

Tender Notice  
No. TB/Pur CCTV/APF/2018, Dated.10.11.2018

Tender Document for Supply, Installation and Commissioning of CCTV Cameras in  
Tobacco Board Auction Platforms in Karnataka.



**TOBACCO BOARD**

(Ministry of Commerce & Industry, Govt. of India)  
AN ISO 9001:2008 CERTIFIED ORGANISATION  
1/9, 3<sup>rd</sup> Cross, CSI Compound,  
4<sup>th</sup> Floor, Unity Building Annexe,  
Mission Road, Bengaluru – 560 027  
Ph: 080-22236599, Fax: 080-22225075,  
Email: bangaloreoffice@indiantobacco.com

## Background

Tobacco Board proposes to install CCTV cameras to record the activities of auction proceedings in Auction Hall and Godown from 5.00 AM to 10.00 PM every day from September to March during auction season in Karnataka.

It is proposed to install 4 new CCTV cameras in the Auction Hall and 4 nos at Godown at each of the Auction Platforms mentioned at point no.1.1 at 6 locations.

### 1. Scope of Work

- 1.1 To install 48 CCTV cameras i.e. 4 nos. in Auction Hall and 4 nos. in the Godown of Auction Platforms located in APF.No.2-Hunsur, APF.No.5-Periyapatna, APF.No.6-Periyapatna, APF.No.7-Ramanathapura and APF.No.63-Ramanathapura and APF.No.61-Kampalapura. The address of each location is furnished as detailed below:

S.No.	Name & Address of the Auction Platform (location) proposed to install CCTV
1	Office of the Auction Superintendent, Tobacco Board, APF.No.2, Hunsur-I, Kattimalvadi, Hunsur (T), Mysuru (D). Ph. 08222-252231, M.No.9448495506, email:apf7@indiantobacco.com
2	Office of the Auction Superintendent, Tobacco Board, APF.No.61, Kampalapura, Periyapatna (T), Mysuru (D) Ph.08223-210403, M.No.9448495511, email.apf61@indiantobacco.com
3	Office of the Auction Superintendent, Tobacco Board, APF.No.5, H.H.Bagilu (P), Periyapatna-II, Periyapatna (T), Mysuru (D) Ph.08223-274149, M.No. 9448495509, email:apf5@indiantobacco.com
4	Office of the Auction Superintendent, Tobacco Board, APF.No.6, H.H.Bagilu (P), Periyapatna-III, Periyapatna (T), Mysuru (D) Ph.08223-274951, M.No. 9448495510, email:apf6@indiantobacco.com
5	Office of the Auction Superintendent, Tobacco Board, APF.No.7, Ramnathpura-I, Arkalaguda (T), Hassan (D). Ph.08175-225536, M.No. 9448495513, email:apf7@indiantobacco.com
6	Office of the Auction Superintendent, Tobacco Board, APF.No.63, Ramnathpura-II, Arkalaguda (T), Hassan (D). Ph.08175-289024, M.No. 9448495514, email:apf63@indiantobacco.com

- 1.2 To set up the NVR box to access the video of all CCTV cameras by Officials at the Tobacco Board in Head Office, Guntur, Directorate Office and Regional Offices over Internet. Without Static IP, the NVR boxes shall be configured using DDNS free to access the CCTV cameras from anywhere through internet.
- 1.3 All camera recordings shall have Camera ID & Location/ Area or recording as well as date / time stamp. Camera ID, location/area of recording & date/time shall be programmed by the service provider with user ID and password.
- 1.4 To provide an online display of video images on TFT monitor / Plasma Screen located in Auction Superintendent Office Room.

***Singature of the Tenderer***

- 1.5 System to have facility of additional camera installation beyond the originally planned capacity.
- 1.6 The system should have the capacity of functioning 24x7 days in Indian conditions.
- 1.7 Preferably the tenderer should visit the above auction platforms before quoting the rate to satisfy that it will serve the purpose for which it is intended.
- 1.8 Terms and conditions shall be signed by the tenderer in each page as a token of acceptance.

## **2. Cost of the Tender form and EMD Amount:**

- 2.1 The Tender document is available on the Tobacco Board's website ***<https://www.tobaccoboard.com>*** under tenders section.
- 2.2 The cost of tender document is **Rs.2110/-** (Rupees Two Thousand One Hundred Ten Only) non refundable by way of DD drawn in Nationalized Banks in favour of Director (Auctions), Tobacco Board payable at Bengaluru shall be paid in cash at Directorate of Auctions, Tobacco Board, Bengaluru. The tender will be rejected in case the tender fee receipt is not enclosed alongwith the tender.

## **3. EMD Amount:**

- 3.1 The bidder shall furnish EMD for an amount of **Rs.72,000/-** (Rupees Seventy Two Thousand only-3% on Rs.24.00 Lakhs) alongwith Technical Bid in a sealed cover Superscribed as Technical Bid with EMD in the form of a Demand Draft drawn on any nationalised bank in favour of Director (Auctions), Tobacco Board payable at Bengaluru.
- 3.2 The tender received after the prescribed date and time will be summarily rejected.
- 3.3 The tender received without EMD will be summarily rejected.
- 3.4 The EMD of the successful tenderer will be retained by the Board till the commissioning of the CCTV cameras and satisfactory functioning of the same and will be refunded after receiving performance security deposit.
- 3.5 The EMD of unsuccessful tenderers will be refunded after award of work order to successful tenderer and the agencies shall not claim any interest on the EMD.

***Singature of the Tenderer***

#### 4. Performance Security Deposit (PSD) :

4.1 The successful firm has to deposit **5%** of the value as Performance Security Deposit (PSD) by way of DD drawn in Nationalized Banks in favour of Director (Auctions), Tobacco Board payable at Bengaluru within 7 days of issue of Work Order. The Performance Security Deposit will be refunded to the successful firm after a period of 1 year from the date of commissioning. The firm shall not claim any interest on the PSD.

4.2 **Forfeiture of PSD:** In case the successful firm does not fulfill any of the conditions or backs out at any stage, the supply order will be cancelled and Performance Security Deposit will be forfeited.

#### 5. Eligibility Criteria :Only those bidders fulfilling the following criteria should respond to the tender and agreeing to terms & conditions and specification.

5.1 Bidders should have been in business for a period of 03 years in Karnataka as evidenced by Certificate of Incorporation / Firm Registration Certificate issued by the Registrar of Companies and have at least dedicated branch office in Bengaluru/Mysuru/Hassan for post contract maintenance and shall submit No. of projects executed where CCTV setup was installed and commissioned.

5.2 Bidder shall submit average turnover during last 3 years ending 31<sup>st</sup> March which shall be atleast 30% of the estimated value. The bidder's financial capability shall be decided based on the average annual turnover (proof of documents to be produced).

5.3 Bidder shall not have been black-listed or defaulted by any Central/State Government or Public-Sector undertakings in India, declaration copy should be attached in **Rs.100/- stamp paper** as per the specimen appended herewith as **Annexure-A**.

5.4 Bidders possessing experience of having successfully supplied and installed at least one (1) work of 50% of the present contract value of not less than Rs.12.00 Lakhs within last 3 years in Central Government / State Government Departments & Undertakings / Public Sector Undertakings/Autonomous Bodies and should submit evidence from the respective clients to be submitted along with Technical Bid.

#### 6. Payment Schedule :

6.1 **90% of the work order value** can be given after successful supply and installation in each Auction Platform succesful commissioning and demonstration at all locations and against submission of invoice in duplicate along with delivery challan, installation report, certification from the concerned Auction Superintendent for cabling work (in meters), Fixing PVC/HDPE pipes (in meters) and Soft soil digging & refilling (in meters) and balance **10%** shall be given after 6 months based on the satisfactory performance.

*Singature of the Tenderer*

## 7. Terms & Conditions:

- 7.1 Bidders shall submit copies of Income Tax returns for last three years for financial year **2015-16, 2016-17, 2017-18** along with the PAN registration
- 7.2 Bidders should have GST registration as evidenced by Registration Certificate issued by concerned department and should have adequate financial standing and proven track record.
- 7.3 Bidders shall furnish the data sheets for the major items mentioned in the technical specification.
- 7.4 Bidders shall submit authorization letter from the original equipment manufacturer (OEM) for participating in this tender.
- 7.5 Bidder shall quote for all the materials which must be branded and bear the brand/manufacturer's name for identification, traceability and shall be of ISO standard.
- 7.6 Bidders shall supply Core, Access Switches, Modules, IP Cameras, NVRs and other accessories as mentioned in the Financial bid.
- 7.7 Bidders shall perform the site survey & submit pre-implementation plan.
- 7.8 The quoted products shall be field proven products that have been installed and working satisfactorily in Govt. Departments.
- 7.9 Bidders shall give an undertaking to maintain the system for a minimum period of 5 years for which they will indicate half yearly maintenance charges on lumpsum basis per platform (since tobacco auctions is for 6 months). For this, the Service Centre Name and Address, Phone number of contact person and persons employed may be given.
- 7.10 'Technical Bid' and 'Financial Bid' for tender for CCTV Cameras shall be kept in separate envelopes superscribed as above and both covers shall be kept in other envelopes superscribed as 'Tender for setup of CCTV Cameras in Auction Platforms' and shall be dropped into the Tender Box at the Tobacco Board, Directorate of Auctions, 1/9, III Cross, Mission Road, 4th Floor, Unity Building Annexe, Bengaluru-560027 on or before 29.11.2018 by 2.00 PM. Late tenders will not be accepted under any circumstances. The Tenders will be opened on 29.11.2018 at 2.30 PM in the presence of authorised representatives of the tenderers who wish to participate.
- 7.11 There should not be over writing or corrections in the rates quoted in the tender form.
- 7.12 **Technical Bid:** Technical bid will be opened on the same day at **2:30 PM** in the presence of the tenderers.
- 7.13 **Financial Bid :** After opening the Technical bid, the tenderers who qualify in the technical bid shall be intimated to participate in financial bid, the date of which is to be decided by Competent Authority.
- 7.14 **Validity of financial Bid :** The validity of offer shall be given as 3 months.

***Singature of the Tenderer***

- 7.15 **Delivery Period:** The successful firm should supply & install preferably within one month from the date of issue of work order.
- 7.16 **Penalty:** Penalty will be levied on the firm @ **0.5%** of the value of balance work to be executed for each week of delay.
- 7.17 Tobacco Board reserves the right to reject any bid and to annul the bidding process and reject all bids at any time prior to award of contract without assigning any reason whatsoever and without thereby incurring any liability to the affected bidder(s) on the grounds of Tobacco Board's action.
- 7.18 It may also be noted that in case of the bidder backing out during the contract period without any explicit consent of the department, he will be liable to forfeiture of EMD amount.
- 7.19 **Status Report:** The successful firm shall submit weekly status report regarding supply/installation to Directorate of Auctions, Tobacco Board, Bengaluru, from commencement till installation.
- 7.20 The firm should enclose income tax clearance certificate along with the Tender.
- 7.21 Income Tax shall be deducted from the bills payable to the firm as per I.T. rules in force.
- 7.22 As per GST Act'2017 in force, TDS shall be deducted from the bills payable to the firm.
- 7.23 Before submitting the tender, all the conditions stipulated shall be fulfilled and no tenderer will be allowed to rectify mistakes, if any, after opening the tender by the Committee Members.
- 7.24 The requirement may either decrease or increase. The rates quoted and finalized would be applicable for the reduced/increased requirements.
- 7.25 For any clarification you may contact Assistant Manager (Works), Directorate of Auction, Tobacco Board, Bengaluru during office hours on landline no 080-22236599.
- 8. Guarantee / Warranty :**
- 8.1 All the equipments should have an onsite warranty as per document. The warranty shall take effect from the date of successful completion of the work and handing over of the system to the user to its satisfaction.
- 8.2 The maintenance services, including spares shall be free of cost during the warranty/ guarantee period.
9. Director (Auctions), Tobacco Board, reserves the right to accept or to cancel all the tenders without assigning any reasons thereof.
10. **Arbitration:** In case of dispute, the matter shall be referred to Executive Director, Tobacco Board for appointing an arbitrator whose decision shall be final and binding on the firm.
11. **Court Of Jurisdiction:** Any litigation/dispute if not solved through arbitration proceedings may be challenged in a court of law and for that, the jurisdiction shall be Bengaluru court.

***Singature of the Tenderer***

# TOBACCO BOARD : BENGALURU

## TECHNICAL BID

### **Tender Form for Supply and Installation of CCTV Cameras in Auction Platforms in Karnataka**

1	Name of the Firm:			
2	Registered Office Address:			
	Fax No.			
	Telephone No.			
	E-mail Address			
3	Service Centre Details	Location -I	Location-2	Location-3
	Postal Address			
	Fax No.			
	Telephone No.			
	Email			
4	Year of Establishment & Registration No.			
5	GST No.			
6	Permanent Account No.(PAN)			
7	Turnover Details	2015-16 – Rs. 2016-17 – Rs. 2017-18 - Rs.		
8	The Tenderer should have successfully installed at least 1 work of 50% of the present contract within last 3 years.			
9	Name, Designation & address of the authorised person in respect of this tender			
10	Details of EMD amount enclosed with the tender	Amount Rs. Demand Draft No.: Name of the Bank :		
11	Validity of the Tender (should be 90 days)			

***Signature of the Tenderer***

12	Any other information			
13	Total Experience in setup of CCTV Cameras with proof (more than 3 years)			
14	No. of major projects executed where CCTV setup was installed and commissioned (Give details – minimum 5 nos. to be given):			
Sl. No.	Name of the Customer & contact information.	No. of CCTV Cameras installed	Brand / Model of CCTV Cameras / NVR Boxes installed	Date of completion of installation (Any certificate issued by the authorities to be enclosed)
1				
2				
3				
4				
5				

***Signature of the Tenderer***



**Bill of Material (BOM):**

S No	Item Description	Quantity	No.of Locations	Preferred brands and technical specifications
1	4MP IP 66 Rated Varifocal Dome Camera	4 Per Location	6 locations	Specifications as per <b>Annexure-B</b> and preferred brands are Honeywell/UNV/Samsung/D-Link/Bosch.
2	4MP IP 66 Rated Varifocal Bullet Camera	4 Per Location	6 locations	Specifications as per <b>Annexure-B</b> and preferred brands are Honeywell/UNV/Samsung/D-Link/Bosch.
3	16 Channel NVR with 4 SATA HDD	1 Per Location	6 locations	Specifications as per <b>Annexure-B</b> and preferred brands are Honeywell/UNV/Samsung/D-Link/Bosch.
4	8Port 10/100/1000 PoE Smart Switch Plus 2 SFP Ports	1 Per Location	6 locations	Specifications as per <b>Annexure-B</b> and preferred brands are Digisol/D-Link/TP Link
5	6Core OFC Cable Armoured	Per Meter	6 locations	D-Link/Digisol/Finolex
6	Fiber Module 1000Mbps Single Mode	1 Set per location	6 locations	D-Link/TP Link/Netfox
7	9U Network Rack with Power Manager, Fans & Other Accessories	1 per Location	6 locations	Netfox/ValRack
8	Power Cable 2C * 1.5 Sq mm Unarmoured	Per Meter	6 locations	Finolex or Equivalent
9	4TB Video Surveillance Hard Disk	1 Per Location	6 locations	Seagate/WD
10	32" LED Monitor	1 Per Location	3 locations	LG/Samsung/VU or Equivalent
11	Cat6 UTP Cable	Per Meter	6 locations	Dlink/Digisol/Digilink
12	Fiber Connector SC/LC Patch Cords 3M, RJ-45 Jacks	Per Location	6 locations	Dlink/Digisol/Digilink
13	Power Box	1 Per Location	6 locations	Reputed
14	25mm HDPE Pipe	Per Meter	6 locations	Sudhakar or Equivalent
15	25mm Medium Gauge PVC	Per Meter	6 locations	Sudhakar or Equivalent
16	Cable Laying, Digging & Labor Charges	Per Meter	6 locations	--
17	Installation, Commissioning, Programming & Net Working Charges	Per Site	6 locations	--

**DECLARATION**

I have gone through the terms and conditions issued by the Tobacco Board and agree to abide by all terms and conditions. The above information furnished by me is true to the best of my knowledge. If the information is found false at any stage, Performance Security deposited by me may be forfeited.

Place:

Date:

SIGNATURE OF THE TENDERER

# TOBACCO BOARD : BENGALURU

## Financial Bid

S. No.	Item Description	Quantity	Unit Price	Total	Taxes	Grand Total
1	4MP IP 66 Rated Varifocal Dome Camera	24 Nos.				
2	4MP IP 66 Rated Varifocal Bullet Camera	24 Nos.				
3	16 Channel NVR with 4 SATA HDD	6 Nos.				
4	8Port 10/100/1000 PoE Smart Switch Plus 2 SFP Ports	6 Nos.				
5	6Core OFC Cable Armoured	Approx. 2000 Meters*	/Per Meter			
6	Fiber Module 1000Mbps Single Mode	6 Sets for 6 locations	/Per Set			
7	9U Network Rack with Power Manager, Fans & Other Accessories	6 Sets for 6 locations	/Per Set			
8	Power Cable 2C * 1.5 Sq mm Unarmoured	Approx.2000 Meters*	/Per Meter			
9	4TB Video Surveillance Hard Disk	6 Nos.				
10	32" LED Monitors with Wall Mount KIT + 4kHDMI Cable 5 Meters.	3 Nos.	/Per Location			
11	Cat6 UTP Cable	Approx. 5000 Meters*	/Per Meter			
12	Fiber Connector SC/LC Patch Cords 3M, RJ-45 Jacks	6 Sets for 6 locations	/Per Set			
13	Power Boxes	6 Nos.				
14	25mm HDPE Pipe	Approx. 800 Meters*	/Per Meter			
15	25mm Medium Guage PVC	Approx. 800 Meters*	/Per Meter			
16	Installation, Programming & Net Working Charges for 32" LED monitors for online viewing at Directorate and Regional Managers Office.	3 Nos.	/Per Location			
17	Installation, Commissioning, Programming & Net Working Charges		/Per Location			
<b>Total Amounts (Rs.):</b>						
18	Soft soil digging, refilling, HDPE pipe ducting, fixing PVC and HDPE underground cables and labour charges (per meter)					/Per Meter

Note:- 1.Rates quoted should be inclusive transportation, handling charges etc.

2. Payment will be made based on actual running length at each location for the **item Nos.5, 8, 11, 14 and 15** above.

We agree and abide with the terms and conditions stipulated in the bid document.

Place:

Date :

Name:

Designation:

Signature of the Tenderer:

(Stamp/Seal of the Company)

**Tender Offer-cum-Undertaking Form**

Tender Reference No.....Date:.....

From,  
M/s.....

To,  
Tobacco Board,  
Government of India, Min. of Commerce and Industry,  
Directorate of Auctions, 1/9 III Cross, CSI Compound, 4<sup>th</sup> floor,  
Unity Building Annexe, Mission Road, Bengaluru – 560027.

Sir,  
Sub: Sealed tender offer for supply & Installation of CCTV cameras – reg.

\*\*\*\*

Having examined the tender documents including all Annexures the receipt of which is hereby duly acknowledged, we the undersigned offer our tender for supply and installation of CCTV cameras as required by the Tobacco Board, Directorate of Auctions, Bengaluru in conformity with all the said tender document.

We undertake, if our tender offer is accepted, to commence supply within \_\_\_\_\_ days from the date of receipt of your order awarding work.

We declare that we have not been black listed by any Govt. Department.

If our tender offer is accepted, we will furnish additional amount not exceeding 5% of the contract value as Performance Security Deposit (PSD) for due performance of the contract.

We agree to keep our offer valid for a period of three months and shall remain binding upon us.

Until a formal contract is prepared and executed, this tender offer, together with your written acceptance thereof and your notification of award shall constitute a binding contract between us.

We understand that you are not bound to accept the lowest or any offer you may receive and also to reject any offer without assigning any reason whatsoever.

Date:

Authorized Signatory  
Designation and Seal

## Annexure-B – Technical Specifications

1. 4 MP Day& Night Varifocal Dome Network POE Camera				
S.NO	Specifications		Compliance (YES/NO)	Deviations, if any
1	Model/Make			
2	Type	1/3"4 Dome Type		
3	Lens	Varifocal Motorized lens 2.8-12mm		
		Shutter Speed 1/5-1/20000		
		Support digital zoom up to 10x		
		Viewing angle of 90deg horizontal		
4	Streams support	Support minimum 3 Streams		
5	compression	H.265,H264 Compression technology		
6	IR	Smart IR with minimum illumination of 20 meter with automatic IR cut filter		
		support 0 LUX black and white mode with IR LED on & 0.05Lux in Colour mode		
7	Image Features	Support WDR-100dB, HLC,BLC, 2D and 3D, DNR ,ROI,Corridor Mode(9,16)		
		The Camera shell support 4 privacy masking Zones		
		Bit Rate should be Configurable up to 12 Mbps for optimizing bandwidth performance		
		Support up to 30 fps Configurable		
		support 8 ROI		
8	Network protocols	Support ipv4,ipv6,NTPclient , DDNS client, HTTP/HTTPS,SMTP,PPPOE,RTP/RTSP/RTCP.		
		should be ONVIF open standard compliant ver 2.4 or better		
9	Event Management	Support Motion detection		
		support event notification and uploading of snapshots via e-mail		
		Support alerts to SMTP client		
10	security	HTTP authentication, HTTPS encryption for web access		
		Recording should have Time stamp and text overlays which are customizable		
11	Device ports	1 x 10/100 BASE-T autosensing RJ-45 POE Ethernet port		
		Audio support with min .1 Audio in & 1 Audio out port		
		Support with BNC connection for better management		
		Micro SD/SDHC/SDXC Slot, max 128GB support		
12	camera Housing	IP66 compliant weatherproof housing		

13	certifications	The camera shall comply CE,FCC&UL Certifications		
14	Service Center	Should Have local service center		
15	R&D Center	should have local R&D center		
16	warranty	Comprehensive Warranty for three years		

## 2. 4 MP Day& Night Varifocal Bullet Network POE camera

S.NO	Specifications		Compliance (YES/NO)	Deviations, if any
1	Model/Make			
2	Type	4 Megapixel Bullet Type		
3	Lens	Varifocal Motorized lens 2.8-12mm		
		Shutter Speed 1/6-1/100000 s		
		digital zoom up to 10x		
		Viewing angle of 90deg horizontal		
4	Streams support	Support minimum 3 Streams		
5	compression	H.265,H264 Compression technology		
6	IR	Smart IR with minimum illumination of 30 meter with automatic IR cut filter		
		0 LUX black and white mode with IR LED on & 0.05Lux in Colour mode		
7	Image Features	Support WDR-100dB, HLC,BLC, 2D and 3D, DNR ,ROI,Corridor Mode(9,16)		
		support 4 privacy masking Zones		
		Bit Rate should be Configurable up to 12 Mbps for optimizing bandwidth performance		
		Support up to 30 fbs Configurable		
		support 8 ROI		
8	Network protocols	Support ipv4,ipv6,NTPclient , DDNS client, HTTP/HTTPS,SMTP,PPPOE,RTP/RTSP/RTCP.		
		should be ONVIF open standard compliant ver 2.4 or better		
9	Event Management	Support Motion detection		
		support event notification and uploading of snapshots via e-mail		
		Support alerts to SMTPclient		
10	security	HTTP authentication,HTTPS encryption for web access		
		Recording should have Time stamp and text overlays which are customizable		
11	Device ports	1 x 10/100 BASE-T autosensing RJ-45 POE Ethernet port		
		Audio support with min .1 Audio in & 1 Audio out port		

		The Camera should Support with BNC connection for better management		
		The Camera should have Micro SD/SDHC/SDXC Slot, max 128GB support		
12	camera Housing	IP66 compliant weatherproof housing		
13	certifications	The camera shall comply CE,FCC&UL Certications		
14	Service Center	Should Have local service center		
15	R&D Center	should have local R&D center		
16	warranty	Comperhenslve Warranty for three years		

### 3. Network Video recorder 16 channel

S.NO	Specifications		Compliance (YES/NO)	Deviations, if any
1	Model/Make			
2	No of Channel support	The offered NVR should support minimum 16 channels of recording		
3	Resolution Support	Resolution- 12MP/8MP/6MP/5MP/4MP/3MP/1080P/960P/720P		
4	Storage capacity	4 numbers of 8 TB and support upto 24TB storage		
5	compression	The NVR Should support H.265, H.264 compression technology		
6	Video Settings	Resolution quality frame rate enable audio		
7	Live Viwe playback/Recording Resolution	4MP/3MP/1080P/920P/720P/D1/VGA/ CIF/QCIF		
8	Performance	Throughput 160 Mbps		
9	Recording Type	record by schedule, manual and event based recording		
10	Overwrite recording	Auto recycling when disk storage is full		
11	Audio& Video Recording	Synchronized Audio and Video Recording		
12	Viewing Functions	Live Viwe,present go, focus,PTZfunctions,snapshot,fullscreen, digital zoom		
13	Playback control	Playback with normal ,fast forward rewind and stop forward rewind digital zoom		
14	protocols	Should support minimum IPV4,RTP/RTCP,TCP/UDP,HTTP,DHCP,DN S,NTP		

15	User Account	Provision for creating additional accounts to allow user access to the system and specify authorization for camera channel ,PTZ,ect either by NVR or software		
16	I/O	2x100/1000BASE-t RJ-45 Ethernet Poet		
		1ch Alarm output, 1ch Alarm input		
		1 xHDMI Port, 1 xVGA Port		
		1 x Audio input, 1 x Audio output		
		2 x 2.0 usb Ports		
17	Event Management	Events-Motion Detection, Video loss Disk space full		
18	service Center	should have local service center		
19	R&D center	Should have local R&D Center		
20	warranty	Comperhensive Warranty for Three Years		

4. 8- ports 10/100/1000 Base -T POE Smart Switch plus 2 SFP Ports				
S No	Specifications		Compliance (YES/NO)	Deviations, if any
1	Model/Make			
2	Number of ports	8 port 10/100/1000 Mbps POE 2 SFP		
3	64-byte packet Forwarding rate	14.88Mbps		
4	MCA address	8K entries per device		
5	Ram for CPU	Minimun 128 Mbytes		
6	Flash Memory	Minimun 32 MB		
7	Jumbo Frame support	UP to 10,000 bytes		
8	SFP support	1000bases-SX/LX,100 Base-FX		
9	POE	Minimum System POE Budget(65 W)		
10	Other Features	802.3X flow control		
		loopvback detection(LBD)		
		Auto MDI/MDIX		
		Port Mirroring(Multi-to-one, TX/RX/Both mode)		
		port Trunking(Group/Ports per group)(8/8)		
		Broadcast storm control		
		802.1D Spanning Tree		
		802.1W rapid Spanning Tree ,802.1s MSTP		
		Static Mac		
		IGMP Snooping		
		Cable Diagnostics		
		LLDP		
		LLDP-MED		
		aAuto Voice Vlan		

		Time-based PoE		
11	VLAN	802.1Q (Support Entries)		
		static 256		
12	Quality of service	802.1p support		
		priority queues number 4		
		port-Based Qos		
		Based on DSCP		
		Bandwidth Control		
13	Access Control List (ACL)	Based on Switch Port		
		Based on MAC address		
		Based on VLAN ID		
		Based on 802.1p priority		
		Based on DSCP		
		Based on IPv4		
		Based on TCP/UDP Port number		
14	Security Management	Password control Access		
		802.1x port-based Access Control		
		Port Security		
		Trusted Host		
15	Management	Web Based managemant		
		CLI (interface)(via telnet)		
		Telnet server		
		TFTP Client		
		SNMP should Support v1/v2c/v3		
		BootP/DHCP client		
		SNTP		
		System Log		
		Configurable MDI/MDIX		
<b>Fiber Module 1000Mbps Single Mode</b>				
1	Fiber Module 1000Mbps Single Mode	Fiber Module 1000Mbps Single Mode compatible to these modules are compatible to the above layer 2 Switches		