

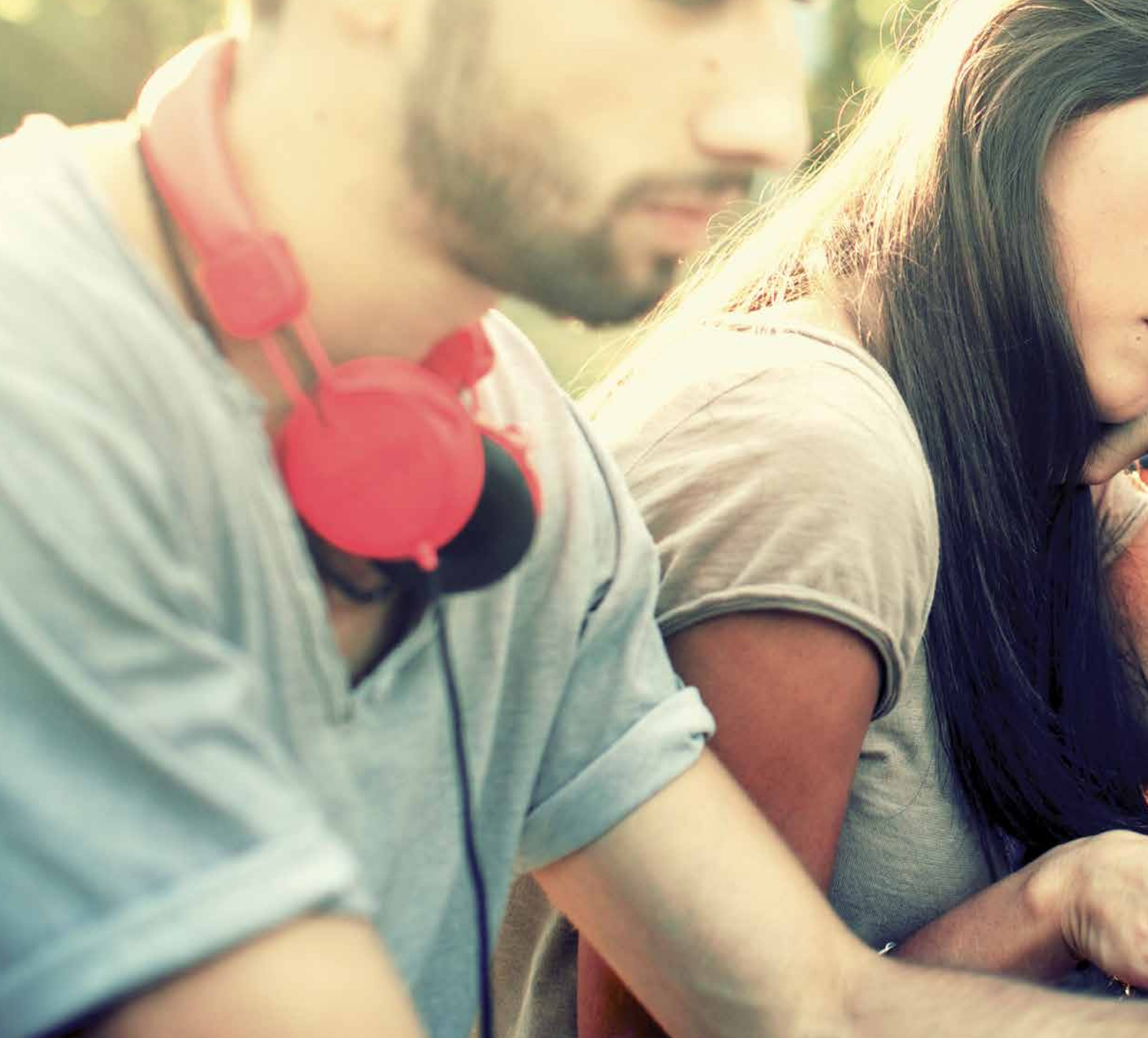
# ENABLING COMMUNITIES CONNECTING LIVES

ADTRAN





*THE DEMAND  
FOR BANDWIDTH  
IS INFINITE.*



# BANDWIDTH



---

## ***THINGS ARE CHANGING***

The rate of change is constantly accelerating. This is evident when you look at the network and realise that in less than a decade we have seen the emergence and domination of smart phones, tablets and a wealth of connected devices. Where only a few short years ago having an Internet connection was a luxury, today it is a necessity. This is true not only at home or work – but anywhere at any time. The demand for bandwidth is infinite, and networks must evolve to meet this need. That leads us to the Gigabit network.



---

# THE NEED FOR GIGABIT

Gigabit networks are still in their infancy. Many question the need for Gigabit speeds, when we have not fully utilised the bandwidth available today. But others have embraced the vision for Gigabit services, and are using it as a force for change within the communities they serve. Gigabit services connect the citizens of a community and enable growth and prosperity. Areas that were once desolate or dying have found new life through the emergence of Gigabit services. These ultra high-speed broadband networks are also serving as a catalyst for the future, bringing new jobs, new innovation and new beginnings.

*“Communities around the globe — from dense urban to sparse rural and everywhere in between — have determined that affordable high-speed broadband is no longer a nicety, but a requirement for economic prosperity and quality of life...”*

*“Deploying fiber rich Gigabit broadband is the logical way to go. It gives the network operator great flexibility to serve business and residences with a range of cost-effective options. We know that when broadband rates increase the global innovation engine creates new compelling applications that drive economic development and improve our lives.”*

Greg Whelan, Principal, Greywale Insights

---

# DRIVERS FOR GIGABIT COMMUNITIES



Education



Business and Job Growth



Improved HealthCare



Civic Life



Connected Homes



Municipal Services

Recent surveys have shown the momentum is just beginning. NTCA-The Rural Broadband Association released a survey stating 85 percent of responding service providers indicate they have long-term fibre deployment strategies.

In the past 12 months, ADTRAN has witnessed first hand the positive impact communities have enjoyed from these deployments. Some key benefits include:



## Economic Development

The availability of Gigabit throughout towns and cities has proven to attract new businesses to the area, stimulating local economies. According to a Fibre-to-the-Home (FTTH) Council study, communities with widely available Gigabit broadband access experience a 1.1 percent higher per capita GDP than areas without Gigabit. Cities in Mississippi are seeing this first hand as they transform from sleepy college towns to hubs for future business investment, attracting global companies creating thousands of local jobs.

## Education

Gigabit broadband is providing school districts with the necessary bandwidth to enable online education creating more personalised learning experiences as well as maximizing the benefit of E-rate funding projects. Schools throughout 15 Ohio districts are using Gigabit service to meet local educational mandates while transitioning from a structured to individualised learning experiences in the classroom. The technology is allowing networks, schools, administrators, teachers and students to communicate in new, innovative ways while learning at their own pace.

## Real Estate

A recent FTTH Council study showed that communities with access to fibre-delivered Internet can increase home values by up to 3.1 percent, or nearly \$5,500 on a median priced home of \$175,000. According to real estate agents in Oregon, this holds true as they are seeing a rise in Gigabit popularity in neighbourhood criteria. Agents have

reported an increase in homebuyers looking for properties specifically in areas currently deploying Gigabit, or expecting to in the near future.

## Telecommuting

Gigabit is opening the doors for increased work flexibility by allowing employees to work remotely. Residents located just outside the tech hub of Silicon Valley are oftentimes experiencing faster speeds at home vs. their workplace. As a result, telecommuters are able to enjoy a more affordable, higher quality of life without having to give up big city jobs. All the time saved in not commuting also translates to a lower carbon footprint.

## Agriculture

The delivery of Gigabit speeds is helping streamline crucial agriculture processes and enable new services. In Indiana, a dairy farm is using Gigabit broadband to remotely monitor milk production and processing. The farm is also delivering remote and on-site educational experiences by supporting connected, interactive learning centers for children.

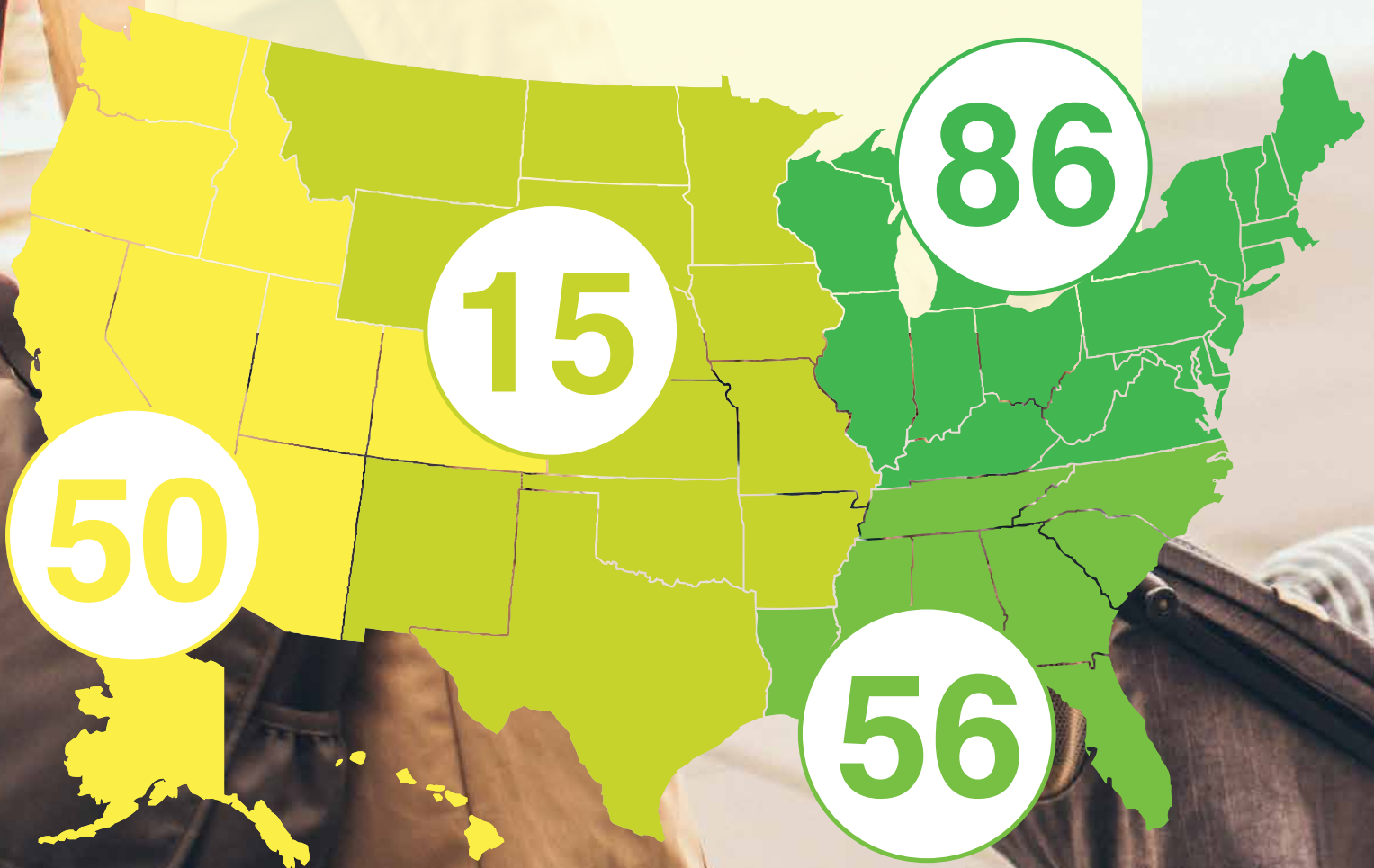
## Healthcare

Hospitals and healthcare facilities are deploying Gigabit broadband as they look to boost the quality of patient care. For those with ultra-fast broadband speeds, doctors, specialists and nurses are able to work efficiently with colleagues on-site and remotely. In Tennessee, doctors are able to provide care that previously wasn't available, with a local knee surgeon using Gigabit broadband to assist with 3D printing for developing patient-specific knee replacements.



---

**ADTRAN ENABLES  
GIGABIT SERVICES  
IN OVER 200  
COMMUNITIES**



---

## **WHERE WE ARE**

In January 2013, former Federal Communications Commission Chairman Julius Genachoski issued the Gigabit City Challenge, calling for all 50 states to have at least one community with gigabit Internet access by 2015.

ADTRAN is doing its part helping service providers, cable operators, municipalities and rural carriers to deploy the ultra-fast broadband services that are changing the game for community revitalisation across the United States. When we launched our Enabling Communities Connecting Lives - campaign in August 2014, we envisioned that every community, regardless of size, could realise the transformative benefits of Gigabit broadband. In just over one year, more than 200 communities have partnered with ADTRAN and are now reaping the benefits of Gigabit broadband.

---

## **GETTING THERE FROM HERE**

So, the question remains, "How do we get there?" Currently, most providers are still concentrating on delivering services that offer speeds far less than 1 Gbps. However, there are new technologies and techniques enabling these operators to reach Gigabit speeds in a more cost-effective and timely manner.

ADTRAN understands the common concerns for service providers evaluating Gigabit deployment such as how to handle growing network traffic with faster connectivity

in place, the cost to build a fiber network, and how to keep up with subscriber activations given the expected demand increase for higher-bandwidth services. Technology breakthroughs are enabling the delivery of services at rates up to 1 Gbps and beyond. One such technology is G.fast.

G.fast, a short-loop DSL acceleration technology, enables operators to extend their fiber networks via existing phone lines to reach up speeds up to 1 Gbps. It is typically deployed from the distribution point or the basement, where loops are less than 100 meters in length.

Current FTTH solutions support a limited number of true Gigabit broadband customers and are simply not designed to support premium business and backhaul services. Next-generation 10 Gbps FTTH solves this issue by delivering four to sixteen times more bandwidth per fibre. This technology uniquely enables both existing residential FTTH customers and early business adopters to be supported on a single, common-access architecture.

ADTRAN is the perfect choice. ADTRAN offers the most comprehensive and open Gigabit solution portfolio on the market today. ADTRAN solutions are designed to maximise your existing network, while enabling the migration to Gigabit and beyond. We not only offer the latest in technologies, but we have world-class service and support to meet both your needs and the needs of your customer.

To find out more about our solutions for Gigabit services, visit [www.adtran.com/gigabit](http://www.adtran.com/gigabit) or to learn more about Gigabit services deployment, visit [www.gigcommunities.net](http://www.gigcommunities.net)

[www.gigcommunities.net](http://www.gigcommunities.net)

[www.adtran.com/gigabit](http://www.adtran.com/gigabit)

Gigabit broadband transforms communities,  
rebuilds urban centers, revitalises schools,  
stimulates economic growth and delivers  
innovative residential and business services.



**ADTRAN, Inc.**  
Huntsville, AL 35806  
P.O. Box 140000  
Huntsville, AL 35814-4000  
256 963-8000  
256 963-8699 fax

**General Information**  
800 9ADTRAN  
info@adtran.com  
www.adtran.com

**International  
Customer Service**  
+1 256 963 8716

**Bluesocket Business  
Group**  
866 633-3358  
vwlan@adtran.com  
www.adtran.com/bluesocket

**Headquarters—EMEA  
ADTRAN GmbH**  
Erika-Mann-Str. 25  
80636 Munich-Germany  
+49 89 411097 111  
sales.europe@adtran.com

**Central-/East and West  
Europe**  
+49 89 411097 111  
sales.cewe@adtran.com

**South Europe**  
+49 89 411097 111  
sales.southeurope@adtran.com

**North Europe and CIS**  
+49 89 411097 111  
sales.ne@adtran.com

**Middle East and Africa**  
+49 89 411097 111  
sales.mea@adtran.com

**Asia**  
+852 3187 7111  
sales.asia@adtran.com

**Australia/New Zealand**  
+61 3 9658 0500  
sales.australia@adtran.com



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

IN10122A October Copyright © 2015  
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 is a registered  
trademark of ADTRAN, Inc. and its affiliates  
in various countries. All other trademarks  
mentioned in this document are the property  
of their respective owners.

ADTRAN warranty duration and entitlements vary  
by product and geography. For specific warranty  
information, visit [www.adtran.com/warranty](http://www.adtran.com/warranty)

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/exporthicense](http://www.adtran.com/exporthicense)