

# Easy Rural Broadband Deployments

The Rural Digital Opportunity Fund (RDOF) initiated by the US government's Federal Communications Commission (FCC) aims to provide adequate high-speed broadband access to rural areas. These areas fall behind the ultra-connected metropolitans across the country and this initiative is designed to bridge that gap. With the incentive of Government funding, broadband carriers are encouraged to construct and operate rural broadband networks that would meet the following targets:

- High quality broadband services to ~ 6 million rural sites:
- Primarily residential and small offices/home offices (SOHO)
- Speeds of at least 25Mbps downlink, 3 Mbps uplink
- Scalability to 1G downlink, 500Mbps uplink is desired
- Future-ready technologies preferred: Providing a path to higher-tiered services with higher bandwidth and lower latency

For carriers engaged in this opportunity, there are some challenges that are unique to the deployment of broadband to rural sites:

- **Difficult to reach**, remote sites and issues of subscriber density and topography.
- **Operational efficiency**: The need to enable service verification testing, performance monitoring and diagnostics, as well as handle installation and maintenance at remote sites.
- **Trusted partner**: Solution provider must have a relevant portfolio and experience, and the ability to meet specific, changing needs.

## RAD Successfully addresses these Rural Broadband Challenges

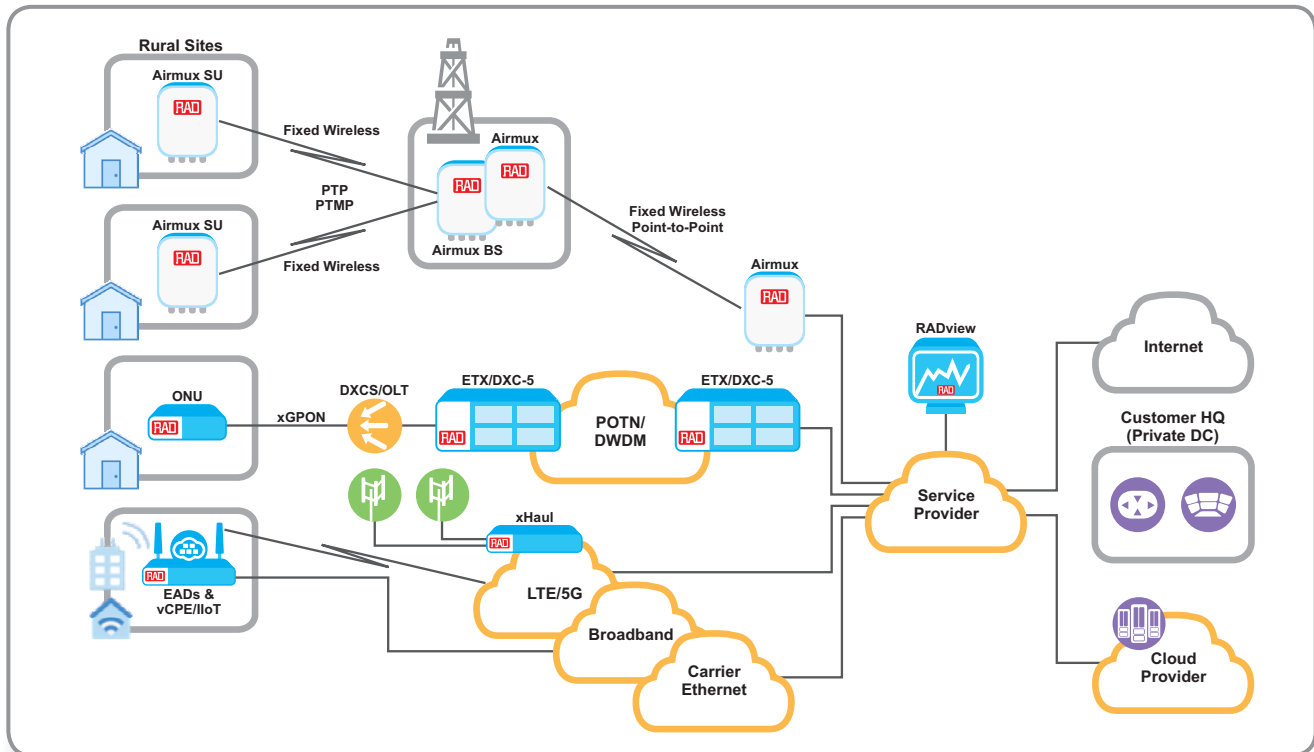
RAD offers a comprehensive portfolio that successfully addresses these rural broadband challenges. Employing a wide range of technologies including point-to-point (PTP) and point-to-multipoint (PTMP) wireless, GPON/xGPON, packet optical and DWDM, as well as routing and Industrial IoT (IIoT) backhaul, RAD enables broadband providers to address any scenario under RDOF deployments.



Your Network's Edge®

## Application Brief

### Easy Rural Broadband Deployments



Extending Broadband to Rural Sites with RAD Solutions

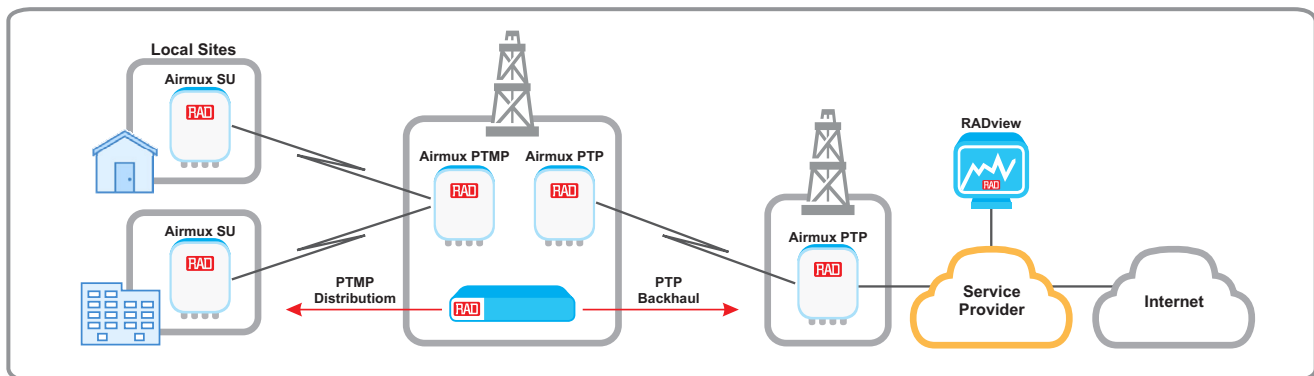
Key deployment scenarios include:

#### Fixed Wireless Access Infrastructure

*Ideal for low density rural areas and long-range connectivity*

RAD's solution includes a wide variety of options for licensed and unlicensed backhaul to effectively close the rural broadband gap:

- Supports all outdoor deployment
- Delivering >50M/5M per residential subscriber
- Economical pay as you grow model



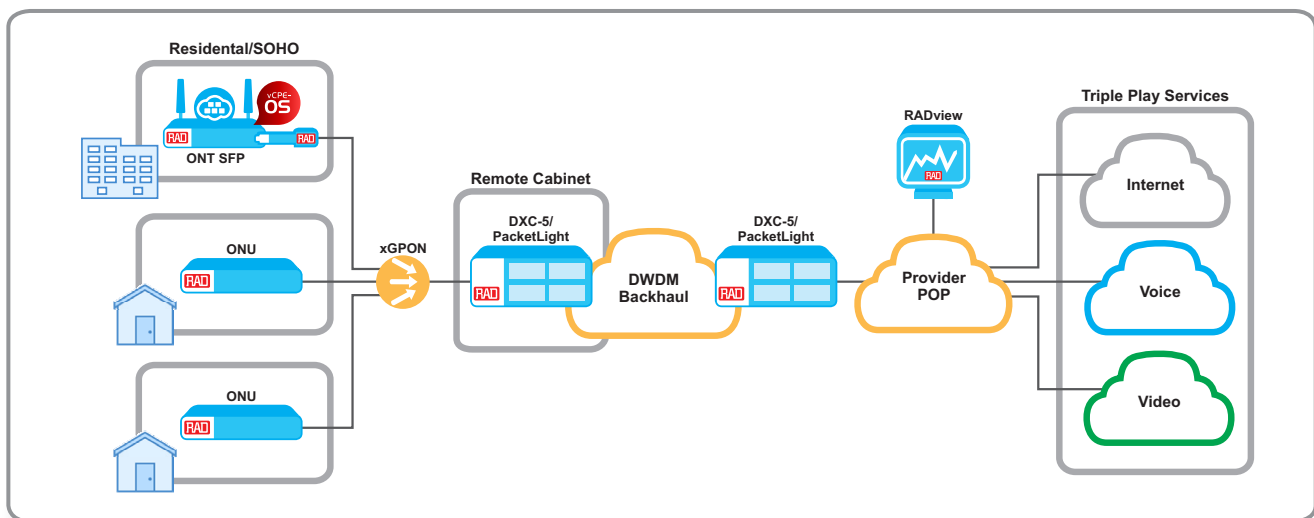
Fixed Wireless Access Infrastructure

#### GPON Access with DWDM Backhaul

*Consolidated GPON/DWDM optimized for higher density rural areas*

RAD enables versatile FTTH Triple Play for suburban and rural areas:

- Small form factor backhaul solutions to save on space
- Universal GPON OLT/ONT solution that eliminates vendor lock-in
- Deliver 1G/500Mb per residential subscriber



GPON Access with DWDM Backhaul

#### IP-VPN and LTE Wireless Access

*Ideal for rural small business*

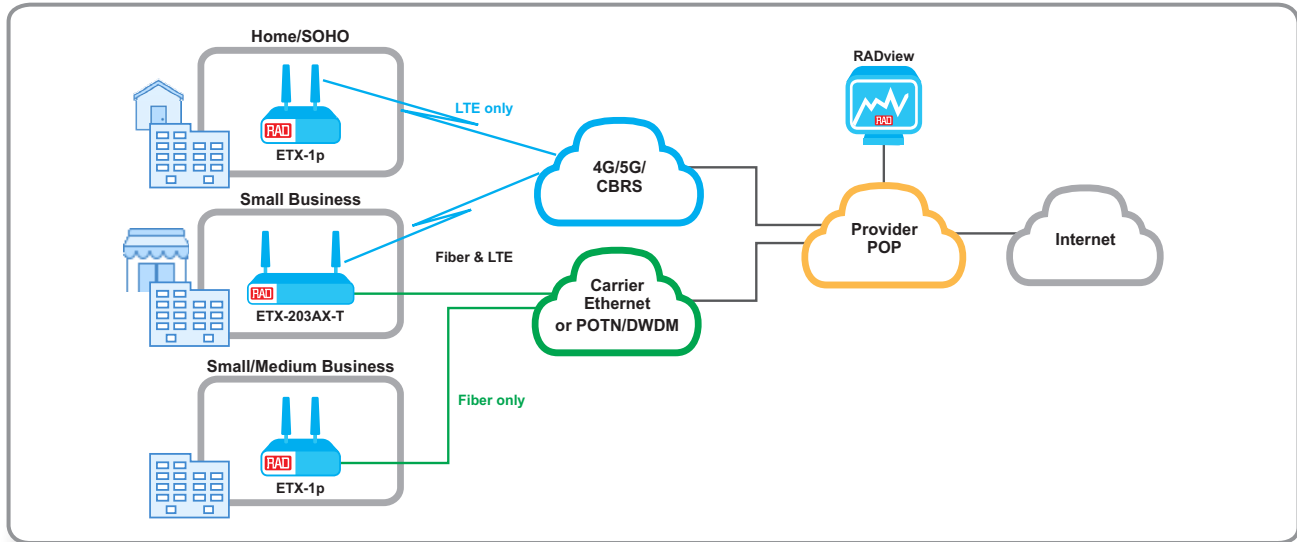
RAD offers broadband carriers LTE and fiber access in a single device that enables them to quickly connect their SOHO customers:

- Cost effectively extend enterprise services into rural area
- Carrier Ethernet and routing options for business users: L2 Carrier Ethernet over a L3 VPN tunnel, or VPN access over LTE
- Shorter Time-to-Revenue by eliminating the need to wait for fiber



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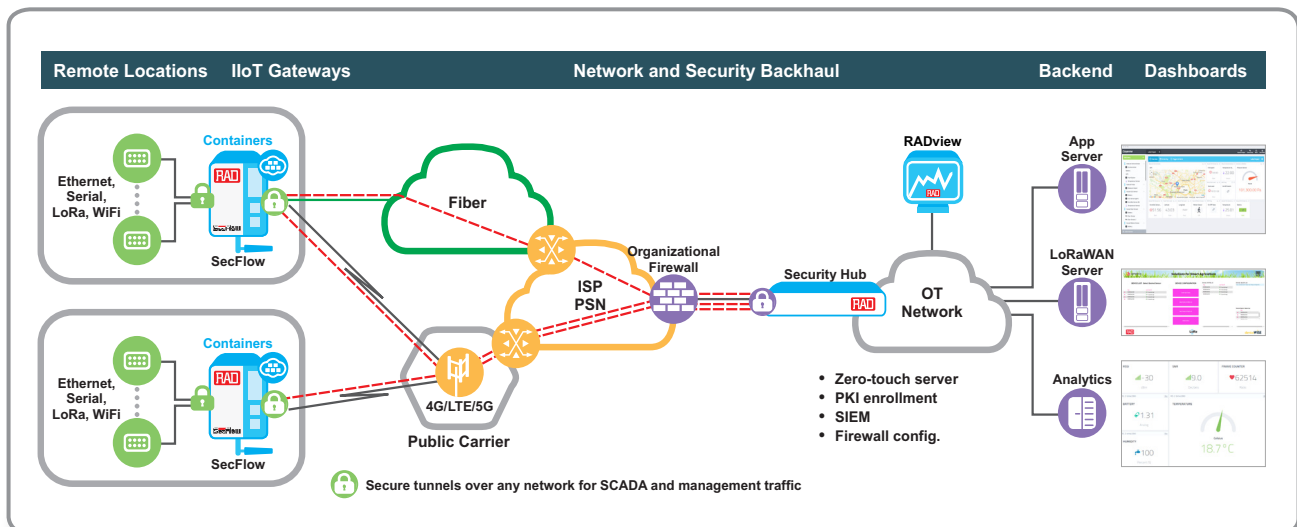
IP-VPN and LTE Wireless Access

### Secure Industrial IoT with Edge Computing

*Ideal for upgrading rural infrastructure (smart grid, smart water, smart agriculture, smart roads, etc.)*

RAD enables carriers to offer competitive IoT services for monitoring and automation devices, Smart City projects, and more. An all-in-one, secure IIoT backhaul gateway that features a router, firewall, LTE modem and a variety of other functionalities in a single device allows effective communication and control of many sensors with Edge Computing

- Versatile ruggedized platform fits harsh environmental conditions
- Seamless communications over fiber optics, radio links and 2G/3G/LTE cellular links
- Edge computing capabilities allows hosting of multiple container-based functions
- Zero-touch provisioning, enhanced cyber security (IPsec, PKI, FW, IDS/IPS, SIEM)
- Integrated PLC functionality and LoRaWAN® gateway reduces the number of devices in the network
- Transparent delivery of SCADA, protocol conversion and terminal server



Secure Industrial IoT with Edge Computing

## Application Brief

### Easy Rural Broadband Deployments

#### RAD's RDOF Solution

With a proven record of helping our customers to successfully deploy rural broadband solutions for over 40 years, RAD offers a comprehensive portfolio specifically designed to address, and even exceed, RDOF targets.

#### Highlights:

- Broad range of solutions helps overcome infrastructure obstacles
- PTP/PTMP wireless simplifies access to remote, difficult to reach sites
- L2/L3 CPE with LTE/CBRS, Fiber, GPON, VDSL Interface options
- Low-cost, operationally efficient and right-sized products ideal for rural deployment
- Simple deployment, maintenance and upgrades: Zero-touch provisioning and automation, service verification testing, monitoring and diagnostics
- Consistently reliable products and high-quality service
- Trusted partner with relevant products and experience

To learn more about RAD's solutions for rural broadband deployments, contact us at [market@radusa.com](mailto:market@radusa.com)



Airmux  
Sub-6GHz PtMP  
Wireless



Ceragon  
6-86 GHz PtP Wireless



PacketLight  
DWDM/OTN/Dark Fiber  
Communications



DXC-5  
Switching and aggregation



Megaplex-4  
Multiservice Networking  
Platform



ETX-203AX-T  
Carrier Ethernet Device with  
LTE/Broadband Connectivity



SecFlow-1v  
Ruggedized Multiservice  
IIoT Gateway



PowerFlow  
Industrial POE Switch



Your Network's Edge

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