



Your Network's Edge®

# 2026 Catalog



The  
Edge<sup>of</sup> AI

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# The Edge of AI

## We Are RAD

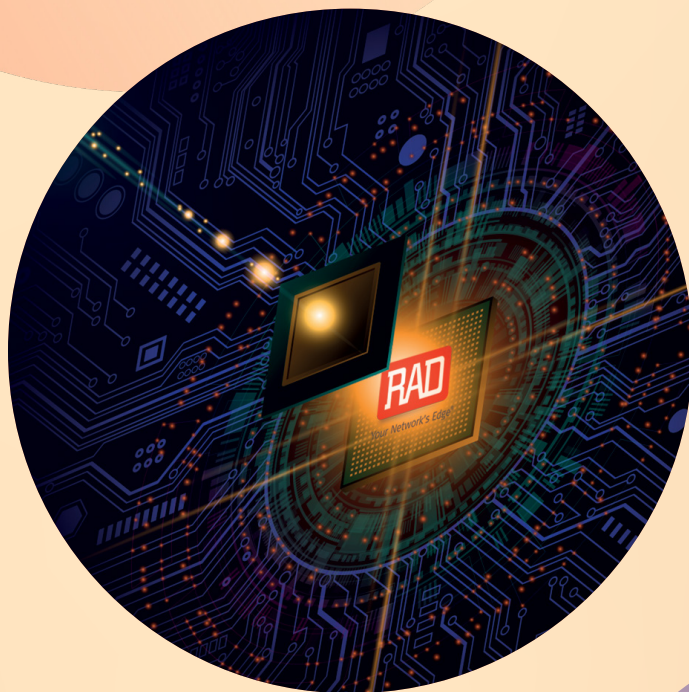
RAD is a global innovator and leader in network edge solutions. With over four decades of pioneering expertise, RAD consistently delivers best-in-class Carrier Edge, AI-native networking, post-quantum security, industrial IoT and physical AI, 5G, and critical operational networks to communications service providers and critical infrastructure operators across more than 150 countries. By closely collaborating with customers, RAD co-creates tailored solutions that ensure reliable, always-on connectivity from any location.

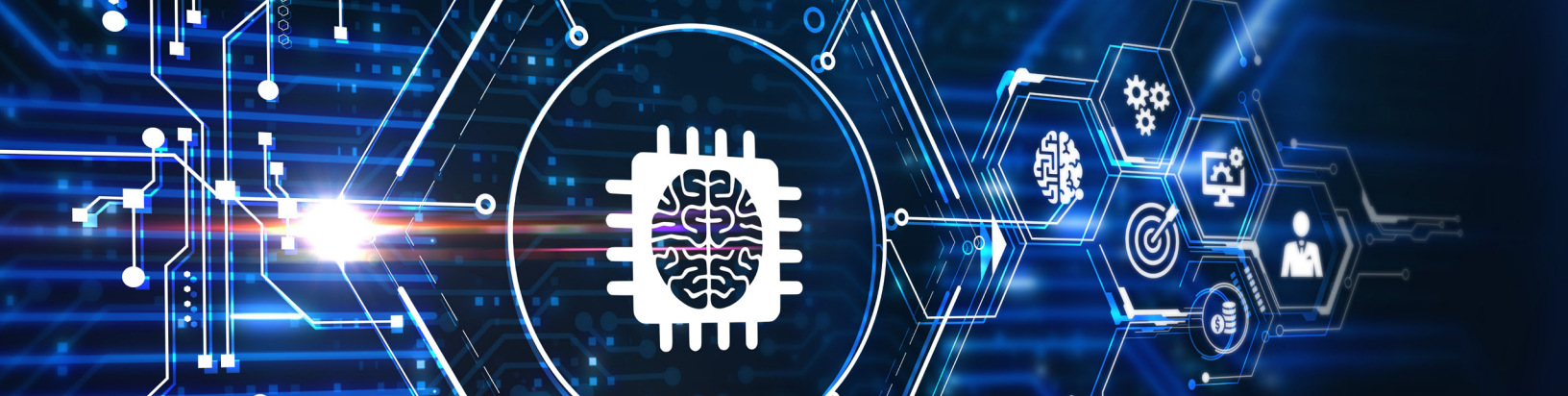
## Our Own Tech

RAD develops and manufactures the ASIC and FPGA components we use in our products. This allows us to push performance to the limit, as well as tailor our products to your specific requirements, providing you with greater flexibility and choice.

## Independent and Fully Controlled Supply Chain

RAD operates an independent and fully controlled supply chain, ensuring a secure and reliable source of components and manufacturing capabilities. This unique advantage allows us to maintain complete control over our products, ensuring consistent quality and timely delivery.





## **Leading the Way in Service Provider Solutions**

RAD empowers wholesale, business and mobile communication service providers to enrich their service portfolios by delivering added value at the network edge for businesses transitioning to AI and the cloud. Our best-of-breed solutions enable Ethernet business connectivity, data center interconnect (DCI), and mobile xHaul. They also support next-generation offerings, such as Smart Business IoT and Private 5G campuses, as well as AI-powered networking for NaaS at the edge, post-quantum security and quantum-safe encryption.

## **Operational Networks: Uninterrupted Service and Seamless Migration**

RAD's solutions help build multiservice, packet and PoE-intensive operational technology (OT) WANs, supporting mission-critical data, voice and video applications. Addressing all communication needs of utility, transportation, government, and oil and gas sectors with always-on reliability and mission-critical protection, we also enable seamless digital transformation, physical AI, migration to packet, and IT-OT convergence.

## **RAD Services**

RAD service plans allow our customers to benefit from real-time service guidance, planning and preventive maintenance. RAD Global Services provide expert consulting and troubleshooting assistance, online tools, regular training programs, and various equipment coverage options – all designed to enable seamless installations and faster service rollouts. Service and support are available through a network of more than 200 highly professional, certified RAD partners, distributors and system integrators located in more than 80 countries.

## **RAD's Commitment: Corporate and Social Responsibility**

We operate with integrity, transparency, and respect for all stakeholders, fostering a culture of ethical decision-making. RAD is committed to minimizing our environmental footprint, implementing sustainable practices throughout our operations.

# **The Power of RAD**

## **The Expertise to Deliver. The Agility to Customize.**



# Service Providers

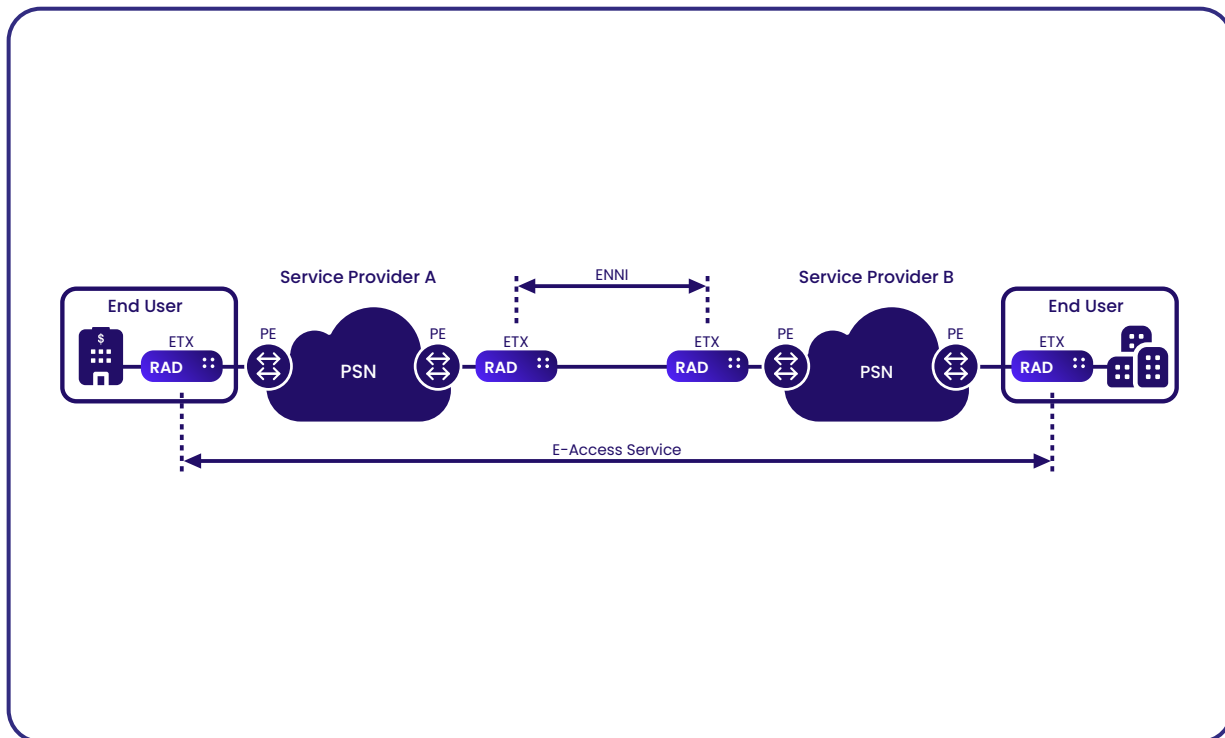
Redefining carrier services and bringing AI to the network edge.

RAD empowers wholesale, business and mobile service providers to enrich their service portfolios by delivering added value at the network edge for businesses transitioning to AI and the cloud. Our solutions enable Ethernet business connectivity, data center interconnect (DCI), and mobile xHaul. They also support next-generation offerings, such as Smart Business IoT and 5G campuses, as well as AI-powered networking for NaaS at the edge, post-quantum security and quantum-safe encryption.

Key CSP solutions include:

- Market-leading Carrier Edge portfolio with SLA assurance, end-to-end visibility and life-cycle management over any access
- 400G wire-speed, low-latency data center interconnect, supporting AI workloads and large-scale data transfer
- Ultra-fast service rates and setup with zero-touch automation and LTE/5G broadband uplinks up to 400G and ruggedized enclosures for outdoor deployments
- Carrier Ethernet for business direct internet and cloud access with E-Access/E-LAN services up to 400G
- Service Assurance Platform for comprehensive assurance, visibility, and insights across every service
- Smart Business IoT: An end-to-end solution for remote monitoring of business spaces, with alerts, and AI-based improvement suggestions
- IP traffic encryption providing security using SFP sleeve
- Crypto-agile, hardware-accelerated quantum-safe encryption built into Carrier Ethernet demarcation and aggregation devices

## Wholesale Networking



### Your Benefits:

- Provide wholesale Carrier Ethernet transport services to multiple service providers with complete visibility and controlled service hand-off between multiple networks
- Demarcation for business and mobile services, and broadband access node (e.g., PON) backhaul over the same transport network
- Provide SLA-based backhaul all the way to the end-customer site, cell site or POP, using a service assurance toolbox
- Seamless connection between networks with 1-GbE, 10-GbE, 25-GbE and 100G and 400G E-NNI interfaces with optional redundancy
- Mplify-certified (Carrier Ethernet for Business) E-Access support with single-CoS and/or multiple-CoS EVC/OVC for standards-based carrier-to-carrier connectivity
- Double fiber capacity while avoiding costly new fiber/transceiver deployments with BiDi QSFP28/DD up to 400G adaptors
- Support 5G convergence for wholesale services and L2 FWA



**ETX-2/ETX-2i**  
1/10/25/100G EADs, LTE/5G and Broadband Options



**MiNID**  
Miniature Programmable Network Interface Device



**BiDi QSFP Adaptor**  
400G Dual to Single Fiber Passive Adaptor

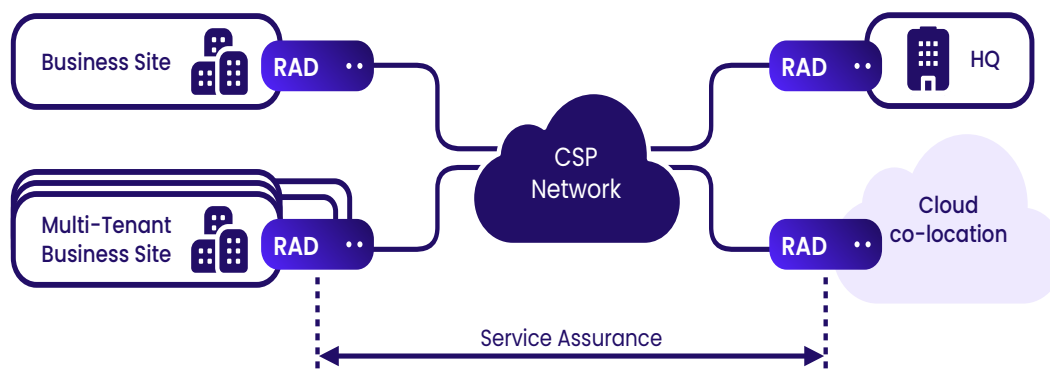


**RADview**  
Management and Domain Orchestration



### Carrier Ethernet for Business Services

Ethernet and/or IP VPN | Multi-service edge | Ethernet underlay for DIA and Direct Cloud Access | Ethernet over 5G



#### Your Benefits:

- Easily plan, deploy, provision, and maintain SLA-based business services over any access: fiber/copper/TDM/mobile
- Carrier Ethernet demarcation and aggregation switch up to 1/10/25/100G/400G
- Enable premium access to the internet and cloud, as well as VPN services for business customers
- Cost-effective aggregation with dynamic edge support for monitoring and policing
- Ruggedized enclosure for outdoor installations
- Enhanced service provisioning, visibility and reporting using RADview Service Manager and RADview Performance Monitoring portal



**ETX-2/ETX-2i**  
1/10/25/100G EADs, LTE/5G and Broadband Options



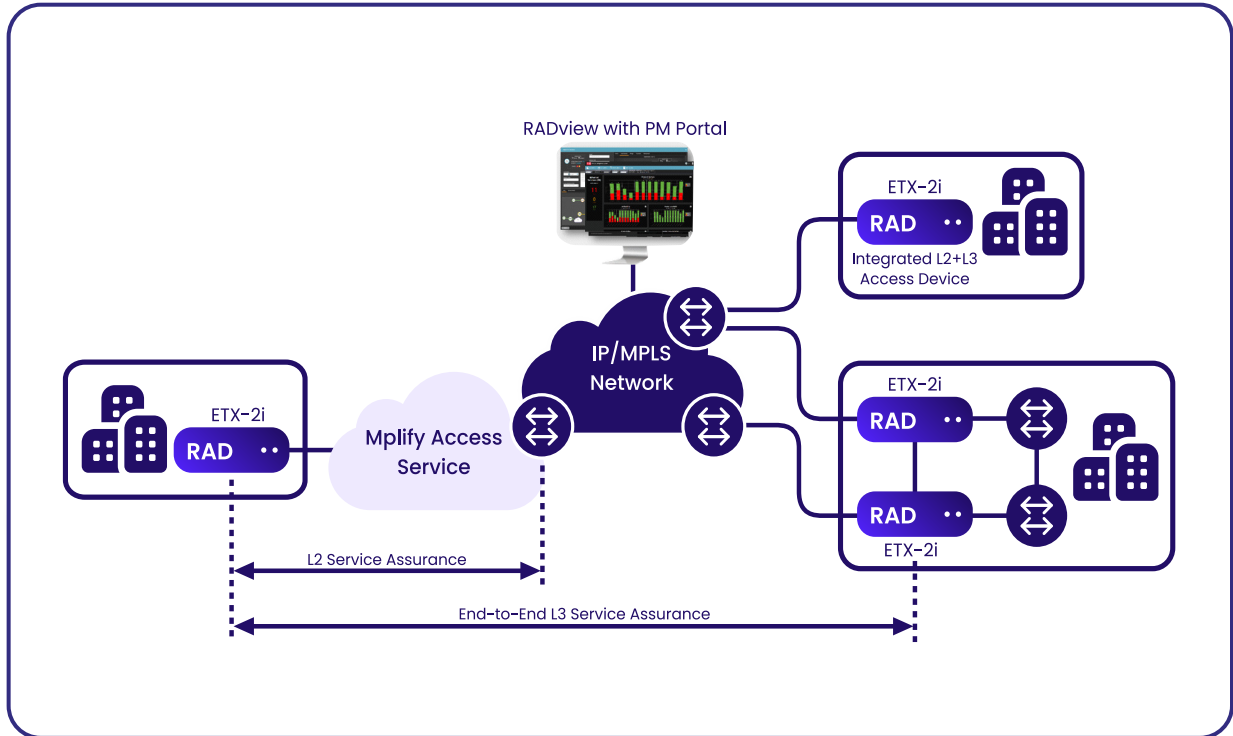
**MiNID**  
Miniature Programmable Network Interface Device



**RADview**  
Management and Domain Orchestration



## Converged IP and Carrier Ethernet for Business Services



### Your Benefits:

- Converged CPE with managed router and EAD functions in a single device helps reduce inventory
- Allows enhanced service offering and co-existence of L2 and L3 services
- Single- and dual-homed L3 protection, including VRRP
- Hardware based, wire-speed L2/L3 packet forwarding and OAM
- Carrier Ethernet Mplify certified
- Rich routing feature-set for IP VPN and Direct Internet Access business services
- Consistent traffic management and service assurance tools
- across both L2 and L3 service span, including diagnostics, service activation tests and performance monitoring
- Enhanced lifecycle management for mass production, visibility and reporting using RADview



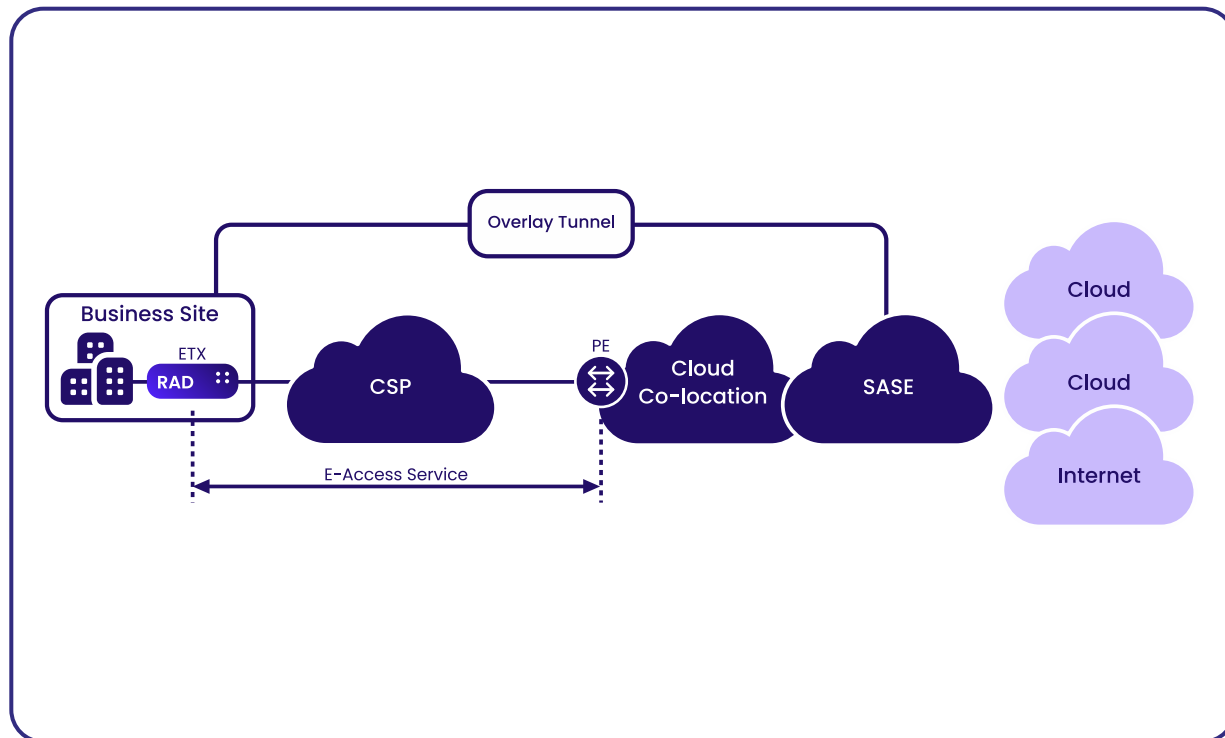
**ETX-2i**  
Carrier Ethernet and IP  
Demarcation



**RADview**  
Management and  
Domain Orchestration



## Carrier Ethernet VPN with Secure Service Edge (SSE) On-Ramp



### Your Benefits:

- Add-on SASE service without the need for a complex SD-WAN appliance
- Bundled direct cloud connectivity with SASE as an alternative to traditional Internet-based SD-WAN + SASE; by bypassing the public Internet, direct cloud access delivers assured data sovereignty and consistent, high performance.
- No vendor lock-in — connect to any SASE provider
- Hardware based, wire-speed L2/L3 packet forwarding and OAM
- Carrier Ethernet Mplify certified
- Enhanced lifecycle management, visibility and reporting using RADview



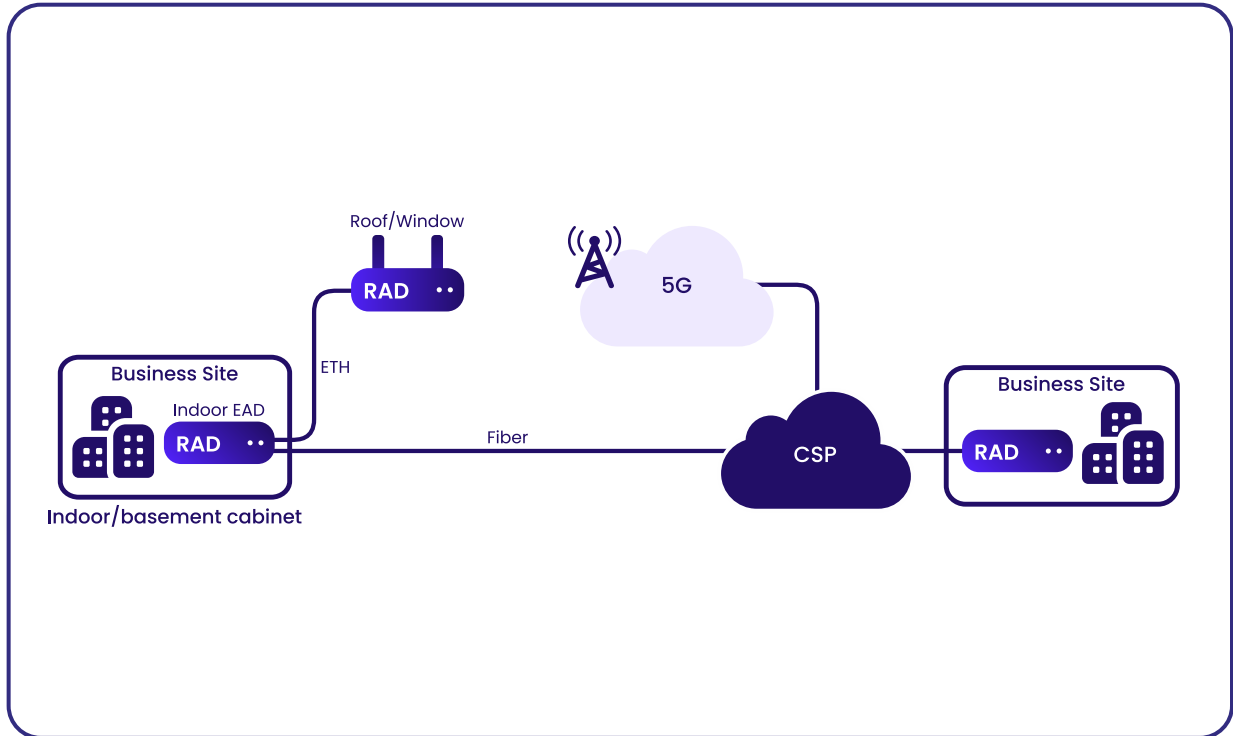
**ETX-2/ETX-2i**  
1G/10G/100G Carrier  
Ethernet Demarcation



**RADview**  
Management and  
Domain Orchestration



## Business Services with IP/Ethernet Backup over 5G FWA



### Your Benefits:

- Extend Carrier Ethernet services to "out of reach" locations
- Fast delivery of L2 service while waiting for fiber connectivity
- Temporary L2 connections (e.g., for events)
- Uninterrupted service with 5G backup for resiliency
- Traffic load sharing
- Transporting L2 traffic over 5G using: Native Ethernet (L2 PDU) or Ethernet frame encapsulation in IP packets (L2TPv3)



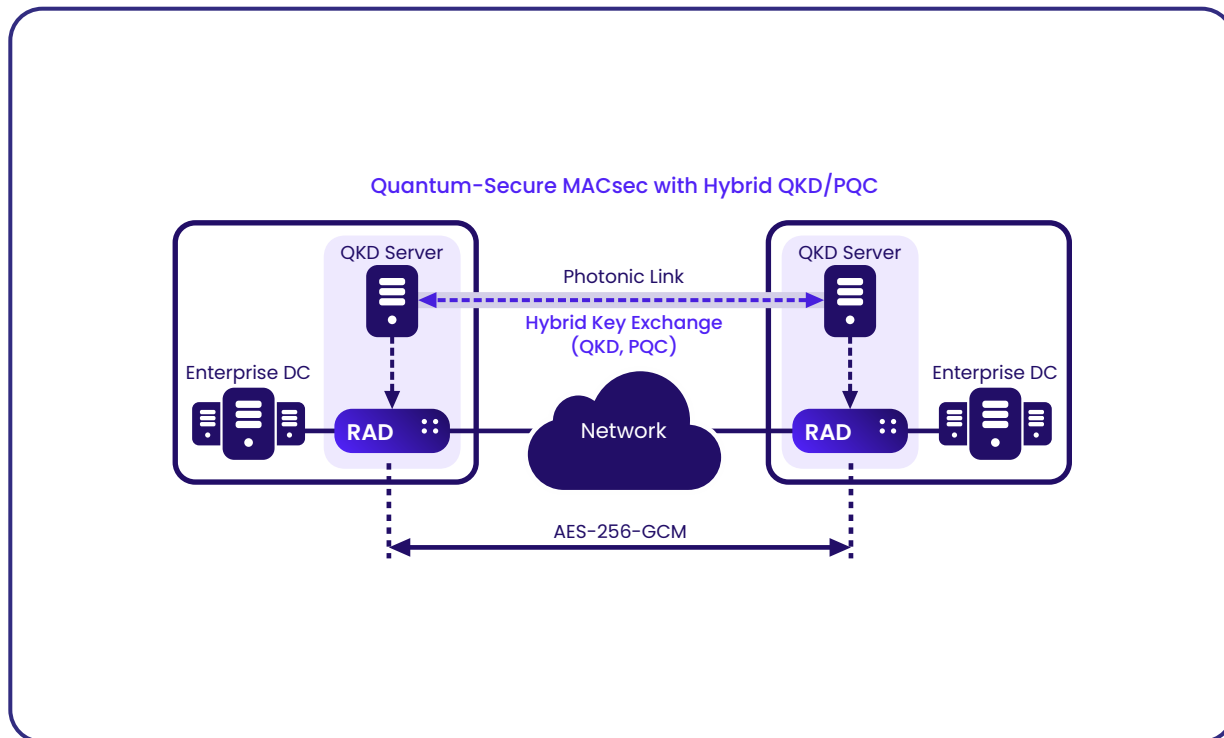
**ETX-2i**  
1G/10G/100G Carrier  
Ethernet Demarcation



**RADview**  
Management and Domain  
Orchestration



## Post-Quantum Security



### Your Benefits:

- Quantum-Secure MACsec: Protects your business services and data center connectivity with advanced MACsec encryption, leveraging AES-256-GCM for robust security at Carrier Ethernet demarcation points.
- Hybrid QKD/PQC Integration: Ensures future-proof security by combining Quantum Key Distribution (QKD) and Post-Quantum Cryptography (PQC), delivering unbreakable encryption keys and resilience against quantum-era threats.
- Photonic Link & QKD Server: Implements QKD servers and photonic links for secure, real-time key exchange, guaranteeing data confidentiality even in the face of emerging quantum computing capabilities.
- Seamless Orchestration: Centralized management and orchestration with RADview, simplifying deployment and ongoing operations for quantum-secure network environments



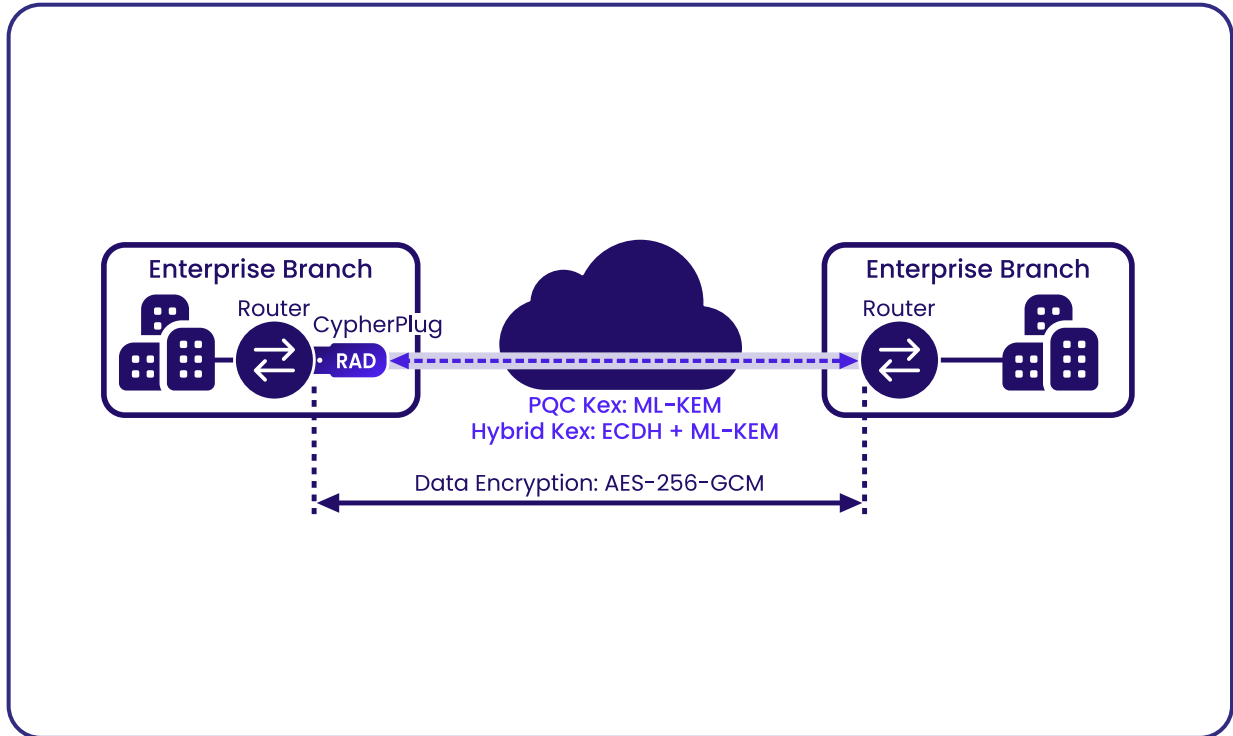
**ETX-2/ETX-2i**  
1G/10G/100G Carrier  
Ethernet Demarcation



**RADview**  
Management and  
Domain Orchestration

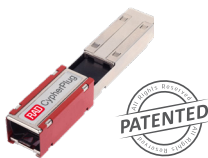


## Upgrading Existing Networks with Quantum-Resistant IPsec



### Your Benefits:

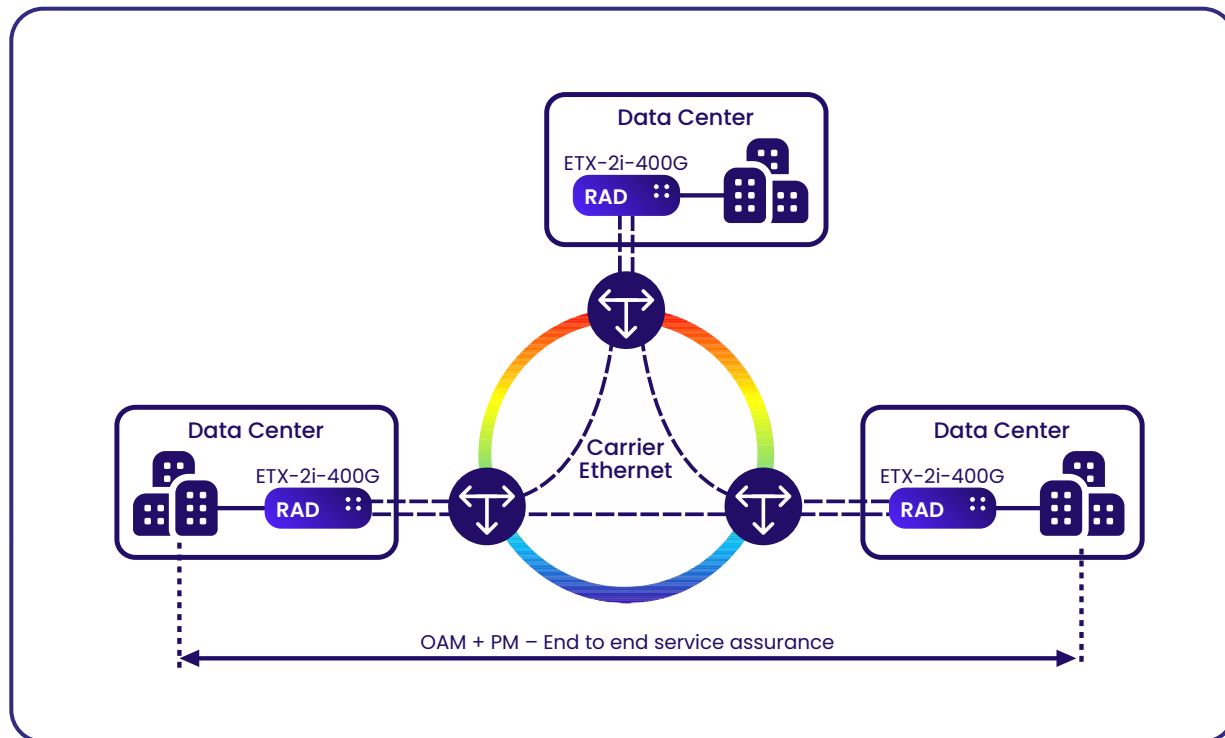
- CypherPlug-10G can be inserted into any installed router
- Works opposite any router implementing standard IPsec
- PQC or hybrid (PQC + classical) key exchange and AES-256-GCM line-rate encryption
- Capable of segregating customer and provider management planes:
  - Customer configures keys and key rotation; Provider manages the rest
- Ensures crypto-agile security, while allowing network equipment to remain in service and avoiding a disruptive rip-and-replace



**CypherPlug®**  
Miniature Network  
Security Device



## Data Center Connectivity



### Your Benefits:

- **AI-Ready Performance:** Ultra-high capacity and low latency for AI, cloud, and data-intensive workloads
- **Assured Service Quality:** Advanced HQoS and traffic management deliver predictable, application-aware performance
- **Quantum-Safe Security:** Line-rate MACsec with PQC and QKD readiness ensures future-proof data protection
- **Efficient Bandwidth Utilization:** With advanced traffic management, HQoS, and per-EVC/port traffic shaping
- **Simplified Architecture:** Integrated ZR/ZR+ coherent optics reduce cost, allow DWDM network termination and eliminate the need for external transponders



**ETX-2i-400G**  
400G Carrier Ethernet  
Demarcation



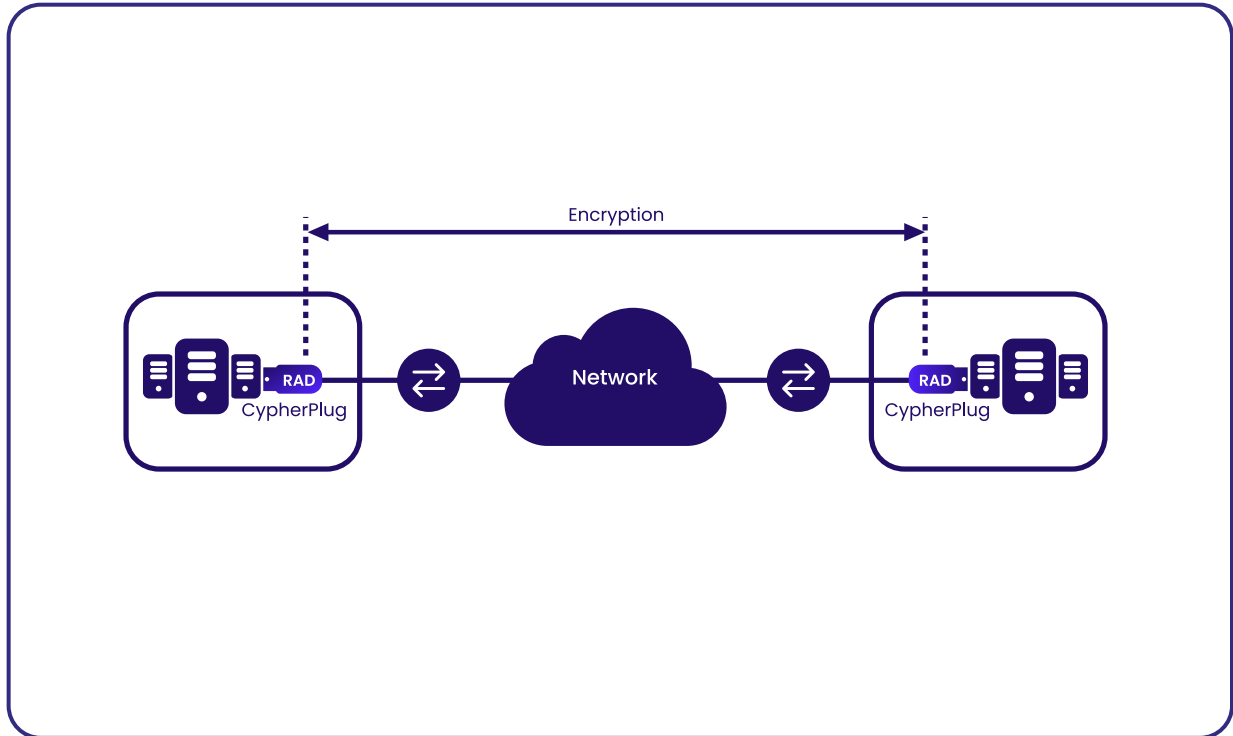
**ETX-2i-100G**  
100-GbE Carrier Ethernet  
Demarcation Device



**RADview**  
Management and Domain  
Orchestration

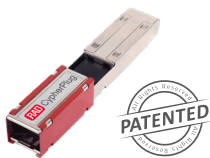


## IP Traffic Encryption

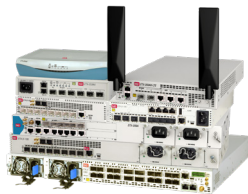


### Your Benefits:

- End-to-end static transport mode IPsec encryption
- Seamless security enhancement for existing deployments using an SFP sleeve
- Traffic encryption without changing network gear and structure
- Easy plug-and-play into standard MSA SFP ports of switches, routers, DSLAMs and mobile base stations
- Powerful FPGA design for wire-speed encryption
- Encryption key allocation allows service isolation between departments
- CypherPlug keeps the keys secret, without exposing them to field technicians
- Allows OpEx savings by eliminating the need for external power and reducing space and cabling expenses



**CypherPlug®**  
Miniature Network  
Security Device



**Carrier Edge**  
Ethernet Demarcation  
Devices



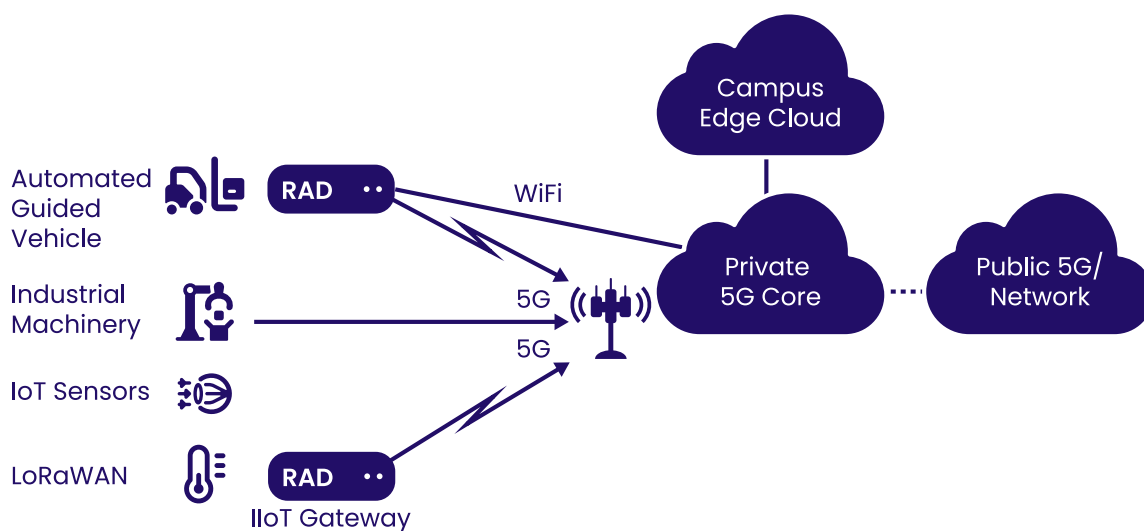
**SecFlow**  
Ruggedized IIoT  
Gateways



**Megaplex**  
Next-Generation  
Multiservice Access Node



## IoT over Private 4G/5G Networks



### Your Benefits:

- Deliver secure and reliable IoT connectivity services to enterprise campuses
- Ultra-resilient connectivity to the cloud over LTE and 5G networks
- Flexible connectivity for IIoT devices over LoRaWAN, Wi-Fi HaLow, serial, Ethernet links
- Scalability and reliability
- Edge Computing capabilities for IoT agents and cyber-security containers
- Enhanced security – IPsec, IDS/IPS, anomaly detection, stateful firewall
- Zero-touch provisioning
- Supports legacy SCADA and new generation IIoT sensors and devices
- Fits various verticals and use cases with special certifications
- Optional end-to-end solution including IIoT sensors and devices, gateway, IoT platform and dashboard



**ETX-1p**  
SMB IoT Gateway with  
Edge Computing



**SecFlow**  
Industrial IoT Gateway  
Programmable Logic Controller



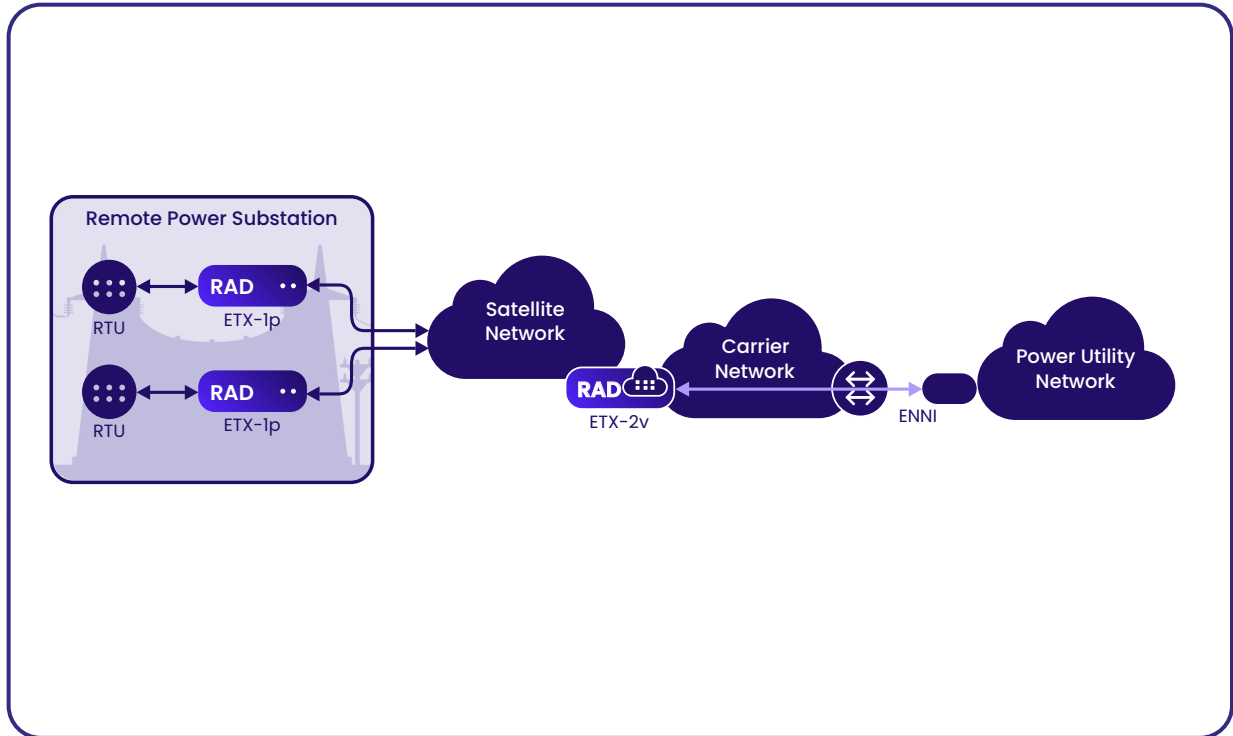
**SecurityGateway**  
VPN Aggregator, Router  
and Firewall



**RADview**  
Management and Domain  
Orchestration



## Satellite Backhaul for Rural Areas



### Your Benefits:

- Provide backup communications over satellite connections to substations and other critical assets deployed in rural and remote areas.
- Fully transparent, point-to-point Layer 2 connectivity with per site VLAN tagging.
- Service reliability and continuity to ensure uninterrupted operations.
- Rapid service deployments and seamless handover when main fiber link is down.



**ETX-1p**  
IoT Gateway with Edge  
Computing and SD-IoT



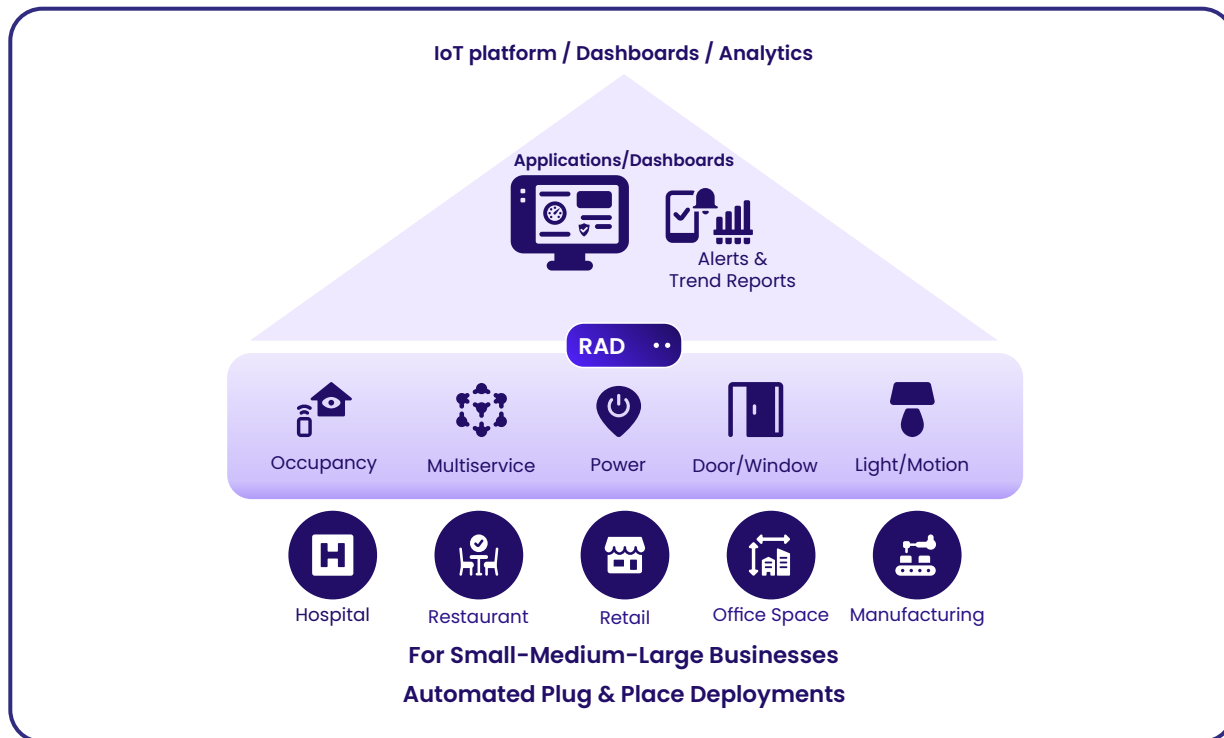
**ETX-2v**  
SD-IoT Hub



**RADview**  
Management and  
Domain Orchestration



## Smart Business IoT



### Your Benefits:

- Enable CSPs to offer their business customers new services with added value. By receiving actionable insights, businesses can improve operations, get suggestions, etc.
- Pre-configured, out-of-the-box solution for easy installation; doesn't require dedicated IT teams
- Support customized offering for various business types with built-in applications
- End-to-end solution includes sensors, a LoRaWAN gateway, and an IoT dashboard with alerts, trending, and AI-based improvement suggestions
- Secure connectivity from the business location to the cloud and IoT platform over fiber, 5G/LTE
- Edge Computing for enhanced cyber security and IoT functionalities



**LoRaWAN Sensors**



**SecFlow**

Industrial IoT Gateway  
Programmable Logic Controller



**ETX-1p**

IoT Gateway with Edge  
Computing



**IoT Platform**

Data Collection, Processing,  
Visualization, and Device  
Management

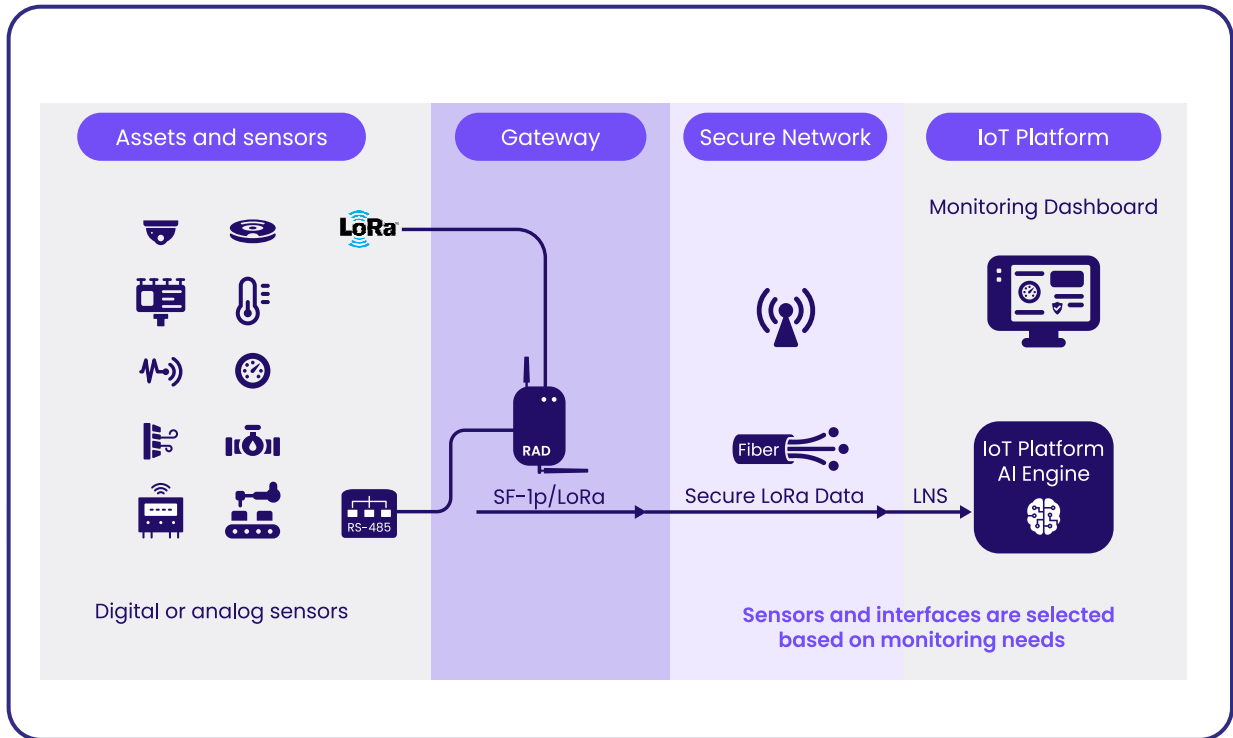


**RADview**

Management and  
Domain Orchestration



## Remote Data Center Monitoring



### Your Benefits:

- Comprehensive oversight of all systems and infrastructure involved in data center operations
- Fast issue detection and resolution by getting real-time data from all subsystems (power, environment, network)
- Remote diagnostics and alerts reduce the need for on-site technician visits, saving time and costs
- Helps predict potential failures before they escalate into outages
- Centralized dashboards and analytics help correlate issues across regions or equipment types
- End-to-end solution includes LoRaWAN sensors, an IoT gateway and an IoT platform
- Seamless communications over fiber, radio, and 2G/3G/4G/5G cellular links
- Edge Computing enables hosting user-tailored applications on SecFlow gateways using Docker containers



**LoRaWAN Sensors**



**SecFlow-1p**

Ruggedized LoRaWAN Gateway



**IoT Platform**

Data Collection, Processing, Visualization, and Device Management

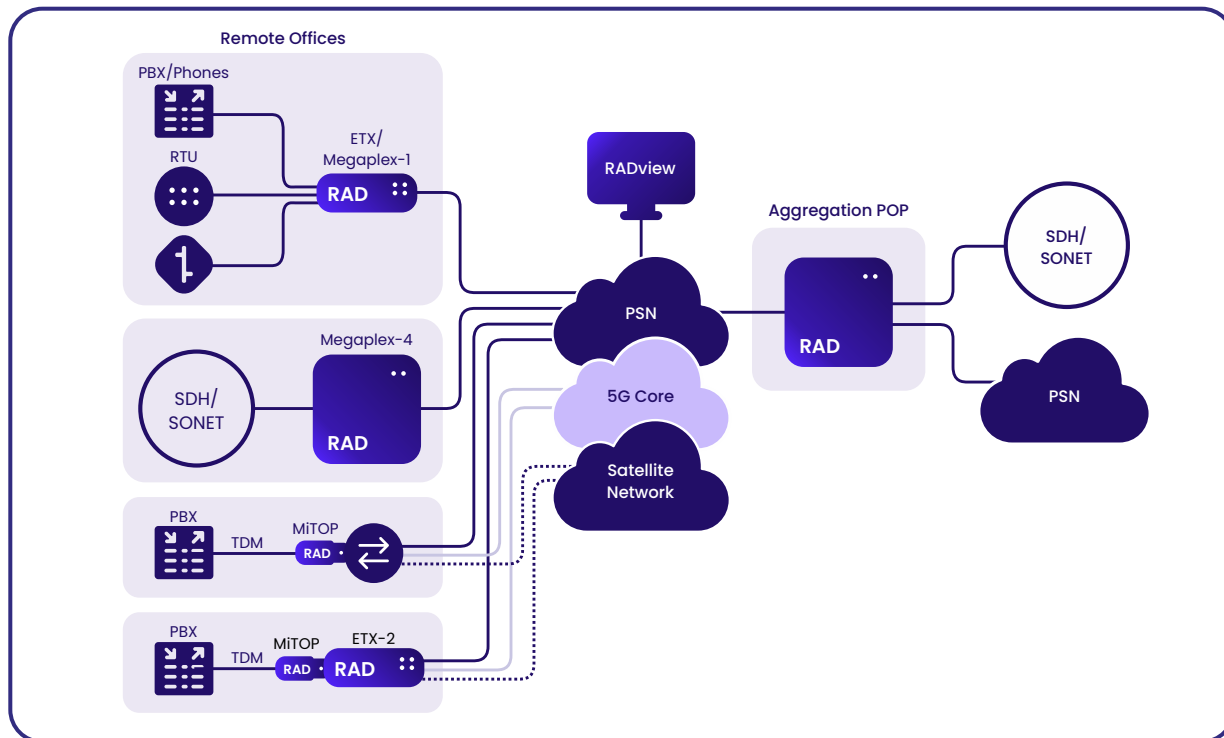


**RADview**

Management and Domain Orchestration



### TDM Migration



#### Your Benefits:

- Maintain legacy TDM services over new packet network to keep revenue flow and customer loyalty
- Enable alternative providers to add leased lines to their service portfolio to attract new customers
- Allow fork-lift TDM (SDH/SONET) infrastructure replacement to PSN without affecting legacy (high revenue) customers
- Support heterogeneous First Mile footprint requiring CPE support for DSL/EFM, Ethernet, GPON connections, and flexibility in PWE termination options: Customer site-to-customer site, customer site-to-POP/network, POP-to-POP
- Allow a single transport network for IP/Ethernet and TDM services to simplify operations and lower TCO
- Satellite/5G support as backup to fiber connections. 5G can also be used for service activation until fiber is available.



**ETX-2/ETX-2i**  
Carrier Ethernet  
Demarcation



**Megaplex-4**  
Next-Generation Multiservice  
Networking Node



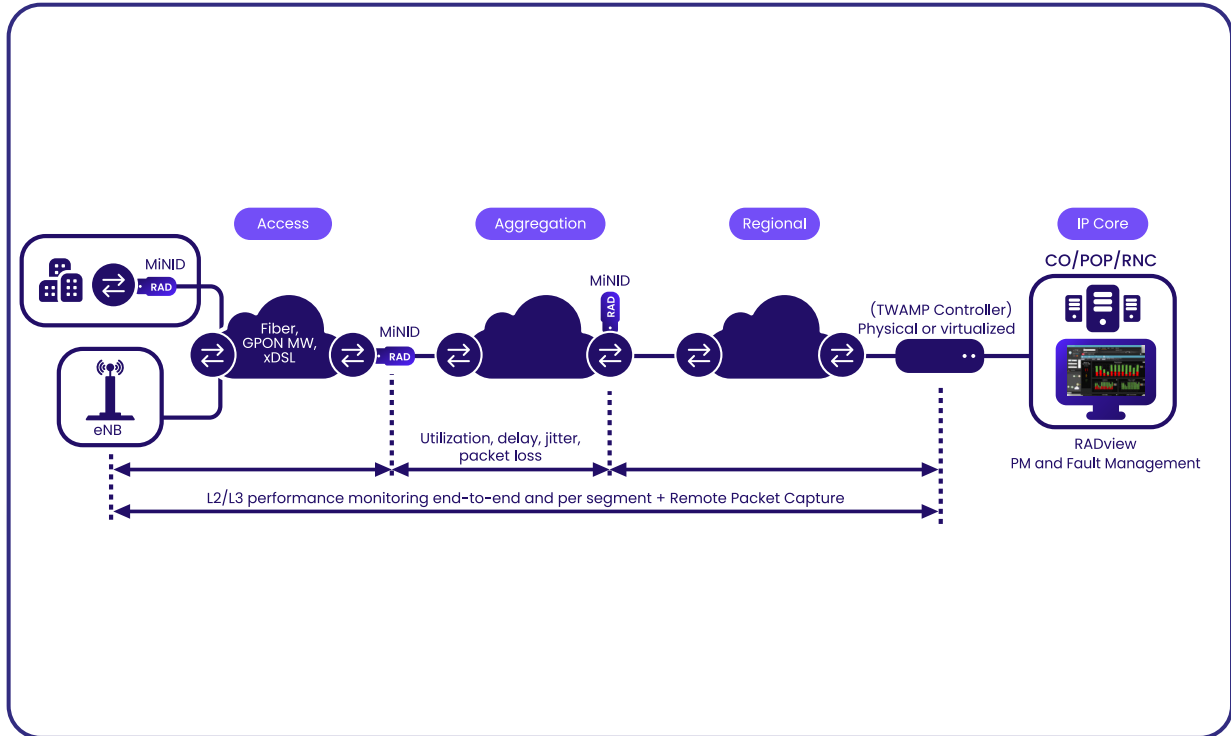
**MiTOP-E1/T1, E3/T3**  
Smart SFP-Format TDM  
Pseudowire Gateways



**RADview**  
Management and  
Domain Orchestration



# Performance Monitoring & Fault Isolation Upgrades to Existing Networks



## Your Benefits:

- End-to-end performance visibility across physical, service, and application layers
- Wire speed, real-time insights powered by FPGA-based hardware, data-driven analytics
- Network segmentation for precise issue isolation
- Efficient troubleshooting to minimize downtime
- Working opposite 3rd party controllers, acting as reflectors for loopbacks and other OAM protocols
- Cost-Effective: Seamless deployment with existing infrastructure
- Sustainability with lower power consumption



### MiNID SEP

Miniature Programmable Network Interface Device



### MiNID Sleeve

Miniature Programmable Network Interface Device

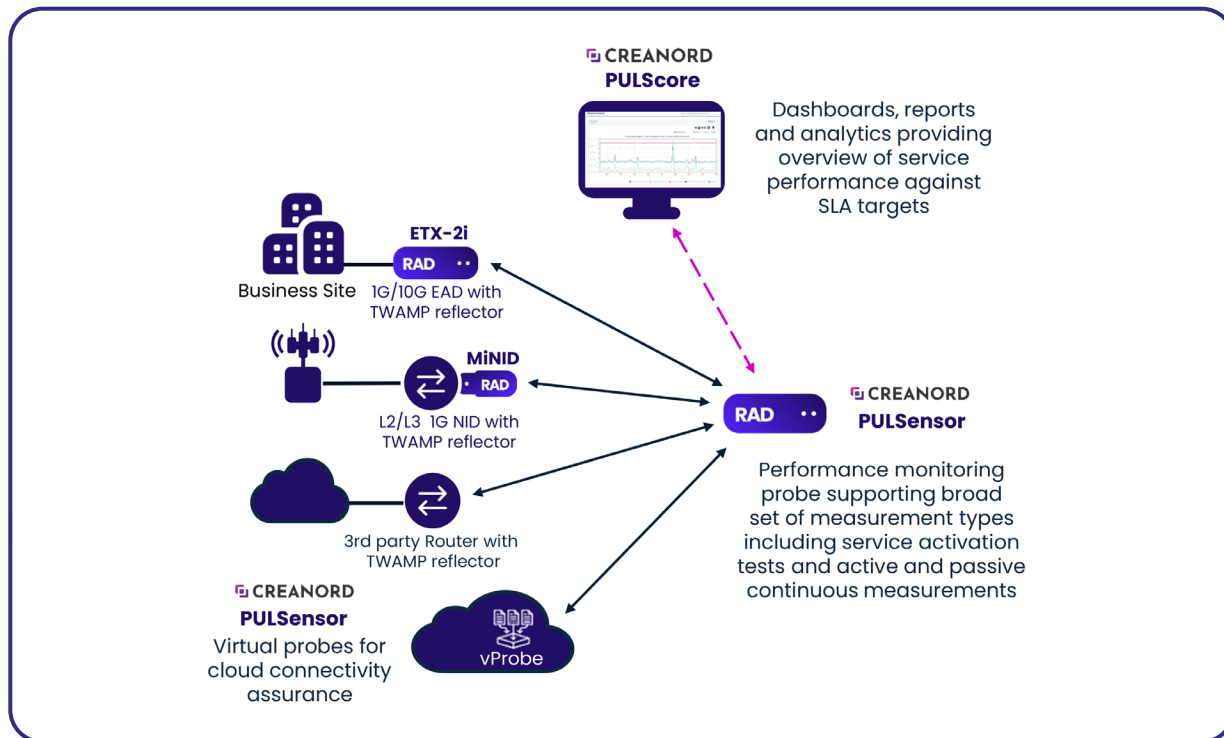


### RADview

Management and Domain Orchestration



## Service Assurance Platform



### Your Benefits:

- Comprehensive assurance, visibility, and insights across every service
- High-precision measurements for latency, jitter, packet loss, and bandwidth utilization
- Comprehensive Layer 2 and Layer 3 monitoring
- Standards-based service activation testing (SAT)
- Continuous active and passive monitoring for ongoing SLA assurance and proactive fault detection
- Application-aware performance testing to assess the quality of business-critical and customer-facing services
- Granular analytics and reporting for faster troubleshooting and root-cause analysis



**PULSensor Virtual**  
Performance Measurement Probe



**ETX-2/ETX-2i**  
1/10/25/100G EADs, LTE/5G and Broadband Options



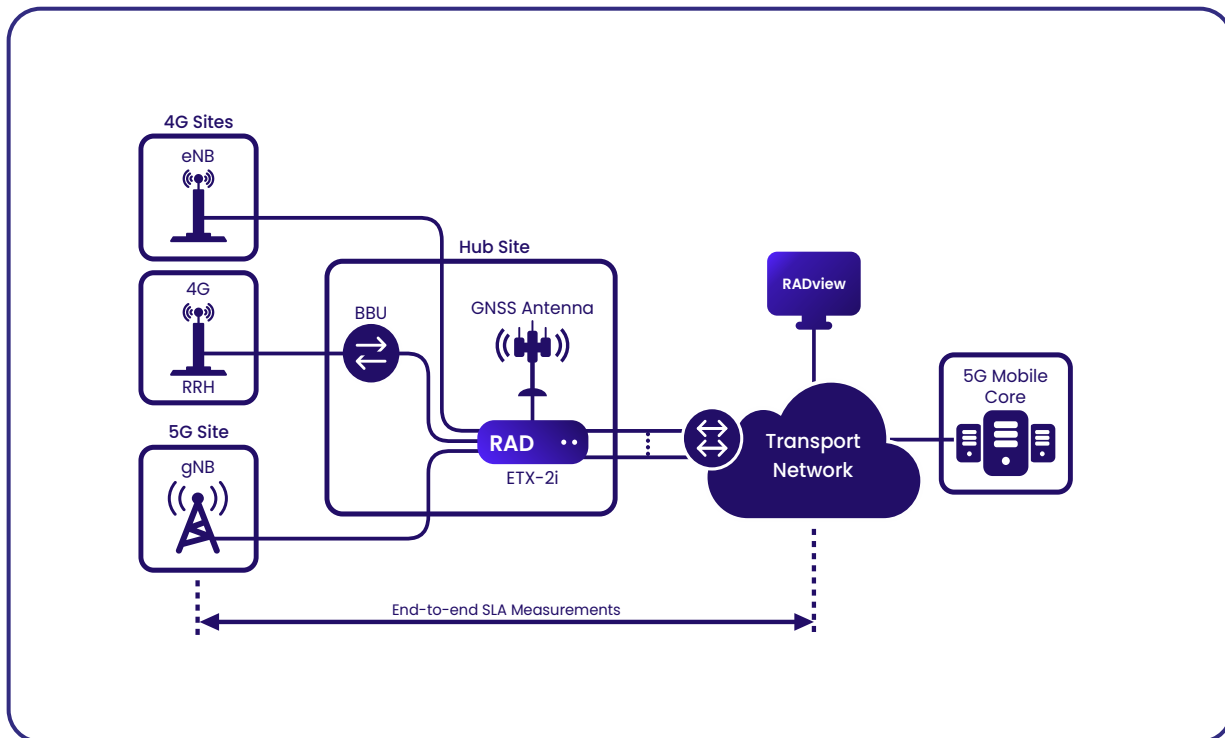
**MinID**  
Miniature Programmable Network Interface Device



**PULScore**  
Network Performance Monitoring and SLA Management System



## 4G/5G Mobile xHaul



### Your Benefits:

- Provide reliable backhaul for 4G, 5G sites and colocated sites
- Highly efficient 4G/5G aggregation: 10G, 25G and 100G
- Support wholesale and direct MNO applications
- Fixed-mobile convergence: Colocated mobile and fixed broadband sites
- Multi-CoS Carrier Ethernet/ IP backhaul with service management and OAM-based diagnostics
- 1588 PTP (GM, BC Class B, TC) with integrated GNSS receiver, Sync-E for timing synchronization
- L2, L3-based performance monitoring for multiple network slices and for network sharing
- Small form factor to meet space and power supply restrictions
- Ruggedized enclosure for outdoor installations



**ETX-2/ETX-2i**  
Carrier Ethernet Cell-Site Gateways up to 100G



**ETX-2i-10G Clamshell**  
Ruggedized Cell-Site Gateway



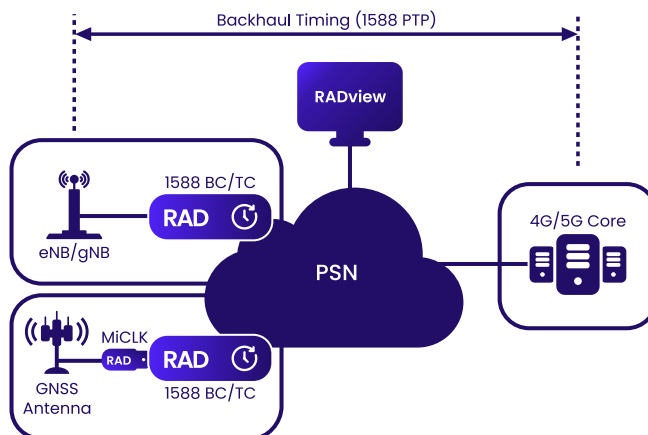
**ETX-2i-100G**  
100G Carrier Ethernet Demarcation



**RADview**  
Management and Domain Orchestration



## Timing Synchronization for Mobile Networks



### Your Benefits:

- Addressing stringent timing requirements (frequency/phase) for LTE/LTE-A/5G macro and small cells with a fully featured PTP Grandmaster:
  - ETX-2 in a local POP/hub
  - Unique MiCLK SFP plugged into an aggregation switch
- Enhanced cost efficiency by bringing PTP Grandmaster closer to the cell site
- Built-in GNSS receiver eliminates the need for a GNSS antenna on every cell site; avoids spoofing and jamming
- Full network coverage, even in underground and indoor installations
- Fits existing installed base – no need for CapEx investments in retrofitting network with 1588 BC/TC Class C support across the entire path
- Robust GNSS (GPS/GLONASS) backup – time holdover for 72 hours, using Sync-E or 1588 frequency references from the network (Assisted Partial Timing Support)



**ETX-2/ETX-2i**  
Carrier Ethernet  
Demarcation



**MiCLK**  
1588 Grandmaster on  
an SFP



**RADview**  
Management and Domain  
Orchestration



# Critical Infrastructure

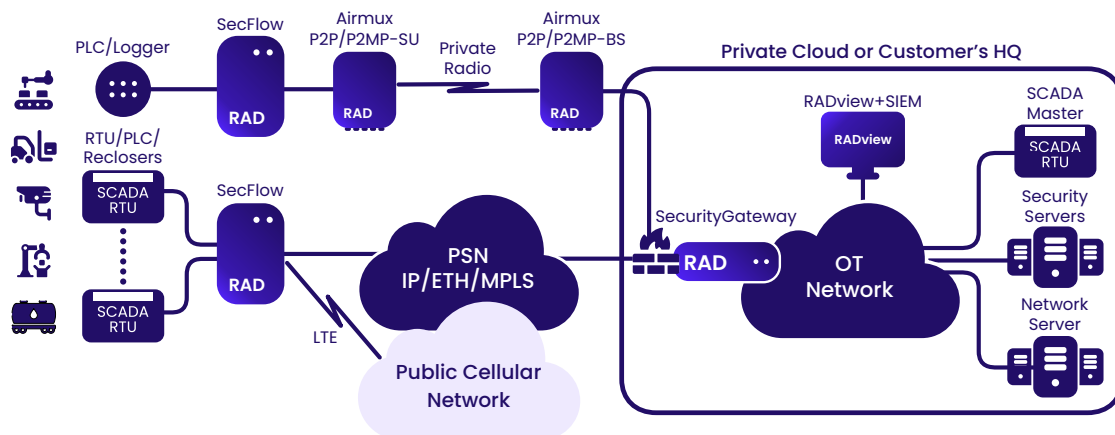
Enabling Industrial Digitalization and Secure IoT

**RAD solutions address all communication needs of utility, transportation, government, and oil and gas sectors with always-on reliability and mission-critical protection. We offer best-of-breed tools for cyber-secure asset monitoring, physical AI and IoT, operational WAN, Edge Computing, Smart/Safe City, and critical infrastructure deployments. We also ensure seamless migration to packet switched communication networks and applications.**

Key solutions include:

- Smart Industrial IoT solution for remote monitoring of manned and unmanned sites, data centers and temporary sites. Easily-accessible reports, alerts and AI-based insights with preventive measure suggestions
- Ultra-resilient, low-latency SD-IoT connectivity enabling Physical AI scalability with real-time decision-making and automation in the physical world
- Multiservice, packet and PoE-intensive operational technology (OT) WANs, supporting mission-critical data, voice and video applications
- Seamless communications over fiber, radio, 2G/3G/4G/5G cellular links, satellite, and leased lines
- Extensive security suite includes SCADA-aware firewall, intrusion prevention, man-in-the-middle attack prevention, encryption, device connection control, event logger, and anomaly detection
- Support a variety of wireless technologies for SCADA and Industrial IoT connectivity: CBRS, Anterix, 450 MHz, Wi-Fi HaLow, LoRaWAN, and LTE/4G and 5G
- Edge Computing allows flexible addition of software applications including protocol conversion, cyber security, IoT platform and video control and functionalities

## Smart Grid and Substation Automation



### Your Benefits:

- A comprehensive and secure solution addressing communications to secondary substations, metering and distribution automation
- Integrated LoRaWAN gateway
- Edge Computing for user-tailored applications allows customers to add new applications on top of SecFlow devices
- Zero-touch provisioning, enhanced cyber security
- Seamless communications over fiber optics, radio links, 2G/3G/4G/5G cellular links, and leased lines
- SD-IoT to ensure resilient, secure and reliable connectivity
- Transparent delivery of SCADA, protocol conversion and terminal server
- Complies with IEC 61850-3 and IEEE 1613 environmental standards
- Point-to-multipoint radio connectivity supports high capacity mission-critical traffic over licensed and unlicensed sub-6 GHz bands



**SecFlow**  
Industrial IoT Gateway with Programmable Logic Controller



**Ceragon/Airmux**  
Wireless Transport Platform

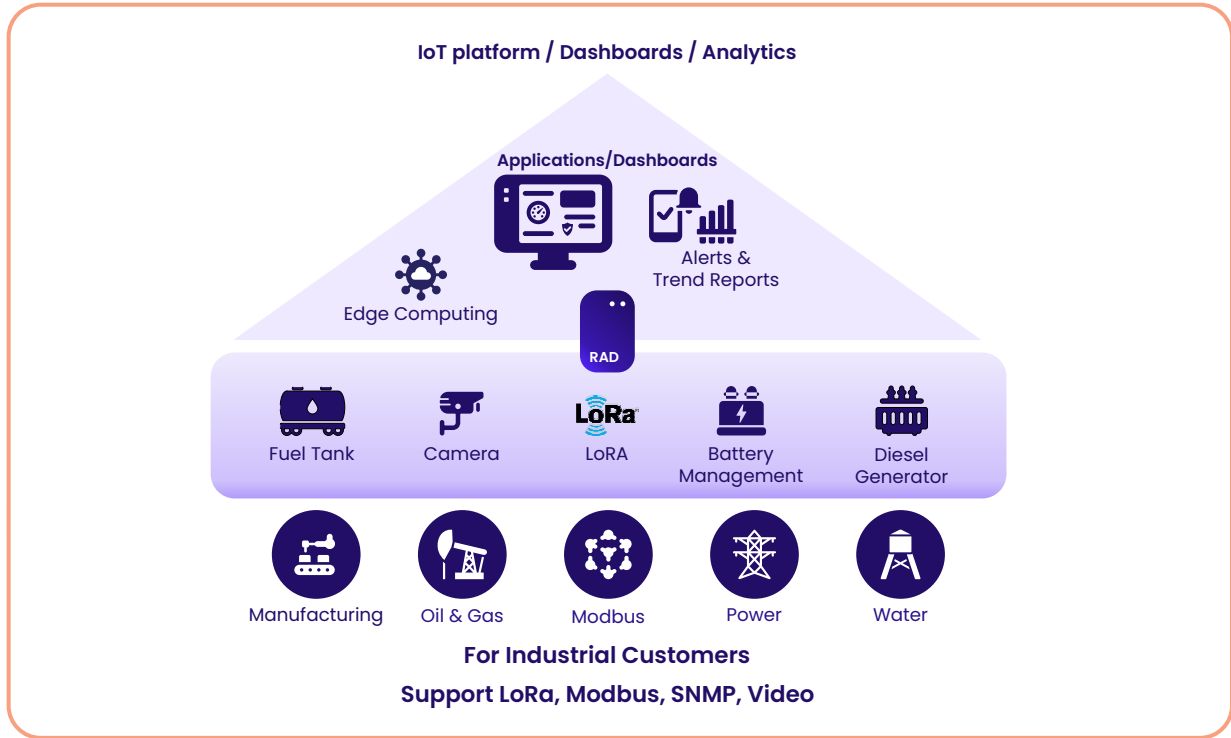


**SecurityGateway**  
VPN Aggregator, Router



**RADview**  
Management and Domain Orchestration

## Smart Industrial IoT



### Your Benefits:

- Provides real-time monitoring and process optimization suggestions for improved operations
- Includes a complete stack of sensors, gateways, and an IoT platform, plus a Docker-based intelligent edge container for advanced use cases
- Supports industrial-specific protocols and traffic at the edge, including LoRa, Modbus, SNMP, and video
- Combines predictive maintenance, data analytics, and AI-based insights with secure data transmission and storage



**Ceragon/Airmux**  
Wireless Transport Platform



**SD-IoT Gateway**  
SD-IoT Aggregator



**SecFlow**  
Industrial IoT Gateway with Programmable Logic Controller

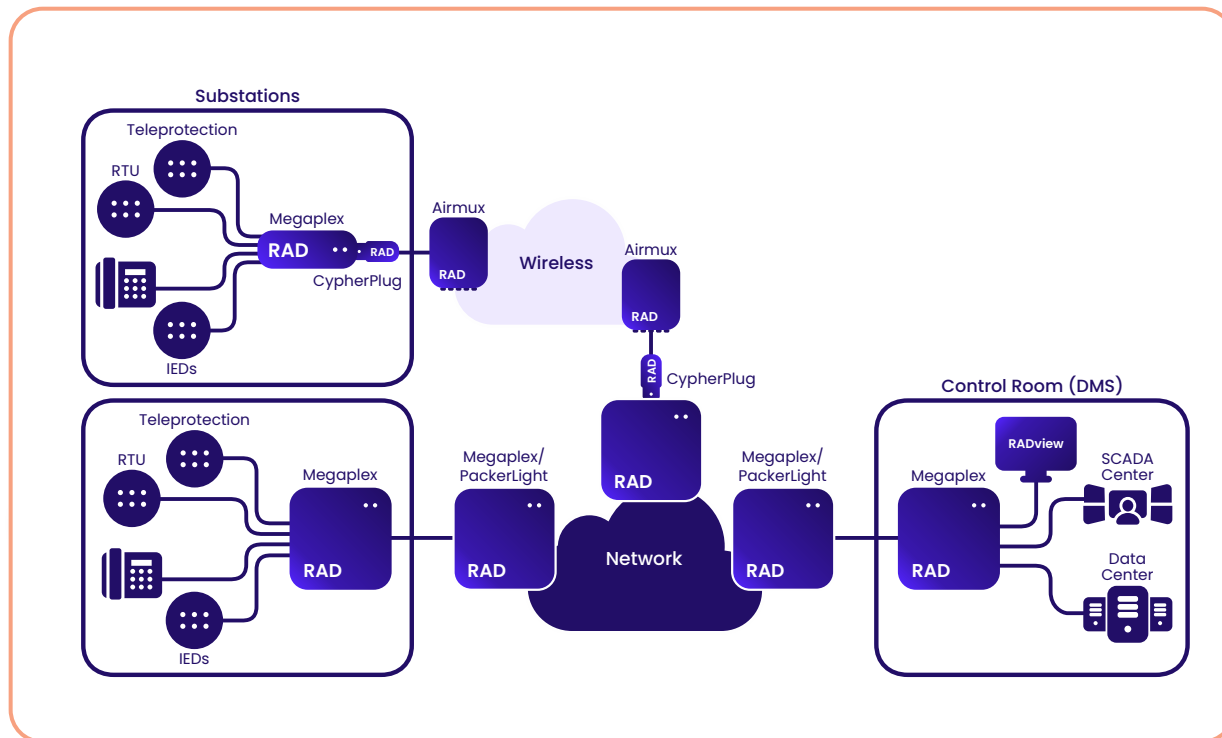


**SecurityGateway**  
VPN Aggregator, Router and Firewall



**RADview**  
Management and Domain Orchestration

# Power Utility Communications: Multiservice Operational WAN



## Your Benefits:

- Powerful cross-generation TDM, MPLS and Ethernet capabilities, including TDM DS0 cross connect and SDH/SONET, Carrier Ethernet with OAM and assured QoS, TDM pseudowire, and Ethernet over NGPDH/SDH/SONET
- Complete cyber suite, including encryption, authentication and authorization
- Easy connectivity of all services including Teleprotection over either SDH/SONET or a packet network
- Supports analog and digital data and voice devices, as well as Ethernet IEDs, with versatile rates from DS0 (time slot) up to STM-64/OC-192 or 10-GbE
- Guaranteed smooth migration to PSNs based on hybrid design for reduced latency and better resiliency
- Point-to-point and point-to-multipoint radio connectivity supports high capacity mission-critical traffic over licensed and unlicensed bands
- CypherPlug encrypts traffic over any L2/L3 network



**Ceragon/Airmux**  
Wireless Transport Platform



**CypherPlug**  
Miniature IP-Level  
Network Security Device



**Megaplex**  
Next-Generation Multiservice  
Networking Node

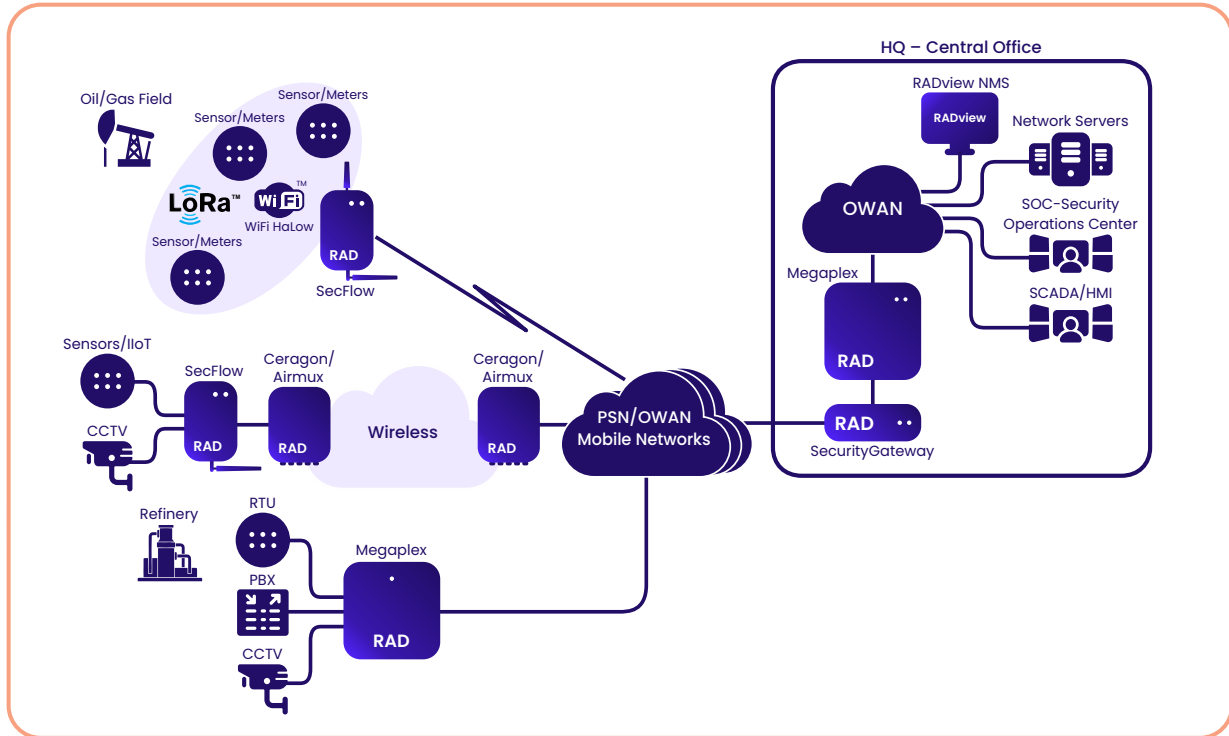


**PacketLight**  
Complete Solutions for WDM/OTN  
and Dark Fiber Applications



**RADview**  
Management and  
Domain Orchestration

## Oil & Gas Communications



### Your Benefits:

- Seamless communications over fiber, radio, 3G/4G/5G, CBRS, Anterix, leased lines
- SCADA and IIoT backhaul, protocol conversion and integrated PLC/RTU
- Integrated LoRaWAN or Wi-Fi HaLow gateway
- Operational voice, video, data aggregation, and transport for legacy SCADA and new IoT devices
- Ultra-resilient for uninterrupted operations
- Edge Computing processing and storage for a variety of added-value IoT platform agents, cyber security, video processing, and automation
- PtP and PtMP radios over licensed and unlicensed bands
- Enhanced cyber security – IPsec, PKI, FW, IDS/IPS, SIEM/SOC
- Zero-touch provisioning for easy deployment
- End-to-end operational network management and monitoring
- Complies with HAZLOC and other utility certifications



**SecurityGateway**  
VPN Aggregator, Router and Firewall



**PowerFlow**  
Managed Ruggedized Ethernet Switch with Power over Ethernet



**Smart SFPs**  
G-PON and XGS-PON OLT in an SFP



**CypherPlug**  
Miniature IP-Level Network Security Device



**Megaplex**  
Next-Generation Multiservice Networking Node



**SecFlow**  
Industrial IoT Gateway with Programmable Logic Controller



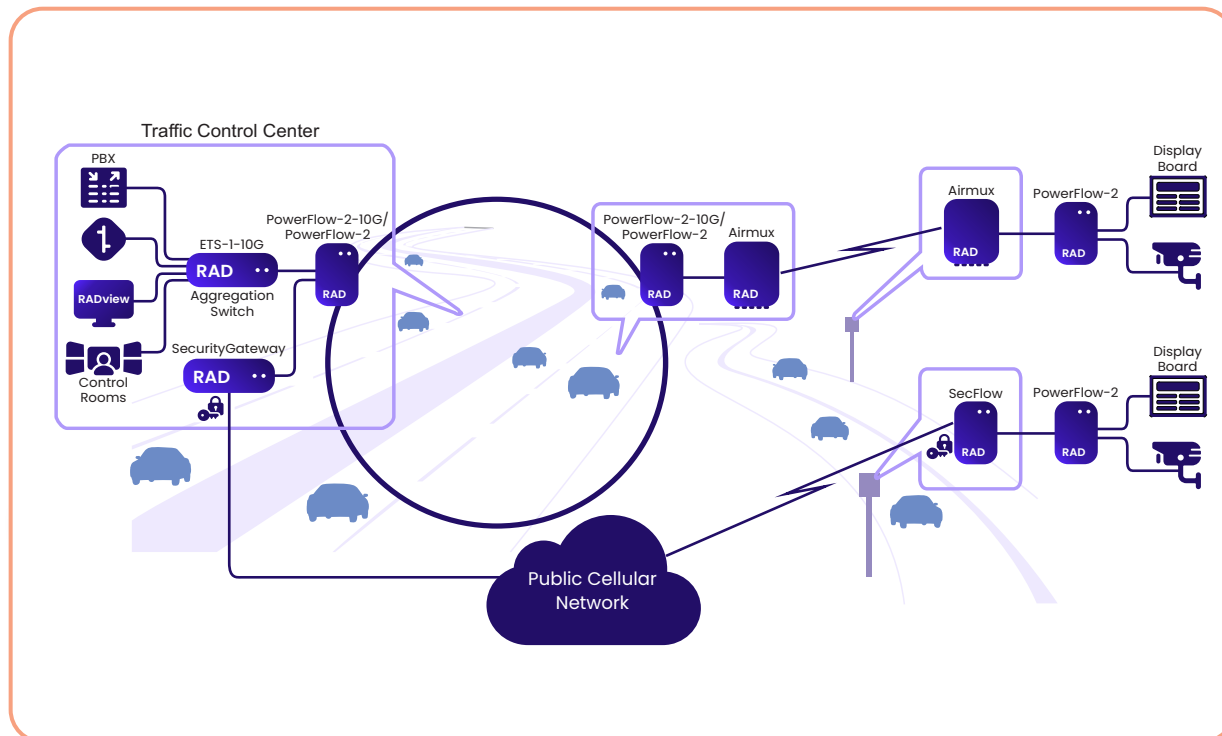
**Ceragon/Airmux**  
Wireless Transport Platform



**RADview**  
Management and Domain Orchestration



## Highway Communications



### Your Benefits:

- Backhaul high-definition video feeds, roadside display board and billing station data from remote facilities over fiber, high throughput microwave PtP and PtMP radio links, and 10-GbE rings
- Enable outdoor installations with industrial design and ruggedized enclosures
- Extensive PoE support including PoE++ and Airmux PoE
- L2 MPLS support
- 10-GbE carrier-grade Ethernet core rings with traffic management capabilities ensure reliable connectivity with appropriate quality of service for various applications
- 5G support where fiber isn't available



**SecFlow**  
Ruggedized SCADA-Aware  
Ethernet Switch/Router



**ETS-1**  
Ethernet Access Switches



**Ceraon/Airmux**  
Wireless Transport Platform



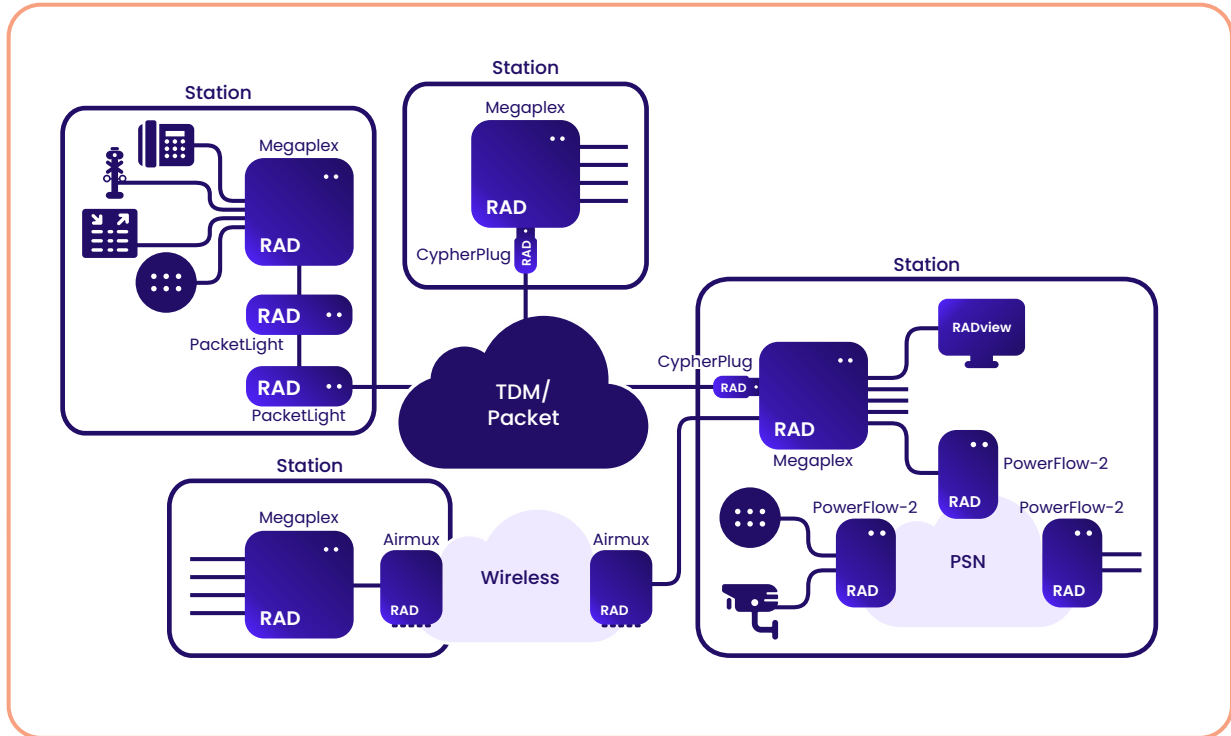
**PowerFlow**  
Managed Ruggedized Ethernet  
Switch with Power over Ethernet



**RADview**  
Management and Domain  
Orchestration



## Operational WAN for Trains and Metros



### Your Benefits:

- Ensure protected connectivity between stations and control room using multidrop and ring topologies
- Ethernet extension over fiber or copper (SHDSL) to enable service reach to remote M2M and video devices
- Support mission-critical railway applications, including automatic train supervision (ATS), centralized traffic control (CTC), SCADA, and multiparty hotlines, as well as passenger information systems (PISS)
- Support legacy TDM and Ethernet traffic delivery over SDH/SONET/IP/MPLS/MPLS-TP/CE/DWDM/OTN and/or carrier-grade fiber optic rings
- Support analog and digital data and voice devices, as well as Ethernet IEDs, with versatile rates from RS-232 up to STM-64/OC-192 or 10-GbE
- Point-to-point and point-to-multipoint radio connectivity supports high capacity mission-critical traffic over licensed and unlicensed bands
- CypherPlug encrypts traffic over any L2/L3 network



**Ceragon/Airmux**  
Wireless Transport Platform



**PacketLight**  
Complete Solutions for WDM/OTN and Dark Fiber Applications



**Megaplex**  
Next-Generation Multiservice Networking Node



**PowerFlow**  
Managed Ruggedized Ethernet Switch with Power over Ethernet



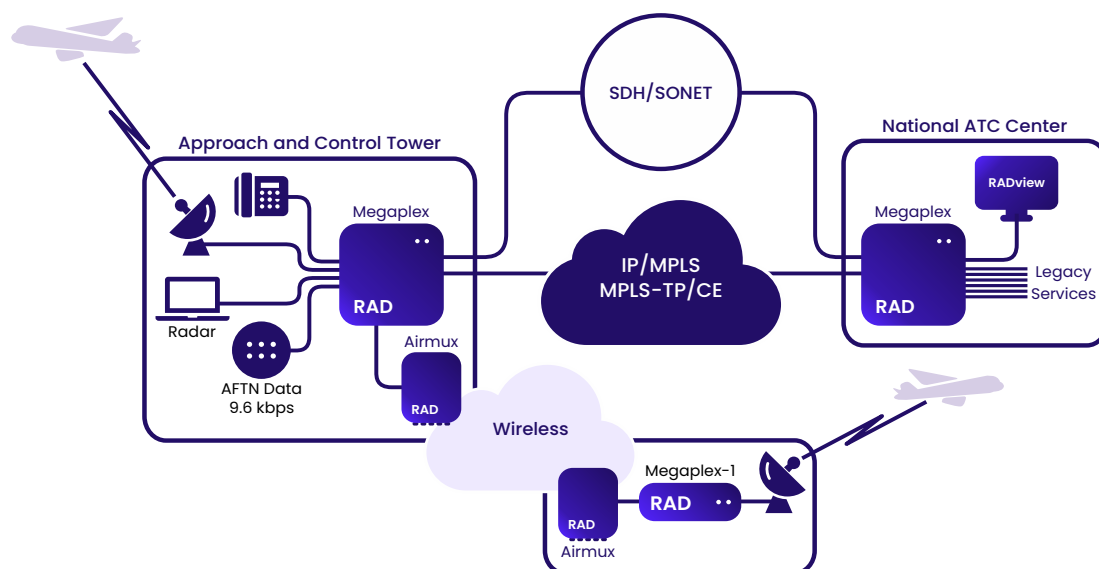
**CypherPlug**  
Miniature IP-Level Network Security Device



**RADview**  
Management and Domain Orchestration



## Multiservice Operational WAN for Air Traffic Control



### Your Benefits:

- Ensure reliable, uninterrupted communications between different traffic control centers with RAD's multiservice connectivity solutions over any transport network, including SDH/SONET, IP/MPLS, MPLS-TP, CE, OTN, DWDM
- Deliver direct speech (DS), Telex (TTY), radar data (RD), extended range VHF (ER), and VHF data link (VDL) traffic, together with other voice, fax and LAN services, using industry-standard interfaces
- Transport traffic over copper, fiber, microwave, or satellite links
- Distributed SCADA security suite with integrated firewall and encryption
- Optimized for subrate leased line transmission and backup to reduce OpEx
- Ruggedized platforms withstand the rigors of field operations
- Support fail-safe operations with ISDN, VSAT and Ethernet backup



**Megaplex**  
Next-Generation Multiservice  
Networking Node



**PacketLight**  
Complete Solutions for WDM/OTN  
and Dark Fiber Applications

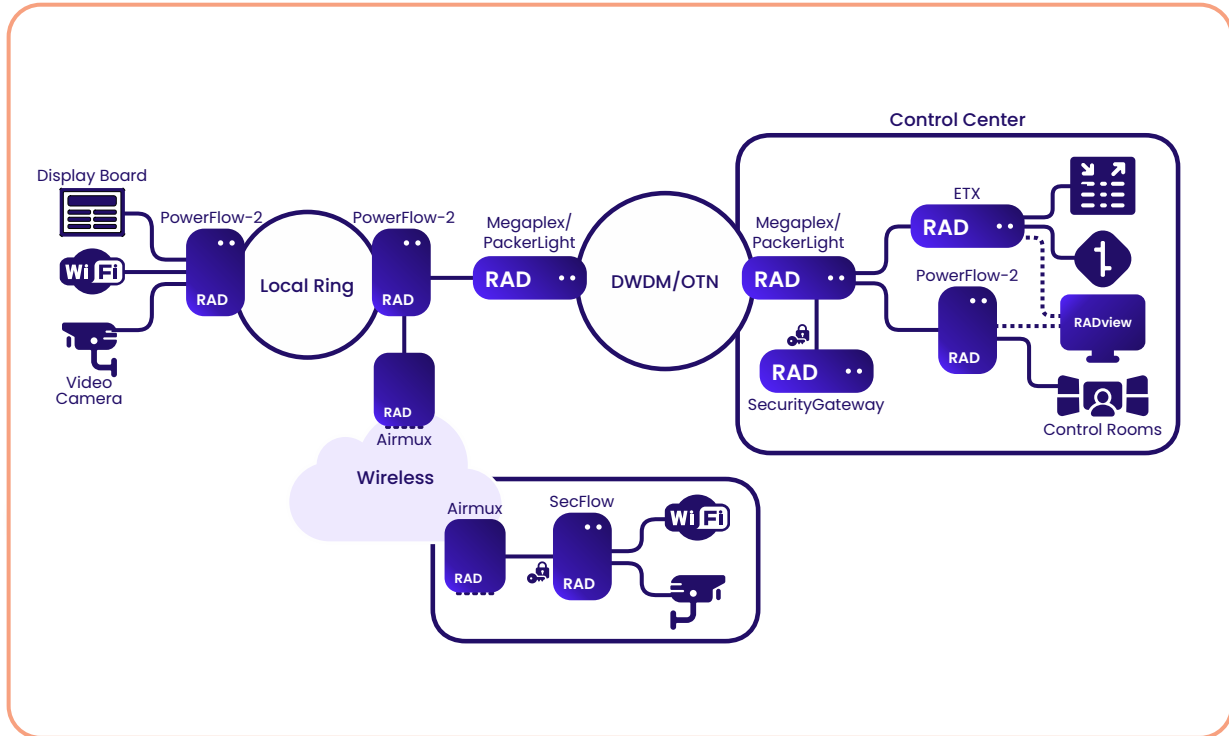


**Ceragon/Airmux**  
Wireless Transport  
Platform



**RADview**  
Management and  
Domain Orchestration

## Smart City Communications



### Your Benefits:

- A comprehensive communication solution for ruggedized devices in outdoor installations, including CCTV cameras, WiFi access points, sensors, payment kiosks, etc.
- Establish a long-distance fiber optic private network backbone utilizing OTN/DWDM multi-tunneling technology, supporting data rates of up to 100G.
- Zero-touch provisioning with enhanced cyber security (integrated IPsec, encryption, stateful firewall, SIEM)
- Allows customers to add new tailor-made applications on SecFlow devices using Edge Computing
- Secure remote access for end-user device management
- Transparent delivery of legacy traffic from serial-based devices
- Seamless communications over fiber, radio, 2G/3G/4G/5G cellular links, and leased lines
- Point-to-multipoint radio connectivity supports high-capacity mission-critical traffic over licensed and unlicensed sub-6 GHz bands
- G.8032 Ethernet Ring Protection Switching (ERPS) and PoE support



**Ceragon/Airmux**  
Wireless Transport Platform



**SecFlow-1p, SecFlow-1v**  
Industrial IoT Gateways with Edge Computing



**Megaplex**  
Next-Generation Multiservice Networking Node



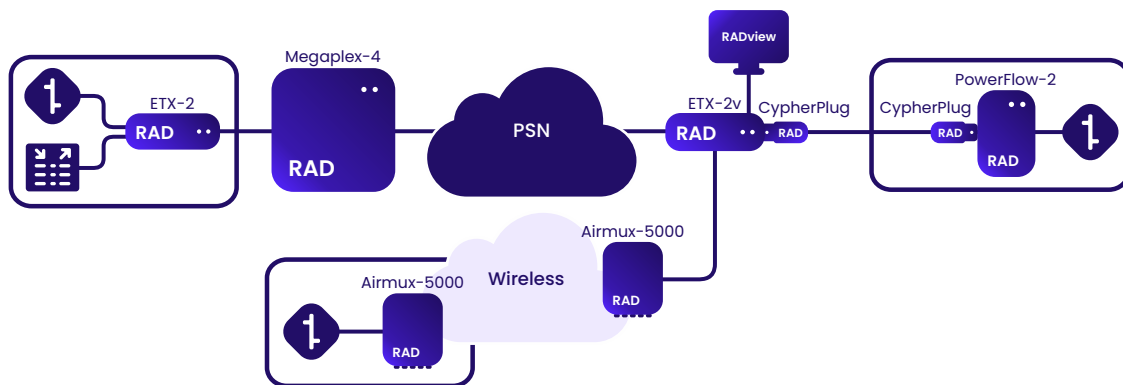
**PowerFlow**  
Managed Ruggedized Ethernet Switch with Power over Ethernet



**RADview**  
Management and Domain Orchestration



## First Responders and Military Communications



### Your Benefits:

- Connect a privately owned government/military/public network to remote sites using diverse infrastructure
- Support multiple services, including Ethernet, TDM and low speed data, using the same device
- Utilize existing SDH/SONET network or build a state-of-the-art IP/MPLS, MPLS-TP, CE backbone
- Secure remote access for end-user device management
- CypherPlug encrypts traffic over any L2/L3 network



**Airmux-5000**  
Point-to-Multipoint Broadband  
Wireless Access



**PowerFlow**  
Managed Ruggedized Ethernet  
Switch with Power over Ethernet



**ETX-2/ETX-2i**  
Indoor & Outdoor Ethernet  
Access Devices



**CypherPlug**  
Miniature IP-Level  
Network Security Device



**RADview**  
Management and Domain  
Orchestration



# RAD Products

## • A

**Airmux-400A/  
Airmux-400E**Point-to-Point Broadband  
Wireless Access

RAD's Airmux-400 series of point-to-point broadband wireless radios seamlessly deliver both native Ethernet and TDM services over a single wireless link, operating within various sub-6 GHz frequencies. With high capacity, the Airmux-400 radio systems boast an impressive aggregated throughput of up to 2.5 Gbps (Airmux-400E) and a remarkable range of up to 120 km (75 miles). These radio systems incorporate advanced features, including MIMO and OFDM, ensuring optimal performance and unmatched robustness in diverse environments. The Airmux-400A/400E are exceptionally well-suited for several applications, including:

- Utilities Advanced Metering Infrastructure (AMI) or Distribution Automation (DA) backhaul
- Public safety and government backhaul
- Transportation (highways and railways backhaul)

- **Multi-band operations over 4.9 to 6.06 GHz or 5.9 to 7.1 GHz a single device**
- **20 MHz, 40 MHz, 80 MHz or 160 MHz channel bandwidth**
- **Net throughput (aggregated):**
  - Airmux-400A: up to 500 Mbps
  - Airmux-400E: up to 2.5 Gbps
- **OFDM, MIMO and antenna diversity capabilities**
- **Extended range – up to 120 km (75 miles)**
- **Hub-site synchronization (HSS) supports simultaneous transmission from up to 16 colocated Airmux-400 and/or Airmux-5000 units**
- **Ring protection link (RPL) for Ethernet resiliency**
- **Spectral power measurement and RF survey tool – “Spectrum View” – for quick and easy installation**
- **AES-256 over-the-air encryption**

**Airmux-5000i/  
Airmux-5000D**Point-to-Multipoint  
Broadband Wireless Access

RAD's Airmux-5000 point-to-multipoint broadband wireless radios are the ideal wireless solution for business users demanding high capacity throughput with dedicated traffic bandwidth allocation and service level agreement (SLA) per subscriber. Featuring up to 750 Mbps aggregated sector capacity and a range of up to 40 km (25 miles), a single Airmux-5000i base station supports up to 128 remote subscriber units (SUs) with multi-band operation, making it ideal for:

- Service providers and ISPs, offering IP backhaul and 4G/broadband access for remote, rural and underserved communities
- Private networks requiring high capacity inter-branch connectivity for university campuses, healthcare organizations, government institutions, large enterprises, and public establishments
- Security and surveillance applications requiring aggregation and backhaul of traffic from multiple colocated HD cameras
- **Airmux-5000/5000i/5000D multi-band operations over 3.4 – 3.8 GHz and 4.9 – 6.1 GHz in a single device**
- **Airmux-5000D includes two radios (3.x GHz and 5.x GHz) in a single unit**
- **Up to 750 Mbps aggregated throughput per sector/band**
- **Up to 128 remote subscriber units per sector with aggregated throughput of 5, 10, 20, 25, 50, and 100 Mbps**
- **Supports fixed and nomadic applications**
- **Airmux-5000i with beamforming antenna**
- **10 MHz, 20 MHz, 40 MHz, or 80 MHz channel bandwidth**
- **OFDM, MIMO and antenna diversity capabilities**
- **Range up to 40 km (25 miles)**
- **Intra- and inter-site TDD synchronization using hub-site synchronization (HSS) and GPS**
- **Low constant latency – typically 4 to 10 msec in full sector load**

## BiDi QSFP Adaptor

### 100G/200G Dual to Single Fiber Adaptor



RAD's patented BiDi miniature passive adaptor fits any transceiver with LC connectors to perform simple dual to single bi-directional fiber connectivity. This 100G/200G QSFP adaptor doubles fiber capacity while avoiding costly new fiber/transceiver deployments. A simple to deploy bookend solution, it is ideal for network service providers, cloud providers, data center operators, and enterprise network operators wishing to better utilize their existing fiber. BiDi QSFP Adaptor allows them to simply pair a small form-factor passive adaptor with any fiber QSFP transceiver. This reduces the need for costly fiber trenching and frees up fiber for other services.

- 50% fiber savings with quick ROI
- Works at any bit rate: 40G, 100G, 200G
- Unique patented technology complements SFP+, QSFP28, QSFP-DD, QSFP+, CFP-2
- Compact and simple to deploy (no need for configuration or additional power source)
- Low insertion loss (<2 dB including connectors)
- 1310-nm (1291-1312) wavelength at any supported bandwidth rate
- 1550-nm (1528-1567) wavelength at any supported bandwidth rate
- Operates over various optical distances: 10 km (6.2 miles), 20 km (12.4 miles), and 40 km (25 miles)
- Double fiber capacity while avoiding costly new fiber/transceiver deployments

## CESP VM

### Virtual TDM Engine



This data/voice virtual machine processing engine can be installed on any x86 or ARM platform. Working on any white box, the CESP VM provides seamless on-site or remote configuration in real time, replaces legacy and/or non-functioning voice compression products, and supports parallel processing on multi-core processors.

It is recommended for integration with ETX-2v, ETX-1p, SecFlow-1p, and its PWE engine is compatible with MiTOP, Megaplex-4 and ETX-205A.

- Point-to-multipoint data/voice services
- Data encapsulation protocols V.110, R111, oversampling
- Terminal server functionality for serial data transport over IP/TCP/UDP, SSH
- Voice conversion (PCM, ADPCM, G729A, RTP)
- Service level protection
- Gateway from TDM to IP for both data (UDP/TCP) and voice (RTP)
- Highly efficient multi-core processes and algorithms
- Powerful PW and DS0 Interworking

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## • C/E

### CypherPlug® Miniature Network Security Device



CypherPlug® is a miniature IP-level network security device that encrypts traffic over any IP network. Its innovative design – an easy plug-and-play solution – breaks through the barriers of cost and complexity for customers seeking a high level of security for their networks.

It is an SFP sleeve form factor, capable of hosting any standard MSA-compatible 100-Mbps or 1-GbE SFP. CypherPlug transparently envelops a large variety of SFPs, enabling full reuse of customer equipment and seamless deployment over multiple access infrastructure types, such as short-haul and long-haul fiber connections, bidirectional single-fiber links, and copper lines.

The SFP sleeve is easily pluggable into standard MSA-compatible SFP ports of switches, routers, DSLAMs and mobile base stations, eliminating the use of external power and reducing space and cabling expenses.

The CypherPlug functionality is based on a powerful FPGA that enables easy customization to additional or different customer requirements.

- End-to-end static transport mode IPsec encryption
- Designed for seamless protection enhancement of any existing SFP-based network device
- Wire-speed encryption (1000 Mbps)
- Low OpEx due to decreased power consumption, space and installation costs compared to other solutions

### ETS-1 Ethernet Access Switches



The ETS-1 switches are high-performance devices suitable for various roles, serving as network edge, aggregation, or transport switches in carrier networks. Additionally, they function effectively as top-of-rack (ToR) or end-of-row switches in data centers.

The ports of these switches support operation at different rates, including 1 Gbps (SFP), 10 Gbps (SFP+), 25Gbps (SFP28), 40 Gbps (QSFP+), and 100 Gbps (QSFP28).

The non-blocking architecture ensures lossless packet forwarding at wire speed, with minimal and predictable delays for all types of traffic.

The switches' port configurations range from 10 x 1-Gbps up to 48 x 1-Gbps/10-Gbps, complemented by six 40-Gbps/100-Gbps uplink ports.

- Stacking support
- Multicast support: IGMP snooping, MVR
- Advanced security: Multilayer ACLs, IP Source Guard, and Dynamic ARP Inspection
- High port density, up to 48 10G ports
- PoE/PoE+ support
- Ethernet OAM, QoS and rate limiting
- Optional, license-based BGP and MPLS support

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## ETX-1p

### CPE for Branch Routing and Edge Access to Cloud



ETX-1p is an economical CPE enabling business customers' transition to the cloud. In addition, it also serves as a LoRaWAN gateway, combining LoRaWAN and security solutions.

As a disaggregated CPE, it hosts virtualized function containers. By combining powerful networking capabilities with flexible connectivity options, rich management interfaces and embedded security functions, the ETX-1p enables service providers to deliver advanced IP-VPN services, as well as value-added virtual services from the data center to the customer branch. The all-in-one device includes an embedded router and a next-generation firewall, together with switching capabilities and LTE, Wi-Fi and LoRaWAN support, making it easy to connect branches to private and public clouds over mobile or fixed broadband or over MPLS, without the need for extra hardware or complicated configurations.

ETX-1p is bundled with RAD's carrier-grade, Linux-based operating system. Designed to run on various ARM- and x86-based CPE platforms, it is security hardened and optimized to provide maximum performance at a low footprint.

- Hosting of third-party software using Docker container technology
- Multiservice support: GbE copper and fiber
- Single or dual cellular modem for a 2G/3G/LTE and 5G uplink; dual SIM for always-on connectivity
- Wi-Fi access point
- Dynamic routing with OSPF, BGP, VRF and secure VPN using IPsec, DMVPN and NAT for flexible connectivity
- Cyber security suite: 802.1X, IPsec encryption with automated PKI, stateful firewall
- Also features secure boot, TPM 2.0, disk encryption, and more
- Zero-touch provisioning, firewall configuration, fault management and reporting, bulk software upgrade, and database management using RADview

## ETX Family

### Carrier Ethernet Demarcation

The ETX-2 line of Carrier Ethernet NID/NTUs offers demarcation for SLA-based business services, wholesale services and mobile backhaul. The ETX-2 is Mplify certified for Carrier Ethernet for Business, including E-Line, E-LAN, E-Tree, and E-Access services, as well as delivering TDM pseudowire over packet networks. Supporting high capacity service provisioning per EVC/EVC.CoS, flexible classification and H-QoS traffic management, it also performs accurate and scalable service testing and performance monitoring. The ETX-2 is supported by RADview management and enables a variety of protection mechanisms. It also offers NEBS-compliant and environmentally hardened enclosure options.



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## • E

### • ETX-203AX: Carrier Ethernet Demarcation Device



ETX-203AX is ideal for carriers, service providers, and wholesale operators requiring advanced Ethernet functionality at customer premises and multi-tenant units (MTUs).

- Four and six FE/GbE ports; varied selection of SFP and copper interfaces
- Outdoor enclosure option
- Wide-range AC/DC power supply

### • ETX-203AX-T: Carrier Ethernet Device with 4G/5G/Broadband Connectivity



ETX-203AX-T extends Ethernet VPN services to new, out-of-reach locations, allowing rapid site commissioning by using readily available 4G/5G or broadband networks. The ETX-203AX-T enables cost-effective Ethernet VPN services backup using 4G/5G or broadband. Additional cost optimization can be achieved by splitting traffic between a service-assured VPN and best-effort LTE or broadband access.

- Five FE/GbE ports with varied selection of SFP and copper interfaces
- Optional built-in 4G/5G modem with global service coverage
- Secure EVC tunneling over private IP/LTE networks or over the internet using L2oGRE or L2TPv3 protocols
- Mplify certified for Carrier Ethernet for Business standard capabilities
- for SLA monitoring, diagnostics and fault detection
- Data and management protection using LTE or broadband
- Integrated wide-range AC/DC power supply
- Fragmentation and IPsec support

### • ETX-205A Carrier Ethernet/Mobile Demarcation Device



The ETX-205A provides advanced Carrier Ethernet demarcation and offers combo interfaces and power supply redundancy. For LTE/LTE-A mobile backhaul, the ETX-205A is installed at cellular tower and controller sites to guarantee differentiated SLAs.

- L2 VPN service demarcation with superior traffic management and monitoring capabilities
- Flexible synchronization offering Sync-E, IEEE 1588v2 slave, BC and TC for frequency and phase synchronization in mobile networks
- Distributed Grandmaster architecture integrating built-in GPS receiver with IEEE 1588v2 Grandmaster functionality for cost-optimized 4G/5G deployments
- E1/T1 pseudowire services per MEF-8, UDP/IP, MPLS static labeling in SAToP and CESoP modes, and with CAS

## ETX-2i Family

Carrier Ethernet  
Demarcation up to 400G

Hot Product

The ETX-2i line of next-generation NID/NTUs offers advanced demarcation for SLA-based, L2 business services, wholesale services and mobile backhaul with optional PTP- and/or GNSS-based timing. The ETX-2i offers a complete service life-cycle toolset, as per Mplify Carrier Ethernet for Business specifications.

Quantum-safe encryption ready, the ETX-2i-100G offers a variety of Ethernet network products supporting 1-GbE, 10-GbE, 25-GbE and 100-GbE connections.

### • ETX-2i: Ethernet 1G Demarcation Device and Cell-Site Gateway



Available as a modular demarcation device, the ETX-2i enables operators to deliver the most advanced Carrier Ethernet services over any network connection. In addition, the ETX-2i combines advanced timing functionalities for wholesale mobile xHaul. The ETX-2i is ideal for wholesale operators requiring advanced Ethernet L2/L3 functionality at customer premises and multi-tenant units (MTUs).

- Up to eight GbE combo ports
- Integrated wire-speed switch/router
- Modular network interfaces: FE/GbE (combo), E1/T1, T3, VDSL2, or SHDSL
- Flexible synchronization offering Sync-E, IEEE 1588v2 slave, BC and TC for frequency and phase
- synchronization in mobile networks
- Supports O-RAN deployments
- NEBS-compliant and environmentally hardened enclosure options
- 3U device with six GbE combo ports and 64 x E1/T1, offering high scale, cost-effective TDM over packet services

### • ETX-2i-B: Ethernet 1G Compact Demarcation Device for SMBs



ETX-2i-B is a 1G demarcation device optimized for remote branches and SMBs over native Ethernet access. It is ideal for carriers, service providers, and wholesale operators requiring advanced Ethernet L2/L3 functionality at customer premises and multi-tenant units (MTUs).

- 1U device with up to ten GbE ports
- Fan-less 2U device with ten GbE ports, ideal for cost-effective small-cell aggregation
- Optional integrated 6-Gbps switch/router



## • E

• **ETX-2i-10G: 10G Carrier Ethernet Demarcation/Aggregation Device**

Hot Product



The ETX-2i-10G combines intelligent, high bandwidth demarcation and aggregation capabilities for enterprise headquarters and mobile backhaul operators. As an aggregation solution at the concentration point, a single unit can support numerous services and concurrent OAM sessions.

- 19" unit with up to eight 10-GbE and up to 24 GbE ports in various combinations
- Half 19" unit with up to eight 10-GbE ports and up to eight GbE ports in various combinations
- Advanced timing with Sync-E and 1588v2 slave, BC (Class C) and TC for phase and frequency synchronization for video and mobile applications
- ITU-T G.8032 Ethernet Ring Protection Switching
- NEBS-compliant, outdoor and environmentally hardened enclosure options
- Outdoor unit with 8x10G ports and optional timing, suited for pole, wall and H-frame installation.



- 19" (environmentally isolated) and half-19", low power, high scale devices with 4 or 8 x 10G with optional 2x copper combo ports and timing.

• **ETX-2i-100G: 100-GbE Carrier Ethernet Demarcation Device**

Hot Product



ETX-2i-100G delivers the full suite of Carrier Ethernet demarcation and aggregation capabilities, at 1/10/25/100-GbE rates. Mplify certified for Carrier Ethernet for Business, the ETX-2i-100G addresses the increasing demand for high bandwidth access to data centers, while maintaining SLA guarantees, service monitoring, flexibility, and management. In addition, the ETX-2i-100G supports timing synchronization for applications such as mobile backhaul.



- 19", 1U device with dual redundant power supply
- Four 100-GbE (QSFP28), eight 1/10/25-GbE SFP28 and eight 1/10-GbE SFP+ interfaces
- Advanced QoS with hierarchical policing and bandwidth shaping per EVC and EVC.CoS
- Supporting 1G (SFP), 10G (SFP+), 25G (SFP28), 40G (QSFP+) and 100G (QSFP28) interfaces
- Accurate and scalable hardware-based OAM and performance monitoring per ITU-T Y.1731 and TWAMP
- Y.1564 service activation testing of up to 100G at wire speed
- Optional timing synchronization support using Sync-E, 1588v2 Master (GNSS), BC (Class C) and TC with various telecom profiles



### • ETX-2i-400G: Carrier Ethernet Demarcation and Aggregation Device



RAD's ETX-2i-400G is an advanced 400G Carrier Ethernet demarcation and aggregation device designed to deliver SLA-based, high performance networking services for massive data transfer across data centers, clouds, enterprise sites, and edge locations. The ETX-2i-400G is designed for Quantum-Safe Security, with line-rate MACsec and PQC/QKD readiness to ensure future-proof data protection. Built for AI-driven network demands, the ETX-2i-400G provides ultra high capacity, predictable low latency, and enhanced security, making it the ideal solution for efficient, scalable, and resilient Data Center Interconnect (DCI) and next generation enterprise connectivity.

- Ultra high bandwidth connecting data centers, clouds, enterprise sites, and edge locations
- Aggregates multiple 100GbE and 400GbE tributaries onto 400GbE links
- Advanced Traffic Management with HQoS and dedicated fast lanes for delay-sensitive business traffic
- Small footprint (1 RU, 19 inch) and low-power consumption solution
- Designed for post-quantum security and quantum-safe encryption

### ETX-2v Open vCPE White Box Platform



The ETX-2v includes a line of carrier-grade white boxes installed at the customer premises – either at headquarters or in remote branch sites. The ETX-2v products support a wide range of business customers and user scenarios, from small offices to large sites, using a variety of bandwidth, processing power and LAN/WAN options.

- White box appliances for virtual CPE, SD-WAN and NFV featuring powerful x86 processors
- Hardware-based security featuring a Trusted Platform Module (TPM)
- Flexible SFP/UTP connectivity with optional interfaces including: LTE, Wi-Fi, GPON, PWE, and more
- Supports a range of x86 CPU technologies (Rangeley and Denverton), with flexible multi-core options
- Various memory (RAM, SSD) size options
- Intel QuickAssist technology – authentication, encryption, etc.
- SR-IOV capable ports to enhance throughput
- Fan-less, low power (~7W) options reduce carbon footprint
- Rack-mount and desktop options

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## Megaplex-1 Multiservice Pseudowire Access Gateway



RAD's Megaplex-1 is a compact, highly reliable multiservice access node that transports analog and TDM traffic originating from legacy circuit-switched devices over packet switched networks (PSNs). It is specifically designed to address the needs of critical infrastructure network operators who are migrating to next-generation Ethernet, IP or MPLS communications. This includes utilities, transportation operators and government agencies. It enables seamless service migration with a scalable TDM over packet pseudowire engine and comprehensive multiservice support for PDH, high and low speed data, analog voice, and Teleprotection devices.

- Grooming and transmitting analog voice and TDM-based services over packet using standard pseudowire technology
- Wide range of services: E1/T1, FXO/FXS/E&M, IEEE C37.94, programmable serial ports and more
- Pseudowire emulation redundancy per tunnel for ultra-fast hitless restoration ensures maximum service uptime
- Bridge functionality with two optical/copper GbE uplinks and up to four FE user interface ports
- 1U 19-inch fan-less enclosure with redundant, wide-range power supply (AC/DC)

## Megaplex-4 Next-Generation Multiservice Access Node



RAD's Megaplex-4 is a carrier-class, high capacity multiservice access concentrator for delivering legacy and next-generation services over PDH/SDH/SONET and packet switched transport networks (PSN). Its ability to handle a broad range of Ethernet, data and voice services, as well as a large variety of network technologies, in a single compact managed node, makes it an ideal aggregation solution for carriers and service providers.

The device also provides a perfect fit for large enterprises, utilities and transportation companies who require an efficient way to transport and provision multiple legacy and next-generation services over their high capacity pipes. Megaplex-4 can be used as a central aggregation unit for CPEs carrying TDM and Ethernet services over various access link technologies, e.g., SHDSL and SDH/SONET.

The Megaplex-4 is available with a cable management solution to reduce storage space and handling, and eliminate cable waste.

- Modular 4U or 2U 19-inch units housing multiple I/O modules
- Carrier-class reliability with hardware, service and system redundancy
- Hardened and certified for IEEE 1613, including fan-less operation for power utilities and EN 50121-4 for railways
- Integrated MPLS switch and IP router
- Mplify certified for Carrier Ethernet for Business, with traffic management, performance monitoring and Ethernet OAM
- Hybrid Ethernet and TDM architecture supporting various services up to STM-4/OC-12 and multi-GbE
- Three-tier built-in cyber security, including 802.1X and MACsec
- Non-blocking cross connect for a high volume of DS0 channels
- Built-in support for distance and differential Teleprotection for power utility applications
- Voice compression, terminal server, serial multiplexer and OMNibus voice conferencing modules
- Interoperability with existing TDM equipment (Nokia, Newbridge)

## MiCLK® 1588 Grandmaster on an SFP with Built-In GNSS



RAD's MiCLK® is the world's first Grandmaster on an SFP, allowing easy upgrades for existing base stations and backhaul equipment to support IEEE 1588 for LTE/LTE-A and 5G. Easily plugged into service routers to simultaneously distribute frequency and time, the patented MiCLK eliminates the need to install GPS/GNSS antennas at every cell site while providing highly accurate timing distribution with full network coverage – even in underground and in-building installations. It is also ideal for 4G small-cell deployments.

The field-proven MiCLK allows service providers to avoid spoofing and jamming risks, and dramatically reduces installation and engineering costs by eliminating the need for additional space or power requirements.

- Fully-featured standard IEEE 1588 Grandmaster including phase/Time of Day (ToD) to meet stringent LTE-Advanced requirements
- Built-in GNSS receiver
- Robust GNSS backup – time holdover when GNSS reception is lost, using Sync-E or 1588 frequency reference from the network (Assisted Partial Timing Support) to deliver continuous and accurate synchronization to the base station
- Miniature pluggable device fits in any standard SFP port
- Scalable solution supports up to 64 slaves

## MiNID® Miniature Programmable Network Interface Device



MiNID® is a field-programmable miniature L2/L3 network interface device (NID), available as an SFP sleeve. It features remote monitoring and fault isolation, as well as remote packet capture and micro-burst measurement capabilities.

MiNID also provides instant upgrades for legacy switches and routers to help service providers, mobile operators and wholesale carriers introduce new services quickly and with better quality of experience (QoE) while increasing operational efficiency and lowering costs.

- Easily pluggable into SFP ports of switches and routers
- Seamlessly hosts standard FE and GbE SFP modules
- Compatible with standard fiber and copper SFPs in a variety of ranges
- Remotely managed via CLI, web interface and SNMP
- Zero-touch provisioning for fast and simple installations
- Reduces inventory by reusing existing SFPs

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**MiRiCi-E1/T1**

Smart SFP Ethernet to E1/T1  
Remote Bridges



RAD's MiRiCi-E1/T1 connect Fast Ethernet or Gigabit Ethernet LANs over framed or unframed E1 or T1 circuits. The smart SFP miniature remote bridges provide TDM connectivity to any Ethernet device with an SFP (small form-factor pluggable) compatible Fast Ethernet or GbE port. Hot-swappable and software-configurable, the intelligent SFPs are fully managed devices supporting standard GFP encapsulation, as well as HDLC and cHDLC. They deliver a complete Ethernet over PDH solution in finger-sized SFP enclosures and enable a quick rollout of new Ethernet services over legacy TDM infrastructure. They provide simple and cost-effective alternatives to external, standalone bridge units or conversion cards for user devices, saving on space, cabling and power consumption, and simplifying management.

- Supports framed and unframed E1/T1
- Supports standard GFP, HDLC-like, and cHDLC encapsulation
- Hot-insertion SFP-format plug, MSA-compliant
- User-configurable
- Enhanced management of control, status and monitoring
- Out-of-band management through I<sup>2</sup>C
- Supports full duplex flow control
- Fault propagation from WAN to LAN link
- Software download via TFTP
- Supports Ethernet OAM per 802.3-2005 (formerly 802.3ah)
- MiRiCi-E1/T1 Sync-E support with a unique ordering option

**MiTOP-E1/T1,  
MiTOP-E3/T3**

Smart SFP-Format TDM  
Pseudowire Gateways



RAD's MiTOP-E1/T1 and MiTOP-E3/T3 transport framed or unframed E1/T1 or E3/T3 traffic, respectively, over Ethernet, IP and MPLS networks. Featuring multi-standard pseudowire support and Synchronous Ethernet (Sync-E) in a finger-sized enclosure, the smart SFP devices provide an ideal solution for service providers, utility companies and enterprises wishing to ensure highly accurate timing synchronization for their legacy services while migrating to packet switched transport.

Part of RAD's "System on an SFP" portfolio, the MiTOP-E1/T1 and MiTOP-E3/T3 are designed for quick and simple insertion into any Fast Ethernet or Gigabit Ethernet port with an MSA-compatible socket.

- Transmits TDM-based services over Ethernet, IP or MPLS networks
- Standard pseudowire encapsulation: CESoPSN, SAToP
- Single E1/T1 or E3/T3 TDM user port
- Transparent to all signaling protocols
- Hot-insertion SFP-format plug, MSA-compliant
- Selectable clock source
- Basic management of control, status and monitoring
- Supports Synchronous Ethernet (Sync-E)
- Supports fractional E1/T1
- Supports CESoPSN CAS
- Up to eight pseudowire tunnels per E1/T1

## Optical Bypass Switch

### Fiber Protection Switching System



The Optical Bypass Switch is capable of automatically bypassing faulty network nodes in the event of a power outage. It is used in optical fiber communications and fits ring or linear fiber network architectures. Featuring AC or DC power supply, the Optical Bypass Switch automatically identifies the power supply status at the network node and helps avoid network outages caused by node failures.

- Small in size
- Easy installation and operation
- Low insertion loss – minimum impact on existing optical budget
- Non-latching type – automatic recovery
- LED indicators for power and optical switch status

## PacketLight

### Complete Solutions for WDM/OTN and Dark Fiber Applications Layer 1 Encryption



PacketLight's product suite offers the flexibility to build a cost-effective, highly efficient optical network infrastructure for CWDM/DWDM, OTN and dark fiber connectivity, while addressing challenges faced by service providers and organizations.

PacketLight solutions are ideal for a variety of vertical markets, such as carriers, ISPs, dark fiber providers, data centers, storage facilities, utility companies (railway and power companies), and financial institutions.

The wide range of PacketLight xWDM and dark fiber solutions includes multi-rate sub-10G CWDM/DWDM platforms, 10G CWDM/DWDM and 100G solutions with built-in OTN options, amplification and booster solutions, WSS-based ROADMs, ten 1-GbE muxponders, and passive multiplexing solutions.

- Multi-rate transponders, 2 Mbps to 200 Gbps
- Muxponder for high wavelength utilization; scales to 96 wavelengths
- Layer-1 encryption for GbE, 10-GbE, 4G FC, 8G FC, and 16G FC
- Long-distance solutions by amplification and DCM
- Performance monitoring
- Supports single or dual fiber
- Low latency connectivity
- Hot-swappable PSU (AC/DC) and fan
- Integrated management
- Compact 1U integrated devices, multi-chassis scalability
- Simple to install, maintain and configure
- Cost-effective CPE device
- Integrated OTN layer (with FEC)

## PowerFlow

Managed Ruggedized Ethernet Switches with Power over Ethernet

Hot Product

RAD's PowerFlow consists of managed and unmanaged industrial-grade Gigabit Ethernet switches, designed to build packet-based, PoE-intensive operational networks for critical infrastructure.

PowerFlow is ideal for OT WANs of power utilities, railways, traffic controllers, and Safe City applications requiring advanced Ethernet functionality and Power over Ethernet (PoE) support.

### • PowerFlow-2: Managed Ruggedized Ethernet Switches with Multiple Options



RAD's PowerFlow-2 is a series of industrial-grade, managed Fast Ethernet and Gigabit Ethernet switches, with or without PoE support, which provide stable and reliable Ethernet transmission. Housed in ruggedized DIN rail or wall-mountable enclosures, these switches are specifically designed for harsh environments, such as industrial networking and intelligent transportation systems (ITS), as well as military and utility market applications where environmental conditions exceed commercial product specifications.

- Compact Ethernet switches with up to 16 x 10/100/1000BaseT ports, and eight x 100/1000BaseFX SFP ports
- Variety of input voltage from 12–48V DC to HVDC of 110/220V DC and support of 110/220V AC
- Variety of PoE feeding options including PoE (802.3af), PoE+ (802.3at) and PoE++ (60W)
- Flexible deployment scenarios using xSTP, ERPS (ITU-T G.8032) and ultra-fast recovery with PF-Ring/chain
- Certified for EN 50121-4, IEC 61850-3, IEEE 1613 and NEMA TS2
- Wide range of operating temperatures from -40°C to 75°C (-40°F to 167°F)

### • PowerFlow-2-10G: Industrial 10G Core Switch Demarcation/Aggregation Device



RAD's PowerFlow-2-10G managed industrial-grade core switches provide a wide variety of reliable mechanisms for mission-critical network communications. These mechanisms include redundant and isolated power supplies, STP/RSTP/MSTP and ITU-T G.8032 Ethernet Ring Protection Switching. The PowerFlow-2-10G is a fan-less unit with IP30 ruggedized metal housing to meet the demands of industrial-grade and core layer applications.

- Industrial-grade Ethernet switches equipped with four 10G SFP+ ports
- Variety of input voltage and PoE feeding options including PoE+ with up to 400W per unit
- 19" unit with up to four 10-GbE and up to 24 GbE ports in various combinations
- Supports STP, RSTP, MSTP, ITU-T G.8032v1, G.8032v2 Ethernet Ring Protection Switching (ERPS), and PF-Ring for redundant cabling
- Environmentally hardened enclosure options

## PULScore

### Network Performance Monitoring and SLA Management System



PULScore by Creanord provides comprehensive insight into network and service performance, enabling service providers to continuously monitor, analyze, and assure the quality of Layer-2 and Layer-3 services. The platform correlates measurement data, calculates service availability metrics, and presents actionable insights through intuitive web-based dashboards. Leveraging AI/ML capabilities and the high-accuracy, granular measurements provided by sensor probes, PULScore delivers advanced analytics and actionable intelligence that helps identify performance degradations and emerging issues before they impact services.

- Deployed on-premises, in a private cloud or public cloud
- Centralized network performance monitoring and SLA management
- Near real-time collection and correlation of performance measurements
- Interactive dashboards, analytics, and service quality reporting
- Automated SLA compliance tracking and reporting
- Centralized provisioning of service activation testing and continuous monitoring
- Customer portal with real-time service performance and SLA transparency analysis

## PULSensor Virtual

### Performance Measurement Probe



PULSensor Virtual by Creanord is a software-based performance measurement probe that provides accurate, granular visibility into network and service quality from the transport network to the application layer. The probe measures key performance indicators (KPIs) across these layers, enabling service providers to continuously monitor service performance and customer experience with microsecond-level accuracy. PULSensor Virtual delivers scalable, cost-effective service assurance while providing deep insight into network health, service quality, and application performance.

- Deployed on RAD's certified and optimized white-boxes, as virtualized software probes
- High-precision measurements for latency, jitter, packet loss, and bandwidth utilization
- Comprehensive Layer 2 and Layer 3 monitoring across Carrier Ethernet and IP services
- Service Activation Testing (SAT) and continuous performance monitoring (active and passive)
- Continuous verification of SLA compliance
- Quick identification of performance degradations affecting customer services

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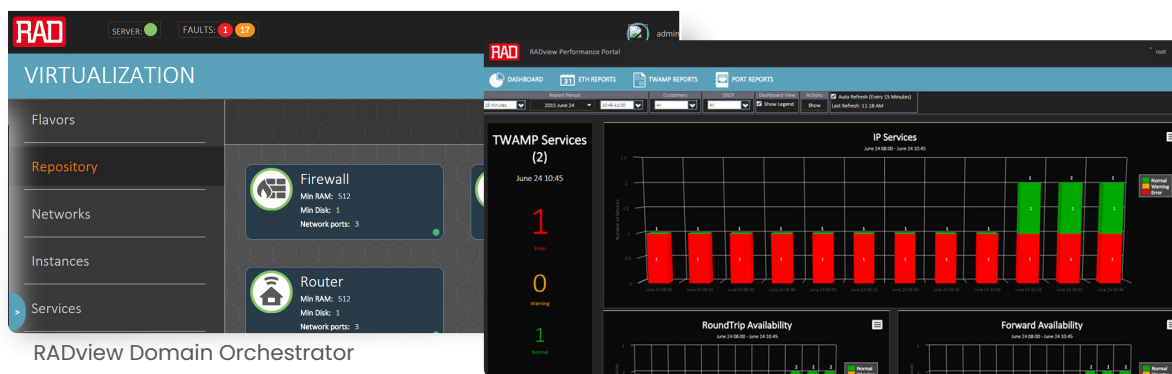
## RADview

### Network Management and Orchestration

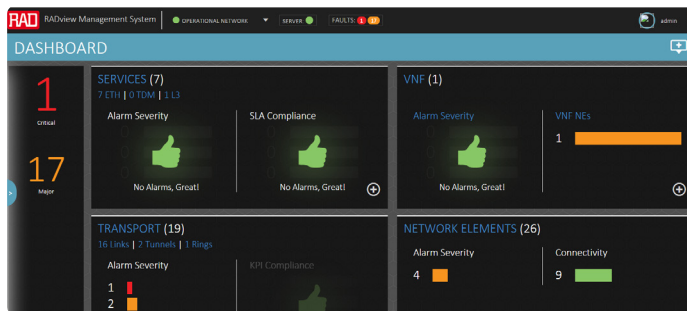
The RADview Network Management and Orchestration suite provides service providers and critical infrastructure operators a comprehensive solution for operating and managing RAD-based Ethernet and broadband access networks. It covers switches, routers, IoT gateways, virtualized network elements, multiservice gateways, and other devices in the RAD solutions portfolio.

- Network management automation through auto-discovery, zero-touch provisioning and auto-executed jobs and tasks
- Point-and-click service provisioning from planning through configuration, SLA setting and service activation test
- Real-time network status topology view and fault isolation
- SLA monitoring and reporting
- Virtually unlimited scalability for large networks support
- High Availability and Disaster Recovery
- Interoperability with third-party NMS and leading OSS/umbrella systems
- Windows and Linux support

## Intuitive, HTML5 UI/UX:



RADview Performance Monitoring



RADview Service Manager



### • RADview Performance Monitoring



The RADview Performance Monitoring module enables ongoing monitoring of Ethernet and IP service performance by collecting KPI (key performance indicator) data from RAD devices. It allows service providers and network operators to easily monitor and manage actual network and service performance over time and compare it to service requirements and SLA (service level agreement) guarantees.

The RADview Performance Monitoring module enables immediate detection of service degradation, so that remedial actions are taken to quickly restore guaranteed performance levels. The system retrieves data lost due to connection failures and exports standard CSV ASCII files to OSS or third-party management systems.

- Collects, stores, analyzes and presents KPIs from RAD devices
- In-service bandwidth utilization measurements
- Actual performance metrics based on ITU-T Y.1731:
  - Frame delay (latency)
  - Frame delay variation (jitter)
  - Packet delivery ratio
  - Availability
- TWAMP-based L3 performance monitoring for IP services
- SLA threshold policy management
- Performance dashboard with aggregated and drill-down views
- Monthly and real-time SLA statistics reporting

### • RADview Service Manager



The RADview Service Manager module is part of the RADview management suite and provides end-to-end management of Mplify-based Carrier Ethernet services. An intuitive GUI, point-and-click functionality and easy-to-follow wizards facilitate planning, provisioning, monitoring, diagnostics, and SLA assurance, so that network operators can add new service offerings, as well as minimize overall operating costs, reduce provisioning times and maximize the efficiency of the entire network.

- Offline resource optimization and capacity planning simplifies pre-deployment stages
- Point-and-click end-to-end service provisioning and OAM settings
- Automatic correlation of network faults with impacted services and customers
- Security management supporting user access profiles and allowing network partitioning
- Graphic representation of network clouds, links, nodes, end-to-end services, and network status indication
- UI designed for management of very large networks

# S

## SecFlow-1c-4G

Industrial 4G/LTE router with 2.4/5 GHz Wi-Fi

Hot Product



SecFlow-1c-4G is an industrial LTE cellular router designed to meet rugged specifications, support DIN rail mounting, and feature improved cellular connectivity (up to 150 Mbps). It empowers industrial automation, smart city deployments, and other data-intensive IoT applications in the transportation and retail sectors.

- Compact DIN-rail form factor with wide temperature range (-30°C to +75°C) ensures reliable operation in harsh environments
- 4G LTE Cat 4 with automatic SIM switching guarantees continuous connectivity and minimizes downtime in critical applications
- Variety of interfaces including Ethernet, RS-232/RS-485, GPIO, Wi-Fi, and GNSS for seamless

integration with industrial devices and smart city infrastructure

- Built-in VPN support (IPsec/OpenVPN), firewall, and multi-link failover with load balancing deliver secure, always-on communications

## SecFlow-1c-4Gm

Compact 4G/LTE industrial router with 2.4 GHz Wi-Fi

Hot Product



SecFlow-1c-4Gm is a compact industrial LTE cellular router designed to meet rugged specifications, support DIN rail mounting, and feature improved cellular connectivity (up to 150 Mbps). It empowers industrial automation, smart city deployments, and other data-intensive IoT applications in the transportation and retail sectors.

- Ultra-compact industrial form factor with lightweight design (only 200g) and DIN-rail support saves on space, and is ideal for dense and space-constrained deployments
- Reliable 4G connectivity with dual SIM resilience, supports LTE Cat 4 with automatic SIM failover for continuous operation in unstable or remote network conditions

- Integrated Ethernet, serial (RS-232/RS-485), GPIO, and Wi-Fi enable efficient connection of field devices and sensors
- Built-in VPN (IPsec/OpenVPN), firewall, and remote management (SNMP, Web, CLI) deliver secure, scalable, and easy-to-operate deployments

## SecFlow-1c-5G

Industrial 5G/LTE Router

Hot Product



The SecFlow-1c-5G industrial cellular router offers ruggedized, high performance 5G/LTE connectivity for mission-critical applications. Featuring dual-SIM failover capabilities, multi-network support (Wi-Fi, wired, mobile) and advanced security, these routers ensure uninterrupted, secure, and scalable connectivity for industrial automation, smart cities, and critical infrastructure.

- Ruggedized build designed for harsh environments with DIN rail and bracket mounting
- Intuitive management via a web-based, friendly UI for easy configuration and monitoring
- Reliable connectivity with 5G SA/NSA, 4G LTE Cat 4, dual-SIM failover, and multi-network support (Wi-Fi, wired, mobile)
- High-speed and seamless wireless connectivity with dual-band Wi-Fi 6 and 2.4/5 GHz Wi-Fi
- Versatile interfaces: 4 Ethernet ports, RS232/RS485, and I/O support for industrial automation
- Secure communications: VPN, firewall, NAT, and static/dynamic routing ensure encrypted and stable connections

## SecFlow-1p

Ruggedized IIoT Gateway

Hot Product



The compact SecFlow-1p is an entry-level multiservice gateway for cost-effective industrial IoT backhaul. Housed in a ruggedized enclosure, it allows secure connectivity over wireless or fiber networks for all types of industrial devices, including RTUs and smart meter aggregation devices. SecFlow-1p is for power utilities IEC 61850-3 and IEEE 1613, as well as for oil and gas hazardous environments (Class 1, Division 2).

- Hosts third-party software using Docker container technology
- Multiservice support: GbE copper and fiber, serial RS-232/485
- Single or dual cellular modem 2G/3G/4G/5G/P-LTE, 450-MHz, Anterix, CBRS; dual SIM for always-on connectivity
- Wi-Fi, Wi-Fi HaLow and LoRaWAN
- Dynamic routing with OSPF, BGP, VRF and secure VPN using IPsec, DMVPN and NAT for flexible connectivity
- Cyber security suite: TPM 2.0, secure boot, 802.1X, IPsec encryption with automated PKI, stateful firewall
- Serial protocol handling with transparent tunneling/protocol conversion/terminal server
- LoRa protocol conversion
- Zero-touch provisioning, firewall configuration, fault management and reporting, bulk software upgrade, and database management using RADview

## • S

**SecFlow-1v**

Ruggedized  
Multiservice IIoT  
Gateway with PLC and  
PoE, US-Certified

Hot Product



The compact SecFlow-1v is a ruggedized multiservice gateway, featuring built-in security mechanisms designed for applications controlling mission-critical operations. It is ideal for industrial IoT backhaul, enabling fast, secure and economical deployment of new IoT sites. Allowing secure connectivity over wireless or fiber networks – either public (e.g., cellular) or private – it connects all types of industrial devices, including RTUs, smart meter aggregation devices, IIoT base stations or concentrators, CCTV cameras, point-of-sale devices, Wi-Fi base stations, and more. RADview's security information and event management (SIEM) enables collection of all security events detected in the network. The system collects events from SecFlow devices and displays them visually on customizable dashboards.

SecFlow-1v provides reliable and secure Layer 3 communications for power utilities, water and gas utilities, public safety and homeland security agencies, as well as intelligent transportation operators.

- Hosting of third-party software using LXD container technology
- Multiservice support: GbE copper and fiber, serial RS-232/485, Power over Ethernet (PoE)
- Single or dual cellular modem for a 2G/3G/4G/CBRS/Anterix B8 uplink, dual SIM
- Dynamic routing with OSPF, BGP, VRF and secure VPN using IPsec, DMVPN and OpenVPN for flexible connectivity
- Cyber security suite: 802.1X, IPsec encryption with automated PKI, stateful firewall
- Serial protocol handling with transparent tunneling/protocol conversion/terminal server
- LoRa protocol conversion
- Zero-touch provisioning, firewall configuration, fault management and reporting, bulk software upgrade, and database management using RADview
- Digital and analog IOs with integrated RTU/PLC functionality
- LoRaWAN gateway for remote sensors aggregation
- Complies with IEC 61850-3, IEEE 1613 and EN 50121-4

## SecurityGateway

VPN Aggregator, Router  
and Firewall



SecurityGateway is a major building block of RAD's industrial IoT solution, serving as a state-of-the-art VPN aggregation appliance. In the fast-growing market of IIoT and the need for secure communications, SecurityGateway provides a small form-factor yet powerful and cost-effective solution for aggregating traffic from multiple remote IIoT sites.

SecurityGateway aggregates multiple VPNs from remote SecFlow devices and addresses industrial IoT applications, for example:

- Distributed automation in secondary substations
- Smart meter concentration
- Water resources management
- Smart retail

Typically located behind the organizational firewall, SecurityGateway may also serve as a WAN gateway, depending on customer needs. RADview's security information and event management (SIEM) enables collection of all security events detected in the network. The system collects events from SecFlow devices and displays them visually on customizable dashboards.

- Compact 19" 1U VPN aggregation device supporting L2/L3 VPNs
- Optional high availability
- Feature-rich, dual stack IPv4/IPv6, including static and dynamic routing and NAT
- Stateful firewall, IKE1 and IKE2, automated PKI (X.509) with integrated DNS resolver
- Supports flexible connectivity methods such as encrypted IPsec VPN, OpenVPN and L2TP
- User authentication using RADIUS
- L2 functionality
- User-friendly, easy-to-use web-based GUI
- Fault management and reporting using RADview

## SFP/XFP/SFP+ Transceivers

Small Form-Factor Pluggable Transceivers



RAD's SFP/XFP/SFP+/QSFP+/QSFP28/QSFP-DD small form-factor pluggable transceivers are hot-swappable, input/output transceiver units converting optical and electrical media. Providing a wide range of detachable interfaces to multimode/single-mode optic fibers and UTP/coaxial electrical cables, RAD's miniature transceiver units enable significant savings in system maintenance and upgrade costs, as well as facilitate efficient design of host devices and flexible network planning.

It is strongly recommended to order RAD devices with original RAD SFP/XFP/SFP+/QSFP+/QSFP28/QSFP-DD transceivers installed to ensure that the entire assembled unit has undergone comprehensive functional quality tests. RAD cannot guarantee full compliance to product specifications for units using non-RAD SFP/XFP/SFP+/QSFP+/QSFP28/QSFP-DD pluggable transceivers.

### Optical SFPs

- MSA (multi-source agreement) compliant
- Built-in DDM (digital diagnostic monitoring) function
- Common Management Interface Specification (CMIS) protocol support on SFP
- New Coherent QSFP28 ZR/ZR+

### Smart SFPs

- GPON OLT in an SFP
- XGS-PON OLT in an SFP+ (10G symmetric)

## vCPE-OS

Open Carrier-Class Operating System for Network Edge Virtualization

Hot Product



The Linux-based, carrier-class vCPE-OS runs on any white box server and is pre-loaded in RAD's virtual CPE (vCPE) platforms. It combines powerful networking capabilities with virtualization for hosting and accelerating SD-WAN and any other value-added virtual network function (VNF) applications from any vendor.

- Slim, high performance operating system for optimized vCPE
- Open solution, compatible with any VNF (networking, security and IT), orchestrator and SDN controller
- Any access with advanced transport/networking capabilities: LTE, WiFi, Carrier Ethernet, xDSL, PON, and TDM
- High Availability: performance monitoring, troubleshooting and self-healing – TWAMP, ICMP Echo, UDP Echo
- Any hardware: RAD's white box/gray box platforms, third-party servers, and RAD's pluggable PNFs
- Comprehensive management and security suite
  - NETCONF/YANG, CLI, Syslog, alarms, and more
  - SNMPv3, SSH, SFTP, Access Control, TACAS+, RADIUS
  - Zero-touch and call-home provisioning





## RAD Global Services

### Peace of Mind, Where and When You Need It

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RAD solutions enable service providers and network operators to deliver the best possible service experience and seamlessly migrate to next-generation networks – all while increasing operational efficiency and reducing TCO.

RAD Global Services is dedicated to assisting our customers in maximizing the benefits of our solutions. Our team provides real-time service guidance, comprehensive planning, and proactive maintenance to ensure optimal performance.

RAD Global Services provides expert consulting, troubleshooting assistance, online tools, regular

training programs, and various equipment coverage options – all designed to enable seamless installations and faster service rollouts. Moreover, our RAD programs help service providers to meet their SLAs and avoid penalties, while private network operators can rely on full support for their mission-critical applications.

These vital services are available from authorized RAD partners. They are backed by highly dedicated and professional teams at regional technical assistance centers, together with project management staff and international training professionals.



## RADcare Technical Support

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### Partner Benefits

- Strict service level agreements (SLAs): Receive response, restore service and resolve issues within a known and guaranteed time frame
- Move to the head of the queue with priority handling by RAD support centers and round-the-clock access to RAD's experts
- Free access to RADcare Online, including regular software updates, patches, online/remote configuration assistance and RAD's FAQ knowledge base

### Customer Benefits

- Ensure optimal quality of experience for your customers by maintaining a high-quality network
- Meet your SLAs and avoid penalties by minimizing service outages and enabling fast recovery
- Plan ahead to limit your spending on support and eliminate hardware repair costs related to old equipment
- Shorten time to market (TTM): Rely on RADcare to support your operations so you can turn up new services faster

# RAD Global Services



- Guidance throughout design and rollout
- High- and low-level network design
- Support service migration and network upgrades
- On-site services
- Consulting services



- Project coordination
- Single point of contact
- Periodic meetings and progress reports
- Project-specific documentation



- Training-on-demand
- Regional sales, pre-sales and technical seminars
- RAD certification



- Strict SLA commitments on response, service restore and resolution times
- 24x7 support, priority handling and escalation procedures
- RADcare Online portal for software updates and upgrades
- Optional multi-year blanket coverage



## Project Assured Services

RADpro Project Assured services encompass all relevant aspects of the pre-installation design and rollout stages to get the new network up and running as quickly as possible.

RADpro Project Assured services include the following valuable elements:

Planning • Staging • Site Survey • Equipment and Management Installation  
• Acceptance Testing and Commissioning • Resident Engineer



## Project Assured Services

Enjoy full project assured service led by certified RAD engineers who are committed to your project's success from start to finish. RAD offers different project assured packages which include:

- High-level design (HLD): Thorough review of the physical topology, required hardware and software, and network management
- Low-level design (LLD): A definitive reference for system and network implementation, including detailed configuration instructions for devices, network management system and interfaces
- Configuration and testing performed by RAD experts to ensure ideal turn-up time
- Full documentation of your system's installation requirements for easier maintenance and future changes
- Commissioning design and execution so that the entire network can be certified before signing off



## Project Management

RAD's professional Project Management staff ensures that your project will have a timely and smooth implementation from the planning stage through completion.

- A single point of contact (Project Manager) within RAD supervises all logistical, technical and commercial aspects of the implementation of all network solutions under your contract
- Periodic status meetings
- Detailed project plan procedures and documentation, regular progress reports, and management of all project aspects



## Training Center

RAD's training programs are designed to keep your team up-to-date with the latest RAD solutions.

- Technical seminars, web-based training and project-based training: A variety of on-site and remote interactive training options to ensure your engineers master your RAD equipment
- Course materials include a carefully balanced mix of lecture, demonstration and hands-on experience
- Topics include theory, configuration and troubleshooting



# **RADadvantage** *Partners Program*



# Welcome to the RADadvantage Partners Program

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Commitment. Trust. Respect. Partnership. These are just some of the values that comprise the essence of RADadvantage, RAD's channel partner program. Ultimately, the success of a partnership is measured by the benefits that are enjoyed by all parties:

The vendor, its partners, and their respective end-users. That's why RAD places immense importance on its network of channel partners and invests significantly in partner enablement, engagement, and support.

## Shared Interests and Commitments

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RAD and its channel partners embrace a set of fundamental guiding principles:

- Delivering the highest quality products, solutions and services that create loyal end-users
- Maximizing customer satisfaction
- Conducting business where there is trust and respect
- Resolving problems with candor and good judgment
- Cooperating to win new business and improve existing opportunities

## RADadvantage Program Highlights

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The RADadvantage Partners Program is designed to incrementally reward partners based on achievements in annual revenues, service level accreditation, and commitment. Designated partnership levels are reviewed and adjusted annually.

RADadvantage Partners enjoy benefits such as:

- Joint business development efforts
- Online and face-to-face sales and technical training programs
- Support for co-branded marketing activities
- Official acknowledgement of Partner relationship

# RAD's LMS Solution for Partners

RAD recognizes the importance of continuous learning and skill development to create a successful partnership. Therefore, we introduced the Learning Management System (LMS), which assists in elevating our partners' capabilities and fosters collaborative growth.

Our LMS solution is a strategic tool for RAD partners to enhance their knowledge, streamline processes, and stay ahead in an ever-evolving market.

## »Key Features Delivering Added Value

- **Tailored learning paths**, allowing partners to focus on the skills and knowledge most relevant to their business goals
- **Real-time progress tracking**, allowing partners to monitor and analyze the progress of their teams in real-time. This also provides valuable insights into areas that partners may want to know more about.
- **Comprehensive analytics and reporting**, offering partners a deep understanding of their team's learning outcomes.
- **Ease of integration** with existing systems ensures a smooth transition to our LMS solution. This minimizes disruption and allows partners to leverage the benefits of our platform without major operational overhauls.

## »Transformative Impact on Partnership Success

- **Skill enhancement:** Partners can upskill their teams, ensuring they are equipped with the latest industry knowledge and trends. This gives partners a competitive edge in the market.
- **Increased efficiency:** Streamlined training processes reduce the time and effort required for onboarding and ongoing education. This translates into improved productivity and quicker response times to market demands.
- **Collaborative growth:** RAD's LMS fosters a culture of continuous learning and collaboration

RAD's LMS solution is not just about technology; it's a commitment to nurturing strong, informed, and agile partnerships. By investing in the continuous learning journey of our partners, we are investing in a shared future of innovation, growth and success.

» For more information, please contact [training@rad.com](mailto:training@rad.com)



Your Network's Edge®

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