



Power Utilities

Reliable, high-performance wireless broadband connectivity for substation and distribution automation

Power utilities are driving a grid modernization process that includes substation and Distribution Automation (DA) to achieve a more reliable, resilient, and cost-effective electric system.

To realize this process, a reliable, high-capacity wireless network is required to enable devices to sense the operating conditions of the grid and adjust overall power flow to optimize performance without dispatching an operating crew.

Addressing the needs of utility companies for greater visibility and control, RADWIN's Point-to-Point (PtP) and Point-to-MultiPoint (PtMP) solutions deliver high-performance and reliable wireless broadband connectivity to substations and a wide variety of intelligent grid devices.

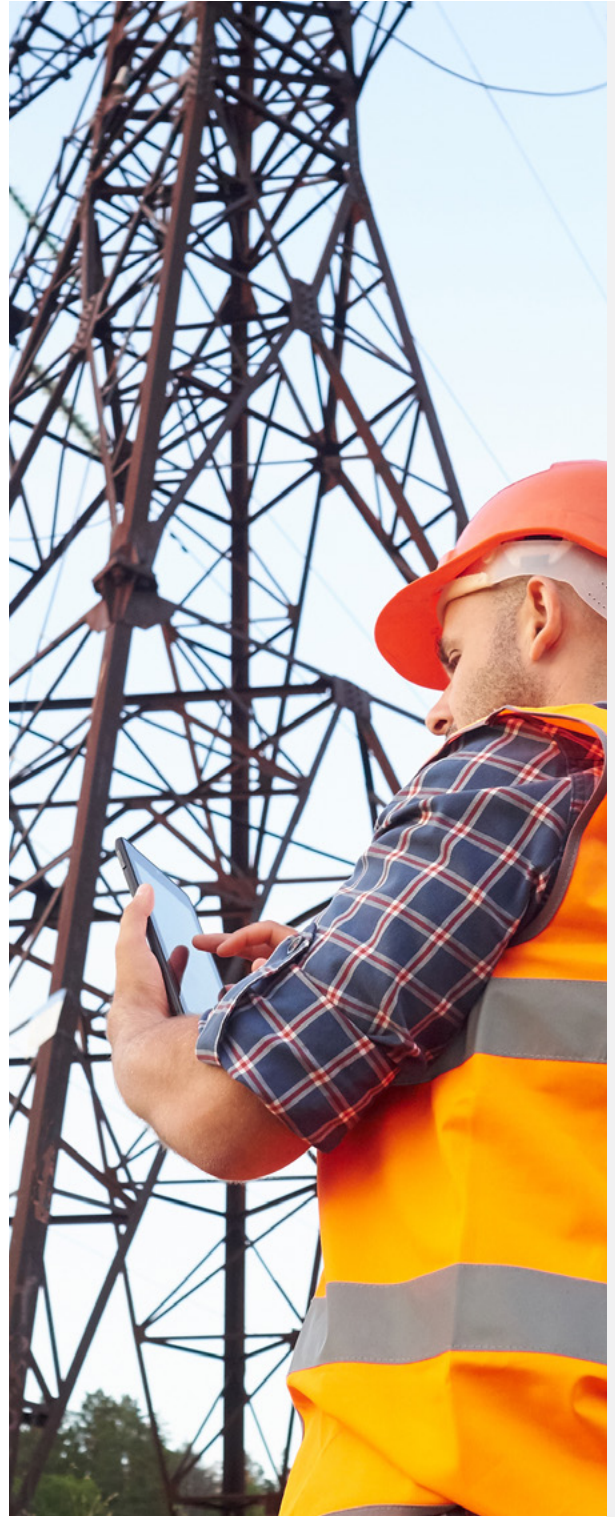
Solutions for Power Utilities

JET series Smart Beamforming Point-to-MultiPoint:

- » Up to 1.5Gbps per sector / 6Gbps per cell
- » Bi-directional beamforming antenna
- » Innovative air interface
- » Support 3.4-3.8 GHz or 4.9- 6.0 GHz bands
- » Guaranteed SLA
- » High uplink system gain in limited EIRP ETSI & FCC
- » 25dbm transmission power across all modulations
- » High packets-per-second (PPS) for VoIP and CCTV
- » High frequency reuse of 1:2
- » Up to 90% uplink traffic transmission for power utility applications
- » Dynamic channel bandwidth selection (D-CBS)

RADWIN 2000 Point-to-Point:

- » Outdoor and all-indoor alternatives
- » High Capacity – up to 750Mbps
- » Long range – up to 120Km/ 75miles
- » Dynamic channel bandwidth selection (D-CBS) - maximizing link capacity in congested spectrum
- » Configurable asymmetric capacity
- » Ruggedized IP67 outdoor units.

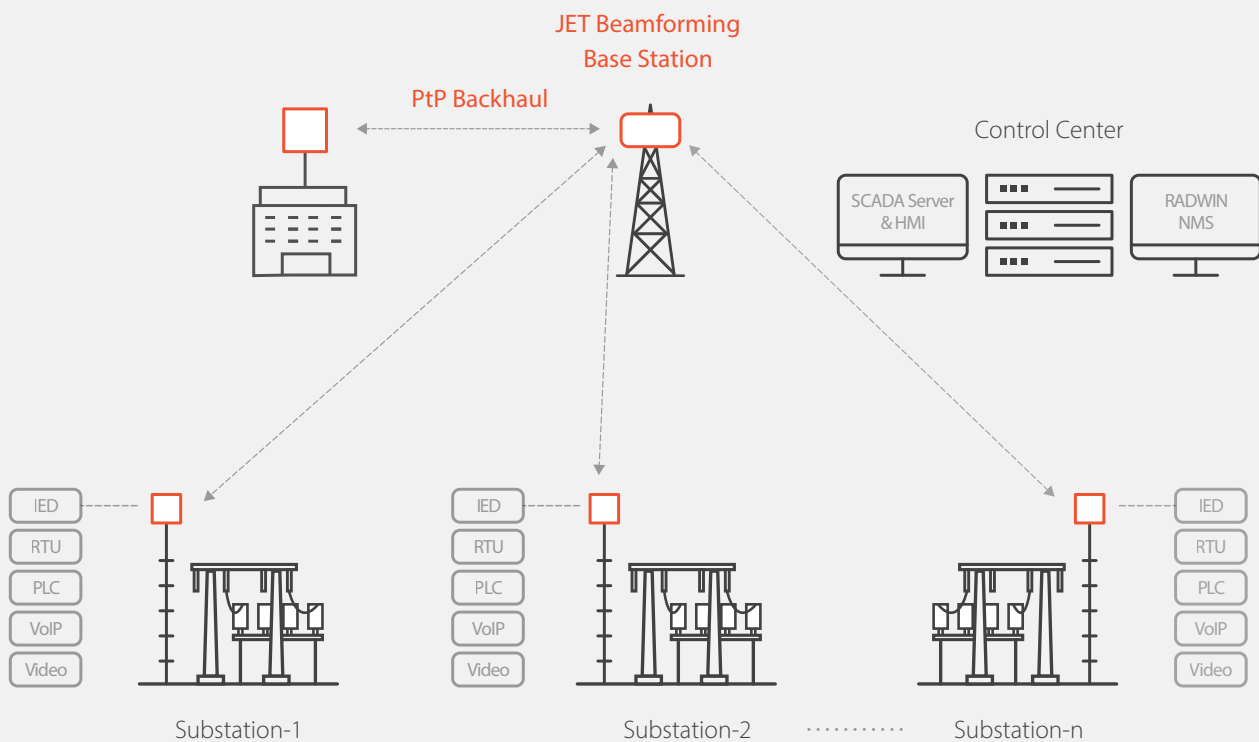


RADWIN advantages for Power Utilities

- » Highest capacity to support reliable substation connectivity, distribution automation and Advanced Metering Infrastructure (AMI) backhaul
- » Higher bandwidth and spectrum efficiency
- » Lower costs and faster Time-To-Market (TTM) alternative to fiber
- » Service Level Assurance (SLA)
- » Network redundancy and increased availability
- » Unified synchronization, eliminating self-interference
- » High durability with IP67 rated units

Applications:

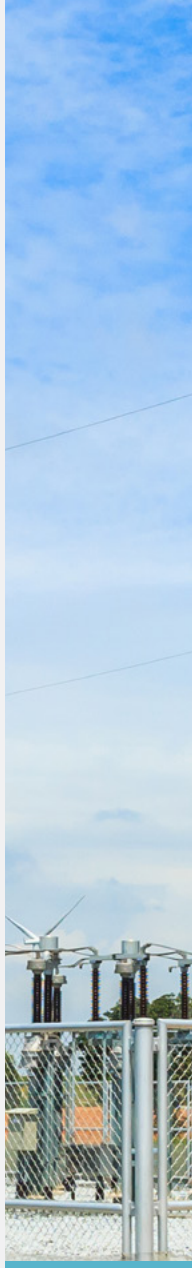
- » Leased line replacement
- » WiMAX system replacement
- » Reliable connectivity to substations:
 - › SCADA
 - › IEDs
 - › Monitoring and control
 - › Security gateways and routers
 - › VoIP phones
 - › Video surveillance
- » AMI connectivity - backhauling wireless concentrators
- » Recloser control and fault monitoring



Substation Automation: High speed connectivity to substations with RADWIN PtMP/PtP systems

Technical Data

	RADWIN JET DUO	RADWIN JET PRO	RADWIN 2000
Type	Point-to-MultiPoint	Point-to-MultiPoint	Point-to-Point
Net Aggregate Throughput	Up to 1.5Gbps	Up to 750Mbps	10Mbps up to 750Mbps
Range	Up to 40km/ 25miles	Up to 40Km/ 25miles	Up to 120Km/ 75miles
Frequency Multi-Band	4.9-6.0GHz	4.9-5.9GHz 3.3-3.8GHz, 3.65GHz (IC)	2.3-2.4GHz, 3.4-3.8GHz, 4.9-6.0GHz, 5.7-6.4GHz
MIMO/Antenna Diversity	Supported	Supported	Supported
Beamforming antenna at Base Station	Supported	Supported	-
Latency	Constant per Subscriber Unit: Typical 4 to 10msec	Constant per subscriber unit: Typical 4 to 10msec	<3msec
TDD Synchronization	Intra and Inter-Site Built-in GPS receiver	Intra and Inter-Site Built-in GPS receiver	Intra and Inter-Site
Security	SNMPv1, SNMPv3, AES 128-bit encryption	SNMPv1, SNMPv3, AES 128-bit encryption	SNMPv1, SNMPv3, AES 128-bit encryption
Bandwidth allocation	Guaranteed bandwidth per site		
Operating Temperatures	-35°C to 60°C/ -31°F to 140°F		
Humidity	100% condensing, IP67		



RADWIN is a leading provider of Point-to-Multipoint and Point-to-Point broadband wireless solutions. Incorporating the most advanced technologies such as a Beamforming antenna and an innovative Air Interface, RADWIN's systems deliver optimal performance in the toughest conditions including high interference and obstructed line-of-sight.

Deployed in over 170 countries, RADWIN's solutions power applications including backhaul, broadband access, private network connectivity, video surveillance transmission as well as delivering broadband on the move for trains, vehicles and vessels.

RADWIN

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