



## **Total Access<sup>®</sup> 1100 Series**

**FTTN Broadband Access Systems**



# Total Access 1100 Series

## Innovative Solutions for FTTN Architectures

Wireline carriers are faced with the difficult challenge of transforming their existing networks to provide next-generation services, enabling not only voice and simple broadband connections to the Internet, but newer services like IPTV. The dynamics of these new services are constantly evolving, making it difficult to identify the right network architecture. Although fiber access technologies may provide the ultimate solution for addressing consumer access bandwidth, especially in greenfield deployments, the fact remains that there is a massive embedded base of copper access infrastructure. Technological advances, including VDSL2 and bonded ADSL2+, are enabling ultra-broadband speeds over copper, provided that loop lengths are reduced. ADTRAN's innovative Fiber to the Node (FTTN) broadband access systems dramatically lower the total cost of deployment in a FTTN architecture.

**Lowering the Total Cost of Ownership**  
ADTRAN's 1100 Series broadband access systems represent an innovative approach to the successful deployment of FTTN architectures. Recognizing the technological and economic barriers of traditional cabinet-based DSL deployments, ADTRAN® designed standalone, weatherproof FTTN systems to eliminate the need for expensive cabinet enclosures, heat exchangers and site construction, which account for a large portion of the total cost of deployment. Depending on the density, 1100 Series FTTN solutions can deliver services for 50 to 75 percent less than traditional cabinet-based DSLAMs, while dramatically reducing the initial circuit costs. This allows carriers to more effectively utilize the capacity of the copper network over the last mile.

**Residential Video Service**  
Premium video services have not only raised the bar for bandwidth requirements in the access network, but the customers' expectations of quality have increased by an order of magnitude as well. The key to delivering high bandwidth, high quality video service over VDSL2 and ADSL2+ technologies is reduced loop lengths. Given the loop length requirements, existing central office and cabinet locations are unable to provide video service to a large percentage of the customer base. Service providers must utilize solutions that allow them to cost-effectively push

fiber closer to the subscriber and increase the coverage area for video services. ADTRAN's Total Access® 1100 FTTN broadband access systems provide the flexibility and scalability to economically reduce the loop lengths and maximize the performance of VDSL2 and ADSL2+. With the feature set and functionality needed to offer broadcast and on-demand video services, the Total Access 1100 FTTN solutions provide the ideal solution for video service delivery over copper.

### The Product At-a-Glance

- Optimized for delivery of ultra-broadband video, voice and data services over copper
- Enables wireline carriers to cost-effectively reduce loop lengths in order to maximize the performance of VDSL2 and ADSL2+ access technologies
- Enables delivery of broadcast and on-demand video service
- Support for Quality of Service (QoS), multicast replication, and security features required for multiservice deployments
- Multi-Gigabit Ethernet uplink capacity
- Scalable from 24 to 192 ports per node
- Field-proven mechanical design facilitates the rapid deployment of services and eliminates the need for expensive enclosures and heat exchangers
- Flexible powering options (span, AC, and DC powering)
- Passive cooling eliminates noise in residential deployments
- Environmentally sealed and temperature-hardened design tailored for deployment in extreme environmental conditions
- Carrier-class reliability

### DEPLOYMENT COSTS OF CABINET vs. 1100 SERIES

Item Description	Cabinet DSLAM	Total Access 1100 Series
Cost of Cabinet	\$\$\$	None
Cabinet Protection and Wiring	\$\$	Integrated
Power System with Batteries	\$\$	\$ (span powering)
Power Pedestal	\$	None
Concrete Pad and Pad work	\$\$	None
Labor Cost	\$\$	\$
Cost of Crane	\$	None
Permits and Right of Way	\$\$	None
Site Prep	\$\$	None
Shipping	\$\$	\$
Solutions Engineering	\$\$\$	\$\$
Deployment Speed	Construction can take more than a month	1 day
Revenue Losses Due to Installation Delays for Construction	Variable	None
Cost of Land Purchase or Lease	Variable	None
Total Deployment Cost	\$25,000–\$35,000	\$5,000–\$7,000

\*Deployment costs only. Cost of the electronics are not included.



## ADTRAN Solutions for Broadband Access

ADTRAN is an established leader in broadband access. From our contributions in the development of industry standards to our superior customer service and product quality, ADTRAN has always delivered system solutions with flexibility and longevity. Whether it is consumer market Internet access and HDTV or business-class Ethernet service delivery – there is an ADTRAN system to support your network needs with the value you have come to expect.

### Ultra High-speed Internet Service

Video is not the only service driving the need for higher bandwidth. The Internet continues to play an increasing role in the delivery of entertainment and media services. Whether it is driven by online gaming, streaming video, or some other application, consumer demand for high bandwidth Internet services continues to escalate. Service providers must now respond with service offerings that enable subscribers to take advantage of these bandwidth-intensive Internet services. With their ease of deployment, ADTRAN's FTTH broadband access systems allow service providers to quickly respond to the demand for these high growth services.

### Total Access EMS

ADTRAN's Total Access EMS is a carrier class, scalable management system that enables a seamless integration of the Total Access 1100 Series broadband access systems into existing OSS systems. Providing full FCAPS functionality, the Total Access EMS can dramatically reduce the operational expenditures of the access network. An intuitive graphical user interface facilitates administrative tasks in a simple and efficient manner. Integrated management functions include monitoring, event notification, service provisioning and system configuration.

### Changing the Broadband Business Case

As service providers continue to address the deployment of triple-play services, ADTRAN FTTH solutions will play a key role in shortening copper loops to enable their delivery. The flexibility and innovative design of these systems allows service providers to use them to economically address both legacy and next generation services while providing a migration path toward a converged network architecture. The ADTRAN 1100 Series scale from 24 ports to 192 ports and are robust enough to go anywhere in the outside plant—giving service providers unmatched flexibility to deploy broadband services.

Figure 1: Downstream Bandwidth per Household (Typical IPTV Service)

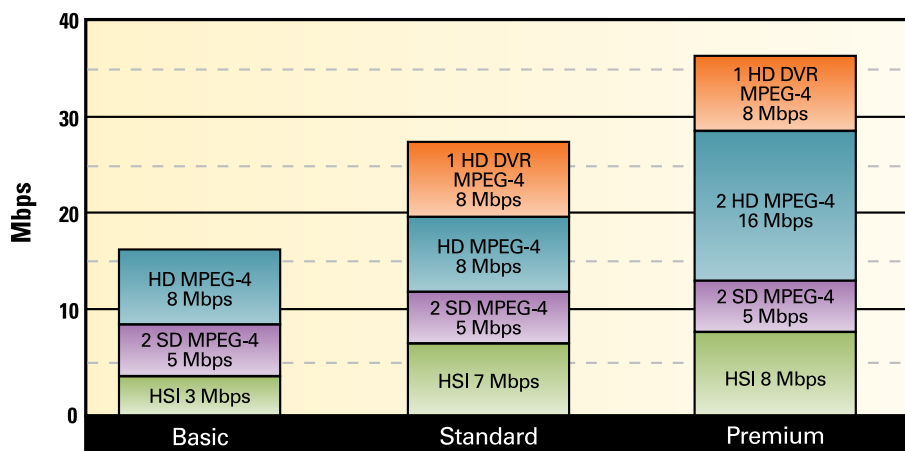
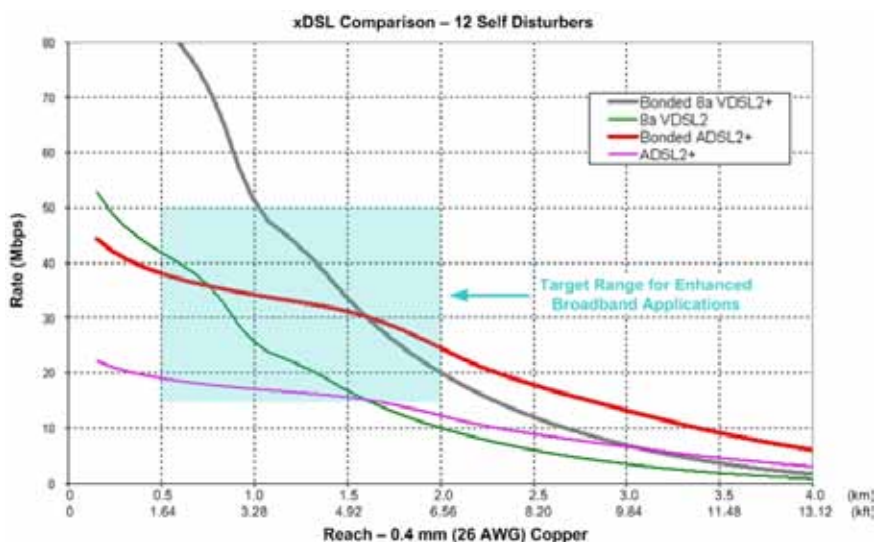


Figure 2: Rate/Reach Comparison of xDSL Technologies





For the regional office nearest you,  
visit [www.adtran.com/regional](http://www.adtran.com/regional)

#### ADTRAN, Inc.

Attn: Carrier Networks  
901 Explorer Boulevard  
Huntsville, AL 35806

P.O. Box 140000  
Huntsville, AL 35814-4000

256 963-8000 voice  
256 963-8699 fax

#### General Information

800 9ADTRAN  
info@adtran.com  
[www.adtran.com](http://www.adtran.com)

#### Pre-Sales Technical Support

800 615-1176  
application.engineer@adtran.com  
[www.adtran.com/support](http://www.adtran.com/support)

#### Where To Buy

877 280-8416  
channel.sales@adtran.com  
[www.adtran.com/where2buy](http://www.adtran.com/where2buy)

#### Post-Sales Technical Support

888 4ADTRAN (888-423-8726)  
support@adtran.com  
[www.adtran.com/support](http://www.adtran.com/support)

Visit us online at,  
[www.adtran.com](http://www.adtran.com)

#### ADTRAN, Inc. International Department

901 Explorer Boulevard  
Huntsville, Alabama 35806  
USA  
[www.adtran.com/global](http://www.adtran.com/global)

#### U.S. Headquarters

+1 256 963 8000  
+1 256 963 6300 fax  
international@adtran.com

#### International Customer Service

+1 256 963 8716 voice

#### Asia—Beijing, China

+86 10 8527 5011  
+86 10 8527 5010 fax  
sales.china@adtran.com

#### Hong Kong

+852 3187 7111  
+852 2116 4084 fax  
sales.asia@adtran.com

#### Asia—Bangkok, Thailand

+66 2 610 3724  
+66 2 610 3601 fax  
sales.asia@adtran.com

#### Asia—Singapore

+65 6232 2305  
+65 6232 2888 fax  
sales.asia@adtran.com

#### Australia/New Zealand— Melbourne, Australia

+61 3 9658 0500  
+61 3 9658 0599 fax  
sales.australia@adtran.com

#### Australia/New Zealand— Sydney, Australia

+61 2 8456 0101  
+61 2 8456 0105  
sales.australia@adtran.com

#### Canada—Montreal, Quebec

+1 877 923 8726  
+1 514 940 2888  
+1 514 989 3198 fax  
sales.canada@adtran.com

#### Canada Headquarters—Toronto, Ontario

+1 877 923 8726  
+1 514 989 3198 fax  
sales.canada@adtran.com

#### EMEA Regional Headquarters— United Kingdom

+44 1256 884055  
+44 1256 884056 fax  
sales.emea@adtran.com  
sales.europe@adtran.com

#### Mexico/Central America/ Caribbean—USA

+1 256 963 4833  
+1 256 963 6300 fax  
sales.latin@adtran.com  
sales.caribbean@adtran.com  
sales.mexico@adtran.com  
sales.ai@adtran.com

#### South America—USA

+1 256 963 3113  
+1 256 963 6300 fax  
sales.latin@adtran.com  
sales.brazil@adtran.com  
sales.ai@adtran.com



ADTRAN is an ISO 9001, ISO 14001,  
and a TL 9000 certified supplier.

CN033A June 2008  
Copyright © 2008 ADTRAN, Inc.  
All rights reserved.

ADTRAN believes the information in this publication to be accurate as of publication date, and is not responsible for error. Specifications subject to change without notice. ADTRAN and Total Access are registered trademarks of ADTRAN, Inc. and its affiliates in the U.S. and certain other countries. All other trademarks mentioned in this document are the property of their respective owners. Five-year warranty applies only to products sold in North America.

ADTRAN products may be subject to U.S. export controls and other trade restrictions. Any export, re-export, or transfer of the products contrary to law is prohibited. For more information regarding ADTRAN's export license, please visit [www.adtran.com/exportlicense](http://www.adtran.com/exportlicense)