Remote Universal Communication System (RUCS)

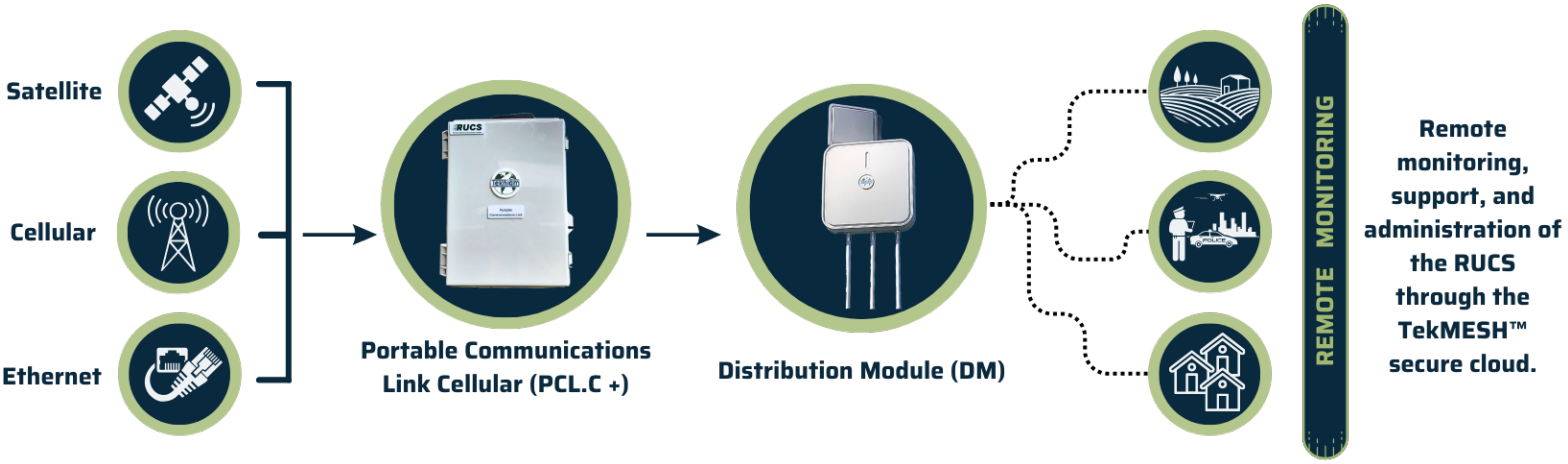
Tekniam has developed the Remote Universal Communication System (RUCS), a customizable and portable internet solution.

The RUCS delivers wide-area connectivity through an easy-to-use and adaptable system, allowing for resilient and interoperable communications that support major operations.

Capable of forming a secure mesh-network that can be remotely monitored, the RUCS has the power to deliver connectivity to 250+ users.

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







250+	1000+	3+
Users Per Unit	Access Point Radius (ft)	Unit to Unit Range (mi)

<10%	3/4/5G, Ka/Ku/L/S/C
Throughput Drop Unit to Unit	All Connectivity Options

Remote Universal Communication System (RUCS)



PCL.C+

Connectivity

- Environmentally Hardened Industrial Router
- Built-In LTE/5G Cellular Modem
- Works with any Cellular Provider via External SIM Card Port
- Up-Link Connection Options:
  - Wired WAN
  - LEO/HEO Satellite Constellations
  - Point-to-Point Radio Backhaul Enabled
  - RJ-45 – IEEE 802.3 AF
  - 10/100/1000 Ethernet Switch

Case and Environmental

- Lockable, IP-67 weather-resistant ABS case
- Module Dimensions: 17x11x6 in (430x270x150)
- Unit Weight: approx. 15 lbs.
- Operational Temperature Range: -20C to 70C
- Operating Humidity Range: 5 to 95% (non-condensing)

Power Features

External:

- Any 120/240 vAC Power Source
- External Surge Arrestor to protect internal components

Internal:

- Converts 120 vAC to 5/24/48 vDC per equipment requirements

Options

Remote Power Module (PM)

- Self-Contained PM Allowing Connection to:
  - Solar Panel Input
  - Wind Generator Input
  - 120/240 vAC Portable Generator

Environmental and Power

- System architecture and hardware based on USA made Single Board Computer (SBC) with custom OpenWRT Operating System
- Weatherproof enclosure with 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% (non-condensing)
- Lightning Resistant:
  - 5000 amp surge tolerant
  - IEC 61000-4-5

Intra-Module Meshing Features

- 2 - 5GHz High-power Meshing Radios
  - Tx Power up to 1w (30 dBm) – channel dependent
- 2x2 MIMO Flat Panel Directional Antennas (12 dB gain)
- Layer III Routing Protocols for all Meshed Connections
- 5 km range (may be more, depending on environment and locale)
- Ability to “daisy-chain” 10+ connections and maintain acceptable signal-to-loss ratio



DM

Access Point Features

- 2.4 GHz High-power Access Point Radio
  - Tx Power up to 1w (30 dBm)
- Up to 250 Simultaneous Wi-Fi Connections
- 3x3 MIMO Wave 2 Protocols
- 3 - Omni-directional antennas (7 dB gain)
- 1000+ ft Radius coverage with full strength signal

Connectivity

- User connectivity via 802.11 a/b/g/n 3x3 MIMO Wave 2 Access Point
- Network meshing via 802.11ac 2x2 MIMO
- High Power AI Routed Directional Radios