



BreezeACCESS[®] VL

Reliable Wireless Broadband Solution

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Reliable Wireless Broadband Solutions

Alvarion's BreezeACCESS VL is a flexible and field proven Point-to-Multipoint (PtMP) solution providing broadband wireless outdoor connectivity for a variety of applications in urban and rural deployments. Available in a range of frequencies in the 4.9 / 5 GHz and 900 MHz bands, this widely deployed platform offers a carrier-class outdoor link with enhanced security and capacity as well as QoS for data, voice and video services. Enhanced uplink/downlink configuration offers better support of business applications including public safety and video surveillance.

BreezeACCESS VL supports a wide range of subscriber units, providing an optimized solution for the performance and cost requirements of various markets and customers. It enables operators, municipalities, enterprises and communities around the world to quickly and cost-effectively benefit from an array of top quality broadband services.

Feature Highlights

- Premium 4.9 / 5GHz and 900 MHz PtMP solution
- Wide range of subscriber units supporting various applications
- QoS for data, voice and video applications
- Coverage range of up to 30 km
- Capacity of up to 32 Mbps per sector
- 900 MHz with Non-Line-Of-Sight (NLOS) support, and excellent propagation capabilities
- Secure connectivity - FIPS-140-2 and HW-based FIPS-197 and AES 128
- TDD OFDM NLOS technology
- Configurable MIR/CIR per SU per direction
- Scalable license-based pay-as-you-grow configurations
- Video Surveillance special features enabled by uplink/downlink configuration with 12 Mbps DL / 8 Mbps UL (SU-V)
- Fast handover between base stations

Markets



Networks



Education



Public Safety



Voice



Oil & Gas





Access





Transportation



Smart Utilities

Unit	Unit Type	Feature Highlights	Deployment Options	Benefits
Access Unit (AU)	Chassis-based base station 	<ul style="list-style-type: none"> NLOS Capabilities Carrier grade chassis 1 to 6 sectors per chassis Mix and match support for different bands Optional redundant power supply Total net capacity > 192 Mbps (32 x 6 sectors) 	<p>Multi-sector: AUS-BS</p> <ul style="list-style-type: none"> Entry level option Supports up to 25 SUs per sector Upgradable to full AU-BS <hr/> <p>Multi-sector: AU-BS</p> <ul style="list-style-type: none"> Supports up to 512 SUs per sector 	<ul style="list-style-type: none"> Pay-as-you-grow support Optimized configuration for vertical applications Supports all SU model in the sector Optimized performance for public safety applications in urban deployments
	Standalone base station 	<ul style="list-style-type: none"> Single sector AU comprised of an indoor unit (IDU) and outdoor unit (ODU) Optional all-outdoor or DC solution 	<p>Single-sector: AUS-SA</p> <ul style="list-style-type: none"> Entry level option Supports up to 25 SUs per sector Upgradable to full AU-SA <hr/> <p>Single-sector: AU-SA</p> <ul style="list-style-type: none"> Supports up to 512 SUs per sector 	

Subscriber Unit (SU) Comprised of an indoor unit (IDU) and outdoor unit (ODU)	SU-3, SU-6, SU-54 	<ul style="list-style-type: none"> Net aggregated throughput: SU-3: 3Mbps, SU-6: 6Mbps, SU-54: 32Mbps Quick installation using LEDs for fast alignment Supports 2 different services per SU (2 priority levels) Coverage range of up to 30 km (LOS) 	<p>Data, voice and video applications</p> <ul style="list-style-type: none"> Extended range Pay-as-you-grow upgrade options: <p>SU-3→SU6 SU-3→SU-Video SU-3→SU54 SU-6→SU-Video SU-6→SU54 SU-Video→SU-54</p>	<ul style="list-style-type: none"> Pay-as-you-grow support Optimized configuration for vertical applications Supports SU in sector
	SU-Video 	<ul style="list-style-type: none"> Fixed asymmetric throughput: 8 Mbps uplink and 12 Mbps downlink Available in 5.4 GHz and 5.8 GHz Quick installation using LEDs for fast alignment Supports 2 different service levels per SU Coverage range of up to 30 km (LOS) 		<ul style="list-style-type: none"> Optimized bandwidth support for video applications

Specifications

Radio

Frequency 902-927 MHz, 4.9-5.1 GHz, 5.15-5.35 GHz, 5.47-5.725 GHz, 5.725-5.875 GHz	Central frequency resolution 1 MHz (900 MHz), 5 MHz, 10 MHz Max input power (at ant. port) -48 dBm typical	Modulation scheme (adaptive) OFDM: BPSK, QPSK, QAM 16, QAM 64 Antenna port (AU-E) N-Type 50 ohm
Radio access method Time Division Duplex TDD	Max output power (at antenna port) AU: -10 dBm to 21 dBm, 1 dB steps AU (900 MHz): -10 dBm to 27 dBm, 1 dB steps SU: -10 dBm to 21 dBm, automatically adjusted by ATPC SU (900 MHz): -10 dBm to 27 dBm, automatically adjusted by ATPC	Subscriber integrated antenna 20 dBi (19 dBi in 4.9-5.1 GHz band), 14° H/V, integrated flat panel
Channel AU/SU: 5 MHz (900 MHz), 10 MHz, 20 MHz (4.9, 5.15-5.875MHz)		AU antennas 60°: 16dBi, sector 60° vertical 90°: 16dBi, sector 90° vertical 120°: 15dBi, sector 120° vertical, 360°: 8dBi, Omni horizontal

Data Communications

VLAN and QoS support QinQ 802.1ad, 802.1Q, WLP over the air traffic prioritization, MIR/ CIR per SU per direction (UL/DL) Concatenation, burst mode, small packet optimization to support voice Advanced Automatic Transmit Power Control (ATPC)	Traffic prioritization Layer 2: Based on IEEE 802.1p, Layer 3: IP ToS according to RFC791 and DSCP according to RFC2474, Layer 4: UDP/TCP port range	Security WEP 128-bit authentication, AES 128, WEP 128, certified built-in encryption FIPS-197 mode and FIPS-140-2
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Specifications

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www.alvarion.com

Configuration and Management

Local and remote management
Monitor via Telnet, SNMP and Configuration
upload/download
Managed by AlvariStar Management System

Remote management access
From wired LAN, wireless link
Software upgrade and Configuration
Via TFTP and FTP

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

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

Electrical Characteristics

Power consumption

SU / AU-SA:

25W

AU-BS:

30W (module plus outdoor unit)

BS-PS-AC-VL (AC power supply):

240W, full chassis (1PS, 6 AU)

BS-PS-DC-VL (DC power supply):

240W, full chassis (1PS, 6 AU)

Input power

SU / AU-SA:

AC input 100-240 VAC, 50-60 Hz

AU-BS:

AC input 100-240, 50-60 Hz, DC output 55 VDC, 1A MAX

PS (IDU):

54 VDC from indoor to outdoor, 3.3 VDC, 54V from power supply in backplane

BS-PS-AC-VL (AC power supply):

AC input 85-265 VAC, 47-65 Hz, DC output 54V, 3.3V

BS-PS-DC-VL (DC power supply):

DC input -48 VDC nominal (-34 to -72), 10 A max., DC output 54V, 3.3V

Connectors

ODU

SU / AU-SA:

Ethernet: 10/100BaseT RJ-45,

Radio: 10/100BaseT

Ethernet RJ-45, AC IN: 10/100BaseT Ethernet RJ-45

Ethernet: sealing assembly, Radio: 10/100BaseT Ethernet RJ-45

AU-BS:

IDU

SU / AU-SA:

Indoor: 3-pin AC power plug 10/100Base RJ-45 (waterproof)

AU-BS:

BS-PS-AC-VL (AC power supply): AC IN: 3-pin power plug

BS-PS-DC-VL (DC power supply): -48 VDC: 3-pin DC D-Type 3 power pin plug Amphenol

Physical and Environmental

Dimensions

SU ODU with integrated antenna:

30.5 x 30.5 x 6.2 cm (0.55 kg) / 12 x 12 x 2.4 in (1.21 lb)

AU/SU ODU without integrated antenna:

30.5 x 11.7 x 5.7 cm (1.8 kg) / 12 x 4.7 x 2.2 in (3.9 lb)

SU with integrated antenna small enclosure:

22 x 22 x 7 cm (1.3 kg) / 8.6 x 8.6 x 2.7 in (2.8 lb)

Operating temperature

SU/AU outdoor units:

-40°C to 55°C

SU/AU indoor units:

0°C to 40°C

Operating humidity

SU/AU outdoor units:

5%-95% non condensing, weather protected

SU/AU indoor units:

5%-95% non condensing

Standard Compliance

EMC

FCC Part 15 class B, EN55022 class B,

EN 301 489-1/4

Environmental

EN 300 019 part 2-3 class 3.2E for indoor units

EN 300 019 part 2-4 class 4.1E for outdoor units IP-67, SU integral antenna IP-67

Safety

EN 60950-1, EN 60950-22

Transportation

EN 300 019-2-2 class 2.3

Storage

EN 300 019-2-1 class 1.2E, Hazardous

substances, RoHS compliant

Lightning protection

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

Radio

EN 301 893 (V 1.6.1), IC RSS-210 (Canada)

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



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About Alvarion Technologies

Alvarion provides tailored solutions based on our optimized wireless broadband addressing the challenges of smart cities. Our innovative solutions use multiple technologies covering the various smart city aspects like security, transportation, first-responders, education, utilities and other community services.