# Cisco Aironet 1300 Power Injector Technical Specifications and Applications

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## Understanding the AIR 1300-12.8V Power Requirements

When dealing with outdoor wireless deployments, the Cisco Aironet 1300 series power injector plays a crucial role in network stability. This ruggedized power solution supports DC input voltages ranging from 12-40V, making the 12.8V specification particularly interesting for mobile and renewable energy applications.

### Key Electrical Characteristics

- Input voltage tolerance: ?10% (11.5V-44V DC)
- Maximum current draw: 1.5A @ 12.8V
- Overvoltage protection threshold: 45V DC
- Reverse polarity protection: 60V DC withstand

## Real-World Deployment Scenarios

Imagine trying to power a remote surveillance camera in the Australian outback - where traditional AC power is as scarce as hen's teeth. The 12.8V specification becomes golden here, perfectly matching standard sealed lead-acid battery banks used in solar installations.

### Typical Power Sources

- Automotive electrical systems (12V nominal)
- Solar charge controllers
- Marine battery systems
- UPS backup units

## Installation Best Practices

While the specs claim support for 200m cable runs, real-world testing shows voltage drop becomes significant beyond 150m with 24AWG cable. Pro tip: Use 18AWG outdoor-rated cabling for runs exceeding 100 meters to maintain stable 12.8V delivery.

### Environmental Considerations

- Operating temperature: -40?C to +60?C
- IP67-rated weatherproof enclosure
- UV-resistant polymer housing

Troubleshooting Common Issues

Ever seen the power LED blinking like a confused firefly? That usually indicates voltage instability. When using 12.8V sources, ensure your power supply can handle sudden current spikes up to 2A during radio transmission peaks.

Diagnostic Checklist

- Verify ground continuity in PoE circuit
- Check for voltage sag under load
- Inspect coaxial connectors for moisture ingress
- Confirm proper heat dissipation

For solar-powered installations, consider adding a 5W buffer to your panel rating - clouds and bird droppings aren't accounted for in spec sheets. Remember, in the world of outdoor networking, redundancy isn't just smart; it's survival.

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