



**IP CCTV System with Intelligent Analytic Video  
for Medicine Chain Shop in Dubai**

**1.Customer's Requirement:**

**Brief Introduction:** We are having project of 20 branches of medicine shop to be protected with video analytic in Dubai. Our client need following:

- 1) People counting
- 2) Tripe Wire
- 3) Face recognition
- 4) Heat map
- 5) Query detection
- 6) Removed objects.
- 7)Alerts

We have to install 4-6 IP cameras per branch and we need to bring video to Head office to watch all branches live. We need video analytic and CMS or VMS for all these cameras.

**Camera Type:** 2 megapixel HD IP camera

**Recording:** 30-60 days at 1080p or 720p

**NVR:** Embedded Linux Desktop NVR

**Intelligent Video functions:** We need front camera to do people counting and face recognition, inside camera can do all tripe wire and removed object.

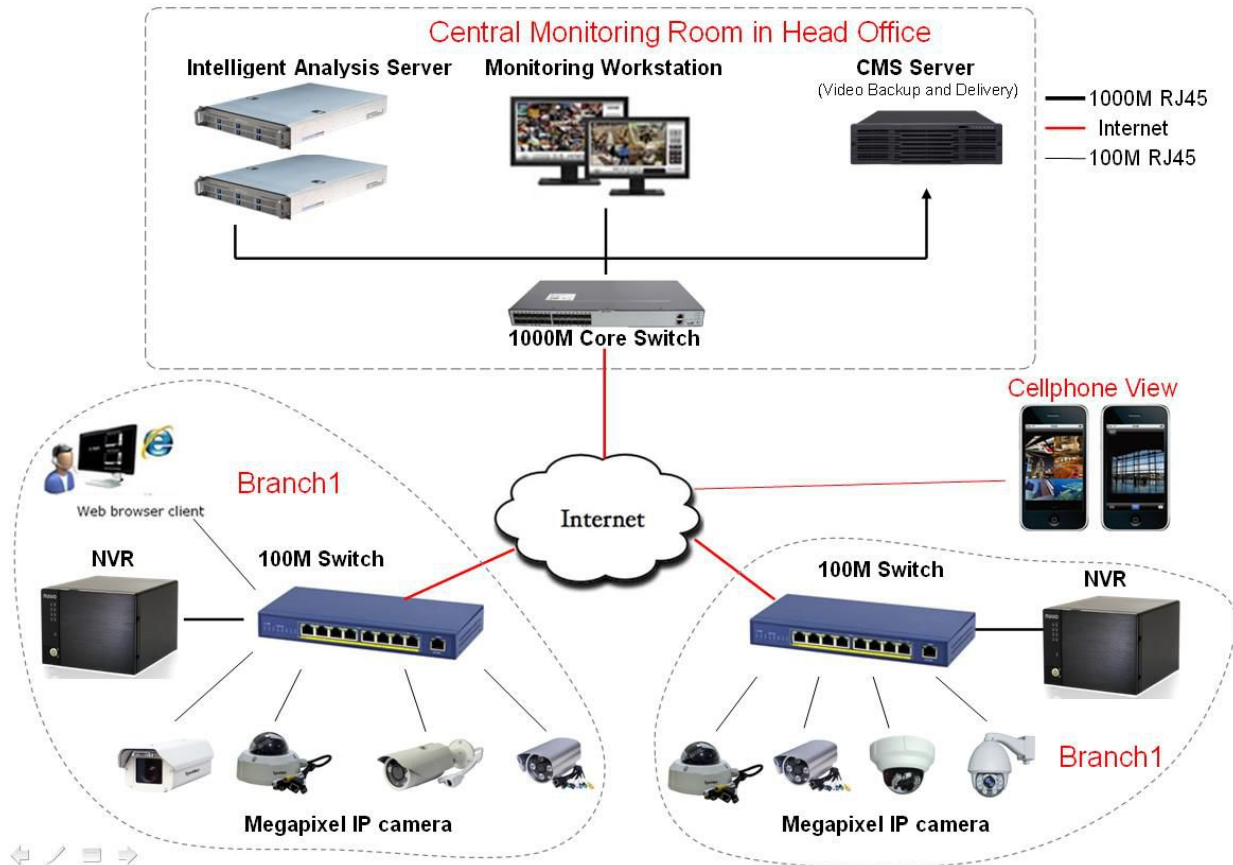
**CMS Requirement:** Local monitoring and record with live view in Head office or alarm files to be seen in Head office.

**CMS software:** NUUO.

**2.Sysvideo Solution:**

- 1) **System Diagram:**

## Medicine Chain Shop in Dubai IP Surveillance System with IVS



### 2) IP Camera:



Depending on the user's requirement, the systems use Sysvideo 1080P (1920\*1080) full high definition 2 megapixel vandal proof IR dome PoE IP camera SC6321, the image is very clear. The camera use Sony Exmor 1/2.8" CMOS sensor, CPU 900MHZ, H.264 HP, MP, BP.super low light, Digital WDR, intelligence 3D noise reduction.SD card, audio, alarm. Vandal Proof Dome, Built-in PoE, IR Light, No AC/DC Adapter.2.8-12mm Varifocal Lens. Waterproof IP66. Every 1080P IP camera use fixed 4Mbit/s bit rate, that will get good image quality with low bandwidth. [This is SC6321 specification.](#)

### 3) Storage Device: Network Video Recorder (NVR):

#### Storage calculating:

Video format: 1080P, 25fps

Bit rate: 4Mbps

Recording hours per day: 24 hours

Recording days: 60days

Every shop cameras max amount: 6 pieces

Storage space (TB) : = video bit rate / 8 \* 3600s \* hours \* days \* cameras / 1024

= GB /1024= TB

=4Mbps / 8 \* 3600s/hour \* 24hours \* 60days \*6 / 1024 /1024 = 15TB

The formatting will waste around 10% space, the 4TB hard disk's useful space is 3.6TB, 15TB/3.6=4.17, We can use 4 x 4TB hard disk. If we use RAID, the exactly storage capacity is less, we can add hard disk or reduce the video bitrates to save the storage requirement.

#### NVR Choose:



The system use 8ch 4 bay NUUO Embedded NVR NE-4080, it's a high performance storage device. NUUO NVRmini 2 is the lightweight, portable NVR solution with NAS functionality. Setup is simple and easy, with automatic port forwarding settings built in. NVRmini 2 supports POS integration, making this the perfect solution for small retail chain stores. NVRmini 2 also comes full equipped as a NAS, so you can enjoy the full storage benefits like easy hard drive hot-swapping and RAID functions for data protection. Choose NVR and know that your valuable video data is safe, always. [This is specification.](#)



#### 4) Network Devices (Switch):

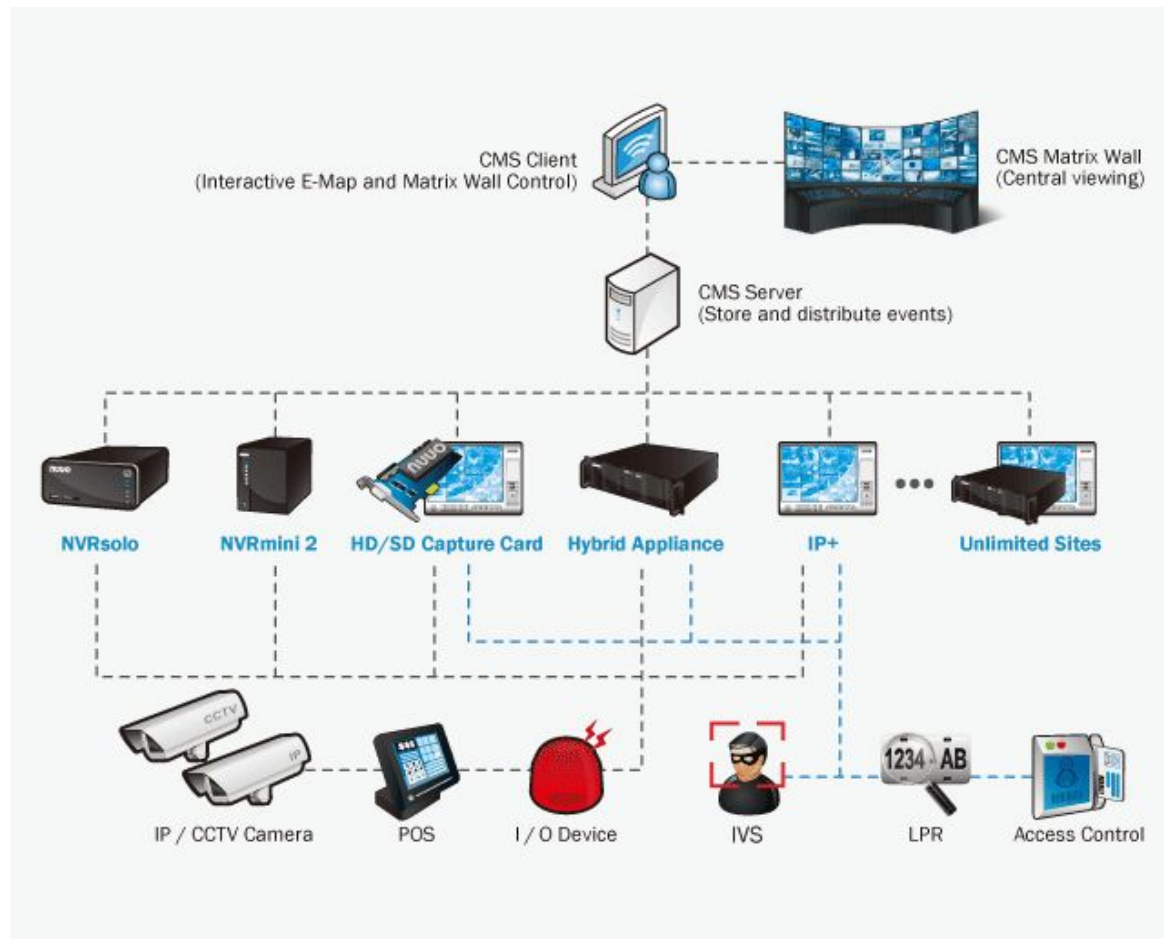
According to the IP camera amount, every shop install 8 port PoE 10/100/1000M access switch, these switch be connected to core switch in head office via bandwidth Internet, then the data be transmitted to central management software and servers..

In head office need to use 1000M Gigabit enterprise switches to receive video from front shop, then save, display, delivery to other computer. We can use Huawei S5700.



#### 5) Central Management & Monitoring Systems

##### CMS Management system:



This system have around 100pcs IP camera, we can use 2 sets high performances PC server with NUUO CMS to manage all cameras and NVR in head office, every server manage max 64ch IP cameras . The PC configuration at least is Intel Dual Core i5 / i7 CPU, 4G RAM, 2G Graphic Card, Dual 1000M Ethernet Interface. The video management software on the computer can add, grouping, edit, delete, monitor all cameras and NVRs, user can



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monitor the 1/4/9/16/25/36/64ch video on the one screen, and also can divide all camera into many groups, for example 16ch per group, then can switch it one by one. This software can support dual screen output, we can use one PC server output two 42" 1080P HD monitor, every monitor view max 32ch cameras.

More information about NUUO CMS, please visit NUUO website: <http://www.nuuo.com/ProductNode.php?node=3#>

**Intelligent Video Analytic (IVS) function:**

IVS software use NUUO Mainconsole IVS, NUUO IVS can turn boring surveillance video footage into valuable data. The presence of a camera not only brings promise of security, but it can also turn an invaluable business tool. Some useful quantitative IVS functions can make immediate business impact such as people and vehicle counting. The application of IVS for business is limitless.

NUUO IVS is special suitable for retail industry:

- Counting: People counting; Vehicle counting
- Intrusion Detection: People climbing over fence
- Forbidden Region Protection: Detect unauthorized access or parking
- Foreign object detection: Detect object in restricted area
- Direction Detection: Wrong-way driving; Wrong direction
- Missing Object Detection: Prevent object from being stolen
- Tampering Detection: Camera tampering detection

NUUO CMS has built-in people / vehicle counting, object detection, alert, tamper function, user don't need to pay additional license charges, but it don't support 2)Tripe Wire 3) face recognition 4) heat map 5)query detection, and the free video analytic function is not strong. In addition, different IVS functions are different license charges, so we need to use different module according to the user's applications. IVS will use a lots of CPU resource, every shop install one computer (at least Inter i5 CPU + 4G memory + 2G graphic card + Gigabit Ethernet ) for this shop local intelligent video analytic: face recognition, people counting, tripe wire, etc...The manager can check all video analytic report, in addition, head office can remote view these reports via CMS.

More information about NUUO IVS, please visit NUUO website: <http://www.nuuo.com/ProductNode.php?node=6#>

**3.Device List**

Unit: US Dollar

No.	Item	Model	Description	Price	Quantity	Sub Total
1	IP Camera	SC6321	1920*1080, Sony Exmor 1/2.8" CMOS		100	

			sensor, CPU 900MHZ, H.264 HP, MP, BP.super low light, Digital WDR, intelligence 3D noise reduction.SD card, audio, alarm. Vandal Proof Dome, Built-in PoE, IR Light, No AC/DC Adapter.2.8-12mm Varifocal Lens. Waterproof IP66.			
2	Embedded NVR	NE-4080	8ch embedded Linux 4bay mini NVR, Total bitrate: 80Mbps,4 SATA Hard Disk Drive Ports. RAID 0, 1, 5, 10 configuration supported. POS integration: Live, record, playback, search		20	
3	PoE switch	LS5008P	8 10/100M IEEE802.3af PoE Ethernet Ports, 1 100M uplink Ethernet port, 15.4W, 150m.		20	
4	PC Server for branch IVS*		Intel i7 CPU + 4GB RAM, 1000M Ethernet 1G graphic card HDMI + 1 VGA output; Redundant power supply Windows Server 2008.		20	
5	PC server for head office surveillance *		Intel i7 CPU + 8GB RAM, 2-1000M Ethernet network; 4G graphic card HDMI + 1 VGA output; Redundant power supply Windows Server 2008.		2	
6	CMS	NUUO CMS	Access and control cameras, I/O devices, POS, LPR and access control from any NUUO Mainconsole family recording server (NVR/DVR/NDVR Hybrid, Hybrid appliance, NVRsolo and NVRmini 2). Stable architecture protects alarm data		100	
7	IVS:Counting *	SCB-IP-P-IVS COUNTING01	People Counting /Vehicle Counting, 1ch license		20	
8	IVS:Tripe wire and removed	SCB-IP-P-IVS SURVEILLANCE	Tamper Detection, Camera Calibration, Object Classification, Camera Shake		20	

	object *	04	Elimination, Presence(Tripwire),Enter and exit, Appear and disappear,Dwell,Tailgating,Stop,Direction.4C H license suite			
9	IVS face Recognition *	SCB-IP-P-IVS ADVANCED 04	Counting, Tamper Detection, Camera Calibration,Object Classification, Camera Shake Elimination, Presence(Tripwire),Enter and exit, Appear and disappear, Dwell,Tailgating,Stop,Direction		20	
Total						

**\* Notes:**

1. Video analytic need to most of CPU resources, it must use high performance computer, and IVS license is very expensive, user can choose a few important cameras for video analysis. NUUO CMS has built-in counting function, but the accuracy is not very high, if the user's budget is limited, we can use free counting function.
2. User can buy computer in local market according to our hardware requirement.