



## VT2210 – Vivato 802.11g Outdoor Wi-Fi Base Station

The Vivato 802.11 b/g Outdoor Wi-Fi Base Station provides 54Mbps data rates while delivering dense and extended Wi-Fi coverage at significantly lower cost for large scale network deployments.

Vivato Wi-Fi installs and performs similar to 3G and 4G at a fraction of the cost, helping to create the most powerful and robust Wi-Fi deployments.

### Benefits

- Vivato topology provides a 1:30 ratio of standard access points in exchange for a single Vivato panel per square mile
- Drastically reduces equipment cost, installation time and overall deployment costs
- Simplifies network management and maintenance through less APs
- Secure network access through robust security features and rogue AP detection
- A \$100M industry leading patent portfolio in extended range wireless technologies



VT2210 - Vivato Outdoor  
Wi-Fi Base Station

## MARKETS SERVED

### Broadband Service Providers

- Cellular (3G/4G offload)
- Cable MSO
- Wireless
- Satellite

### Local Broadband Networks

- Metropolitan Open Areas (Street & Parks)
- Rural & Neighborhood
- Hospitality & Convention Centers
- Education and Business Campuses
- Transportation Ports and Stations
- Warehouses and Retail Malls

### Government Broadband Networks

- City & Municipality Services
- Military Deployments
- First Responders

## Functionality

Vivato's Wi-Fi Base Stations change the "physics" and economics of Wi-Fi, combining industry leading performance and capacity at the lowest cost of deployment. With Vivato, a few manageable network elements, instead of many, result in a system architecture that is easier to manage and secure.

The VT2210 Base Station utilizes a smart antenna to form 6 narrow beams of Wi-Fi that transmit 802.11b/g packets to standard Wi-Fi clients. The VT2210 provides connectivity to the Internet at speeds up to 54Mbps over much greater areas than with traditional Wi-Fi products because it uses its entire phased array antenna to receive low-power transmissions from distantly located clients.

Deployed as a system, the VT2210 supports up to 24 Vivato AP/Bridges via Wireless Distribution System (WDS) links to extend the Wi-Fi coverage area, to fill in coverage gaps, or to add capacity. Flexible network architectures of VP2210s and Vivato AP/Bridges provide comprehensive outdoor coverage for even the most demanding deployments.

## Security

Vivato products offer industry standard security on all its products. To protect the wireless network, the device offers multiple SSID/VLAN support to segregate client traffic and each SSID/VLAN supports different authentication/security models. Standard security: WEP (40- and 104-bit (RC4) encryption, 802.1x (EAP-TLS, EAP-TTLS, PEAP), and WPA (TKIP/MIC, 802.1x) are supported. Other enhanced features include ICCF (inter-client communication filtering), which prevents client-to-client traffic, and MAC address filtering, which allows administrators to deny or permit client association.

## Manageability

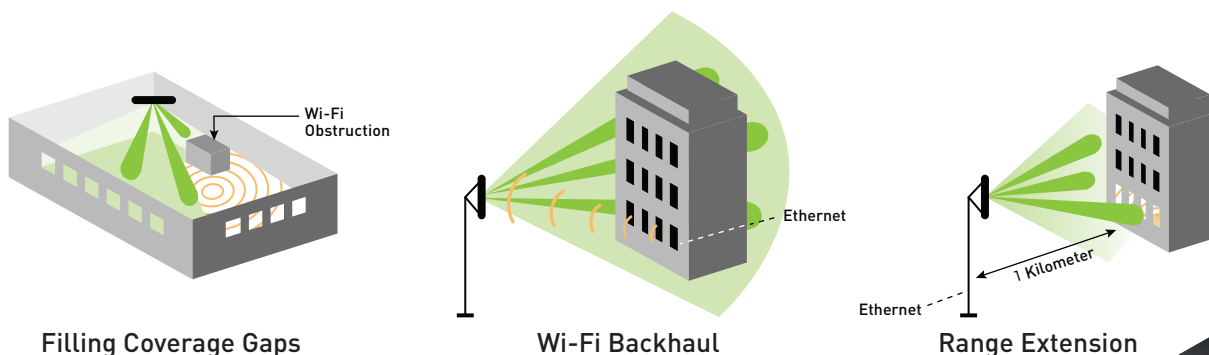
The device can be easily managed remotely via VivatoVision™ WebUI through secure HTTPs connections and supports SNMP and remote and local logging. The VT2210 may also be managed locally through a DB-9 serial port. Vivato helps protect investments by offering software upgrades that keep the device up-to-date with the latest features.

### OPEN SPACE ENVIRONMENT



The VT2210 provides Wi-Fi coverage for buildings and open spaces.

By reducing the number of devices and their associated installation costs, Vivato Wi-Fi Base Stations enable telecom service providers and IT network managers to provide Wi-Fi where it's needed at an affordable price.





## WIRELESS SPECIFICATIONS

Network Standard	IEEE 802.11b/g																																				
Frequency Band/Operating Channels	2.4 – 2.483 GHz, North America Channel Set (1-11)																																				
Supported Data Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps																																				
Media Access Protocol	Carrier Sense Multiple Access/Collision Avoidance																																				
Receive Sensitivity	Rate (mode) receiver sensitivity																																				
CCK: 8% PER, 1000 bytes OFDM: 10% PER, 1024 bytes	54 (OFDM) -72dBm      11 (CCK) -90dBm 48 (OFDM) -76dBm      5.5 (CCK) -93dBm 36 (OFDM) -81dBm      2 (CCK) -94dBm 24 (OFDM) -84dBm      1 (CCK) -95dBm 18 (OFDM) -87dBm 12 (OFDM) -90dBm 9 (OFDM) -91dBm 6 (OFDM) -92dBm																																				
Operating Range	Outdoor Line of Sight: VT2210 with 85% coverage, 2.2 path loss coefficient Typical 802.11b/g Wi-Fi client with 15 dBm output power Antenna at 1.5m																																				
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Users per Device	Up to 150 simultaneous users / 1,530 associated users																																				
Coverage Pattern	90° horizontal and 12° vertical field of view																																				
EIRP (Max.)	41 dBm typical @ 802.11b rates, 21dBi antenna 37 dBm typical @ 802.11g rates, 21dBi antenna																																				

## WIRED SPECIFICATIONS

Network Interfaces	2 - IEEE 802.3 auto-sensing 10/100 BaseT Ports
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## MANAGEMENT & MIB SUPPORT

Local Management	RS-232 Serial Console Port
Remote Management	HTTPs, SNMP, (v1, v2c)
MIBs	RFC 1213, RFC 1493 Bridge Generic and Enterprise Specific Traps: IEEE 802.11, IEEE 802.1x
Logging	SNMP trap support Local and Remote Syslog
File Management	TFTP, SCP

# CARRIER CLASS Wi-Fi



## SECURITY

Static and Dynamic WEP Encryption

40- and 104-bit (RC4) Encryption

WPA

802.1x – EAP-TLS, EAP-TTLS, PEAP, TKIP/MIC

802.11i / WPA2

AES supported  
802.1x – EAP-TLS, EAP-TTLS, PEAP, TKIP/MIC

ICCF

Inter-client communication filtering

Multiple SSID/VLAN

Support for up to 16 MSSID/VLANs each capable of supporting a different security model

## ENVIRONMENTAL SPECIFICATIONS

Dimensions

30" (L) x 30" (H) x 11" (W)  
76.15cm (L) x 76.15cm (H) x 27.85cm (W)

Power Requirement

48VDC, 200 Watts maximum

Weight

83lbs. (37.64Kg.)

Weather Rating

NEMA-4x (IP66)

Temperature

-40° F to 131° F (-40° C to 55° C) – Operating  
Solar load tested per GR-487-CORE Sec 3.26 Category 2  
-40° F to 185° F (-40° C to 85° C) - Storage

Wind Survivability

125 mph

Shock & Vibration

GR-63-CORE

Transportation

ISTA 2A

## CERTIFICATIONS

Radio

FCC 47 CFR Part 15, Class B  
Industry Canada RSS 210

Safety

UL 60950  
CB Report IEC 60950

## WARRANTY

One year limited warranty

## PACKAGE CONTENTS

One VT2210  
One sun shroud and mounting hardware  
One CD-ROM containing User Guide  
Two RJ45 to DB-9 adapters  
Quick Start Guide

## OPTIONAL ACCESSORIES

Tower Mounting Kit, with 125mph wind survivability



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