



RUCS Overview

Internet.
Anywhere.

Tekniam has developed RUCS, a customizable and instant solution to *bridge the digital divide*.

RUCS is both affordable and rapidly deployable, bringing reliable *last mile connectivity* to communities that need it most.

Tekniam is a proud American Company that designs and manufactures the RUCS in Kansas.



The Remote Universal Communication System (RUCS) is an edge-based telecommunications grade network. It provides users with:


Portable Communications Link (PCL) creates a standalone local internet or cellular network signal from any available wide area network.


Distribution Module (DM) connects directly to the PCL or existing networks, broadcasts signal in a 1000+ ft radius and extends that signal across a wide area.


TekMESH™ Operating System (TOS) manages deployments from the Cloud.


Remote Monitoring and real-time technical support.



 USERS PER UNIT
250+

 ACCESS POINT RADIUS (FT)
1000+

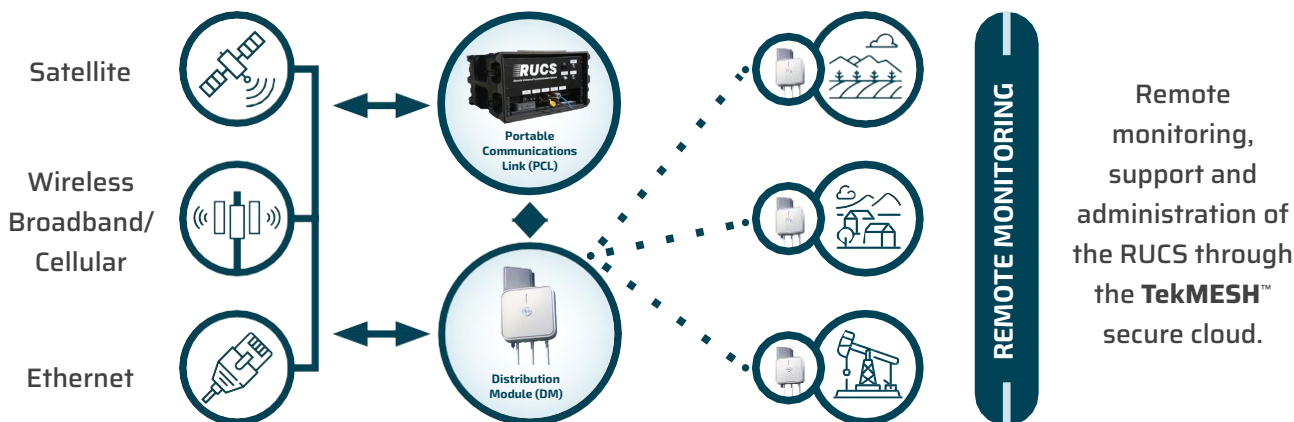
 UNIT TO UNIT RANGE (MI)
3+

 POINT TO POINT RANGE (MI)
35+





Portable Communications Link (PCL) creates a standalone network, aggregating the signal from existing satellite, ethernet, broadband or cellular networks.



DMs extend network signal from a PCL or any Ethernet source. They broadcast signal locally over a 1000+ ft radius and extend signal over a wide area through a wireless mesh network.

PCL



Connectivity

- Environmentally Hardened Industrial Router
- LTE/5G Cellular Modem
- Up-Link Connection Options:
 - » Wired WAN/LAN
 - » Ka or Ku Band Satellite
 - » Point-to-Point Radio backhaul
 - » RJ-45 - IEEE 802.3AF
 - » 10/100/1000 Ethernet Switch
 - » 1G Network Backplane

Power Features

- External:
 - » 120/240 VAC
 - » Portable Generator providing 120/240 VAC or 12 VDC
 - » 12/24/36 VDC Solar or Wind
- Internal:
 - » Battery Backup for power smoothing and normalization
 - » 5/12/24/48 VDC per equipment requirements

DM



Connectivity

- 2.4 GHz High-power Access Point Radio
 - » Up to 250 Simultaneous Wi-Fi Connections
- 3x3 MIMO Wave 2 Protocols
- 3 - Omni-directional antennas
- 1000+ ft radius coverage
- User connectivity via 801.11 a/b/g/n 3x3 MIMO Wave 2 Access Point
- Network meshing via 801.11ac 2x2 MIMO
- High Power AI Routed Directional Radios

Power Features

- US-made Single Board Computer (SBC) with custom OpenWRT Operating System
- IP-67 rating
- Wind Survival: 140 km/h
- 0.5 amp - 48V DC power via POE
- Temperature Range: -20C to +70C
- Operating Humidity Range 5 to 95%
- Lightning Resistant:
 - » 5000 amp surge tolerant
 - » IEC 61000-4-5