DA-3400/DA-3600A ATM Analysis
Real-time Monitoring and Testing

The ATM network is often blamed for faults in transmission facilities and problems in performance-sensitive applications. Network downtime and open trouble tickets increase operating costs, decrease revenue, and can cause customer churn. Using the JDSU DA-3400 or DA-3600A Data Network Analyzer together with the JDSU ATM Analysis Software, ATM network downtime is minimized, and customer service is greatly improved.

The ATM Analysis Software provides visibility into difficult higher layer data problems, enabling quick identification and fast resolution of complex problems. In addition, the powerful combination of the ATM Analysis Software with either the DA-3400 or DA-3600A provides comprehensive troubleshooting capabilities and expert tools for maintaining network uptime, isolating data/VoATM problems, and identifying customer traffic anomalies over ATM, Ethernet, WAN, and PoS networks.

In addition to ATM Analysis Software, JDSU offers Ethernet Analysis Software and High-speed WAN Analysis Software for the DA-3400 and DA-3600A as well as Packet over SONET (PoS) Software for the DA-3600A.
Features

**Multiple interface support with network connections**
By supporting networks from DS-1/E1 to OC-12/STM-4 in one instrument, the DA-3400 and DA-3600A meet the most demanding ATM network requirements. Support for multiple test access methods ensures an easy connection to the network.

**VoATM analysis**
Many DSL circuits support both Voice and Data services. The ATM Analysis Software monitors these VoATM/AAL2 connections for quality, providing both real-time troubleshooting analysis and long-term performance monitoring.

**Data traffic analysis**
The ATM Analysis Software identifies and provides statistics for each AAL type in use on each VCC. Reassembled PDU analysis is performed in real time with detailed IP host and application statistics.

**Expert events**
Automatic identification of important network events ensures the identification of transient problems. This allows technicians to examine the history of the circuit in order to analyze when problems occurred at different OSI layers.

**Reporting**
Professional, customized report generation is an integral capability of the ATM Analysis Software. Easily customized and formatted for printing, it is also possible to export the reports to standard database applications.

**Routing, signaling, authentication**
The ATM Analysis Software provides a separate view for protocols related to routing, VoIP signaling, SS7, and RADIUS authentication. Technicians can view messages by type, define display filters, and view decodes in real time. This allows for the quick identification of issues related to packet routing, VoIP and SS7 call control, and user logon access.

**Remote or local operation**
Using IP networks or dial-up connections, technicians can control the DA-3400 or DA-3600A remotely. A direct connection to a PC allows for easy control in portable field service environments. Once initiated, network monitoring continues without the need to maintain the connection.

**Frame relay within ATM**
FRF.5 support allows for the analysis of frame relay services quickly and easily at aggregate monitoring points in an ATM transport network.

**Real-time and historical visibility of IP conversations**
Network problems often occur beyond the reach of a traditional element management system. To simplify cause-and-effect analysis across OSI layers, both the DA-3400 and DA-3600A provide real-time data and VoIP traffic visibility as well as historical trending of IP conversations for up to 30 days.

**Real-time protocol decodes**
The ATM Analysis Software allows technicians to display protocol decodes in real time. Summary, hex, and detailed decode views are available for over 350 protocols.
Applications

**Data service troubleshooting**
The ATM Analysis Software uses VCC traffic classification and real-time IP conversation analysis to solve the complex higher-layer problems that traditional element management systems are unable to solve. Coupled with an intuitive graphical user interface (GUI), the ATM Analysis Software allows for the rapid identification and solution of problems that decrease mean time to repair (MTTR) and increase customer satisfaction.

**VoATM troubleshooting**
VoATM deployments support the transport of voice over broadband technologies such as DSL, cable, and wireless networks. The ability to support this service requires tools that identify the source of problems quickly. Understanding cell loss and timing issues are critical to sectionalizing and resolving performance issues. The VoATM analysis option provides a simple way to identify poor quality calls that allow technicians to sectionalize the network easily and understand the source of the problem.

**Network baselining**
Understanding network use is the first step in adding new applications, which require additional bandwidth. This can prevent circuit overload that degrades the performance of all of the applications sharing the bandwidth. Placed at key points on the network for long-term monitoring, both the DA-3400 and DA-3600A use historical trends, coupled with event correlation, to provide an understanding of current network operation and the ability of a specific circuit to handle additional traffic. The ATM Analysis Software allows technicians to identify potential problem areas before the application carries live traffic.

**ATM circuit turn-up**
After physical layer and network element installations are complete and tested, the ability to generate and analyze cells and packets is required to verify circuit provisioning. The ATM O.191 turn-up feature allows for provisioning verification, and the IP ping feature tests IP connectivity. The ATM Analysis Software provides a simplified verification process for error-free circuits.

**VoIP and SS7 signaling monitoring**
Troubleshooting VoIP over ATM services is challenging. The ATM Analysis Software allows technicians to monitor, analyze, and decode VoIP and SS7 signaling messages on ATM circuits. PUD reassembly and frame decoding are performed in real time for efficient problem resolution.

**Filter, capture, and decode**
With powerful filtering and a line rate capture capability of one Gigabyte RAM, the DA-3400 and DA-3600A allow technicians to capture traffic for post-capture decoding and analysis. Additionally, it is possible to view decodes in real time. Coupled with line rate filters, technicians can focus on specific traffic, improving efficiency and reducing problem resolution times.
## Specifications

### DA-3400 and DA-3600A Mainframes

#### Physical characteristics
- **Overall dimensions (w x l x d):** 10.5 x 12.6 x 2.6 in (26.7 x 32 x 6.6 cm)
- **Weight:** 7 lb (3.2 kg)
- **Rack mount height:** 2U

#### Environment
- **Ambient temperature range:** +5ºC to +40ºC
- **Storage and transport:** –10ºC to +60ºC

#### Electrical
- **Power supply:** 100–240 VAC, 50/60 Hz
- **DA-3400 power consumption:** 70 W
- **DA-3600A power consumption:** 90 W

### Configuration/control/power connectors
- RJ-45 10/100 Ethernet console port
- Keypad with LCD for communication setup
- LED indicators for physical, link, error
- Dual cardbus slot
- RS-232 serial port
- 12 VDC power supply input

### Minimum system requirements
- Windows 2000, Windows XP Professional
- 800 MHz processor
- 128 MB RAM — 256 MB recommended
- 300 MB disk space

### Ordering Information

#### Mainframe

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA-3400 Data Network Analyzer</td>
<td>DA3400</td>
</tr>
<tr>
<td>DA-3600A Data Network Analyzer</td>
<td>DA3600A</td>
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</tbody>
</table>

#### Interface Modules

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>DS1/DS3 E1/E3 WAN/ATM/IDDN</td>
<td>DA3000M-DS/E</td>
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<tr>
<td>DS1/Channelized DS1: Dual RJ connectors, receive sensitivity 0 dBm to –30 dBm</td>
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<tr>
<td>DS3/Channelized DS3: Dual BNC connectors, terminate receive sensitivity 200 mVp to 1.2 Vp, DSX receive sensitivity 30 mVp to 80 mVp, designed for –20 dBm receive loss</td>
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<tr>
<td>E1/Channelized E1: Dual RJ connectors, receive sensitivity 0 dBm to –30 dBm</td>
<td></td>
</tr>
<tr>
<td>E3: Dual BNC connectors, terminate receive sensitivity 110 mVp to 1.2 Vp, DSX receive sensitivity 30 mVp to 85 mVp, designed for –20 dBm receive loss</td>
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#### OC-3/12/STM-1 POS/ATM

<table>
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<tr>
<th>Description</th>
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<tbody>
<tr>
<td>OC-3/12 STM-1/4 Singlemode (DA-3400 only)</td>
<td>DA3000M-622-5M</td>
</tr>
<tr>
<td>Dual SC full-duplex connectors: Optical transmit power –8 dBm to –15 dBm, optical receive sensitivity –14 dBm to –26 dBm</td>
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</tbody>
</table>

#### OC-3/12 STM-1/4 Multimode (DA-3400 only) | DA3000M-622-MM |
| Dual SC full-duplex connectors: Optical transmit power –14 dBm to –20 dBm, optical receive sensitivity –14 dBm to –26 dBm |

#### Ethernet

<table>
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<tr>
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<tbody>
<tr>
<td>10/100 Base-T Ethernet (DA-3400 only)</td>
<td>DA3000M-10/100</td>
</tr>
<tr>
<td>10/100/Gigabit Ethernet</td>
<td>DA3000M-1G</td>
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</table>

#### Software and Options

#### DA-3400 and DA-3600A software

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>ATM Analysis</td>
<td>DA3000S-ATM</td>
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<tr>
<td>Ethernet Analysis</td>
<td>DA3000S-Ethernet</td>
</tr>
<tr>
<td>WAN Analysis</td>
<td>DA3000S-WAN</td>
</tr>
<tr>
<td>VoATM Analysis</td>
<td>DA3000T-VoATM</td>
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<tr>
<td>VoIP Analysis</td>
<td>DA3000T-VoIP</td>
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#### DA-3600A advanced software

<table>
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<th>Description</th>
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<tbody>
<tr>
<td>Advanced (POS/Ethernet) Analysis</td>
<td>DA3600S-Advanced</td>
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</table>

#### Options

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<tbody>
<tr>
<td>Cardbus Hard Disk Drive</td>
<td>AC-018398</td>
</tr>
<tr>
<td>Rack Mount Kit</td>
<td>RM-18006</td>
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<tr>
<td>Gigabit Ethernet Upgrade (DA-3400 only)</td>
<td>DA3000T-1G-U1</td>
</tr>
<tr>
<td>622 ATM Upgrade (DA-3400 only)</td>
<td>DA3000T-622-U1</td>
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<tr>
<td>PVA-1000 VoIP Analysis and Playback</td>
<td>PVA-1000-VoIP</td>
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### Test & Measurement Regional Sales

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