2X2 MIMO Transmitter (Client)

Single Radio

Viper 650-i31t



Factory Programmed for Your Network

// Description

CDM Wireless, a leader in innovative wireless broadband network solutions, proudly introduces the Viper 650-i31t transmitter.

Viper 650-i31t is a single radio 2x2 MIMO transmitter with a high gain dual-polarity MIMO antenna, 3 Ethernet ports, ultra-wide frequency range and high RF output to connect unlimited number of client transmitters and/or repeaters up to 8 miles at maximum data rates.

With actual data rates of 470 Mbps, this unit delivers constant capacity to stream high resolution video, audio, VoIP and live recordings without interruption of camera control or loss of data.

Installation is fast and easy with an all cast aluminum enclosure, universal mounting kit, 1 Cat-5/6 cable for power/data and 2 additional POE+ ports for powering external devices.

This transmitter can easily be combined into any P2P/P2MP hybrid deployment and is compatible with all Viper 400/650 series products. This allows flexible network design, phased deployments and high bandwidth upgrades that are scalable, fast and budget friendly.

// Designed for Security Integrators

The Viper 650 series are uniquely designed to satisfy the needs of security integrators. They are specifically designed to meet the challenges of designing and deploying wireless networks in uncontrolled environments by offering no maintenance, simplicity, and maximum flexibility in configuration and future upgrades.

With multiple radios, antennas, frequencies, channel bandwidths, spatial multiplexing, adaptive noise immunity and selection of protocols, Viper delivers constant throughput by analyzing, selecting and optimizing the frequency spectrum and mitigating interference.

All Viper products include software, licenses, accessories and unlimited bandwidth at no additional charge.

Assisting customers is our specialty! Each Viper system is pre -programed to each customers specific network requirement.

At CDM, we deliver complete Plug and Play systems.

// Key Features

- 1 2x2 MIMO transmitter with panel antenna
- P2P / P2MP / Bridge / Backhaul / MESH
- Bandwidth of 470 Mbps throughput[1]
- Range of 8 miles at maximum throughput[1]
- Frequency 4920 to 6100 MHz
- Adaptive Noise Immunity
- Dynamic Frequency Selection
- 3 1-Gigabit Ethernet ports with Auto-MDI/X
- 2 POE+ 802.3at power output ports
- AES 256 / 3DES encryption and VLAN support for enhanced security
- Industrial-grade cast aluminum enclosure/mount
- Includes universal mounting kit and POE supply
- Windows-based GUI and Web browser interface for programming and monitoring
- Tested and delivered with a site map drawing showing installation locations of each unit
- Made in USA

[1] Higher/lower actual throughput and range depends on environment

CDM
Wireless Network Solutions

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...Innovative Broadband Network Solution

P2P / P2MP / Bridge / Backhaul / MESH

// WIRELESS INTERFACE

Radios:	1 2x2 MIMO transmitter
Antennas:	19dBi, 20deg Integrated MIMO panel
Data Connect Rate:	650 Mbps
Data Throughput Rate:	470 Mbps[1]
Frequency:	4920 - 6100 MHz[2] (Dynamic Freq Selection)
Transmit Power:	630mW (28dBm)[2]
Supported Channels:	20/40/80 MHz
Wireless Standards:	802.11a/n/ac (Standard & Proprietary modes)
MAC protocols:	TDMA, CSMA/CA, Polling
Modulation:	OFDM / BPSK, QPSK, up to 256-QAM
Quality of Service:	4 QoS class levels (voice, video, high, low)
Range:	8 miles at MCS7 with 19dBi antenna[1]
TX Power / RX Sensitivity:	TX/RX at MCS0 28dBm / -96dBm
	TX/RX at MCS7 27dBm / -77dBm
	TX/RX at MCS9 24dBm / -72dBm
	TX/RX at 6Mbit 28dBm / -96dBm
	TX/RX at 54Mbit 28dBm / -81dBm

// POWER

POE Input :	48VDC power injector and/or POE (802.3at) compatible switch on port 1
POE Output:	2 POE+ (802.3at) on ports 2 & 3
Consumption:	30 Watts maximum

// INTERFACES

Ethernet	Three (3) 10/100/1000 Gigabit Ethernet ports with Auto-MDI/X
Fiber	2 SFP cages for FTTH and fiber ring

// SYSTEM MANAGEMENT AND CONTROL

Antenna Alignment, Freq Scan, Freq Sniffer, Spectrum Usage, Channel Snooper, TX Power, TX/RX Signal Strength, Signal Quality, Connection Rate, Data Rate, Noise Floor, Signal-to-Noise Ratio, Bandwidth, Ping, Flood Ping, Ping Speed, Netwatch, IP Scan, Traffic Monitor, Email, Packet Sniffer, Torch, System Health, Resource Stats, History, Logging, Scripts, Scheduler, SMS, Watchdog, Graphing, Trace Route, MAC Server.

[1] Higher/lower actual throughput and range depends on environment
[2] Operating range limited by Country Regulations

// AUTHENTICATION, SECURITY AND ENCRYPTION

Authentication:	RADIUS server MAC enabled
Security:	SSL based authentication
Local/Remote Admin:	SSH, IP/MAC Telnet, Win GUI, HTTPS, FTP, Serial Console
Encryption:	AES 128/256, Triple DES with CBC-MAC, RADIUS, EAP
VPN:	EOIP, VLAN, PPOE, PPTP, IPIP, L2TP
VLAN:	802.1Q / 802.1QinQ / 802.1ad
Protocols:	RTP/IP, UDP/IP, TCP/IP, HTTPS, VRRP, NTP, DNS, DHCP, ARP, WDS
GPS Support:	Asynchronous NMEA0183, NMEA/RTCM or simple text

// ENVIRONMENTAL & ENCLOSURE SPECIFICATIONS

Material:	Cast aluminum
Finish:	Powder coat paint
Rating:	IP67, IP66
Temperature:	-40C to +70C
Humidity:	0-95% (wind driven rain)
Dimensions:	12” x 12” x 2.75”
Weight:	7 Lbs.
Connectors:	1 Weatherized feed thru for cables or conduit
LEDs:	Power, Ethernet Activity
Mounting:	Mast, pole or wall
Grounding:	DC Ground
Vibration:	IEC 60721-3-4 4M5 Random
Mechanical:	IEC 60721-3-4 4M5
Solar Radiation:	ASTM G53 1000 hours
Ice Load:	25mm radial
Salt Fog:	IEC 68-2-11 Ka 500 hours

Regulations:	FCC Part 15, Class B

The Viper 650 Product Line

CDM Wireless, your trusted wireless broadband solutions provider, proudly introduces our Viper 650 product solutions.

The Viper 650 product series are uniquely designed to satisfy the needs of security integrators. They are specifically designed to meet the challenges of designing and deploying wireless networks in uncontrolled environments by offering no maintenance, simplicity and maximum flexibility in configuration and future upgrades.

Frequency, RF modes and antenna selection are a few of the most important elements of a reliable high performance wireless network.

The Viper 650 series includes a complete line of MIMO transmitters, receivers and repeaters with a wide selection of configurations for multiple radios, radio modes and combination of internal and external antenna selections, designed to operate in any environment with fast installation and no maintenance.

With the Viper 650, integrators can choose from a wide band of frequencies and variety of antenna types, including: panel, sector, omni-directional and parabolic. Most P2MP installations consist of several radio models and antenna types.

Installation is fast and easy with an all cast aluminum enclosure, universal mounting kit, 1 Cat-5/6 cable for power/data and 2 additional POE+ ports for powering external devices.

All Viper products include software, licenses, accessories and unlimited bandwidth at no additional charge.

CDM far surpasses the industry competition on performance, quality, factory programming and assisting customers with design, installation and performance testing and optimization.

At CDM, our customers are our #1 priority !

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Made in USA / Viper 650-i31t, Rev 1