alvarion®
Your Open WiMAX Choice

BreezeACCESS® VL SU-Video

Wireless Connectivity for Video Surveillance

Alvarion's BreezeACCESS VL SU-Video is a cost-effective, flexible wireless access infrastructure ideally suited for the diverse needs of the video surveillance market. Providing strategic, wire-free outdoor connectivity for a broad range of cameras and sensors, it ensures highly effective video surveillance services in the 5 GHz spectrum.

Wireless Video Surveillance

Video surveillance is a top priority for government, business and private sectors. A rapidly expanding market, it is generating a growing business challenge to meet demands for safety and security with efficient, easy-to-deploy, cost-effective solutions.

Wireless connectivity offers video surveillance solutions the combination of reduced deployment costs, flexibility in the placement of cameras and optimization of bandwidth allocation. Alvarion's extensive experience in the development and deployment of customized wireless communications systems ensures reliable and resilient mission-critical solutions, specifically designed and optimized for the video surveillance market.

Ideal solution for a range of video surveillance applications

- Government installations
- Urban centers
- Homeland security
- Educational institutions and public buildings
- Transportation centers
- such as airports, railways,
- ports and bridges
- Traffic congestion control
- Personal security services

Robust Multipoint Solution

The BreezeACCESS VL SU-Video solution consists of two main units

BreezeACCESS VL Access Unit (AU)

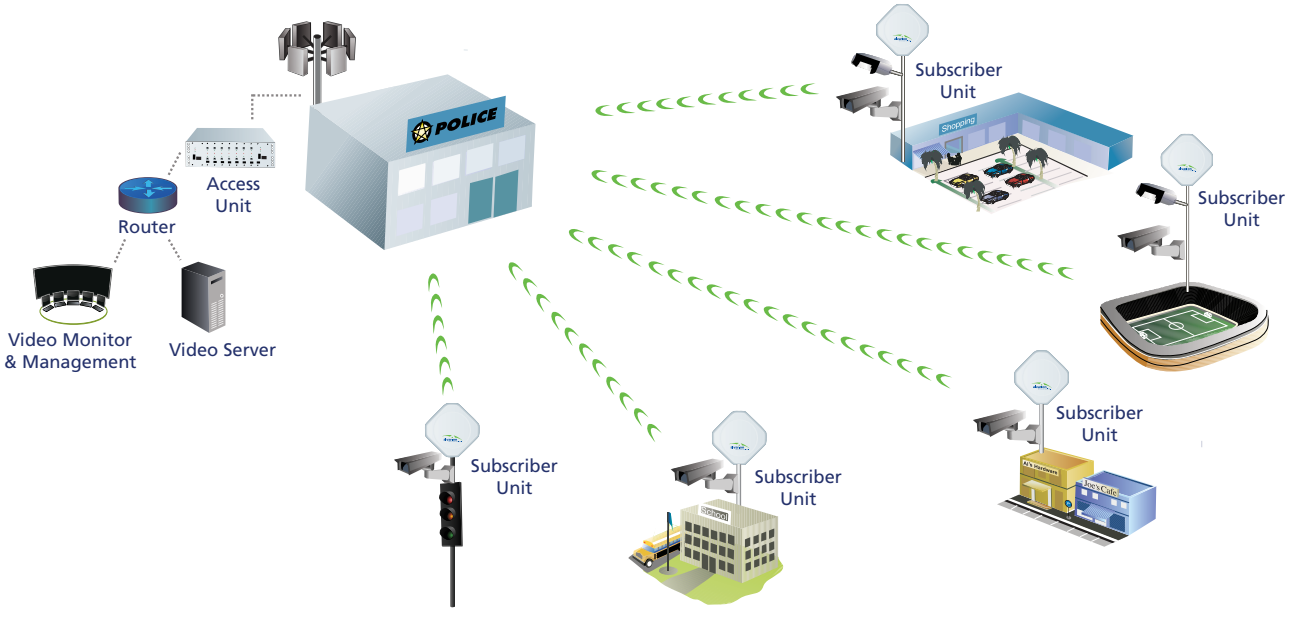
A base station (AU) supporting two optional configurations:

- Stand-alone micro base station
- Modular shelf base station universal chassis holding up to 6 AU modules

Each configuration includes indoor and outdoor units. The indoor unit connects to the network through a standard Ethernet 10/100BaseT (RJ-45) Interface and to the outdoor unit using a CAT-5 cable.

BreezeACCESS VL Subscriber Unit (SU)

Enables the seamless connection of single or multiple video cameras (as well as additional PoE devices) to the base station. This platform enables always-on, high-speed, low latency quality of service, and supports an optimized asymmetric video link of 8 Mbps in the uplink and 2 Mbps in the downlink. The subscriber unit connects to the network via a standard Ethernet 10/100BaseT (RJ-45) interface and connects to its outdoor part via CAT-5 cable.



System Highlights

- Premium 5 GHz PTMP solution
- Optimized bandwidth for video surveillance
- QoS for video and voice applications
- Secure connectivity (FIPS 140-2 certified)*
- Carrier-class outdoor link reliability and availability
- Ultimate versatility and robustness
- TDD OFDM technology, supporting NLOS deployments
- Coverage range of up to 30 km
- Capacity of up to 33 Mbps per sector
- Configurable MIR/CIR per CPE per direction
- Scalable pay-as-you-grow configurations

* Certification in future release

System Advantages

The BreezeACCESS VL SU-Video wireless surveillance system offers a series of advantages

Quality Connectivity	Optimized asymmetric bandwidth allocation dedicated to video streaming needs and providing cost-effective quality connectivity.
Flexibility	Cameras can be located exactly where required and transferred when necessary, since the system is free of wired infrastructure restraints and ensures full tactical communications in every possible configuration.
Quick Integration	Standard-based solution which secures infrastructure investments and is operational with all surveillance cameras and applications.
Compelling Business Case	Requires less base stations and eliminates complex cabling and related mounting fixtures, reducing installation and on-going maintenance costs.
Maximizes Modularity	NLOS support, high bandwidth capacity, increased coverage, multi-subscriber profiles in same sector and network.
Powerful Access	Proven robust system enabling best of class service delivery, including long range and high capacity service. Dynamic frequency selection (DFS), with unique Alvarion algorithm improves channel management in low radar activity conditions. The Access Unit automatically selects algorithm for best possible service, rapid antenna alignment and SLA enforcement.
Security	Built-in encryption and a host of secure management and authentication functions.
Reliable	Ruggedized solution operating over an extended temperature range.

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For the latest contact information in your area, please visit:
www.alvarion.com/company/locations

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Specifications

Radio

Frequency
5.47 - 5.725 GHz, 5.725 - 5.850 GHz

Radio access method
Time Division Duplex TDD

channel
10 MHz, 20 MHz

Central frequency resolution
5 MHz, 10 MHz

Capacity
AU Capacity: 32 net FTO/ 54 gross
SU Capacity: 8Mbps uplink, 2 Mbps downlink

Max input power (at ant. port)
-48 dBm Typical

Max output power (at antenna port)
AU: -10 dBm to 21 dBm, 1 dB steps
SU: -10 dBm to 21 dBm, automatically adjusted by ATPC (Actual max power may be limited for compliance with local regulation)

Modulation scheme (Adaptive)
OFDM: BPSK, QPSK, QAM 16, QAM 64

Antenna port (AU-RE)
N-Type 50 ohm

Subscriber integrated antenna
21 dBi (19dBi in 4.9-5.1GHz band), 10.5° H/V, Integrated flat panel

AU antennas
60°: 16dBi, Sector 60° horizontal, 10° vertical
90°: 16dBi, Sector 90° horizontal, 6° vertical
120°: 15dBi, Sector 120° horizontal, 6° vertical ,
360°: 8dBi, Sector 360° horizontal, 9° vertical (AU-SA only)

Sensitivity, typical (dBm at antenna port, @10-6)

Modulation	1	2	3	4	5	6	7	8
Level* (20 MHz)	-89	-88	-86	-84	-81	-77	-73	-71
Level* (10 MHz)	-92	-91	-89	-87	-84	-80	-76	-74

*** Modulation Level combines modulation scheme and coding gain.**

Data Communications

VLAN support
Based on IEEE 802.1q , QinQ 802.3ad

Layer-2 traffic prioritization
Based on IEEE 802.1p

Layer-3 traffic prioritization
IP ToS according to RFC791 and DSCP according to RFC2474

Layer-4 traffic prioritization
UDP/TCP port range

Security
WEP 128-bit authentication, AES 128, WEP 128, and certified FIPS-197 mode built in encryption

Configuration and Management

Local & remote management
Monitor via Telnet, SNMP and configuration upload/download

Remote management access
From wired LAN, wireless link

Management access protection
Multilevel password
Configuration of remote direction (from Ethernet only, wireless only, or both sides)
Configuration of IP addresses of authorized stations

Software upgrade
Via TFTP and FTP

Configuration up/download
Via TFTP and FTP

SNMP agents
SNMP v1 client, MIB II, Bridge MIB, Private BreezeACCESS VL MIB

Physical and Electrical

Type	Connectors		Outdoor Unit
SU-NI, AU-NI	Ethernet	10/100BaseT RJ-45, 2 embedded	Power consumption 25W AC input: 100-240VAC, 50/60Hz
	Radio	LEDs	
	AC IN	10/100BaseT Ethernet RJ-45	
SU-RA, AU-RE	Indoor	3-pin AC power plug 10/100Base RJ-45 with waterproof	54 VDC from indoor to outdoor
AU-BS	Ethernet	sealing assembly	Power consumption 30W (module plus outdoor unit) AC input: 100-240VAC, 50/60Hz 3.3VDC, 54V from power supply in backplane
	Radio	10/100BaseT RJ-45, 2 embedded LEDs 10/100BaseT Ethernet RJ-45	
BS-PS-AC-VL (AC power supply)	AC-IN	3-pin power plug	Power consumption: 240W, full chassis (1 PS, 6 AU) AC input: 85-265VAC, 47-65Hz DC output: 54V, 3.3V
BS-PS-DC-VL (DC power supply)	-48 VDC	3-pin DC D-Type 3 power pin plug Amphenol	Power consumption: 240W, full chassis (1 PS, 6 AU) DC input: -48 VDC nominal (-34 to -72), 10 A max. DC output: 54V, 3.3V

Standard Compliance

Type
Standard

EMC
FCC Part 15 class B, CE EN55022 class B

Safety
UL 1950, EN 60950

Environmental
ETS 300 019 part 2-3 class 3.2E for indoor units
ETS 300 019 part 2-4 class 4.1E for outdoor units

Storage
ETS 300 019-2-1 class 1.2E

Transportation
ETS 300 019-2-2 class 2.3

Lightning protection
EN 61000-4-5, class 3 (2kV)

Radio
FCC part 15, FCC P.90, EN 301 893 (V 1.3.1)

Note: Not all options are available in all regions and some features require software licensing key. Please contact your local representative for further information