

² Virtually unlimited synchronization through multiple time servers/sources with Enterprise edition

³ Standard version (non enterprise) may be user installable based on size of the system

^E Feature included in Enterprise edition only

SPECIFICATIONS

POWER REQUIREMENTS

100/120/230 VAC +/- 10% 50/60 Hz

POWER CONSUMPTION

Normal 3W, maximum 6W

TEMPERATURE

14°F ~ 113°F (-10°C ~ 45°C)

HUMIDITY

10-90% (non-condensing)

DIMENSIONS

6.9" H x 5.9" W x 6" D (176mm x 150mm x 153mm)

WEIGHT

5 lbs. (2.3 Kg)

ENVIRONMENT

Indoor use only, dust free, no direct sunlight

REQUIREMENT	OATS COMPLIANCE	ATVS SOLUTION
Imprint format	· Y2K compliance and prints seconds YYYY/MM/DD HH:MM SS	1998/02/28 16:51 21s YYYY/MM/DD HH:MM SS
Time synchronization	· Time synchronization with Atomic time from NIST at least one per day	1998/02/28 16:48 33s ← · Self-validation mark · Self-validation Time Synchronization
Time deviation	· Within 3 seconds deviation per day	· Less than 4/10th seconds deviation per day

The PIX 3000xN has the following additional features not found on the standard PIX 3000X:

- Factory set fixed style print format that will print year/month/date/hour:minute seconds, with the year printed as a four digit number.
- On a daily basis, the PIX 3000xN can self-check and validate if a time/date synchronization signal has been received.
- Dual Auto-Print feature. This feature allows the automatic printing of a second programmed print style, without having to push the auxiliary Symbol Print Bar.

The PIX 3000xNT is a PIX 3000xN equipped with an Ethernet Board, which is to be used with TCP/IP based applications. All other functions are the same.

Manufactured by Amano Cincinnati, Inc.'s Ohio factory, an ISO 9001:2000 registered facility.
Specifications are approximate and are subject to change without notice.
UL approval does not apply to 220/240V AC, 50/60 Hz



Central Time Clock

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