

TECHNICAL SPECIFICATIONS VIDEO AND SECURITY WIRELESS SYSTEM

1. GENERAL

A. Manufacturer:

ClearSite Communications, Inc.
5602 Marquesas Circle – Suite 104
Sarasota, FL 34233
www.clearsitecom.com

B. All equipment and materials used shall be standard components that are regularly manufactured and used in the manufacturer's system.

2. PERFORMANCE

A. The Video Router will provide dual radio interfaces capable of operating in the 2.4, 4.9 and 5.8 GHz bands.

B. The Video Router's radios will both function as mesh interfaces for seamless backhaul of video and security data without significantly degrading the bandwidth when hopping from node to node.

C. The Mesh Routing Protocol will provide automatic configuration of the wireless interfaces to ensure the data is load balanced across the network.

D. The Video Router will provide a serial interface with native support for access control panels.

E. The Video Router will provide a MATRIX interface for serial communications.

F. The Video Router will support both analog and IP cameras.

G. The Video Router will provide at least 3 Ethernet interfaces and 1 Serial interface.

H. The Video Router will be housed in a passively cooled NEMA 4X housing.

I. The Video Router will only operate in Encrypted mode. No data will pass unencrypted.

J. The Video Router radio interfaces must be capable of being software configured for operation in the 2.4, 4.9 and 5.8 GHz bands independently and offer power selection from 0 to 23 dB in 1 dB increments.

K. System must have an integrated GPS to allow automated configuration of the wireless links based on distance. The system must also provide a mapping interface with node locations relative to GPS position.

L. Point to Point mode provides either a high capacity link transmitting on dual radio interfaces with per stream load balancing or hot standby mode provides a protected configuration using a primary radio link with the secondary redundant link for back up.

3. RADIO SPECIFICATIONS

- A. Unlicensed Frequency bands: 5.725 - 5.850 GHz (US, FCC) 2.4 - 2.462 GHz (US, FCC)
- B. Non-overlapping unlicensed channels: 8 (US, FCC)
- C. PA - Public Safety 4940-4990 MHz Band
- D. Modulation: OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
- E. Modulation speed: Up to 54 Mbps per radio (total 108 Mbps)
- F. TX power: Up to 23 dBm, depending on configuration and regulatory constraints
- G. RX Sensitivity 2.4 GHz: -90dB@6Mbps, -74dB@54Mbps
- H. RX Sensitivity 5 GHz: -90dB@6Mbps, -74dB@54Mbps
- I. Antenna connectors: Two (2) N-female

4. POWER SPECIFICATIONS

- A. Power Input AC version: 100-240 VAC, 50/60 Hz, autoranging
- B. Power Input DC version: 7-18 V DC
- C. Auxiliary power output: 12 V DC
- D. Power Supply (AC Ver.): Internal, 30W maximum
- E. Power Consumption (max.): 10W (VR42-IP) 22W (VR42-VIP)

5. ENVIRONMENTAL SPECIFICATIONS

- A. Operating Temperature: -20 to 60 C (-4 to 140 F)
- B. Storage Temperature: -30 to 65 C (-22 to 149 F)
- C. Operating Humidity: up to 95% non-condensing
- D. Weather rating: NEMA4X
- E. Wind survivability: >165 mph
- F. Wind loading: <1024N
- G. Salt/fog/rust resistance: MIL-STD-810F 509.4
- H. Shock & Vibration: ETSI 300-19-2-4 spec. T41.E

6. PHYSICAL SPECIFICATIONS

- A. Construction: Cast Aluminum
- B. Finish: White
- C. Dimensions (inches/mm): 8"/203 (h) x 8"/203(w) x 4"/102(d)
- D. Unit Weight: 5.7 lb. / 2.6 Kg.
- E. Mounting: Wall and Pole mounting brackets included

7. NETWORK SPECIFICATIONS

- A. Interface: Three (3) 10/100 Ethernet RJ-45 auto-sensing ports (10/100BaseT)
- B. Protocols: UDP, TCP, IP, RTP, RTCP, RTSP, HTTP, HTTPS, ICMP, ARP
- C. Remote management: Client Server Application

8. ACCESS CONTROL SPECIFICATIONS

- A. Interface: One (1) RS232 Interface

9. CERTIFICATIONS AND REGULATIONS

- A. FCC CFR47 Part 15, class B
- B. CE!
- C. NEMA4X rated for outdoor use

10. WARRANTY

- A. One (1) year, parts and labor

11. SUPPLIED ACCESSORIES

- A. Wall and Pole Mounting Brackets
- B. GPS
- C. Sunshield with integrated GPS and omni directional antenna mounting points

12. OPTIONAL ACCESSORIES

- A. Dual Band Antennas, 2.4/5.8 GHz Omni Directional, Patch, and Panel
- B. Variable Length RF Cables
- C. Outdoor Ethernet Cables
- D. Analog Video Cable Assemblies at custom lengths

13. CLEARSITE MODEL NUMBERS

- A. VR42-IP IP Camera, Mesh Router
- B. VR42-PTP Point to Point
- C. VR42-FLEX Operates as a VR42IP or VR42PTP
- D. VR42-VIP-1 Single Analog Camera Mesh Video Router
- E. VR42-VIP-2 Dual Analog Camera Mesh Video Router