

vWatch®

Enabling Video through Any Comms Link

vWatch® DESIGN

vWatch® provides excellent live video quality at both low data and higher rates. The video quality can be adjusted manually or automatically to match the cell phone link. vWatch® enables framing rate, compression rate, and image quality control to obtain the best quality video over a limited data rate link. Importantly the video does not have motion or compression artifacts that limit the video use of the video. The vWatch® Video Transport Field Unit in the picture has an RJ-45 IP connector for a camera, a power connector for AC or DC Power, and two antenna connectors for the cell phone modem. The vWatch® system permits video and data feeds to be multiplexed over one link. A Coordination Server receives the video and supports user terminals over an IP network.

vWatch® provides a comprehensive capability to set up a video surveillance application. This system manages the selected communications video link, the video distribution over the network, and the video quality provided to the user. The user can adjust the image settings and consequently the data rate to match both the link throughput and the data rate plan. vWatch® also will dynamically adjust the data rate to match link throughput signal variations. vWatch® makes it easy to deploy and remotely control the video surveillance operation.



- Provides Live Compressed Video to Multiple Distributed Users
- Good Quality Video Using Compression Over Low Data Rate Links
- Compression Rates Can Be Changed on the Fly Without Video Interruption
- Operates on 3G or 4G LTE Cell Phone Networks
- Operates Over Any Digital Data Link Including Military and Civil Radios
- User Interface Displays Video and Provides Operator System Control
- Supports all IP Cameras Including Pan, Tilt and Zoom Units (ONVIF)
- Target Activity Based Sensor Triggered Video
- Data Stored on a Server for Replay and Distribution
- Video and Associated Data is Encrypted for Information Assurance

Single Compressed Frames from a 5 FPS Video:



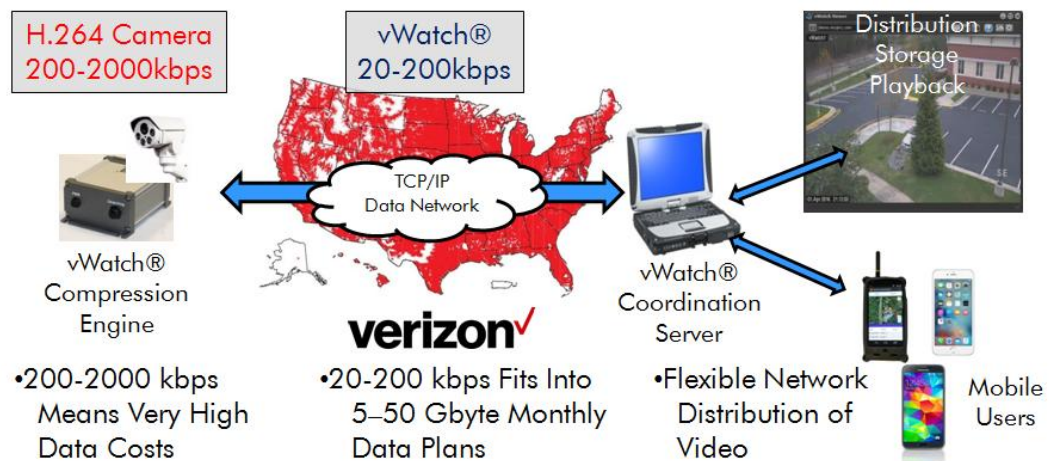
vWatch® Features and Specifications

vWatch®

PERFORMANCE

vWatch® will provide video at channel bit rates as low as 20 Kbps for very low bandwidth wireless links and at much higher data rates for wireless RF modems, 3G and 4G cell phone modems, Satcom data modems, and for IP digital radios. The receiver for these various wireless modems will integrate the IP files into standard wired networks or provide the IP files directly to a PC computer or a server. The video files are then addressed to the Coordination Server where they are stored on hard drives for supporting live display applications or to provide DVR playback capabilities. The user applications can be on cell phones, tablets, or PCs. This architecture permits many users to have access to the video without broadcasting the video over separate cell phone links.

Standard IP cameras with pan, tilt and zoom capabilities can plug into the vWatch® Field Unit and provide video, as well as, receive camera control commands. The vWatch® Field Unit is powered with a 9 to 36 volt DC input. A computer board in the Field Unit has an I/O to accept the IP data files and perform multifaceted image compression by adjusting the output frame rate, the image compression rate, and the image quality from CIF, D1 up through Megapixel. Any low data rate digital radio, cell phone, or Satcom link can connect the video with users. In the figure below, the video files are transmitted by a 3G/4G LTE modem to a cellular receiver with an IP network connection. A Coordination Server receives the video files over an IP network where they are both stored and available for live streaming to a User Terminal. The User Terminal may be cell phones or tablets, laptop or desktop PCs connected via cell or IP networks.



- Mobile Camera Connectivity to Mobile Users
- Good Quality Video Even at Very Low Data Rates
- IP Network Compatibility for Video Distribution
- Low General Surveillance Data Rates/High Definition Video when Activities of Interest are Detected
- Multiple Cameras and Viewer Video Displays Can Be Individually Controlled by the User
- Both Hardware and Software Implementations Are Available for Integration with User Systems
- Power Consumption- 15 Watts with IP PTZ LED Array Camera

Specifications may change due to product enhancements.
For more information on any of our products or services please visit us on the Web at: www.mcqinc.com

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