

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS**

ANADEx DATA COMMUNICATIONS  
LLC,

Plaintiff,

v.

AMCREST TECHNOLOGIES LLC AND  
AMCREST INDUSTRIES LLC,

Defendants.

**Civil Action No. 1:23-cv-1417**

**JURY TRIAL DEMANDED**

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Anadex Data Communications LLC (“ADC” or “Plaintiff”), for its Complaint against Defendants Amcrest Technologies LLC, (“Amcrest Technologies”) and Amcrest Industries LLC (“Amcrest Industries”) (individually each a “Defendant” and collectively “Defendants”) alleges the following:

**NATURE OF THE ACTION**

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*

**THE PARTIES**

1. Plaintiff is a limited liability company organized under the laws of the State of Texas with a place of business at 356 Greenwood Court, Villanova, Pennsylvania 19085.

2. Upon information and belief, Defendant Amcrest Technologies LLC is a corporation organized under the laws of the State of Texas with a primary place of business at 16727 Park Row, Houston, Texas 77084.

3. Upon information and belief, Defendant Amcrest Industries LLC is a corporation organized under the laws of the State of Texas with a primary place of business at 16727 Park Row, Houston, Texas 77084.

4. Upon information and belief, Amcrest sells, offers to sell, and/or uses products and services throughout the United States, including in this judicial district, and introduces infringing products and services into the stream of commerce knowing that they would be sold and/or used in this judicial district and elsewhere in the United States.

5. On information and belief, Amcrest designs, develops, manufactures, sells, offers to sell, and/or imports products, devices, systems, and/or components of systems through certain accused instrumentalities (as discussed further below) that either infringe or support the infringement of the patent asserted in this action.

#### **JURISDICTION AND VENUE**

6. This is an action for patent infringement arising under the Patent Laws of the United States, Title 35 of the United States Code.

7. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

8. Venue is proper in this judicial district under 28 U.S.C. §1400(b). On information and belief, Defendants are incorporated in the State of Texas.

9. On information and belief, each Defendant is subject to this Court's general and specific personal jurisdiction because each Defendant has sufficient minimum contacts within the State of Texas and this District, pursuant to due process and/or the Texas Long Arm Statute because each Defendant purposefully availed itself of the privileges of conducting business in the State of Texas and in this District, because each Defendant regularly conducts and solicits business within the State of Texas and within this District, and because Plaintiff's causes of action arise directly from each of Defendant's business contacts and other activities in the State

of Texas and this District. Further, this Court has personal jurisdiction over Defendants because each Defendant is incorporated in Texas and has purposely availed itself of the privileges and benefits of the laws of the State of Texas.

## **BACKGROUND**

### **The Invention**

10. Marcin Zalewski is the inventor of U.S. patent No. 7,310,120 (“the ’120 patent”). A true and correct copy of the ’120 patent is attached as Exhibit 1.

11. The ’120 patent resulted from the pioneering efforts of Marcin Zalewski (hereinafter “the Inventor”) in the area of analog video conversion receivers. These efforts resulted in development of a receiver which could receive and convert an analogue video signal and control the display of the video frames at the time of the invention in 2004. At the time of these pioneering efforts, the most widely implemented technologies used to address controlling display of video signal frames were systems comprising a single frame buffer or systems comprising two frame buffers. In single frame buffer systems, output could be affected by interferences unless input and output timers were synchronized. This was problematic due to difficulties related to switching among input signals with different synchronization frequencies/phases. Systems with two frame buffers for double buffering where data was fetched into the first buffer and then copied to the second buffer required copying of large amounts of data. The Inventor conceived of the inventions claimed in the ’120 patent as a way to reduce the interferences and allow a conversion of video frames in such a way that the output frequency could be either lower or higher than the input frequency. (*See* Ex. A, the ’120 patent, at 1:16-66.)

12. For example, the Inventor developed a receiver of analogue video signal having means for analogue video signal conversion.

**Advantage Over the Prior Art**

13. The patented invention disclosed in the '120 patent, provides many advantages over the prior art, and in particular improved the operations of analog video conversion receivers. (See Ex. A at 2:1-2.) One advantage of the patented invention is to eliminate the interferences and allowing a conversion of video frames frequency, in such a way that the output frequency can be either lower or higher than the input frequency. (See Ex. A at 1:61-24.)

14. Another advantage of the patented invention is the avoidance of picture interference, as is needed for the transfer of large amount of data between separate frame buffers. Thanks to data buffering in the queue of the frame buffers, and to the method of controlling it, problems with synchronization of the input signal frame timer with the of output signal frame timer, can be also avoided. (See Ex. A at 3:12-18.)

15. Because of these significant advantages that can be achieved through the use of the patented invention, the '120 patent presents significant commercial value for companies like Amcrest. Indeed, aspects of the present invention are widely applicable to the use and function of video surveillance systems.

**Technological Innovation**

16. The patented invention disclosed in the '120 patent resolves technical problems related to of analog video conversion receivers, particularly problems related to the utilization of frame buffering. As the '120 patent explains, one of the limitations of the prior art as regards analog video conversion receivers was that controlling display of video signal frames comprised using a single frame buffer or two frame buffers. In single frame buffer systems, output could be affected by interference unless input and output timers were synchronized. Systems with two

frame buffers for double buffering where data was fetched into the first buffer and then copied to the second buffer required copying of large amounts of data. (*See Ex. A at 1:29-47.*)

17. The claims of the '120 patent do not merely recite the performance of some well-known business practice from the pre-Internet world along with the requirement to perform it on the Internet. Instead, the claims of the '120 patent recite inventive concepts that are deeply rooted in engineering technology and overcome problems specifically arising out of how to eliminate video signal display interferences and allow a conversion of video frames frequency, in such a way that the output frequency can be either lower or higher than the input frequency.

18. In addition, the claims of the '120 patent recite inventive concepts that improve the functioning of video surveillance systems, particularly improved performance of the video signal from a surveillance camera input to a user's output device.

19. Moreover, the claims of the '120 patent recite inventive concepts that are not merely routine or conventional use of analog video conversion receivers. Instead, the patented invention disclosed in the '120 patent provides a new and novel solution to specific problems related to improving the frequency of video frames.

20. And finally, the patented invention disclosed in the '120 patent does not preempt all the ways that analog video signal conversion may be used to improve analog video conversion receivers, nor does the '120 patent preempt any other well-known or prior art technology.

21. Accordingly, the claims in the '120 patent recite a combination of elements sufficient to ensure that the claim in substance and in practice amounts to significantly more than a patent-ineligible abstract idea.

**Prior Litigation**

22. The '120 patent was previously litigated in the District Court for the Eastern District of Texas (*Anadex Data Communications LLC v. Lowe's Companies, Inc. et al.*, C.A. No. 4:21-cv-00523 (E.D. Tex.) and *Anadex Data Communications LLC v. Harbor Freight Tools USA, Inc.*, C.A. No. 4:21-cv-00524 (E.D. Tex.)); in the District Court for the Western District of Texas (*Anadex Data Communications LLC v. Lorex Technology, Inc.*, C.A. No. 6:20-cv-00246 (W.D. Tex.) and *Anadex Data Communications LLC v. Compassion Consulting & Distribution, LP, d/b/a Top Dawg Electronics*, C.A. No. 6:20-cv-00236 (W.D. Tex.)) (collectively "Prior Litigation"); and in the District Court for the Central District of California (*Anadex Data Communications LLC v. The Home Depot, Inc.*, C.A. No. 2:22-cv-01741 (C.D. Cal.))

**COUNT I – INFRINGEMENT OF U.S. PATENT NO. 7,310,120**

23. The allegations set forth in the foregoing paragraphs 1 through 22 are incorporated into this First Claim for Relief.

24. On December 18, 2007, U.S. Patent No. 7,310,120 ("the '120 patent"), entitled "RECEIVER OF ANALOGUE VIDEO SIGNAL HAVING MEANS FOR ANALOGUE VIDEO SIGNAL CONVERSION AND METHOD FOR CONTROL OF DISPLAY OF VIDEO FRAMES," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '120 patent is attached as Exhibit 1.

25. Plaintiff is the assignee and owner of the right, title and interest in and to the '120 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

26. Upon information and belief, each Defendant has and continues to directly infringe at least claim 1 of the '120 patent by making, using, selling, importing and/or providing and causing to be used a products, specifically one or more security video camera DVR recording

system(s) that have analog inputs as well as analog outputs, which by way of example include, without limitation, Defendants' 16 channel AI DVR Security Camera System Recorders (including SD and HD versions of such systems) and similar systems (the "Accused Instrumentalities").<sup>1</sup>

27. On information and belief, the Accused Instrumentalities infringe claim 1 of the '120 patent.

28. Claim 1[pre] of the '120 patent recites "A receiver of analogue video signal having means for analogue video signal conversion comprising . . . ."

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<sup>1</sup> Plaintiff notes that the listed "Accused Instrumentalities" are not intended to be exhaustive. The present list of "Accused Instrumentalities" is necessarily preliminary in that Plaintiff has not obtained substantial discovery from Defendants nor have Defendants disclosed any detailed analysis for their non-infringement position, if any. Thus, it would be improper for Defendants to withhold otherwise responsive information regarding unlisted products on the basis that those products are not specifically named herein.

29. The Accused Instrumentalities include a receiver of analogue video signal having means for analogue video signal conversion. For example, the security camera DVR systems of the Accused Instrumentalities comprise a receiver of analogue video signals having means for signal conversion:

https://amcrest.com/4k-16ch-video-security-ai-dvr-digital-recorder-4k-hd-analog-hard-drive-cameras-not-included-remote-smartphone-access-amdv5116-ai-2.html

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**Amcrest 4K UltraHD 16 Channel AI DVR Security Camera System Recorder with Preinstalled 4TB HDD, 8MP Security DVR for Analog Security Cameras & Amcrest IP Cameras, AI Smart DVR, Cameras NOT Included (AMDV5116-4TB)**

Number of Channels 16

389.99 | 189.99 | 289.99 | 259.99 | 359.99

AMCREST MODEL: AMDV5116-AI

**DVR FEATURES:**  
Pentabrid AI DVR, Supports HDCVI, AHD, TVI, CVBS, Analog View and Record in Widescreen with Remote Viewing on iPhone, iPad, and Android devices (with included Amcrest View Pro app). Supports up to 10TB Storage for Continuous Recording at 16CH 4K @7fps (Hard Drive Not Included)  
Bandwidth up to 128Mbps  
Enable two way talk using an external speaker and microphone  
AI DVR Features: Face Detection & Recognition, Perimeter Protection, Smart Motion Detection, and IVS Features (Tripwire: Trigger an event anytime a human or vehicle crosses the set tripwire line. Intrusion: Be alerted anytime a human or vehicle crosses the intrusion area)  
Supports Long Distance Signal Transmission up to 2296 ft.  
Intelligent Video Footage Search and Playback.  
H.265 Compression Technology.  
USB Backup Feature for Peace of Mind.  
Supports HDCVI, AHD, TVI, CVBS and Amcrest IP Cameras with Limited Compatibility to third-party ONVIF IP Cameras.

**UPC: 755003974819**  
**SKU: AMDV5116-4TB**

**Documentation :**  
Technical Specifications  
Quick Start Guide  
User Manual  
Amcrest IP Config Tool for Mac  
Amcrest IP Config Tool for Windows  
Amcrest Surveillance Pro for Windows PC  
Amcrest Surveillance Pro Mac  
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Amcrest 4K Outdoor Security IP Turret PoE Camera (8MP, 1080P)

(<https://amcrest.com/4k-16ch-video-security-ai-dvr-digital-recorder-4k-hd-analog-hard-drive-cameras-not-included-remote-smartphone-access-amdv5116-ai-2.html> (annotated) (includes “H.265 Compression Technology”)) (accessed May 4, 2023).



30. Upon information and belief, the Accused Instrumentalities infringe claim 1[a] of the '120 patent. Claim 1[a] of the '120 patent recites “a receiving block for receiving a first analogue video signal of a first format . . . .”

31. The Accused Instrumentalities include a receiving block for receiving a first analogue video signal of a first format. For example, cameras in the Accused Instrumentalities’ systems transmit 16-channel and BNC (or “Bayonett Neill-Concelman”) video signals to the receiver:

<b>Video and Audio</b>	
Analog Camera Input	16 Channels, BNC
HDCVI Camera Input	4K@15fps, 6MP, 5MP, 4MP, 1080P@25/30fps, 720P@50/60fps, 720P@25/30fps
AHD Camera Input	4K@15fps, 5MP, 4MP, 3MP, 1080P@25/30, 720P@25/30fps
TVI Camera Input	4K@15fps, 5MP, 4MP, 3MP, 1080P@25/30, 720P@25/30fps
CVBS Camera Input	PAL/NTSC

(<https://amcrest.com/downloadable/download/attachment/id/24813/> (annotated) (accessed May 4, 2023).)

32. Upon information and belief, the Accused Instrumentalities infringe claim 1[b] of the '120 patent. Claim 1[b] of the '120 patent recites “a conversion block for conversion of the first analogue signal of the first format into a digital signal and connected to the receiving block . . . .”

33. The Accused Instrumentalities include a conversion block for conversion of the first analogue signal of the first format into a digital signal and connected to the receiving block. For example, the Accused Instrumentalities convert the analog signal to a digital signal for storage and/or remote access across a network:

<b>Recording</b>	
Compression	AI Coding, H.265, H.264
Resolution	4K, 6MP, 5MP, 4K-N, 4MP, 3MP, 4M-N, 1080P, 720P, 960H, D1, CIF
Recording Rate	Mainstream: All Channel 4K(1fps-7fps), 6MP(1fps-10fps), 5MP(1fps-12fps); 4K-N, 4MP/3MP(1fps-15fps). 4M-N/1080P/720P/960H/D1/CIF (1fps-25/30fps); Sub stream:960H(1fps-15fps); D1/CIF(1fps-25/30fps)



Bit Rate	32 Kbps-6144 Kbps Per Channel
Record Mode	Manual, Schedule (General, Continuous), MD (Video detection: Motion Detection, Video Loss, Tampering), Alarm, Stop
Record Interval	1 – 60 min (default: 60 min), Pre-record: 1 s-30 s, Post record: 10 s-300 s
Audio Compression	AAC (only for the 1st channel), G.711A, G.711U, PCM
Audio Sample Rate	8 KHz, 16 bit Per Channel
Audio Bit Rate	64 Kbps Per Channel
<b>Display</b>	
Interface	1 HDMI, 1 VGA
Resolution	HDMI: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720 VGA: 1920 × 1080, 1280 × 1024, 1280 × 720
Multi-Screen Display	When IP Extension Mode Not Enabled: 1/4/8/9, When IP Extension Mode Enabled: 1/4/8/9/16
OSD	Camera Title, Time, Video Loss, Camera Lock, Motion Detection, Recording
<b>Network</b>	
Interface	1 RJ-45 Port (1000MB)
Incoming Bandwidth	128 Mbps
Network Function	HTTP, HTTPS, TCP/IP, IPv4/IPv6, Wi-Fi, 3G/4G, SNMP, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, Alarm Server, P2P, IP Search.
Max. User Access	128 Users
Management Software	Amcrest Surveillance Pro (Windows/MAC) Amcrest View Pro app for IOS and Android Web Browser (Pale Moon, Sea Monkey, Firefox 49.0, Internet Explorer, Safari)
Interoperability	ONVIF 16.12, CGI Conformant

(<https://amcrest.com/downloadable/download/attachment/id/24813/> (annotated) (accessed May 4, 2023).)

34. As an additional example, the camera facial auto detect feature converts an analog signal to a digital signal:

<b>Perimeter Protection</b>	
Performance	2 Channels, 10 IVS Features Per Channel
Object Classification	Human/Vehicle Secondary Recognition for Tripwire and Intrusion
AI Search	Search by Target Classification (Human, Vehicle)
<b>Face Detection</b>	
Performance	Max of 12 Face Pictures/Second Processing, 2 Channel Video Stream Face Recognition, Only Supported by Analog Cameras.
Stranger Mode	Detect Strangers' Faces (Not in Device's Face Database). Similarity Threshold Can Be Set Manually.
AI Search	Up To 8 Target Face Images Search at the Same Time, Similarity Threshold Can Be Set for Each Target's Face Image.
Database Management	Up to 20 Face Databases with 20,000 Face Images in Total. Name, Gender, Birthday, Address, Certificate Type, Certificate Number, Countries, Regions, and State Can Be Added to Each Face Picture.
Database Application	Each database can be applied to video channels independently.
Trigger Events	Buzzer, Voice Prompts, Email, Snapshot, Recording, Alarm Out, PTZ Activation, etc.
<b>SMD Plus</b>	
Performance	16 Channels
AI Search	Search by Target Classification (Human, Vehicle)

(<https://amcrest.com/downloadable/download/attachment/id/24813/> (annotated) (accessed May 4, 2023).)

35. Upon information and belief, the Accused Instrumentalities infringe claim 1[c] of the '120 patent. Claim 1[c] of the '120 patent recites “a buffer controller of frames included in the digital signal connected to the conversion block and having frame buffers organized as a two-way list, a decoding frame controller and a displaying frame controller . . . .”

36. The Accused Instrumentalities include a buffer controller of frames included in the digital signal connected to the conversion block, and having frame buffers organized as a two-way list, a decoding frame controller and a displaying frame controller. For example, the Accused Instrumentalities offer user-adjustable video output resolution and live speed display, as well as user-adjustable record rate:

<b>Display</b>	
Interface	1 HDMI, 1 VGA
Resolution	HDMI: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720 VGA: 1920 × 1080, 1280 × 1024, 1280 × 720
Multi-Screen Display	When IP Extension Mode Not Enabled: 1/4/8/9, When IP Extension Mode Enabled: 1/4/8/9/16
OSD	Camera Title, Time, Video Loss, Camera Lock, Motion Detection, Recording

(<https://amcrest.com/downloadable/download/attachment/id/24813/> (annotated) (accessed May 4, 2023).)

<b>Playback and Backup</b>	
Playback	1/4/9/16
Search Mode	Time /Date, Alarm, MD and Exact Search (accurate to second)
Playback Function	Play, Pause, Stop, Rewind, Fast play, Slow Play, Next, File, Previous File, Next Camera, Previous Camera, Full Screen, Repeat, Shuffle, Backup Selection, Digital Zoom
Back Up Mode	USB Device/Network

(<https://amcrest.com/downloadable/download/attachment/id/24813/> (annotated) (accessed May 4, 2023).)

37. This type of functionality necessitates separate frame buffers for decoding and displaying, respectively, so that the frame buffers are organized as a two-way list. For instance, the two-way list potentially comprises a decoding frame buffer and displaying frame buffer, which would enable different rates for decoding and display, or different resolutions for decoding and display.

38. Upon information and belief, the Accused Instrumentalities infringe claim 1[d] of the '120 patent. Claim 1[d] of the '120 patent recites “a video coder for transforming the digital signal into a second analogue signal of a second format . . . .”

39. The Accused Instrumentalities include a video coder for transforming the digital signal into a second analogue signal of a second format. For example, the Accused Instrumentalities convert the digital signal to a second analogue signal for display, which may be a VGA signal:

<b>Display</b>	
Interface	1 HDMI, 1 VGA
Resolution	HDMI: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720 VGA: 1920 × 1080, 1280 × 1024, 1280 × 720
Multi-Screen Display	When IP Extension Mode Not Enabled: 1/4/8/9, When IP Extension Mode Enabled: 1/4/8/9/16
OSD	Camera Title, Time, Video Loss, Camera Lock, Motion Detection, Recording

(<https://amcrest.com/downloadable/download/attachment/id/24813/> (annotated) (accessed May 4, 2023).)

40. Upon information and belief, the Accused Instrumentalities infringe claim 1[e] of the '120 patent. Claim 1[e] of the '120 patent recites “a receiver for displaying the second analogue signal of the second format . . . .”

41. The Accused Instrumentalities include a receiver for displaying the second analogue signal of the second format. For example, the receiver block, which is located after the coder, comprises the electronics associated with preparing the second analogue coded signal disclosed in limitation 1[d] for display (e.g., VGA).



42. A user is then able to view the second analogue signal of the second format, for example on a monitor (*i.e.*, receiver).

43. Upon information and belief, the Accused Instrumentalities infringe claim 1[f] of the '120 patent. Claim 1[f] of the '120 patent recites “a processor for data processing and controlling the receiving block, the conversion block, the buffer controller, the video coder and the receiver.”

44. The Accused Instrumentalities include a processor for data processing and controlling the receiving block, the conversion block, the buffer controller, the video coder and the receiver. For example, the Accused Instrumentalities comprise a computer that runs, *inter alia*, the “Linux” operating system, functions based on installed firmware, includes memory for frame buffering and other functions, and includes an “[e]mbedded processor” (*i.e.*, CPU).

<b>System</b>	
Main Processor	Embedded Processor
Operating System	Embedded Linux

(<https://amcrest.com/downloadable/download/attachment/id/24813/> (annotated) (accessed May 4, 2023).)

45. Plaintiff has been harmed by Defendants’ infringing activities.

**JURY DEMAND**

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Plaintiff demands a trial by jury on all issues triable as such.

**PRAYER FOR RELIEF**

WHEREFORE, Plaintiff demands judgment for itself and against Defendants as follows:

A. An adjudication that each Defendant has infringed the '120 patent;

B. An award of damages to be paid by Defendants adequate to compensate Plaintiff for Defendants' past infringement of the '120 patent, and any continuing or future infringement through the date such judgment is entered, including interest, costs, expenses and an accounting of all infringing acts including, but not limited to, those acts not presented at trial;

C. A declaration that this case is exceptional under 35 U.S.C. § 285, and an award of Plaintiff's reasonable attorneys' fees; and

D. An award to Plaintiff of such further relief at law or in equity as the Court deems just and proper.

Dated: November 17, 2023

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/s/ Robert Kiddie

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