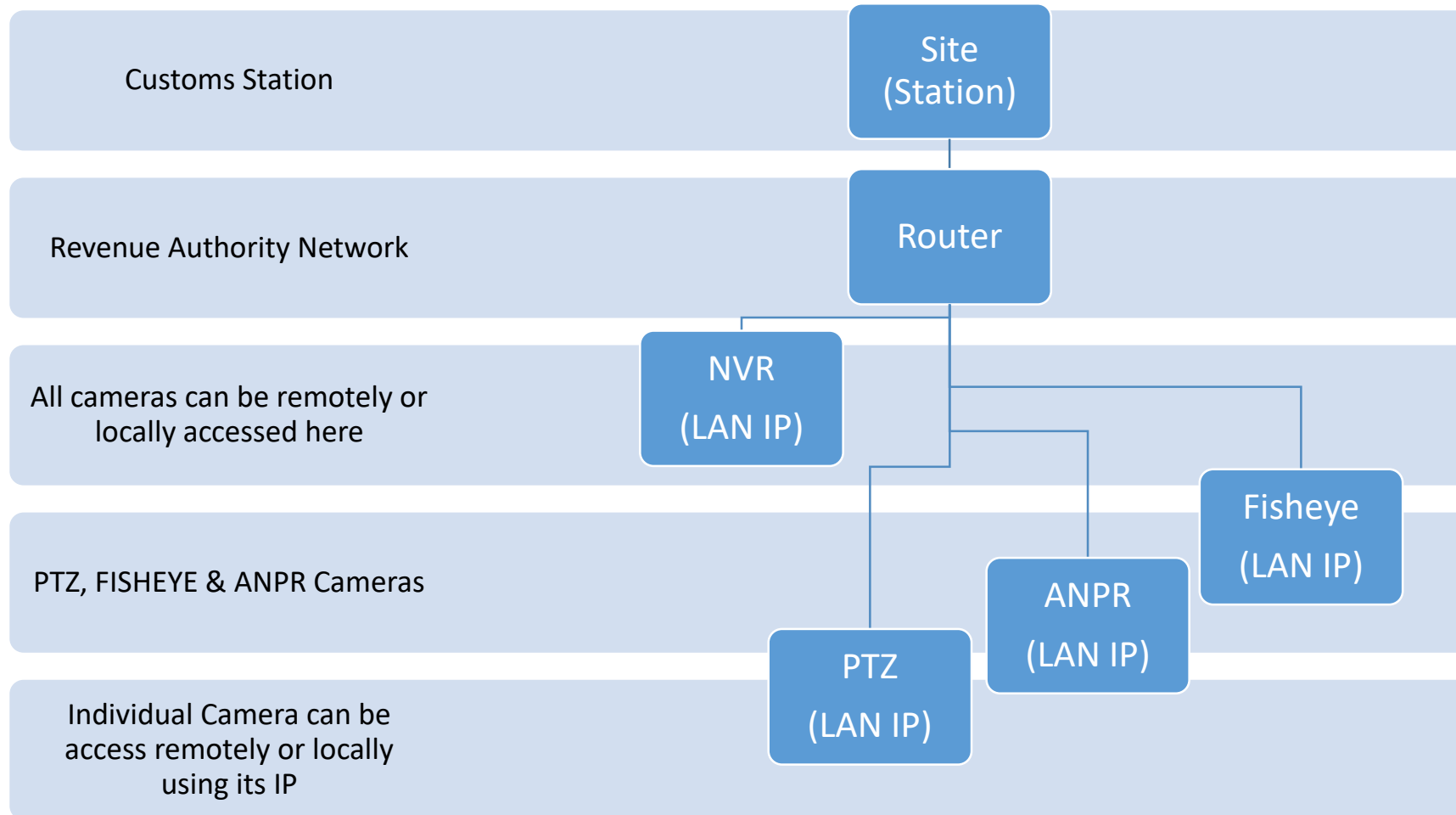


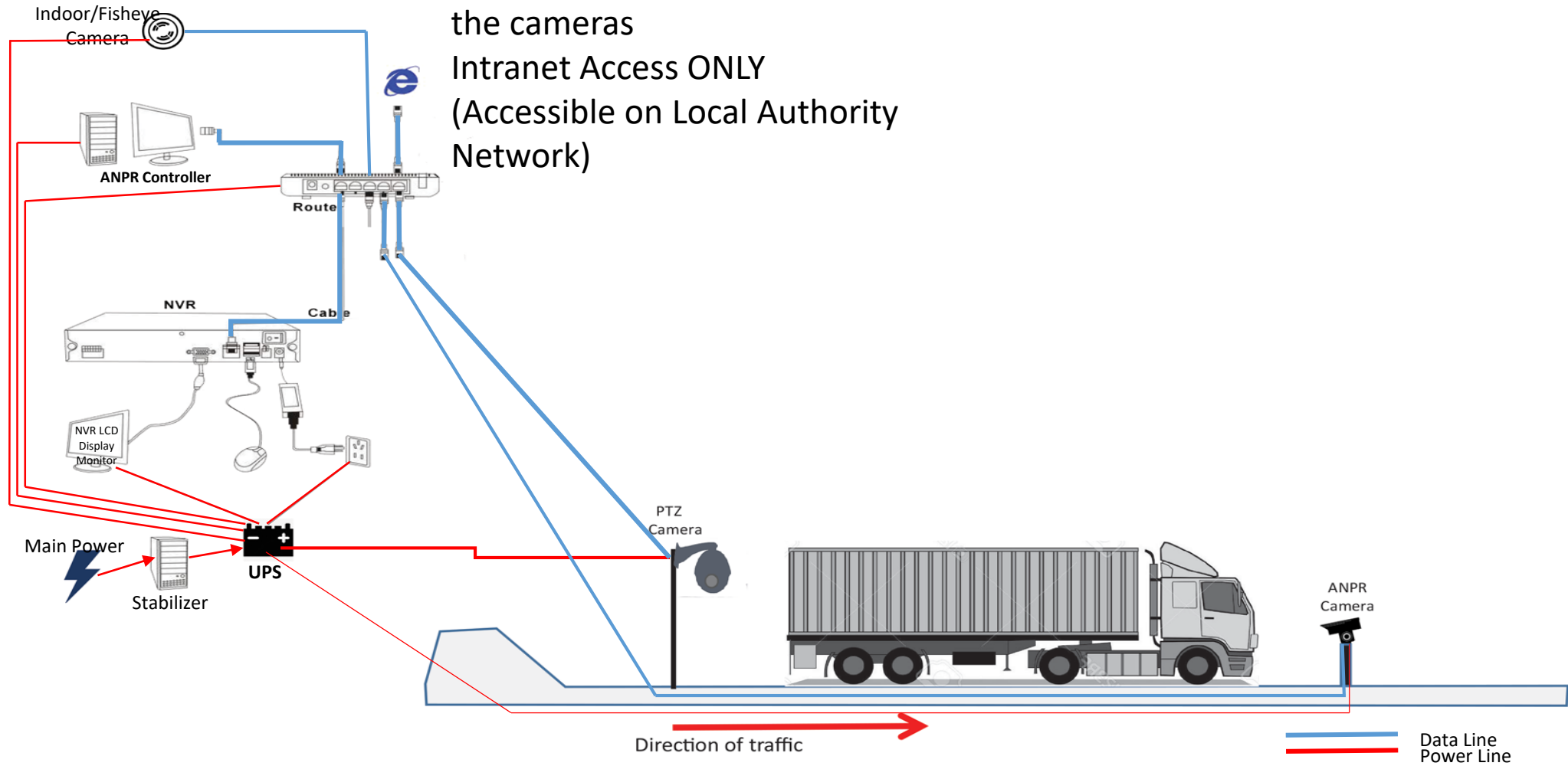
# ELECTRONIC CARGO TRACKING SYSTEM

**IPCCTV**  
**TECHNICAL MANUAL**

# Proposed Installation per Site



# Illustration



Link for Remote Access of all the cameras  
Intranet Access ONLY  
(Accessible on Local Authority Network)

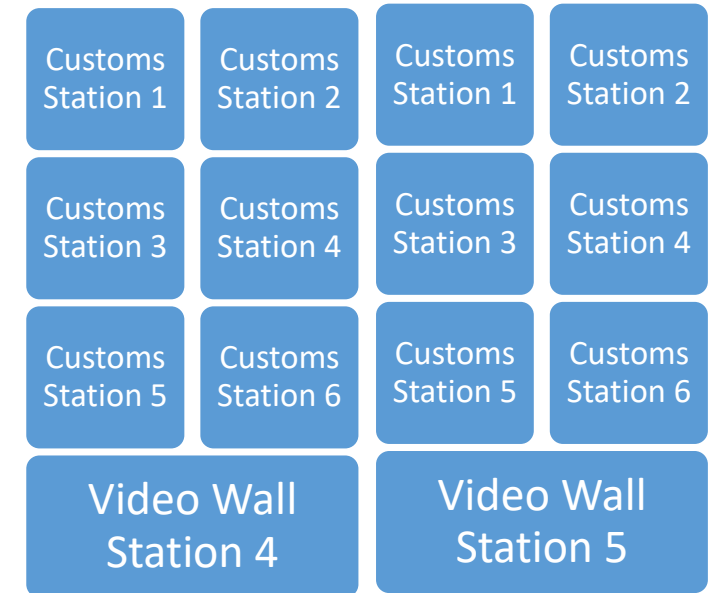
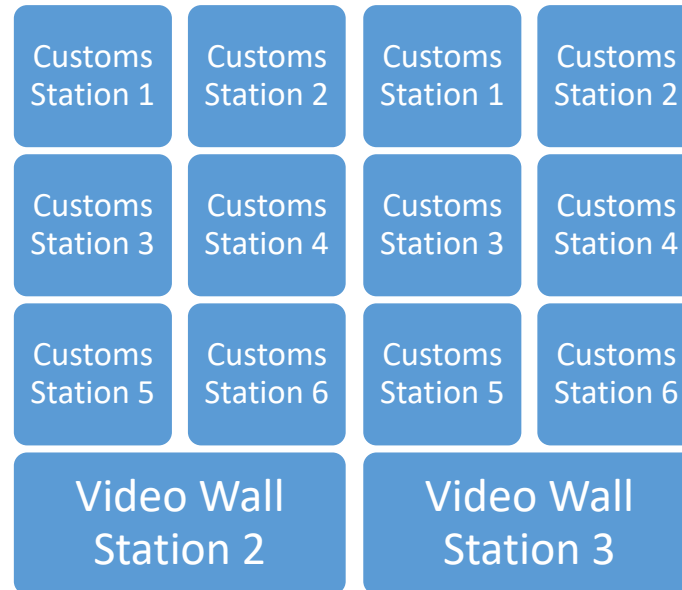
# Centralized Monitoring Centre

The CMC has got 5 Video Wall Stations. The main one (5 \* 65") is used to Display ECTS monitoring information.

The other 4, each has 6 monitors (48" screens) attached to it making them a total of 24 screens.

Each screen will be used to display a live stream from a Customs Station.  
i.e.:

- Screen 1 – NVR-1
- Screen 2 – NVR-2
- Screen 3 – NVR-3
- Screen 4 – NVR-4
- Screen 5 – NVR-5
- Screen 6 – NVR-6



# CMC Continued....

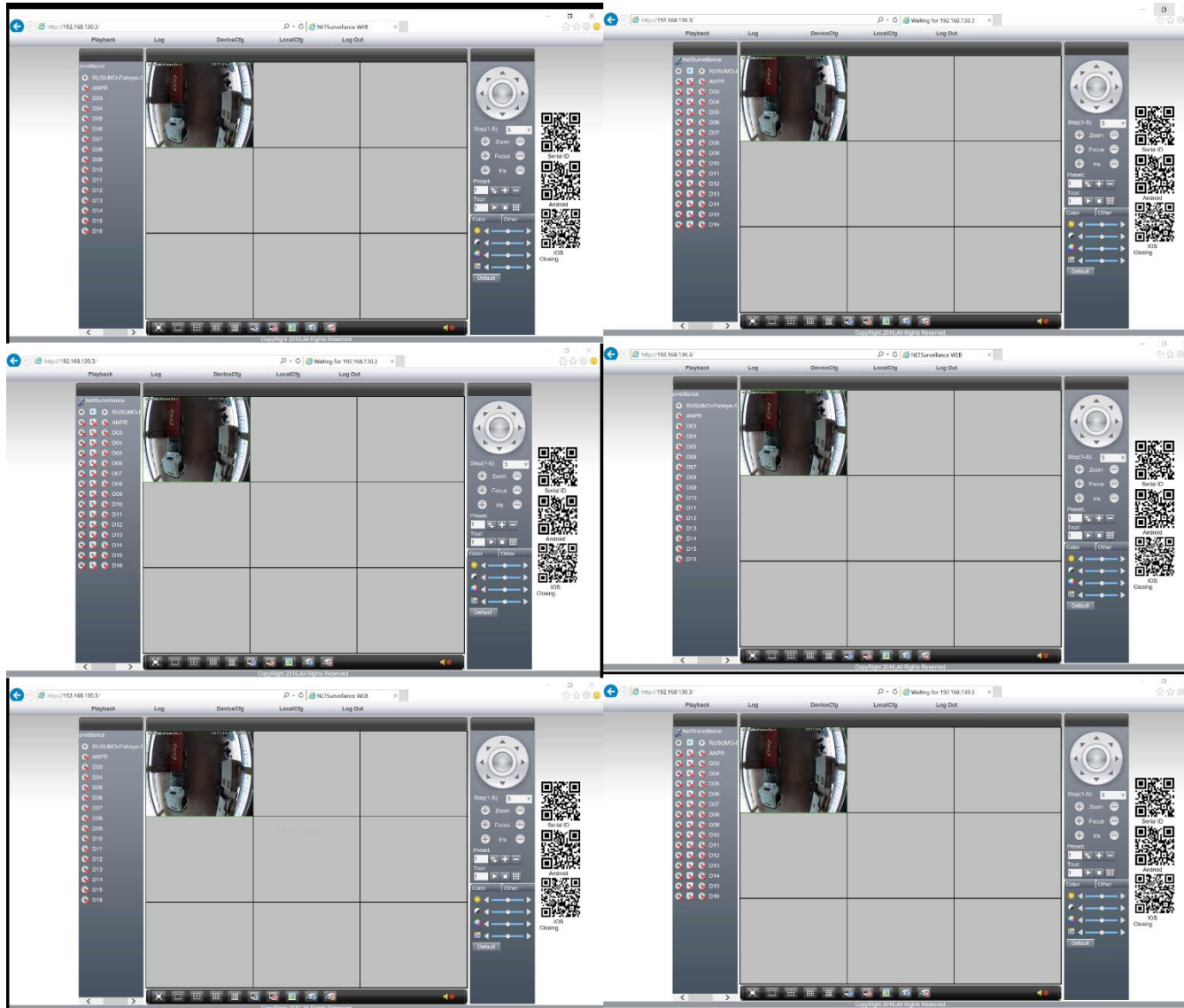
The Display layout of each Video wall screen is proposed to be as image on the right.

The feeds from the cameras will all be shown and streamed at all times.

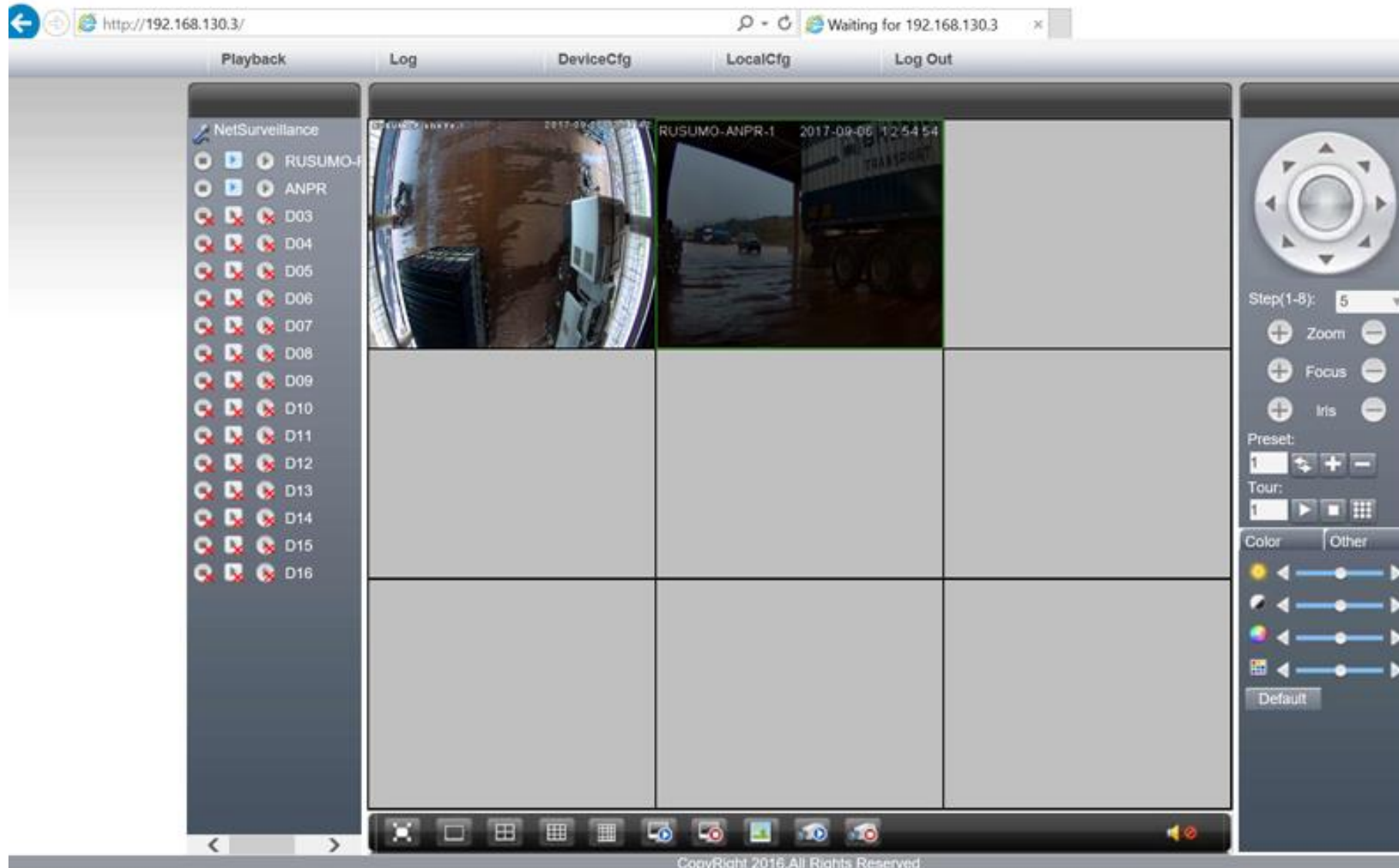
In cases where a specific feed needs to be critically monitored, it will be put into full screen to be able to view full screen.



# Video Wall Demo Setup

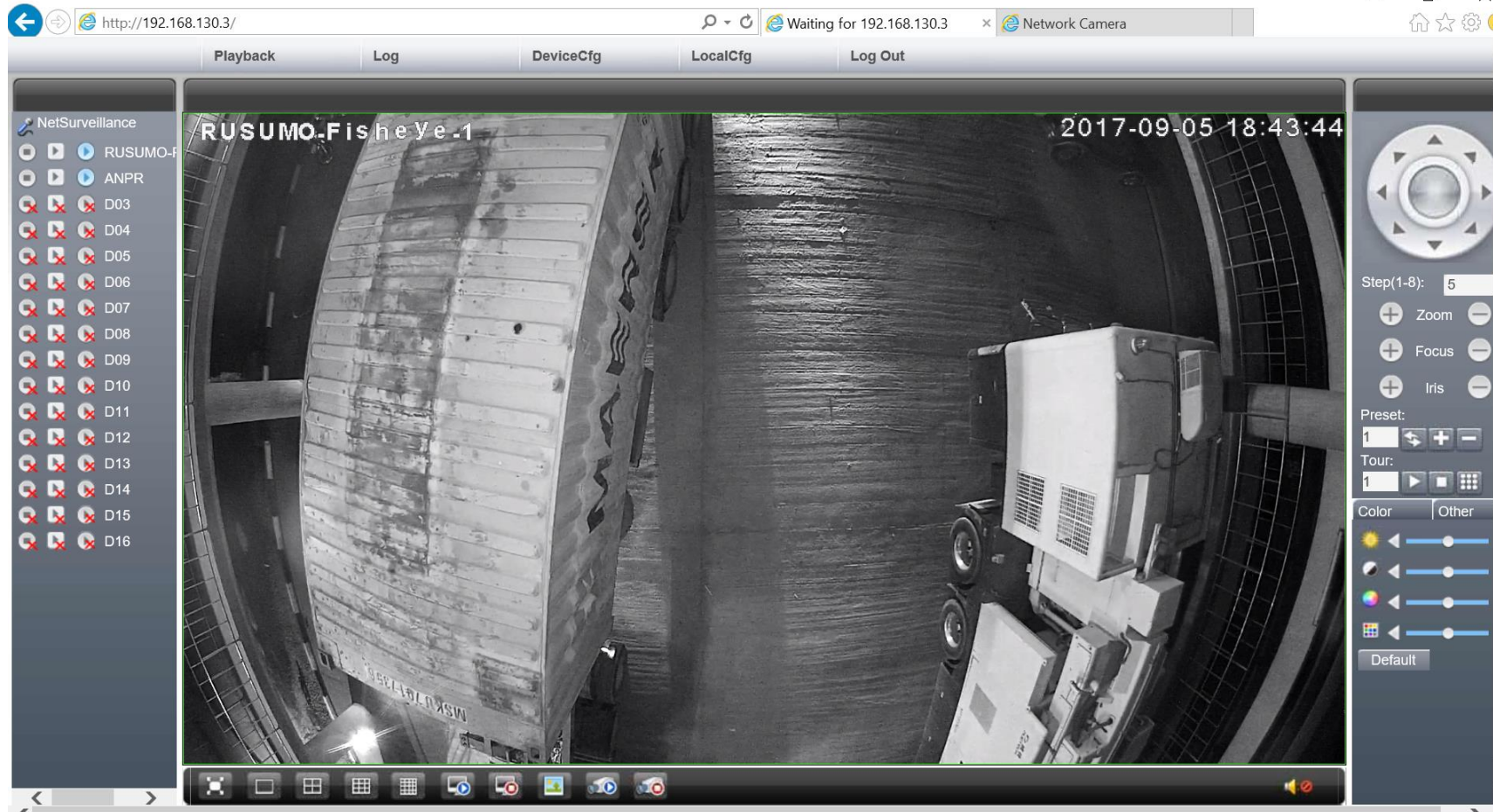


# Rusumo Demo





# Single Camera View





# Camera Configuration

The screenshot displays a camera management software interface. On the left, a sidebar lists surveillance cameras: RUSUMO-Fisheye-1 (selected), ANPR, D03, D04, D05, D06, D07, D08, D09, D10, D11, D12, D13, D14, D15, and D16. The main area shows a live video feed of a fisheye camera view. A 'Device config' dialog box is open, titled 'Setting -> System -> Encode'. The settings are as follows:

Parameter	Value
Channel	1
Compression	H.264
Resolution	1080P
FPS	25
Bit Rate Type	CBR
Quality	Good
Bit Rate(Kb/S)	4096
I Frame Interval	2
Video/Audio	<input checked="" type="checkbox"/> <input type="checkbox"/>

At the bottom of the dialog box are buttons for 'Copy', 'Paste', 'Refresh', 'OK', and 'Cancel'. On the right side of the interface, there is a control panel with a directional pad, 'Zoom', 'Focus', and 'Iris' buttons, and a 'Color' section with sliders for brightness, contrast, and saturation. A 'Default' button is also present.

# Camera Configuration Cont.d....

The screenshot shows a web browser window with the address <http://192.168.130.3/> and the title "NETSurveillance WEB". The interface includes a navigation bar with tabs: Playback, Log, DeviceCfg (selected), LocalCfg, and Log Out. On the left, a sidebar lists surveillance cameras: RUSUMO-Fisheye-1, ANPR, and channels D03 through D16. The central area displays a video feed of a fisheye camera. A "Device Configuration" dialog box is open, showing the following table:

Channel	Channel Name
Channel1	RUSUMC
Channel2	ANPR
Channel3	D03
Channel4	D04
Channel5	D05
Channel6	D06
Channel7	D07
Channel8	D08
Channel9	D09
Channel10	D10
Channel11	D11
Channel12	D12
Channel13	D13
Channel14	D14
Channel15	D15
Channel16	D16

The dialog box has "OK" and "Cancel" buttons at the bottom. The right-hand control panel includes a directional pad, "Step(1-8): 5", "Zoom", "Focus", "Iris" controls, "Preset: 1", "Tour: 1", and "Color" and "Other" sliders. A "Default" button is at the bottom of the control panel.

# ANPR Camera

- Camera Sensor Interlace 1/4" CCD
- Operational range 3-20m
- Filter IR pass Illumination Built-in IR, 850 nm -, with night vision
- Illumination of LED intensity Integral LED array, Synch system Internal
- 2.0MP HD1080P 30fps/s video and picture capture
- Support video, loops trigger and capture
- 120dB super WDR range; Auto brightness adjustment with integrated fill light, soft light, low power consumption, no need another fill light and flash light
- Support H265/H.264 Main Profile /MJPEG Compression encoding; triple stream video output ( 2ch H.265/H.264+1ch MJPEG)
- Auto-trigger. Sunshield, Wall Mount Bracket, plug and play, IP 68/66 Sealed for use in hostile and outdoor environment, DSP ambient light rejection



# ANPR Camera

WDR range	≥110dB	
Min illumination	0.05Lux@F1.2(AGC ON)	
SNR	≥50db(AGC OFF)	
Fill lens	6 pcs auto PWM high power LED	
exposure mode	Program mode ( Customized shutter range) ; shutter mode (1/5 - 1/20,000s); Support slow shutter	
Optics	port	CS
	lens	FIX IRIS, focus Manual, factory pre-set fixed lens /2.8~12mm zoom lens
	Focal length	12/16/25/35/50mm (6mm fixed lens /2.8~12mm zoom lens)
Storage	Support SDXC 4.0standard Micro SD(TF) card ,max 64G	
Network	10/100M adaptive, RJ45	
Video port	1Vp-p Composite Output(75Ω/BNC)	
Alarm input	2ch alarm input	
Alarm output	2ch relay output	
RS485 port	1ch RS485 port	
Reset button	Hardware reset button (reserved)	
Video coding	H.265 Main Profile coding, H.264 Main Profile coding, MJPEG coding	
Image resolution	Main stream	1920*1080, 1-25 (30) ftp/s
	Sub-stream	720*480, 640*480,480x360,352*288,176x144@ 25FPS(ftp/s)
video compression bit rate	32Kbps ~ 16Mbps continual adaptive; support CBR/VBR	
Audio	Audio compression: G711, PCM 1ch input : linear; impedance 1KΩ, 1ch input : linear; impedance 600	
OSD	support channel name, date, time and location adjustable	
Network protocol	TCP/IP, HTTP, NTP, IGMP, DHCP, UDP, SMTP, RTP, RTSP, ARP, DDNS, DNS, HTTPS、P2P	
ONVIF protocol	Standard ONVIF2.4	
Access number	main stream 3 users; Sub-stream 6 users.	
Operating temperature	-10°C - +55°C	
Operating humidity	0% - 90%	
Waterproof	IP66	
Power	Reverse polarity protection. AC 12-15VAC. DC 12-40VDC -Consumption 7-25W	
Capacity	10W(MAX)	
dimension	380(length) *147 (wide) *101(height)mm	

# PTZ Camera

- Heavy Duty Marine Grade All-Weather Housing
- View and Control your Cameras Anywhere: Built-in Web Server
- Control the System Remotely with Your PC or Smartphone
- Capture, Record and Observe Camera from Another Location
- Setup Alarm and Email Alerts, Triggered by Built-in Motion Sensor
- View Video Through Website or the Free Mobile App
- Includes Camera Customization and Management Software
- Software Supports PC Recording and Monitoring for Multiple Cameras
- Create Multiple User Accounts and Passwords Schedule (Set Time) or Round the Clock Surveillance
- 24 IR-LED Lights for Low Light and Night Time
- High Resolution Capability (300K Pixels) Day or Night
- Video Resolution: 1280Hx720V, 1920Hx1080V
- 7" Total Metal body construction, IP66 rate protection
- 1/2.8" CMOS, 2 Megapixels, 20X optical zoom
- HD-IP digital interface output, 1080P definition image
- PWM function, intelligent IR illumination
- IR distance 120M



# PTZ Camera

Sensor	1/2.8" CMOS
Effective Pixel	2.0Meg
Focus Distance	4.7±5%~94±5%mm
Optical Zoom	20X
Aperture Value	F1.6~F2.7
View of Angle	D : WIDE 68.5°±5% TELE 4.2°±5% H : WIDE 54.8°±5% TELE 3.4°±5% V : WIDE 41°±5% TELE 2.5°±5%
Resolution	1280H*720V/ 1920H*1080V
Min. Illumination	0.5 lx (F1.6, 50 IRE, ICR off), 0.095 lx (F1.6, 50 IRE, ICR on)
AGC Control	Manual/Auto
S/N Rate	≥50db
White Balance	Manual/Auto
Camera module control interface	SONY VISCA (Signal level 3.3V), baud rate: 9.6 Kb/s, 19.2 Kb/s, 38.4 Kb/s stop bit: 1 HITACHI COMMAND (Signal level 3.3V), baud rate: 4.8Kb/s, 9.6 Kb/s, 19.2 Kb/s, 38.4 Kb/s, 57.6Kb/s stop bit: 1
IR-cut	Manual/Auto
Communications Protocol	TCP/IP, HTTP, FTP, RTSP, UPnP, DNS, NTP, RTP, UDP, IGMP
Software Control	IE, CMS, Management Platform

Horizontal Rotation Speed	60°/s
Horizontal Rotation Range	360°
Tilt Rotation Speed	45°/s
Tilt Rotation Range	90°
Auto Control IR LED	PWM
A-B Scan	User programmable
A-B Scan Speed	0-64 levels setting available
Dwell Preset	2-60s interval available
Go to Preset Speed	01-64 levels available
Guard Points	Max.16 points, dwell time user selectable
PWR On Action	Memory/Pattern 1/Tour 1/360° scan/A-B scan/Preset 1-8/None
Park Time	0-60mins available
3D Location	Support (DH-SD1)
Auto Control IR LED	PWM
IR Illumination Distance	120m
Baud Rate	1200/2400/4800/9600bps
Operating Temperature	-40°- +60°
Operating Humidity	≤95% Non-Condensing
Heater & Blower	Auto temperature control
Power Supply	AC/DC15-28V ≤2A
Power Consumption	≤ 20W
Lightning Protection	Transient voltage 6000V

# Fisheye Camera



System	Dual-core 32-bit DSP(HI3516)
Sensor	HI3516C+322 CMOS sensor
Resolution	1920(H)×1080(V), 2.0MP
Lens	360° Panoramic Megapixel HD Fisheye Lens
IR LED	30pcs
IR distance	25-30m
Video processing	H.264 video coding, support dual coding,0.1M-6Mbps adjustable
Video bitrate	Main stream:1920×1080,1280×960,1024×768,1280×720; Sub-stream: 960×540,640×360,480×270,352×288,320×240
frame rate	≤2.0MP 25fps (Real time), Support1-25fps/s adjustable
Min. illumination	Color 0.1Lux@F1.2, B/W 0.01 Lux@F1.2

- HD 2.0MP
- 360 ° Panoramic Megapixel HD Fisheye Lens
- 30pcs IR LED, IR distance 25-30m
- Support Standard ONVIF 2.0

D/N function	Support IR-CUT
Network protocol	RJ45 Ethernet interface,10/100M self-adaption; Support RTSP/FTP/PPPOE/DHCP/DDNS/NTP/UPnP. network protocol
access protocol	Standard ONVIF, support third party protocol access; support Android & iPhone IOS
Motion Detection	Support Motion Detection and IO alarm action
Remote monitoring	Support CMS , APP remote monitoring
Playback	Support Camera storage, playback and download
WEB configuration	Support WEB configuration, Support OSD, Support real-time record
Power supply	Support DC12V
work environment	operation temperature -10°C--+60°C, operation humidity 10%-90%
Dimension	Φ141*104
Weight	0.82kg