



Cambium Networks™

**Bridging the Homework Gap
with the \$7.2B ECF Fund**

14 July 2021

About the Emergency Connectivity Fund (ECF)

Solutions to Solve the Homework Gap

TCO Comparison of Solutions

Wrap Up

Questions & Answers

The Emergency Connectivity Fund (ECF)

Established May 10, 2021 by the FCC to support remote learning

Part of the America Rescue Plan Act of 2021 for COVID-19 pandemic relief

Funded by an \$7.17B appropriation by US Congress

Provides assistance for Internet access off campus of schools/libraries

Initially applies to purchases from July 1, 2021 to June 30, 2022

Program administered by USAC who also administers the E-rate program

ECF Products and Services Eligibility

Eligible products include:

- Laptop and tablet computer – up to \$400 for each device
- Wi-Fi hotspots – up to \$250 for each hotspot
- Modems, routers and modem/router combos – funding limits not set
- Commercially available Internet service – funding expected \$10-25/month
- In circumstances where there is no available broadband service, the fund may support construction of new networks

Reasonable costs of equipment/services beyond laptops/hotspots to be determined upon careful review by USAC

ECF Application Process

Filing window opened June 29, 2021

Application window will be open 45 days until August 13, 2021

Applicants need on online ECF portal account to apply

USAC will review applications and approve funding in waves over time

FCC officials have instructed the program administrator to process 50% of applications within 60 days and 70% of applications within 100 days

Schools/libraries apply at: emergencyconnectivityfund.org

\$3.2B funding for consumer Internet access

Offers discount \$50/mo. to consumers and \$75/mo. if on Tribal land

Enrollment opened May 12, 2021

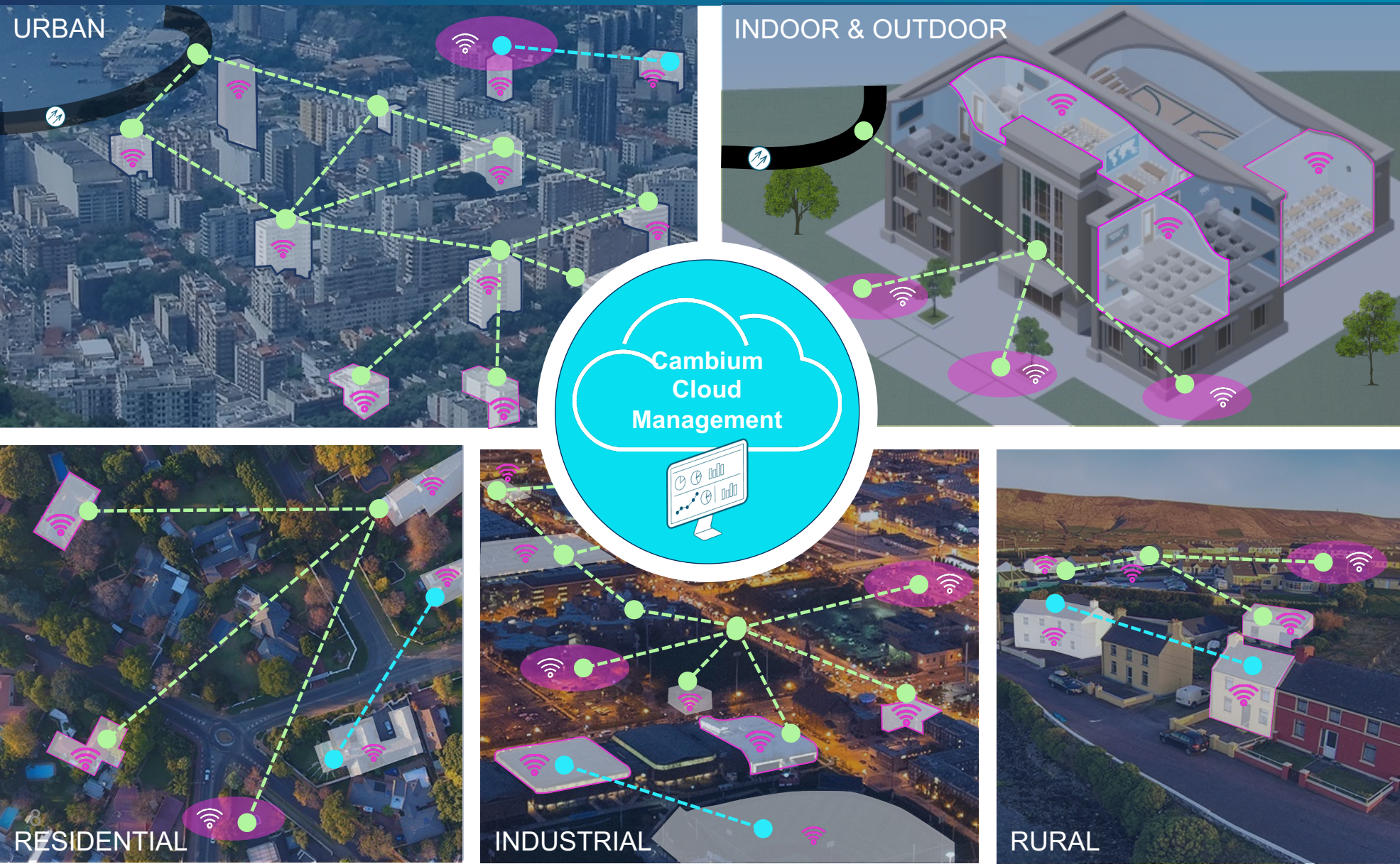
More than 1000 broadband providers participating

ECF intended to complement the EBB (rules to prevent duplicate funding)

Cambium Solutions for the Homework Gap



The Multi-Gigabit Wireless Fabric

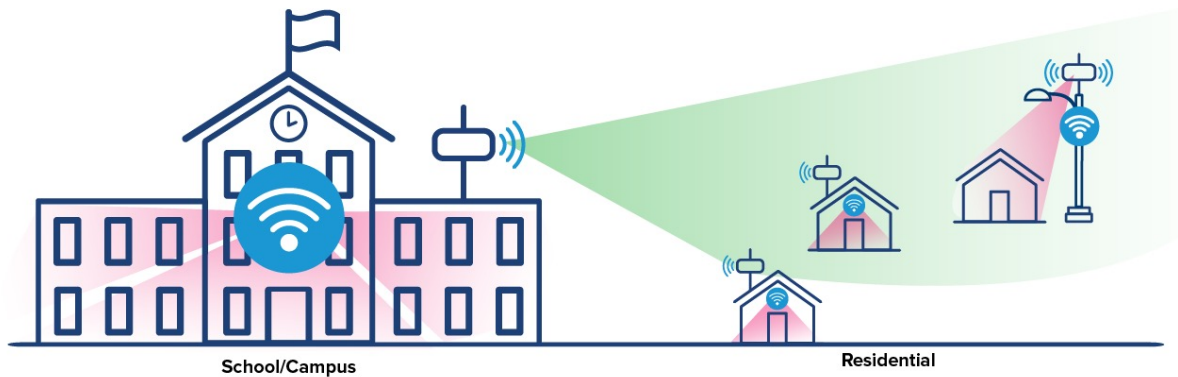


Multi-Gig Wireless from
Broadband to the Edge

Proven Lowest Cost
per Mbps

One Dashboard for Wi-Fi,
Switching and Broadband

-  Fixed Wireless 60 GHz Distribution
-  Fixed Wireless 60 GHz PTP
-  Wi-Fi
-  Fiber Ring



Extend the schools network via a dedicated point to multipoint network and indoor wifi to student residences.

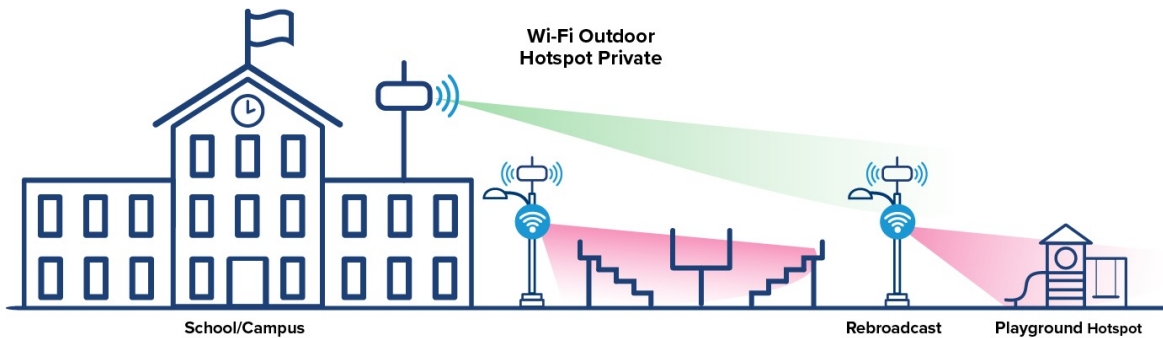
- Create a long term sustainable network with minimal recurring costs.
- Partner up with local providers with existing coverage and leverage installation, maintenance overhead.

Choose from a variety of technology solutions

- Private LTE in 3.5 CBRS band
- Proprietary technology in un-licensed 5GHz band
- High performance mm wave technology
- **Dedicated CPE installation on roof tops and indoor wifi becomes part of the solution.**
- **Transmit power limits in CBRS, propagation characteristics in the bands prevent universal “self” and/or “indoor” installs.**



Wi-Fi Extension to Public Places



Extend the school WiFi network to playgrounds, community centers and general student body public areas.

- Create a long term sustainable network using your current network.
- Partner with local govt for further use cases such as security and IOT.
- Manage seamlessly as you would your indoor campus network.

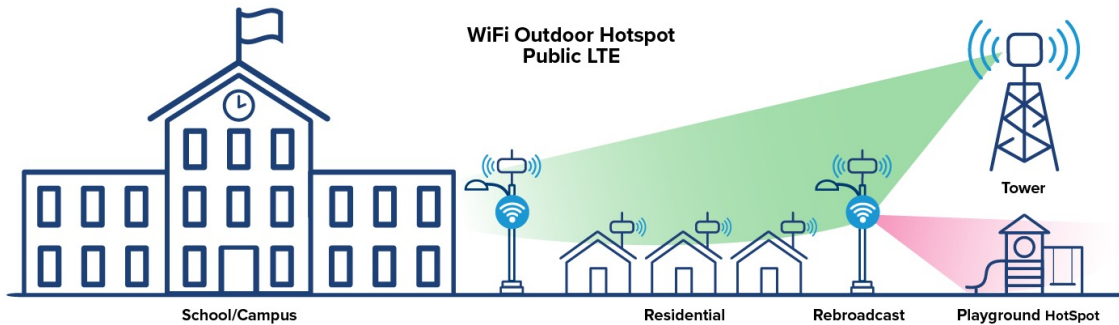
Choose from a variety of technology solutions

- Private LTE in 3.5 CBRS band
- Proprietary technology in un-licensed 5GHz band
- High performance mm wave technology

Simple installation with only power requirements.

Outdoor coverage with same security as the school network.





Create Wi-Fi hotspots leveraging cellular network coverage

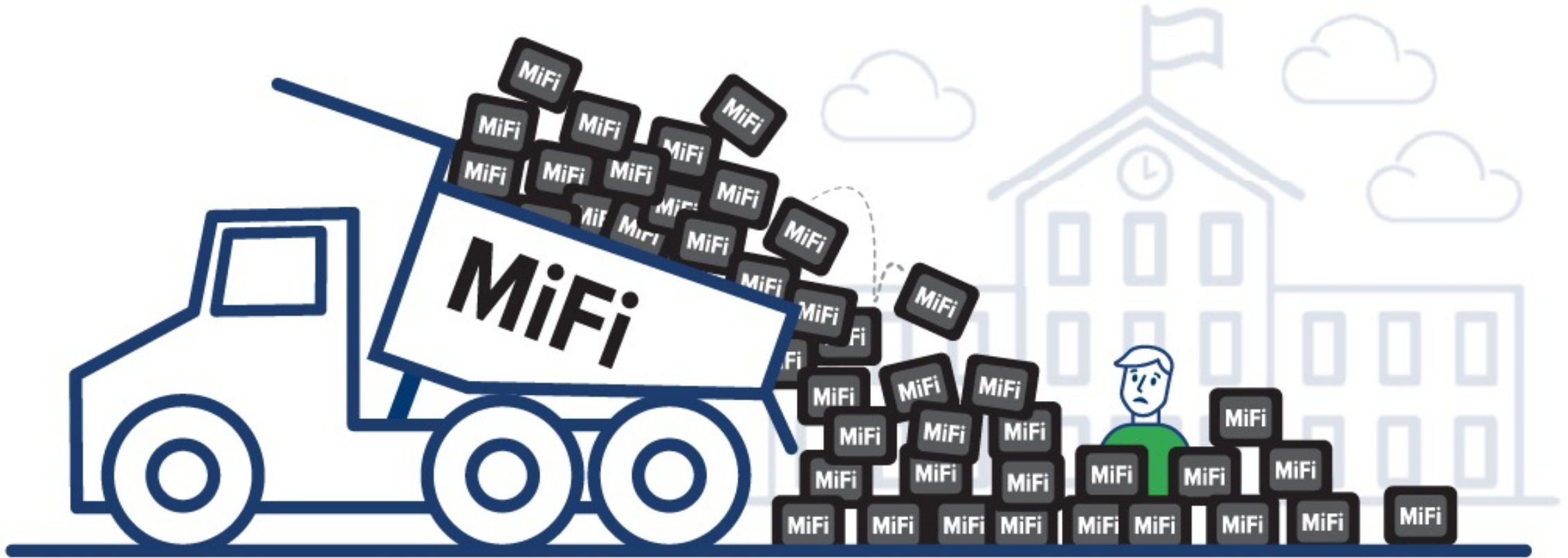
- Create a short term Wi-Fi network by using outdoor LTE modems and Cambium Wi-Fi hotspots.
- Use pre/post paid SIM cards to backhaul WiFi via a cellular connection.
- Route all traffic securely back to school network/firewall.
- Keep cellular backup as an emergency option while building out a dedicate network.

Choose from a variety of Wi-Fi solutions

- Outdoor Wi-Fi hotspots with directional and omni directional coverage.
- Wi-Fi 6 and 802.11ac 4x4 APs and new Wi-Fi 6 outdoor APs
- End to end cloud or on-premise management



The Mi-Fi Challenge



Fixed Wireless vs. Mi-Fi TCO Comparison


Cambium Networks™
FIXED WIRELESS VS CELLULAR MIFI COST COMPARISON


MIFI

Item	Value	Unit
MiFi device unit cost	150	\$
Monthly charge	50	\$
Number of connections	100	Nos


Base Station CPE
FIXED WIRELESS

Fixed Wireless Cost
(Default values populated by Cambium)

Base Station End

Item	Value	Unit
Infrastructure Cost (Tower, Switch, Power, Cabling Etc)	6000	\$
AP + Antenna Cost (To cover 360 deg)	4792	\$

CPE End

Item	Value	Unit
Installation/one time cost including outdoor CPE	150	\$
One time cost for home wifi router	70	\$
Monthly Maintanance	40	\$

Live Wire Networks – Roof Installation Example



- The Homework Gap is defined by 17 million+ students in the US without home Internet access
- Emergency funding acts including ECF, EBB, CARES, etc. are providing technology funding in response to the COVID-19 pandemic
- Cambium's broadband and Wi-Fi solutions deliver infrastructure to help to bridge the homework gap
- Cambium Homework Gap resource page:
<https://www.cambiumnetworks.com/solutions/homework-gap/>
- Contact zachary.loschiavo@cambiumnetworks.com
- Download today's webinar handouts

Questions



Thank You

