

 RADIUS nPoint**RADIUS nPoint**
*Radio-to-IP Extension Point***PART NUMBER: RD-NP-NDE**

The SyTech RADIUS nPoint is a compact radio-to-IP extension point for two-way radio communications and remote control over IP networks. The nPoint interfaces with radios, converting analog audio and control into IP for transport over Ethernet, cellular, satellite, or other networks.

This enables remote monitoring, transmission, and control of radio assets from distributed locations. Using the RADIUS Client application, operators can transmit, receive, and control radios in real time across geographically dispersed environments.

The nPoint operates within the RADIUS architecture, including the Distribution Service and Client application, providing scalable and secure communications across local and wide-area networks.

**Distribution Service:**

Centralized control and routing via the RADIUS Distribution Service, deployed on-premises or in the cloud.

**CLIENT:**

Monitor, transmit, and remotely control radios from a Windows-based client.

**MINIMIZED SWaP:**

Optimized size, weight, and power (SWaP) for deployable and embedded applications.

**COMPRESSION:**

Options for efficient audio transport using OPUS compression down to 9.6 kbps (at least 50 kbps datalink recommended).

**RADIO CONTROL:**

Enables remote monitoring, transmission, and control of connected radios, including AIRCOM AC-1 and L3Harris 117G, 160, 163, and 167 radios.

**SECURITY:**

Secure communications using TLS 1.3 encryption with support for customer-managed PKI certificates.



RADIUS nPoint

Radio-to-IP Extension Point

RADIUS nPoint



IP Network

RADIUS Distribution Service:

Gateway, on-premises server, or cloud



The RADIUS nPoint

- **Dimensions:** 28 mm (H), 63 mm (W), 133 mm (L)
- **Weight:** 185 grams
- **Processor:** SoM based on TI Sitara AM62x processors
- **Ethernet:** 10/100 Mbps
- **Device Interface:** D-Sub 26-pin (1 port)
- **Power:** 5V USB-C: 3 W nominal, 7.5 W peak or 11-30 V DC: 3 W nominal, 7.5 W peak

AC-1 Radio Configuration

- **Dimensions:** 60 mm (H), 63 mm (W), 160 mm (L)
- **Weight:** 365 grams
- **Combined:** 11-30 VDC @ 5 W nominal, 24 W transmit
- Custom Circuit Board Integration



The RADIUS Distribution Service

- **Operating System:** Embedded Linux OS
- **Custom Linux Distribution:** Built with Arago and Yocto
- **Network Transport:** Configurable for UDP or TCP, unicast or multicast
- **Security:** TLS 1.3 encryption with options for PKI
- **Audio Compression:** Optional OPUS codec support



The RADIUS Client Application

- Connect to and manage multiple nPoint devices
- **User Management:** Create and manage users with role-based profile permissions
- Remotely tune, configure, and control connected radios
- **Enterprise Management:** Centralized system administration and configuration
- **Selective PTT:** Enable "Select" functionality for targeted push-to-talk using SyTech microphones or USB headsets



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