

# StorTrends® iTX Disaster Recovery Guide: Failover and Failback Operations



© Copyright American Megatrends, Inc.

All rights reserved.

American Megatrends, Inc.

5555 Oakbrook Parkway, Suite 200

Norcross, GA 30093

## TRADEMARK AND COPYRIGHT ACKNOWLEDGMENTS

This publication contains proprietary information that is protected by copyright. No part of this publication can be reproduced, transcribed, stored in a retrieval system, translated into any language or computer language, or transmitted in any form whatsoever without the prior written consent of the publisher, American Megatrends, Inc. Trademarks and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. American Megatrends, Inc. disclaims any proprietary interest in trademarks and trade names other than its own.

## FOR ADDITIONAL INFORMATION

Call American Megatrends at 1-800-U-BUY-AMI for additional information. You can also visit us online at [ami.com](http://ami.com).

## LIMITATIONS OF LIABILITY

In no event shall American Megatrends be held liable for any loss, expenses, or damages of any kind whatsoever, whether direct, indirect, incidental, or consequential, arising from the design or use of this product or the support materials provided with the product.

## LIMITED WARRANTY

No warranties are made, either express or implied, with regard to the contents of this work, its merchantability, or fitness for a particular use. American Megatrends assumes no responsibility for errors and omissions or for the uses made of the material contained herein or reader decisions based on such use.

**DISCLAIMER:** Although efforts have been made to assure the accuracy of the information contained here, American Megatrends expressly disclaims liability for any error in this information, and for damages, whether direct, indirect, special, exemplary, consequential or otherwise, that may result from such error, including but not limited to the loss of profits resulting from the use or misuse of the information contained herein (even if American Megatrends has been advised of the possibility of such damages). Any questions or comments regarding this document or its contents should be addressed to American Megatrends at the address shown on the back cover of this document.

American Megatrends provides this publication "as is" without warranty of any kind, either expressed or implied, including, but not limited to, the implied warranties of merchantability or fitness for a specific purpose. Some states do not allow disclaimer of express or implied warranties or the limitation or exclusion of liability for indirect, special, exemplary, incidental or consequential damages in certain transactions; therefore, this statement may not apply to you. Also, you may have other rights that vary from jurisdiction to jurisdiction. This publication could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. American Megatrends may make improvements and/or revisions in the product(s) and/or the program(s) described in this publication at any time.

## Summary

StorTrends storage appliances from American Megatrends expertly manage the everyday storage requirements of small to medium businesses, thanks to the innovative ideas and technologies featured in StorTrends iTX Data Storage Software. With a single appliance, organizations can address the entire storage needs of today's increasingly complex IT storage environments –file servers, application storage for Oracle® and SQL databases, high availability, remote replication, disaster recovery and much more.

StorTrends iTX is refreshingly easy to use and deploy, and setting up its features is a snap. One of the key strengths of StorTrends iTX – the robust Disaster Recovery module – can be fully configured in mere minutes. Thanks to the intuitive design of StorTrends iTX, ensuring that the systems in use are properly configured for successful disaster recovery is a simple task. This document will outline a step by step process of how to guide a StorTrends iTX user through a recovery of a volume.

## Overview

The typical steps involved in the procedure for effectively and quickly recovering from a disaster (power outage, network trouble, hardware malfunction, etc.) are straightforward and simple. The following sequence describes a typical recovery scenario with two (primary and secondary) StorTrends storage appliances (IP-SAN or NAS) connected via Snapshot Assisted Replication:

1. Disaster Occurs
2. Disconnect (if needed)
3. Fail Over
4. Activate DR Site
5. DR Recovery
6. Get in Sync
7. Fail Back

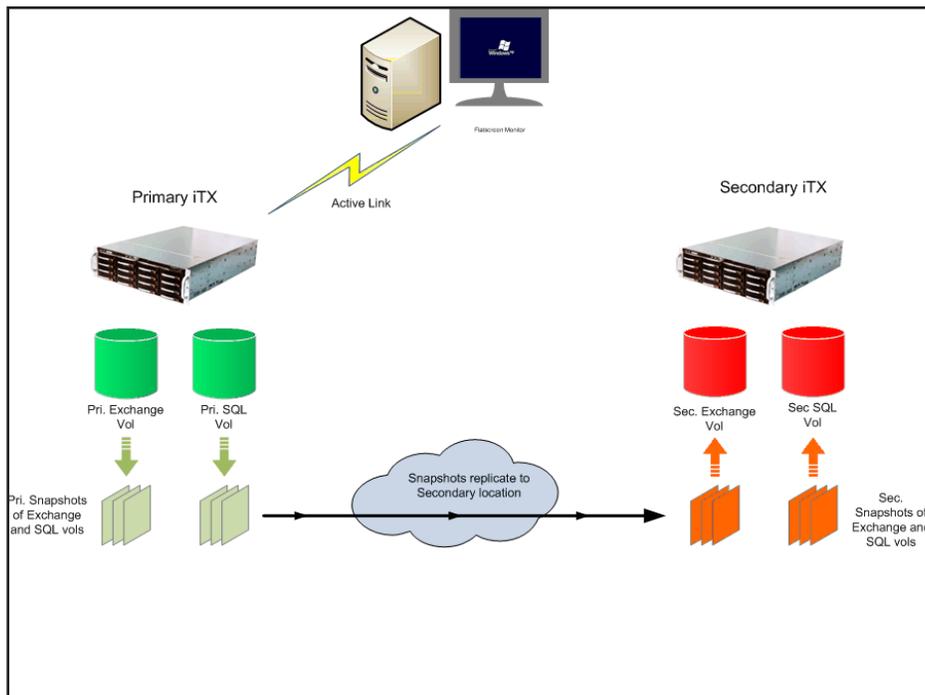


Figure 1: Original configuration, with server(s) connected to two StorTrends iTX volumes, replicating snapshots to secondary iTX volumes through a WAN

## 1. Disaster Occurs

Some of the most common causes for the loss of storage appliances are power outage, link failures, or similar catastrophes that remove the primary volumes from the setup. In the case of a failure, the steps to recovery are simple – thanks to the user friendly ManageTrends™ GUI featured in StorTrends iTX. The ManageTrends GUI includes easy-to-recognize icons and navigation, along with an intuitive help section should additional detailed information be needed during the recovery process.

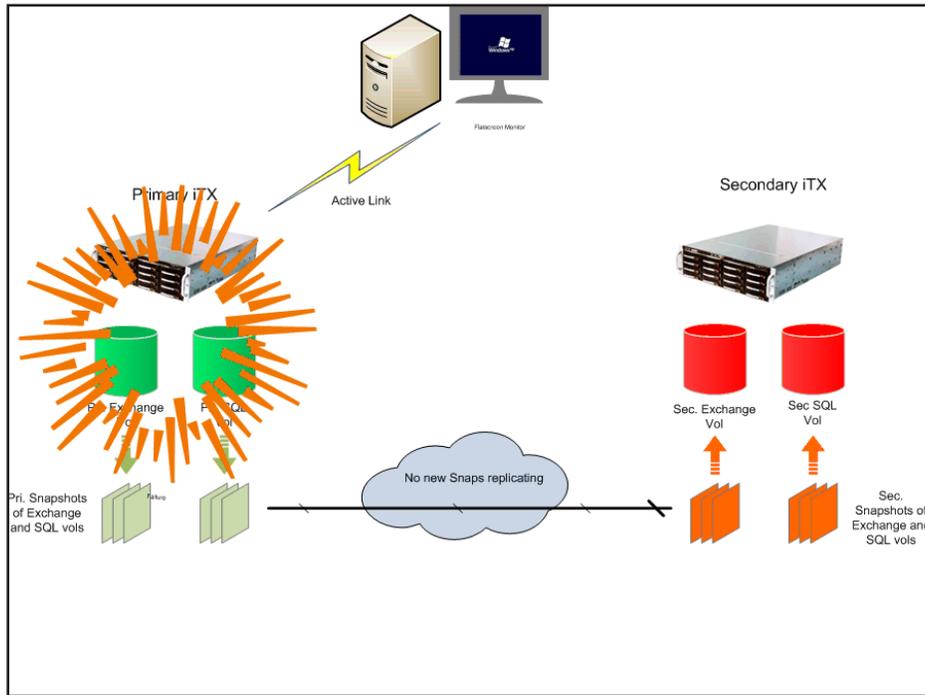


Figure 2: Failure of the volumes on the primary side

## 2. Disconnect (if needed)

For an IP-SAN volume, the first step required will be to logout of the target(s) from the initiator. Next, open the Microsoft iSCSI Initiator, select the connected target and then click the Details tab. Finally, check the Identifier box and then click the Log off button.

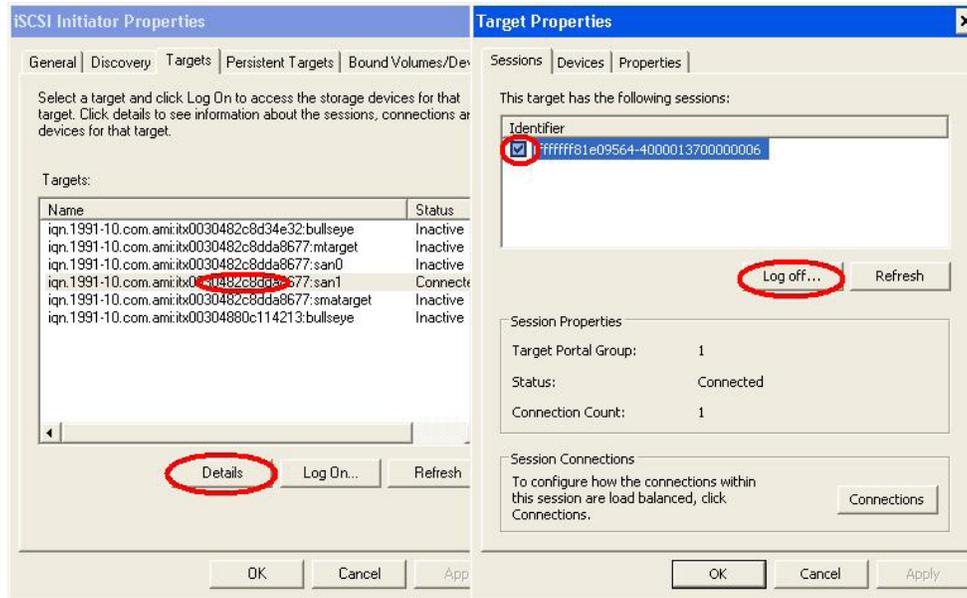


Figure 3: Screenshot of Microsoft initiator

## 3. Fail Over

After logging off the targets (not applicable to NAS), the next step is to fail the replication pair over to the secondary (hereafter referred to as "Box B"). To do so, first login to ManageTrends on the secondary unit (Box B). To get started, in the left pane of ManageTrends click Asynchronous Replication, then select Snap Assisted (SAR) underneath, then click the SAR pair name. Once the Snap Assisted Replication (SAR) Management page has loaded, select the Fail Over button at the bottom right of the screen.

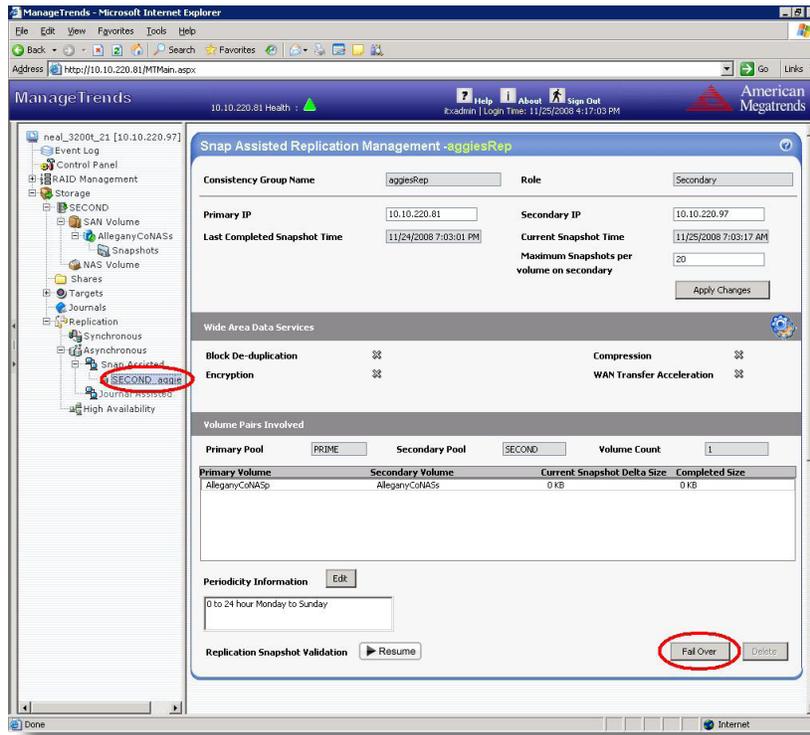


Figure 4: ManageTrends screenshot of secondary SAR pair; circle indicates where to click.

#### 4. Activate DR Site

Now that the SAR pair has failed over from the primary unit (hereafter referred to as “Box A”) to secondary unit (Box B), connect to the secondary volumes by using the iSCSI initiator or just mapping the drive depending on your volume type. Lastly, start a snapshot schedule on the new primary (Box B) to make sure that you maintain the same ability to avoid local failures as you did in the primary location (Box A). This gives you a functional backup storage unit, in case of a disaster in your primary data center.

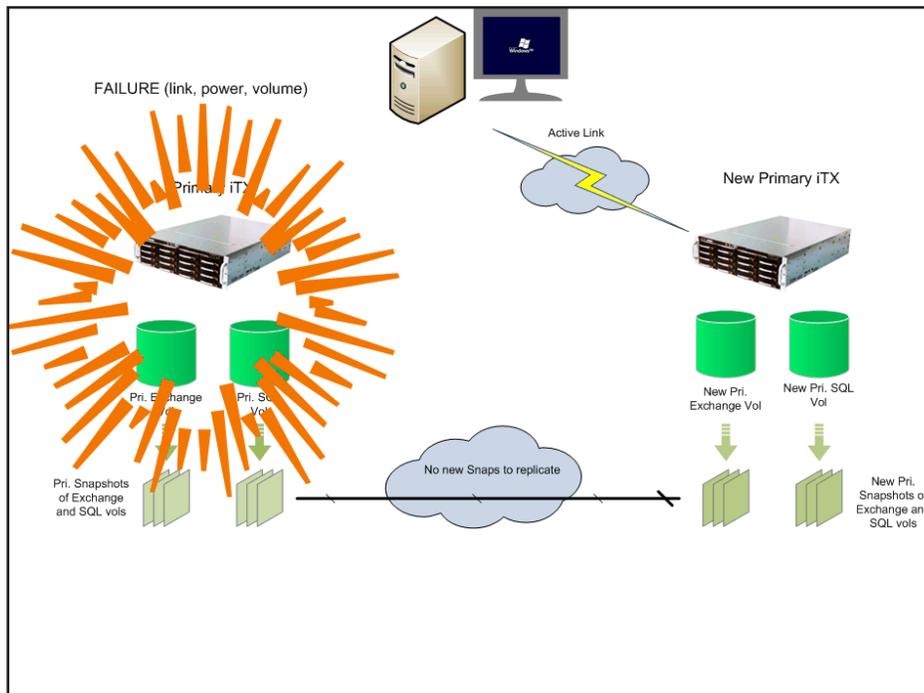


Figure 5: Connected secondary storage

## 5. DR Recovery

Depending on the urgency of the need for data backup to resume at the primary site (Box A), and the seriousness of the disaster, the new primary unit (Box B) can generally maintain the same load possibilities as the primary unit (Box A) and is only limited by bandwidth. A quick failover to the new primary (Box B) creates an opportunity to restore the primary site (Box A), either to come back on line once again as the primary unit, or to function in a new role as the secondary DR site for the new primary (Box B). To make the original primary location (Box A) a permanent secondary location, simply replace the original unit (Box A, assuming the disaster ruined the unit) and create a new SAR pair using the Replication Wizard in ManageTrends.

In this example, we will assume that the goal is to come back on line at the original primary location (Box A), and also that the disaster did not destroy the StorTrends appliance unit. (Note that if the StorTrends appliance had been destroyed, you would simply replace the damaged unit with a functioning one before coming to this step).

Once the original primary (Box A) is up and running, it can be joined back to the replication pair from the SAR Management page. To get started, in the left pane of ManageTrends click Asynchronous Replication, then select Snap Assisted (SAR) underneath, then click the SAR pair name. After the SAR Management page loads, click the Failback Join button; this will start the process of replicating the new snapshots that were taken since the failure.

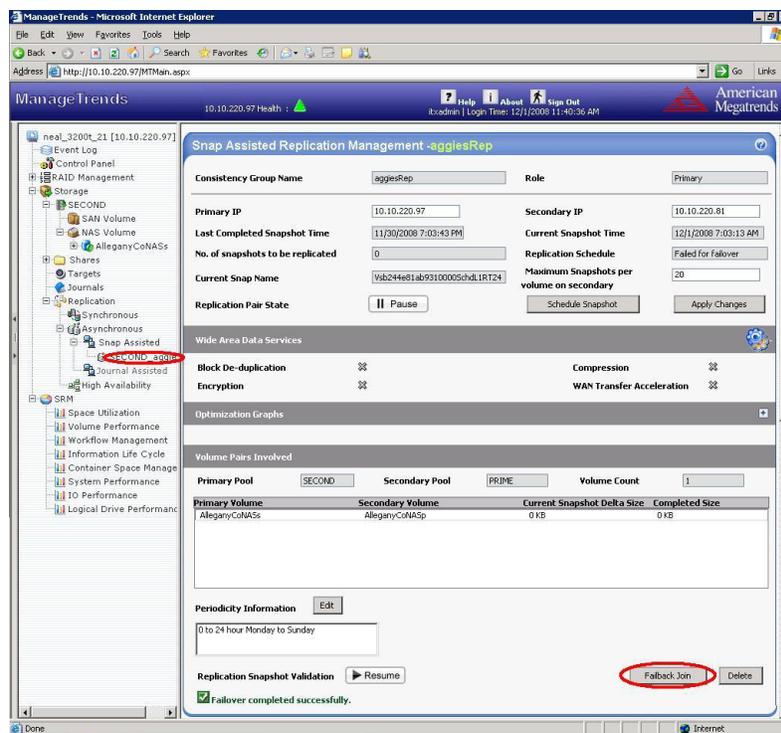


Figure 6: Failback Join screenshot in ManageTrends

## 6. Get in Sync

The next step in the process to restore the original primary unit (Box A) is to log out of all connections, and then allow a final scheduled snapshot to be taken on the original secondary unit (Box B) and sent to the original primary / new secondary (Box A).

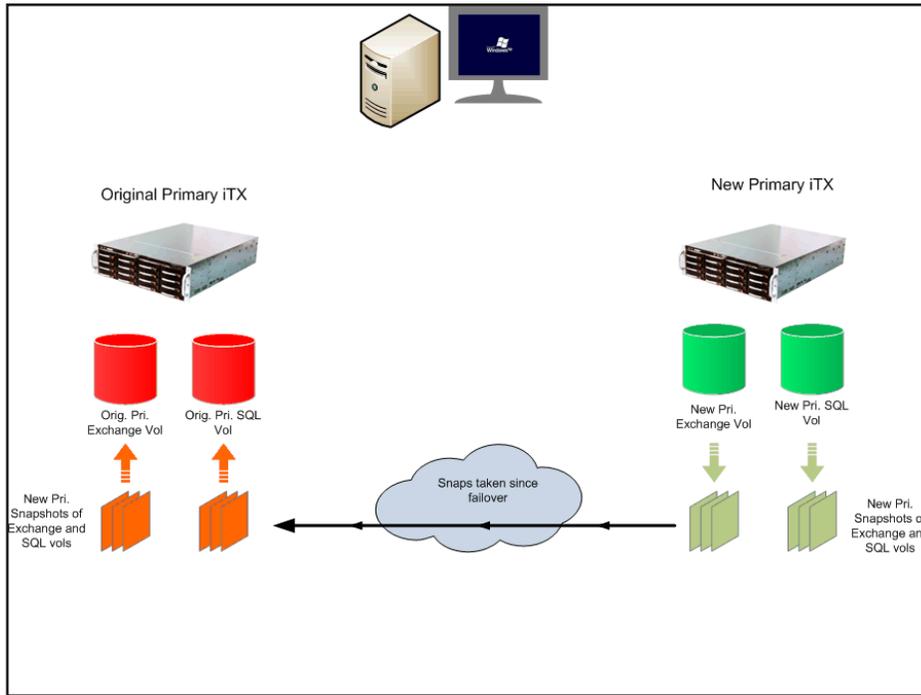


Figure 7: Replication to sync up the original primary (Box A) without I/O link

## 7. Fail Back

After all of the snapshots have been replicated to the original primary (Box A), the replication pair is now in sync. It is now possible to fail back to the original primary (Box A). To do so, as before click Asynchronous Replication in the left pane of ManageTrends, then select Snap Assisted (SAR), then click the SAR pair name. Once the Snap Assisted Replication Management page loads, click on the Fail Back button at the bottom right of the screen.

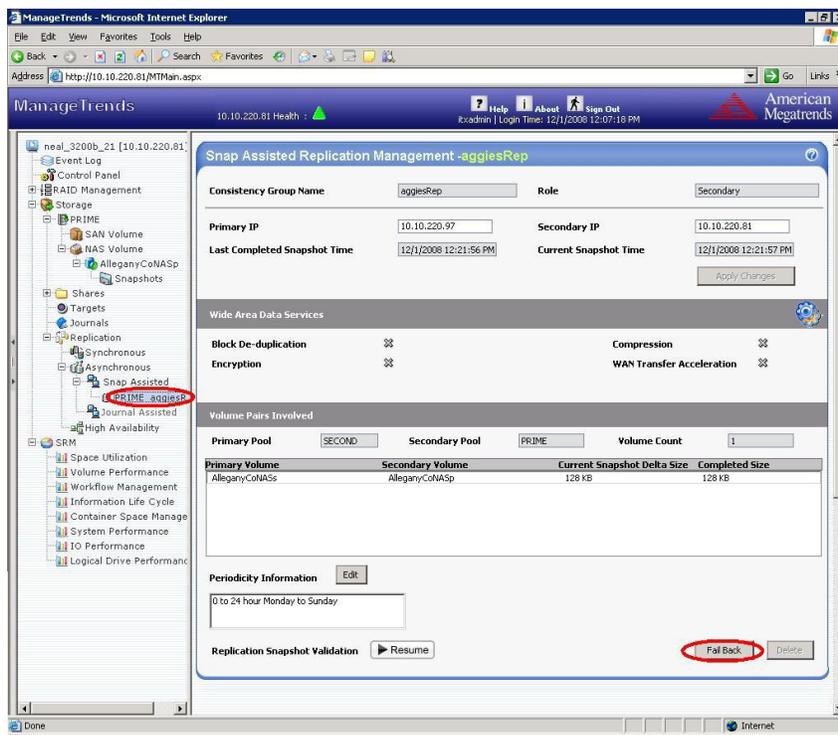


Figure 8: ManageTrends screenshot of Failback operation

---

After reconnecting to the primary unit (Box A) from the application servers, recovery is complete and the original configuration has been restored. Lastly, click the Schedule Snapshot to create a snapshot schedule on the restored primary (Box A) and ensure that the ability to recover from local failures is preserved.

## **Conclusion**

This document has outlined the simple process of recovering from a disaster and restoring the original primary unit in StorTrends iTX. Thanks to the simplicity of ManageTrends and its Replication Wizard, this process can be safely carried out with a minimum of time and effort.

If you wish to know more about Disaster Recovery in StorTrends iTX, please contact your StorTrends Sales Representative for additional information and assistance.

## ***About StorTrends from AMI***

AMI offers a wide array of disaster recovery and high availability solutions for your business needs. We provide services that range from storage needs analysis to the design and implementation of a custom disaster recovery solution. AMI's team of experienced Sales Representatives can help your business plan for when things are at their worst, while reducing the cost and complexity of your storage environment.

For more information on AMI StorTrends solutions, visit [www.StorTrends.com](http://www.StorTrends.com), email [sales@ami.com](mailto:sales@ami.com), or call AMI at 1--800-U-BUY-AMI.

This publication contains proprietary information that is protected by copyright. No part of this publication can be reproduced, transcribed, stored in a retrieval system, translated into any language or computer language, or transmitted in any form whatsoever without the prior written consent of the publisher, American Megatrends, Inc.

© American Megatrends, Inc.

All Rights Reserved



**American Megatrends Inc.**

**5555 Oakbrook Parkway, Suite 200**

**Norcross GA 30093 | t: 770.246.8600**

**Sales & Product Information**

**sales@ami.com | t: 800.828.9264**

**Technical Support**

**support@ami.com | t: 770.246.8645**

**www.ami.com**