



# Air2LAN ATSC Terrestrial Receiver / Router

## Overview

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Broadband Technologies' **Air2LAN** ATSC data receiver / router brings superior throughput performance, flexibility, and simplicity to a very cost-effective solution. **Air2LAN** has been engineered and optimized to deliver IP datagrams from an ATSC terrestrial broadcast signal to a local area network. Its RJ45 Ethernet connection provides powerful and distinct installation, performance, and maintenance advantages compared to USB or PCI form factors.

Installation of **Air2LAN** is easy and non-invasive. No drivers are required and no computer needs to be opened. **Air2LAN** makes the received data available to any device on the LAN from hubs to routers and laptops to mainframes. The ability to forward IP traffic directly to the LAN at the full rate of a 6 MHz ATSC channel (19.38 Mbps) provides powerful flexibility to the user, allowing the use of any IP-based file delivery or streaming applications. And with the addition of an external return channel, broadband internet access is possible.



## Applications

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**Air2LAN** is the ideal ATSC broadband receiver/router. It is designed for datacasting applications over ATSC broadcast signals (ground-based digital TV channels). Using **Air2LAN**, enterprise or individual users can receive IP traffic for a variety of applications like distance learning, software and database file distribution, audio/video streams, and weather, emergency and homeland security information updates.

## Standard Features

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- Exceptional Cost / Performance
- 19.38 Mbps
- TCP / UDP / Unicast / Multicast
- Unique MAC Address
- Static or Dynamic MAC
- Small Footprint
- DVB / ATSC Compliant
- RJ45 10/100BaseT Ethernet Interface
- PID Filtering
- Application Transparent
- IGMP / DHCP

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## Technical Specifications

### Receiver

- Receiving Frequency: 54 to 806 MHz
- ATSC Channels: 2 to 69
- Input Signal Level: -80 dBm to 0 dBm
- Channel Bandwidth: 6 MHz
- Phase Noise: -89 dBc/Hz @ 10kHz
- Demodulation: 8-VSB
- Channel Bit Rate (raw): 19.38 Mbps
- FEC: Reed-Solomon and Viterbi
- Noise Figure: 8 dB
- Image Rejection: > 70dBc

### Data

- DSM-CC Multiprotocol Encapsulation per ATSC A/90
- Throughput: 19.38 Mbps
- MAC filtering
- Section packing
- LLC-SNAP

### Configuration Points

- IP Address
- PID selection
- RF Channel

### Configuration Tools

- MS Windows GUI application and DLL
- Linux library

### Status Monitoring

- Signal
- Lock
- Diagnostics

### Status Indicators

- Power: Red LED
- Packet Error: Amber LED
- Lock: Green LED
- Ethernet Link and Transmit

### Hardware Capabilities

- PID Filters: 16
- Internal Hardware Watchdog
- Non-Volatile Configuration Storage

### Operating Systems

- Once Configured, Receiver Supports all
- Operating Systems

### Physical Interfaces

- RF Input Connector: female F-Type, 75 ohms
- Ethernet 10/100 Base-T LAN Interface: RJ-45

### Physical/Environmental

- Height: 1.23 in (3.12 cm)
- Width: 5.22 in (13.27 cm)
- Depth: 3.90 in (9.92 cm)
- Operating Temperature: 0C to 60C
- Storage Temperature: -40C to 85C
- Operating Humidity: 10 to 90% Non-Condensing

### Standards/Regulatory

- UDP/TCP/IP Protocol
- IP Multicast
- IGMP: V1.0, V2.0
- ETSI 301.192 DVB
- ISO/IEC 13818-1
- ISO/IEC 13818-6
- ATSC A/90
- IEEE 802.3 10/100 Mbps

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