XATA

FLEET INTELLIGENCE

XATANET

The Web-based fleet management system with
an affordable entry point to quickly improve
operations across any-sized fleet.

Know What Matters.

▶ XATANET Overview

XATANET is a flexible, expandable, online fleet management solution that is easy to use and delivers a rapid return on investment.

Your Fleet, Your Future, Your Flexibility.
XATA has recast 20 years of experience designing, developing and delivering fleet management solutions into a new Web-based platform – XATANET.

XATANET is delivered as a hosted service, allowing a fleet to deploy an enterprise-wide fleet management solution rapidly and cost-effectively, without placing time intensive and expensive demands on its IT infrastructure, staff or budget.

Enterprise Architecture. Centralized Infrastructure.
XATANET is 100% web-based, and delivered through an ASP model, allowing your fleet to rapidly and cost-effectively utilize fleet management technology, while avoiding the pain and expense of installing, maintaining and upgrading packaged software. XATANET provides the applications, hosting and services via a centralized infrastructure – delivering full-featured fleet management functionality and unlimited scalability at a monthly cost based on how you configure your system.

Software That Sets The Standard.
XATANET delivers a powerful software platform of integrated fleet management applications designed to solve problems core to operating, managing and maintaining a fleet of trucks.

This new system provides you with the right information at the right time in the right place – from hours of service status to delivery notification to fuel economy performance – helping you make the decisions that lead to improved fleet productivity and profitability, quickly and effectively.

XATANET is the only fleet management software that automatically collects, transforms and delivers exactly what you need to know about your fleet in order to drive operational results and business performance by delivering this fleet intelligence right to your desktop.

XATANET Benefits:

o Eliminates the need for a substantial capital investment
o Offers a lower cost of entry and ownership
o Expands as your business grows or changes
o Requires minimal training for drivers and fleet operators
o Automates labor-intensive, error-prone processes
o Reduces the time required for deployment
o Configures to best meet your needs
o Anywhere, anytime access via a Web browser
o No software or hardware purchase or installation
o Minimal IT support
o Costs are structured and predictable

XATANET Hosting:

XATANET is hosted in a Tier One data center owned and managed by Agiliti, a leading provider of hosting, network management and professional services that delivers complete availability, reliability and security to more than 400 customers.

▶ XATANET: THE ASP ALTERNATIVE

XATANET is delivered as a completely managed, outsourced service that XATA hosts, maintains and upgrades for a predictable, ongoing monthly fee based on usage.

The ASP alternative
With ASPs, businesses can forego the need to make expensive upfront hardware investments and instead, pay for only those applications they need and cost-effectively scale up or down their application usage as demand requires. Depending on the application and the business requirement, this approach delivers numerous benefits:

• **Lower upfront costs.** Since the ASP operates and maintains the application and has invested in the back-end hardware needed to run it, businesses don't have to buy expensive new hardware and pricey software licenses. Depending on the application, this can save tens or hundreds of thousands of dollars in upfront costs.

• **Lower ongoing costs.** ASPs eliminate the need for internal IT personnel to support and maintain an application. The only technology involved may be a web browser and dial-up or broadband IT connection. (For fleet management applications, onboard truck units will be required). This changes IT to a monthly expense – scaled to actual usage – instead of a large capital investment.

• **Faster application deployment.** In addition to lower costs, a hosted and managed application can be deployed in much less time than an internal application. "Deployment" for the business user may be simply a matter of setting up and activating an account. Upgrades to the host software are implemented automatically, as well, since they are delivered over the Internet.

• **Reliability and security.** Established ASPs maintain "Tier One" data centers – technologically sophisticated facilities built that provide more application reliability and data security than businesses can typically afford on their own. Moreover, Tier One centers are staffed by personnel whose sole job is protecting, maintaining and backing up data. Due to the sophistication of their IT infrastructures, ASPs commonly maintain 99+ percent uptime.

• **Anytime-anywhere access.** Customers can access their applications and data 24/7 from any Web browser. And since the application interface is a browser, deployment to

The ASP model:

An application service provider (ASP) is a company that offers businesses access to applications and related services over the Internet that would otherwise have to be located on their own computers. This is called managed hosting. Instead of buying software licenses, customers pay a monthly usage fee. Overall costs are usually less, sometimes substantially less, than outright application ownership and maintenance. However, with an ASP, a business is able to derive most if not all the benefits of owning and operating the application itself.

Sometimes called "renting" or "leasing" applications, the ASP model has become an important alternative to owning and operating applications. Small companies with limited budgets benefit by access to applications that otherwise would be unaffordable, and can better focus on their core business competencies, not on maintaining large and expensive IT units.

The ASP approach allows customers to pay for their system in a highly accurate, utility-like manner – tightly aligning their information technology expenditures with the expected operational cost savings and business value-add. Bottom line: ASP solutions provide a tailored approach to getting the powerful applications you need today, while ensuring that you aren't left stranded with an obsolete technology embedded throughout your enterprise tomorrow.

additional users requires no additional hardware investments. Moreover, the Web browser is a familiar, cross-platform interface, so training is simplified and access is universal.

• **Total cost of ownership.** When the total cost of application ownership is calculated, the ASP model is usually much less expensive. As noted, the reasons include smaller or nonexistent upfront equipment costs; fees based on usage or transaction, rather than on dedicated software licenses; lower ongoing support and maintenance costs; and faster deployment, including deployment of upgrades and patches.

Conclusion
In summary, ASPs allows small- to medium-sized businesses access to sophisticated, full-featured and tightly integrated business applications that would normally be cost prohibitive. They also enable businesses to precisely control their total cost of technology ownership and to focus on their core businesses.

XATANET makes sophisticated and otherwise unaffordable applications available to smaller fleets. Indeed, with the ASP model, companies of all sizes can install, utilize and pay for only those applications that benefit their organization today and expand their use over time, enabling them to gain immediate value at a lower cost of entry, while retaining the ability to scale up their solutions as their operations evolve.

▶ XATANET DETAILS

XATANET is quickly implemented by fleets of all sizes, easily expands with your business, and immediately improves the efficiency of your fleet.

XATANET is ideal for organizations that seek to eliminate the startup costs and lengthy implementation times typically associated with fleet management solutions. XATANET brings fleet intelligence within easy, no-risk reach to even the most budget-constrained company.

XATANET allows fleets of all sizes to install, utilize and pay for only those applications that benefit their organization today, gaining immediate value at a lower cost of entry, while retaining the ability to expand their use over time as fleet operations evolve.

A XATANET solution is comprised of four primary components as described below:

Applications (Service Packages)
Web-enabled applications to manage and monitor your fleet that are bundled into service packages designed to match your operational needs.

Onboard Hardware
Mobile computing modules that collect, store and intelligently manage data and communications, including GPS and wireless communications hardware.

Driver Displays
Touch-screen driver displays that are mounted in the cab of the truck for capturing and communicating fleet information.

Communications
Patented technologies for utilizing lowest cost communication methods via access to wireless networks to synchronize trip and driver data, dispatch drivers, and maximize efficiency.

XATANET Specifications:

Model
XATA Hosted & Managed

Description
Flexible, expandable, online fleet management solution that is easy to use and delivers a rapid return on investment

Platform
Web-based

GPS
Included

Wireless
Included

Applications
Grouped by service package

Cost
Initial in-vehicle equipment cost
Monthly service fee

Support
Standard Support & On-line training included, premium support available for purchase

Security
Protected environment to ensure safety and security, daily backups complete with offsite storage and disaster recovery

Upgrades
Included for purchased service packages

▶ APPLICATION SERVICE PACKAGES

XATANET's applications are bundled into 4 Service Packages, conveniently designed to target specific operational needs. This modular approach enables you to expand services over time as your fleet or your demands increase.

Click any of the application names below for details about the powerful functionality built into XATANET.

BRONZE
- **Asset Tracking** – *real-time visibility of drivers, vehicles and deliveries*
- **Operation Profile** – *up-to-date fleet performance analysis*
- **Daily Mileage** – *support for preventive maintenance and lease-billing calculations*

SILVER
- **Fuel Tax** – *automates fuel tax reporting at state line crossings*
- **2-Way Messaging** – *two-way messaging and one-touch driver feedback*
- **Black Box** – *second-by-second record of critical vehicle parameters*
- **Diagnostic Warning** – *Receive vehicle alerts before problems occur*

GOLD
- **DOT Logs** – *automates all data capture and log handling*
- **Trip Management** – *monitor performance by vehicle, driver and route*

PLATINUM
- **SmartRoute** – *monitor route progress and delivery status in real-time*

XATANET Service Packages:

Bronze
- Asset Tracking
- Operation Profile
- Daily Mileage

Silver
Bronze plus:
- Fuel Tax
- Black Box
- Diagnostic Warning
- 2-Way Messaging

Gold
Bronze & Silver plus:
- DOT Logs
- Trip Management

Platinum
Bronze, Silver & Gold plus:
- SmartRoute

▶ **BRONZE** PACKAGE	
Asset Tracking *Real-time visibility of drivers, vehicles and deliveries* Improve customer service by capturing accurate vehicle location information. Improve routing with time, distance and economy data. And intelligently choose back haul assignments based on real-time information. XATANET provides a complete set of resources to improve productivity, efficiency, and customer service. Other features include: • Complete route records for productivity and efficiency analysis • Bread crumb and interactive mapping • Accurate, on-demand vehicle locations • Accurate arrival and departure times	**Operations Profile** *Up-to-date fleet performance analysis* Improve fuel economy. Boost engine performance. Improve safety. The onboard computer collects data on vehicle operations, activities and events, comparing real-time data with historical trip, segment and driver information. The operations profile ensures you see the information that will help you intelligently analyze your fleet, including: • Speed, economoy and load profiles • Torque compliance • Monitors engine idling to decrease engine wear and improve fuel performance • Analyzes "bumper riding" • Records stops, idle times and fuel data • Analyzes route delays and delay times • MPG by speed range is the biggest
Daily Mileage *Support for preventive maintenance and lease-billing calculations* XATA automatically records odometer readings at the end of each day to support lease-billing calculations and help you stay on top of scheduled maintenance. Manual readings by drivers are eliminated entirely, ensuring accurate mileage reports and greater productivity. Reports are available online in an easy-to-use format.	

▶ **SILVER** PACKAGE

Fuel Tax *Automates fuel tax reporting at state line crossings* Track and record vehicle location, mileage and fuel consumption at state line crossings to support automated fuel tax reporting. XATA automatically records stateline crossings and fuel consumption, so you can eliminate the productivity drain on your drivers. • Eliminate driver trip reports • Eliminate costly fines • Reduce office paperwork • Reduce tax preparation time • Automate recording of state line crossings	**E-mail Select** *2-way messaging and one-touch driver feedback to streamline communication and cut costs* Communications slow down your drivers. Eliminate the time they spend on the phone or responding to inquiries. Email Select utilizes two-way interactive communication that doesn't slow down the driver. With your own custom multiple choice responses, drivers can respond with one touch of the display screen. E-mail Select alerts drivers economically of trip changes, stop instructions or back haul requests. It can be effectively used to divert drivers from delay situations and keep deliveries on track
Black Box Accident Reconstruction *Second-by-second record of critical vehicle parameters* XATA collects a record of vehicle data whenever rapid acceleration or deceleration occurs. This second-by-second data allows you to intelligently analyze accidents or other vehicle events, such as damaged cargo. Protect your fleet from potential liabilities and help educate drivers with specific data from their own vehicle.	**Diagnostic Warnings** *Get vehicle alerts before problems occur* XATA collects and communicates engine and vehicle diagnostic information at all times. By plugging into the tractor's J1708 bus, XATA provides real-time reporting of ABS sensors, coolant levels, fuel temperatures, and more. Stay one step ahead of scheduled maintenance and spot trends or problems before they occur.

▶ **GOLD** PACKAGE	
Automated DOT Logs *Automates all data capture and log handling, leaving drivers free of paperwork and delays* Fully compliant with federal regulations, XATANET automates the entire process of collecting data and transforming logs into reports for pre- and post- trip inspections. DOT logs are electronically sent via batch and/or wireless transfer from the vehicle. Saves drivers from the unnecessary hassle of preparing paperwork or processing logs. Ensuring your fleet remains fully DOT compliant, the Gold Package includes wireless communication and driver displays that automatically display drive time to drivers. A fully compliant log can be recalled at anytime on the display.	**Trip & Driver Management** *Monitor performance by vehicle, driver and route* Improving performance in your fleet comes from individual improvements. Trip & Driver Management allows you to analyze individual driver and vehicle performance, so you can spot trends or problems that might be solved by better planning or training. Online reports organize vehicle activities for route and customer analysis. And, like all of XATA's applications, learned standards help you to analyze information faster and quickly know what matters.
▶ **PLATINUM** PACKAGE	
SmartRoute *Monitors route progress and delivery status in real-time* When a customer calls asking for the status of a delivery, SmartRoute provides instant real-time answers to both the route progress and ETA. Dispatchers can locate the route and driver through a simple online interface — without contacting the driver. SmartRoute automates and simplifies the process of monitoring delivery status. The XATA system can track vehicles as they leave the yard, updating ETAs and alerting dispatchers. Like all of XATA's software, SmartRoute makes sure you are alerted to anything out of the ordinary, so you can proactively communicate with customers before they call you.	

▶ DRIVER DISPLAYS

XATANET Micro-Display
XATANET's touch-screen driver displays save time, money and improve productivity

The XATA Application Module (XAM) uses the display to feed routes, cargo data, stop activities, along with real-time intelligence based on ongoing events to the driver. With the ability to monitor fuel economy, ETA, or time clocks in real-time, drivers can help ensure your fleet reaches its optimum performance.

▶ ONBOARD HARDWARE

XATA Application Module (XAM)
XATANET's integrated onboard computer and communications module

The compact, rugged XAM incorporates a powerful microprocessor, wireless communications, and a twelve-channel GPS receiver all housed in an industrial aluminum alloy base with a UV resistant plastic dome. It can comfortably reside on the rooftop or in the back of the cab.

- 32-bit processor
- 20MB memory
- GPS receiver
- Multiple communication options

The XAM connects to the tractor's J1708 bus to listen for vehicle and diagnostic information. Two analog inputs monitor fuel and brakes, and the entire system collects, stores and analyzes data onboard, reducing the amount (and cost) of wireless communication.

▶ **WIRELESS** COMMUNICATIONS	
"Least Cost" Communications *XATA enables you to select the wireless services that best suits your needs, including 802.11 WiFi, cellular or satellite.* Through the intelligence built into the system, XATA provides customers with the flexibility to deliver information in a *least cost* manner, such as 802.11 WiFi networks where data and communications are batched and transmitted in the yard. • Keep complete visibility over your mobile assets • Maintain anytime, anywhere communication with drivers • Control communication costs	**XATANET Communication Options:** • 802.11 wireless radio • Cingular packet data radio • Orbcomm Satellite Modem • **Sprint PCS (CDMA 1xRTT, 1900 MHz)**

XATA Application Module (XAM) Installation to a VIMX4

QTY	PART NO.	ITEM DESCRIPTION
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QTY	PART NO.	ITEM DESCRIPTION

XM-04xx PARTS LIST

QTY	PART NO.	ITEM DESCRIPTION
1	SA-00xx-xx	XATA Application Module
4	HW-0010-11	Bolt, ¼-20 x 0.75"
4	HW-0010-12	Washer, ¼
1	CA-000x	XAM Drop Cable Assembly (shipped separately)
1	ME-0039-0x	XAM Mounting Bracket (shipped separately)
1	VK-032x	ORBCOMM Antenna Kit (shipped separately if required)

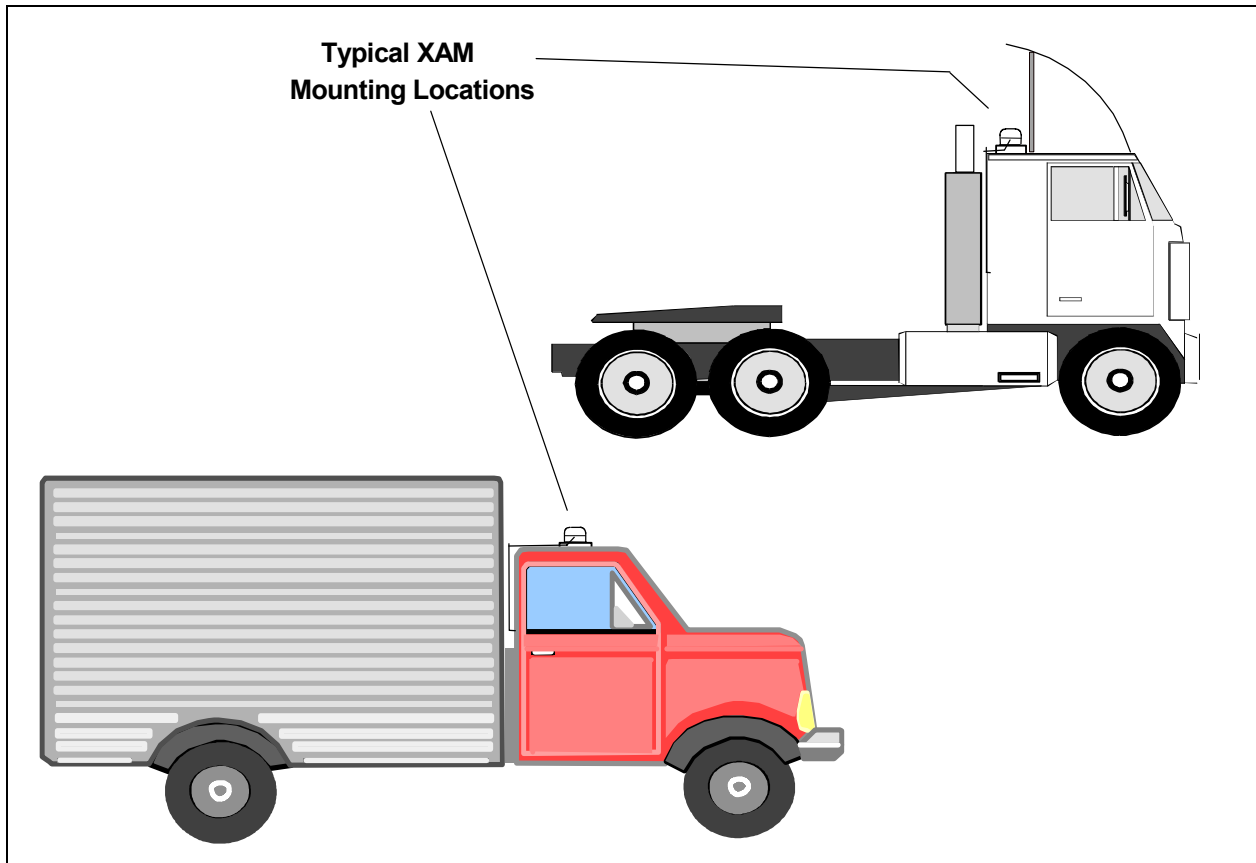## Plan the locations of the parts that make up the Onboard System

The Onboard System consists of these components: the XAM; the XAM Mounting Bracket; the Onboard Installation Kit; the XAM Drop Cable; the Driver Computer; and, if required, the ORBCOMM Antenna Kit (see the individual installation guides). The Drop Cable connects the XAM to the VIMX4 (from the Installation Kit). The wires or cable in the Electrical Kit connects Power, Ground, and Vehicle Signals to the VIMX4. The VIMX4 DC Cable connects to the Driver Computer. It is best to install the Installation Kit first, then the Driver Computer, and then the XAM.

XATA Application Module Location

1. The XAM must be mounted above any large metal surfaces. The XAM Mounting Bracket should be installed directly to the cab and positioned away from other Antennas on the cab. If the XAM has ORBCOMM communications see special mounting instructions in the ORBCOMM Antenna Installation Guide. Optional mounting brackets may be purchased from XATA. Figure 1 shows two typical mounting locations.

2. Securely fasten the XAM Mounting Bracket to the vehicle. Use lock washers on the bolts.

3. Securely fasten the XAM to the Mounting Bracket with the included bolts and washers.

4. Remove the protective cap on the XAM connector and connect the Drop Cable to the XAM. To keep moisture out of the connector it is very important that the cable is hand tighten securely and then using a pliers on the connector tighten the connector an additional 1/8th of a turn. The XAM connector has a Corrosion Preventive Compound on the contact pins.

5. Route the Drop Cable between the XAM and the VIMX4. Use an existing opening in the cab or drill a 7/8" hole and install the included grommet to protect the cable.

6. Secure the Drop Cable along the way with the included cable tie bases and cable ties. Clean and dry the area where the cable tie bases are placed. Stay away from sharp edges, moving parts, hot surfaces, tight bends, and cable stress. Do not damage the cable by over tightening the cable ties. Verify the Drop Cable does not interfere with the normal operation of the vehicle.

7. Connect the Drop Cable to the XATALink connector on the VIMX4 and hand tighten the connector securely. The XAM is now installed and it will power up.

8. To check the operation of the XAM the vehicle needs to be outside in an area with a clear view of the sky and the Driver Computer Service Parameters must be setup.

9. To check GPS operation touch the READY FOR NEW TRIP screen on the Driver Computer to display the following sequence of screens:

NEW-TRIP   SERVICE
COMM-MSGS MESSAGES
 	
EXIT
	DIAGNOSTICS
	
	                    CLEAN
	SET-UP ADJS
		GNRL ENGIN XID
		          SPEED EVNT
		   FUEL GPST MEM
		   BRAKE WCOM ATA
			STATUS:NORMAL
			LAT = 044º 46' 48.546" N
			LON = 093º 48' 08.120" W
			DATE:05-23 10:50:45

10. Touch *SERVICE* on the screen shown at the left, touch *DIAGNOSTICS* on the next screen, then touch *GPST* on the Diagnostics Menu to display the GPS Status screen. The status line shows *INITIALIZING* or *OBC NO RESP* while the XAM is powering on and *BLOCKED* while the GPS is acquiring satellites. This can take up to seven minutes. The status should then change to *NORMAL* and a latitude / longitude reading should be displayed. If the status remains *BLOCKED* the XAM may not be properly positioned.

Figure 1. Typical XAM Mounting Location on Straight Truck and Tractor

Warning:
Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

RF Exposure Warning:

When installed as directed, this equipment complies with radiation exposure limits for general population/uncontrolled exposure. To ensure user's safety and to satisfy RF exposure requirements for mobile transmitting devices, this unit must be installed so that a minimum separation distance of 20 cm is always secured between the transmitting structure and the body of the user or nearby persons.

NOTE: This equipment has been tested and found to comply with the limits for Class B digital devices, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio / TV technician for help.

XATA Application Module (XAM) Installation

QTY	PART NO.	ITEM DESCRIPTION
		XM-05xx PARTS LIST
1	SA-00xx-xx	XATA Application Module
4	HW-0010-11	¼-20 x 0.75" Bolt
4	HW-0010-12	¼" Washer
1	VK-100x	Onboard Electrical Kit (shipped separately)
1	CA-000x	XAM Drop Cable Assembly (shipped separately)
1	XP-000x	Driver Display Kit (shipped separately)
1	ME-0039-0x	XAM Mounting Bracket (shipped separately)
1	VK-032x	ORBCOMM Antenna Kit (shipped separately if required)

Before the Installation

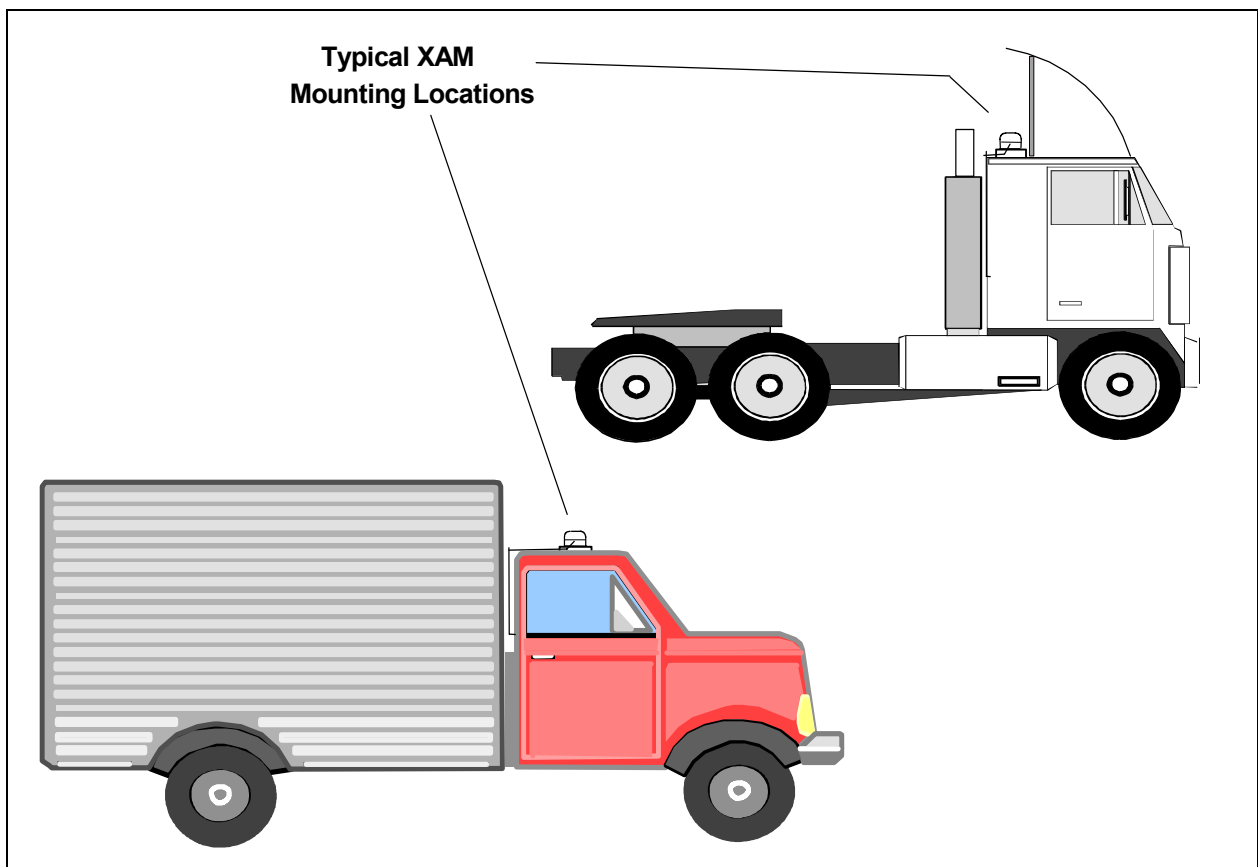Record the following information for entry into the Host System:

XAM Serial Number	
Vehicle ID	
Odometer Reading	

Plan the locations of the parts that make up the Onboard System

The Onboard System consists of these components: the XAM; the XAM Mounting Bracket; the Electrical Kit; the Drop Cable; the Driver Display Kit; and, if required, the ORBCOMM Antenna Kit (see the individual installation guides). The Drop Cable connects the XAM to the XATA Interface Module (XIM) in the Electrical Kit. The wires or cable in the Electrical Kit connects Power, Ground, and J1708 Signals to the XIM. The cable in the Display Kit connects the Display to the XIM. **It is best to install the Electrical Kit first, followed by the Driver Display Kit, and then the XAM.**

XATA Application Module Location

1. The XAM must be mounted above any large metal surfaces. The XAM Mounting Bracket should be installed directly to the cab and positioned away from other Antennas on the cab. If the XAM has ORBCOMM communications see special mounting instructions in the ORBCOMM Antenna Installation Guide. Optional mounting brackets may be purchased from XATA. Figure 1 shows two typical mounting locations.

2. Securely fasten the XAM Mounting Bracket to the vehicle. Use lock washers on the bolts.

3. Securely fasten the XAM to the Mounting Bracket with the included bolts and washers.

4. Remove the protective cap on the XAM connector and connect the Drop Cable to the XAM. To keep moisture out of the connector it is very important that the cable is hand tighten securely and then using a pliers on the connector tighten the connector an additional 1/8th of a turn. The XAM connector has a Corrosion Preventive Compound on the contact pins.

5. Route the Drop Cable between the XATA Application Module and the XIM. Use an existing opening in the cab or drill a 7/8" hole and install the included grommet to protect the cable.

6. Secure the Drop Cable along the way with the included cable tie bases and cable ties. Clean and dry the area where the cable tie bases are placed. Stay away from sharp edges, moving parts, hot surfaces, tight bends, and cable stress. Do not damage the cable by over tightening the cable ties. Verify the Drop Cable does not interfere with the normal operation of the vehicle.

7. Connect the Drop Cable to the XIM and hand tighten the connector securely. The XAM is now installed and it will power up. The XAM will be fully operational in seven minutes.

8. If the Driver Display is installed it will display WAITING FOR VEHICLE SETUP.

9. To send a Vehicle Setup to the XAM the vehicle needs to be outside in an area with a clear view of the sky.

Figure 1. Typical XAM Mounting Location on Straight Truck and Tractor

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RF Exposure Warning:

When installed as directed, this equipment complies with radiation exposure limits for general population/uncontrolled exposure. To ensure user's safety and to satisfy RF exposure requirements for mobile transmitting devices, this unit must be installed so that a minimum separation distance of 20 cm is always secured between the transmitting structure and the body of the user or nearby persons.

NOTE: This equipment has been tested and found to comply with the limits for Class B digital devices, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced Radio/TV technician for help.