

Information to Bidder for the “Supply, Installation and commissioning of IP Colour Cameras and all accessories required for their installation for VSS project through GeM as per RDSO Specification No. RDSO/SPN/TC/65/2016, Revision 4.0 .”

Ref: GeM Bid No.GEM/2019/B/233613 dated 14.05.19

1. The item/items in this bid should be quoted as per the technical specifications. *The details of the specifications along with consignee/site details are also available on website www.railtelindia.com*
2. In the specification wherever support for a feature has been asked for, it will mean that the feature should be available without RailTel requiring any other hardware/software/licenses. Thus, all hardware/software/licenses required for enabling the support/feature shall be included in the offer.
3. OEM or Authorized distributor/Partner of OEM should have a registered office in India to provide sales and 24x7 support in India. The certificate to this effect should be submitted. The bidder should be either OEM or his authorized dealer/distributor.
In case of the authorized distributor/partner certificate from the OEM to this effect should be submitted. If OEM is quoting then OEM should submit the certificate.
4. Equipment offered shall have complete data sheets and detailed description on OEM web sites.
5. Bidder shall submit the detailed BOM of the equipment offered duly verified and certified by the respective OEM.
6. GSTIN ID of vendor should be provided from where goods will be supplied.
7. Delivery period: 45 days from the date of PO.
8. **Tender Cost & Earnest Money Deposit (EMD)/ Bid Security:**
 - 8.1 **Tender Cost:** Estimated cost of the Tender is Rs 21,11,59,584/-.
 - 8.2 **Earnest Money Deposit (EMD)/ Bid Security:** Rs 10,00,000/- in the form of Pay Order/Demand Draft/BG drawn in favor of RailTel Corporation of India Ltd. payable at New Delhi. The Bid received without EMD will be summarily rejected.
9. This bid complies with “Public Procurement (preference to make in India) Policy Order, 2017 issued by DIPP and Public Procurement Policy for Micro and Small Enterprises (MSEs) order, 2012” issued by MoSME.”
The bidders claiming the preference have to submit relevant documents prescribed under relevant order.

10. Security Deposit/Performance Bank Guarantee:

The successful tenderer shall submit security deposit in the form of DD/FDR or irrevocable Bank Guarantee from any scheduled bank for due fulfillment of contract as per the details given below:

- i. Security Deposit/Performance Bank Guarantee @ 10% of total value of Purchase Order is required to be submitted within 30 days of issue of Purchase Order with validity of 3 months beyond warranty period, failing which a penal interest of 15% per annum shall be charged for the delay period i.e. beyond 30 (thirty) days from the date of issue of LOA/PO.
- ii. The security deposit/PBG shall be submitted to Corporate Office Gurugram.
- iii. A separate advice of the BG will invariably be sent by the BG issuing bank to the RailTel's Bank through SFMS and only after this the BG will become acceptable to RailTel. It is therefore in own interest of bidder to obtain RailTel's bank IFSC code, its branch and address and advise these particulars to the BG issuing bank and request them to send advice of BG through SFMS to the RailTel's Bank.

The security deposit/Performance Bank Guarantee shall be released after successful completion of Contract obligations under the contract, duly adjusting any dues recoverable from the successful tenderer. Payment of Security Deposit in the form of Pay Order/Demand Draft should be made in favor of "RailTel Corporation of India Ltd" payable at New Delhi.

11. Eligibility Criteria for OEM:

- a. The Equipment offered by the OEM or equipment of the same series/family from the same OEM should have been satisfactorily working in Government/PSUs/Telecom Service Providers network for at least 12 months as on opening of bid, in India or Abroad. The certificates from the actual users will have to be submitted offline.
- b. The OEM should have supplied at least 35% of the tendered quantity of the equipment offered or equipment of the same series/family during last preceding 3 financial years (i.e. current year and three previous financial years) as on opening of bid to Government/PSUs/Telecom Service Providers. OEM should submit self-certificate with proper contact detail of clients along with quantities supplied (Firm Name, Contact person, Designation, Telephone Number, Fax, Official mail id etc.). The same should be issued by authorized signatory.
- c. The OEM should have proven facilities for Engineering, manufacture, assembly, integration and testing of **IP Colour Camera** and basic facilities with respect to space, Engineering, Personnel, Test equipment, Manufacture, Training, Repair, Service Center Supports for at least past three years in the country from where the proposed equipment are planned to be supplied. In case OEM is located outside India, it should have training repair and service center facilities in India also. The certificates/Undertaking for the same will have to be submitted offline.

(The bidder will have to submit the proof of establishment for the facility)

12. Eligibility Criteria for Bidder:

- a. The tenderer should have executed order of supply/ provision **in the field of security/IT/ICT/Telecom/IP Colour Camera for central government or any state government or semi/quasi-government entities or Public sector Units or private enterprises** during last preceding 3 financial years (i.e. current year and three previous financial years) as on opening of bid, as per following:

(A) Single order of atleast 35% of tendered value.

OR

(B) Two orders of atleast 20% each of tendered value.

OR

(C) Three orders of atleast 15% each of tendered value.

Satisfactory Performance certificate issued by customer/s for the Purchase Orders/ Work Orders should be enclosed.

- b. Bidder should have authorization specific to this tender from respective OEM as per Annex-III.

13. SPLITTING OF QUANTITY-

13.1 Deleted

- 13.2** In case bidder claims PMA, Government of India Guideline/Instruction regarding splitting of order to Local supplier shall be applicable. Govt. Guidelines in regard to MSME shall be followed.

14. WARRANTY:

- 14.1** The materials are to be warranted for 3 **years** from date of delivery to the consignee. The tenderer shall warrant that stores to be supplied shall be new and free from all defects and faults in material, workmanship and manufacturing and shall be of the highest grade and consistent with the established and generally accepted standards of materials of the type ordered and shall perform in full conformity with the specifications and drawings.

The supplier shall be responsible for any defects that may develop under the conditions provided by the contract and under proper use, arising from faulty materials, design or workmanship such as corrosion, inadequate quantity of material to meet equipment requirements, inadequate contact protection, deficiencies in design and/ or otherwise and shall remedy such defects at his own cost when called upon to do so by the Purchaser who shall state in writing in what respect the stores are faulty.

14.2 SLA:

After having been notified of the defects / service requirement during warrantee period, Seller has to complete the required Service / Rectification within time limit of max. 7 days. If the Seller fails to complete service / rectification within defined time limit, a penalty of 0.5% of Unit Price of the product shall be charged as penalty for each week of delay from the seller & upto max. of 100% of Unit Price of the product.

Seller can deposit the penalty with the Buyer directly else the Buyer shall have a right to recover all such penalty amount from the Performance Security (PBG) or from the running bills.

15. Long Term Maintenance Support:

Tenderer (OEM) shall provide maintenance support after successful completion of the warranty obligations for a minimum period of **5 years**. The long term maintenance support shall be comprehensive and include all hardware and software of equipment supplied against this contract. RailTel should be extended the benefits of periodical software patches/updates made by OEM on the system from time to time for equipment security/performance without any additional cost to RailTel.

Buyer reserves the right to enter into AMC @ 3.5% of ordered value of equipment before 30 days of expiry of warranty period. In case bidder refuses to enter into AMC, PBG will be forfeited.

Separate agreement for AMC (Long term Maintenance Support) before expiry of warranty period shall be entered into with OEM/the authorized partner of OEM by RailTel. A fresh Bank Guarantee valid for Five years and four months for 10% of the Long Term Maintenance Support cost of five years, shall be required to be submitted by bidder for due fulfillment of long term maintenance support obligation.

Quarterly payment for AMC Charges would be made by RailTel after successful completion of AMC Services of that quarter and on the certificate furnished by concerned RailTel representative.

Note: The acceptance of the above clause is mandatory and specific acceptance from OEM is required to be enclosed as per Annexure-II. Any deviation / non acceptance will lead to rejection of the bid.

16. Payment Conditions :-

- i. 100% payment against full supply OR Supply, Installation & Commissioning.
- ii. 80% payment against part supply OR Supply , Installation & Commissioning of the completed part as the case may be. In case bidder completes the supply order or order for supply , installation and commissioning as the case may be, for one Region , he can claim part payment of 80% against each Region's completed supply / completed installation &

Commissioning of the said Region. Balance payment shall be made after full supply or full installation & commissioning. The following documents are to be submitted for payment:

- a. Original Invoice
- b. Delivery Challan
- c. Original Consignee receipt with GRN No.
- d. Original Inspection Certificate
- e. Insurance Certificate.
- f. Warranty Certificate of OEM
- g. Copy of BG
- h. Certificate of receipt of Goods & installation thereof from RailTel.

17. Offline Submissions:

The bidder is required to submit the following documents offline to RailTel Corporation of India Ltd, Institutional Area, Plot No. 143, Sector 44, Gurugram/ ROs before 07.06.19 **Hrs of 15:00** in a Sealed Envelope. The envelope shall bear 'DO NOT OPEN BEFORE' (due date & time). The offline documents shall be opened at 07.06.19 **Hrs of 15:30**.

- i. EMD
- ii. MAF/ OEM Authorization Letter (as per Annexure-III)
- iii. BOQ of offered equipment.
- iv. Data Sheet of offered equipment.
- v. Financial (Certified copies of audited balance sheets/annual reports of last three preceding financial years) and Technical Eligibility Criteria documents.
- vi. Technical Compliance of Specification as per Annex-I.
- vii. Certificate from the End user against the Eligibility criteria for OEM para 11.
- viii. Acceptance from OEM as per Annexure-II against long term maintenance support para 15.

Note:

1) The bidder is required to give acceptance of all the clauses mentioned in the **“Information to the Bidders”** document is mandatory. Any deviation / non-acceptance may lead to rejection of the bid.

2) Information to Bidder viz. corrigendum /addendum/ amendments etc. for this bid shall be posted on www.railtelindia.com only.

3) This bid is governed by the Specific Additional Terms & Conditions and General Terms & Conditions laid down by the GeM against **GeM Bid No.GEM/2019/B/233613 dated 14.05.19**.

4) Bid : RA will be operated for this bid.

In case, If any contradiction between GeM Additional Terms & Conditions and General Terms & Conditions, RailTel Terms & Conditions will prevail.

Technical Specifications

SOR wise details are as:

SOR	Item	Regions	Qty	Total Quantity
1	Supply, Installation and commissioning of Fixed dome Type IP Colour Camera along with housing and mount and all accessories required for their installation as per RDSO Specification No. RDSO/SPN/TC/65/2016, Revision 4.0	NR	486	1224
		WR	192	
		ER	252	
		SR	294	
2	Supply, Installation and commissioning of Bullet Type IP Colour Camera along with housing and mount and all accessories required for their installation as per RDSO Specification No. RDSO/SPN/TC/65/2016, Revision 4.0.	NR	2187	5508
		WR	864	
		ER	1134	
		SR	1323	
3	Supply, Installation and commissioning of P/T/Z Type IP Colour Camera along with housing and mount and all accessories required for their installation as per RDSO Specification No. RDSO/SPN/TC/65/2016, Revision 4.0.	NR	243	612
		WR	96	
		ER	126	
		SR	147	
4	Supply, Installation and commissioning of 4K UHD Bullet Type IP Colour Camera along with housing and mount and all accessories required for their installation as RDSO Specification No. RDSO/SPN/TC/65/2016, Revision 4.0.	NR	324	816
		WR	128	
		ER	168	
		SR	196	

SOR-I Fixed Dome Type IP Colour Camera:

1. Technical specifications

The Full HD Fixed Dome Type IP Colour Camera shall have the following minimum specifications:-

S. No.	Parameter	:	Specification
i.	Image Sensor	:	1/ 2.8" or larger, Progressive scan, CMOS sensor
ii.	Pixels	:	2.0 Mega Pixel Full HD (1920x1080)
iii.	Video Compression	:	H.264/H.265
iv.	Dual Stream	:	Dual H.264/H.265 Streams
v.	Video resolutions	:	a) For Main stream : i)1920x1080 (Full HD) ii)Configurable from Full HD to other HD/SD Resolution b) For Second Stream: Configuration from D1 to other HD/SD resolutions.
vi.	Resolution and Frame Rate	:	Minimum 25 frames per second (FPS) for both the streams. Full HD@ 25 FPS with H.264/H.265 compression on one stream & D1@ 25 FPS with H.264/H.265 compression on other stream.
vii.	Minimum Illumination :		
	a) Colour Mode	:	0.5 Lux
	b) Night Mode (Black & White)	:	0.05 Lux
viii.	Shutter speed	:	Maximum shutter speed should be 1/8000 sec or Higher
ix.	Signal to Noise Ratio	:	≥ 45 dB
x.	Video Standard	:	PAL
xi.	Lens	:	3.8mm - 8mm
xii.	Day/Night Camera	:	Auto Day/Night Configuration
xiii.	Data rate	:	i) 8 Mbps maximum for H.264/H.265 Video Compression. ii) Shall work on 3 Mbps bit rate or less average for Full HD@ 25 FPS at Variable bit rate (VBR) on individual (Single) stream with H.264/H.265 Video Compression.
xiv.	Video Streaming	:	Unicast and Multicast streams
xv.	Text Superimposing	:	Camera shall support superimposing the title and date & time on the video
xvi.	Edge Storage	:	Edge Storage slot suitable for 64 GB SD/SDHC/SDXC memory or higher along with memory card.

xvii.	Network Connectivity	:	Ethernet, 10/100 Base T
xviii.	Discovery Interface	:	OEM interface to detect the Camera automatically and configure network settings
xix.	Network Protocols	:	Suitable and required network protocol stack to work Camera in TCP/IP based Ethernet network environment. (As required for system working)
xx.	Web Server	:	Internal Web server required with embedded operating system.
xxi.	Automatic Gain Control	:	Required
xxii.	Back light Compensation (BLC) or High Light Compensation (HLC) or Automatic White Balance	:	Required.
xxiii.	Wide Dynamic Range (WDR)	:	Required
xxiv.	Alarm Inputs / outputs	:	1 input & 1 output
xxv.	Input Voltage	:	220V AC Voltage (Nominal) / 24V AC or DC /12V DC / PoE
xxvi.	PoE	:	IEEE 802.3af compliant
xxvii.	Operating Temperature	:	0°C to +50°C
xxviii.	Operating Humidity	:	20 to 80% RH non-condensing
xxix.	Enclosure Protection	:	Vandal proof and Impact resistant Aluminium enclosure with IP66 or NEMA-4 or better
xxx.	Regulatory	:	UL or EN or CE or IEC or IS certification for Safety and CE or FCC Certifications for EMC & Immunity. Note: For EN/IEC/IS/CE/FCC, test certificate to be provided from NABL/NABCB accredited Labs or internationally reputed test agencies along with detailed test reports.
xxxi.	Approvals/ Certifications Two way/Bi-directional Audio Input/Output	:	Required for Sound Detection
xxxii.	ONVIF Compliance	:	ONVIF Profile 'S'. The quoted models should appear on the ONVIF website and a confirmation certificate for the offered

			models to be provided.
xxxiii.	MAC Address	:	The MAC address of the IP Cameras must be registered in the name of OEM supplying the Cameras.

2. **Scope of work:**

Supply	As per technical specification
Installation	<ol style="list-style-type: none"> 1. The bidder to prepare a site plan showing exact location of different type of cameras at various locations like parking areas, entrance/exit points, platforms, yards, waiting halls, ticket counters, offices, foot over bridges, circulating areas etc. as per site requirement in consultation with RailTel after the proper site survey. In general, 40 cameras have been planned at each station. The site plan shall be approved by RailTel. 2. Fix camera as per approved site plan & connect cameras on STP CAT-6 cable (RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2016 Revision 4.0 with all amendments) to nearest PoE Switch. Approximately, 25 meter STP CAT-6 cable and associated accessories to be provided by bidder along with each camera.
Commissioning	Free/Open source VMS to be installed in a server (server to be provided by RailTel) for approx. 40 camera/station and display video recording, playback and live display of cameras at stations as well as from any central location through a VMS client. OS for server, if required shall be provided by RailTel.
Warranty and AMC	3 Years warranty after completion of installation and Commissioning 5 Years AMC post warranty period

SOR-2 Bullet type IP Colour Camera:

1. Technical specifications

The Full HD Bullet type IP Colour Camera shall have the following minimum specifications:-

S. No.	Parameter	: Specification
i.	Image Sensor	1/ 2.8" or larger, Progressive scan, CMOS sensor
ii.	Pixel Resolution	2.0 Mega Pixel Full HD (1920x1080)
iii.	Video Compression	: H.264/H.265
iv.	Dual Stream	: Dual H.264/H.265 Streams
v.	Video resolutions	: a) For Main stream : i)1920x1080 (Full HD) ii)Configurable from Full HD to other HD/SD resolution b) For Second Stream: Configuration from D1 to other HD/SD resolutions.
vi.	Resolution and Frame Rate	: Minimum 25 frames per second (FPS) for both the streams. Full HD@ 25 FPS with H.264/H.265 compression on one stream & D1@ 25 FPS with H.264/H.265 compression on other stream.
vii.	Minimum Illumination :	
	a) Colour Mode	: 0.5 Lux
	b) Night Mode (Black & White)	: 0.05 Lux
viii.	Shutter speed	: Maximum shutter speed should be 1/8000 sec or higher
ix.	Signal to Noise Ratio	: ≥ 45 dB
x.	Video Standard	: PAL
xi.	Motorized Varifocal Lens	: Motorized Varifocal IR corrected lens suitable for 2 Mega Pixel Full HD Camera.
xii.	Infra Red	: Built-in Infra-Red Illuminator with range 20 m or More
xiii.	Day/Night Camera	: Auto Day/Night Configuration

xiv.	Data rate	:	<p>i) 8 Mbps maximum for H.264/H.265 Video Compression.</p> <p>ii) Shall work on 3 Mbps bit rate or less average for Full HD@ 25 FPS at Variable bit rate (VBR) on H.264/H.265 individual (Single) stream with 5 Video Compression.</p>
xv.	Video Streaming	:	Unicast and Multicast streams
xvi.	Text Superimposing	:	Camera shall support superimposing the title and date & time on the video
xvii.	Edge Storage	:	Edge Storage slot suitable for 64 GB SD/SDHC/SDXC memory or higher along with memory card.

xxviii.	Network Connectivity	:	Ethernet, 10/100 Base T
xix.	Discovery Interface	:	OEM interface to detect the Camera automatically and configure network settings
xx.	Network Protocols	:	Suitable and required network protocol stack to work Camera in TCP/IP based Ethernet network environment. (As required for system working)
xxi.	Web Server	:	Internal Web server required with embedded operating system.
xxii.	Automatic Gain Control	:	Required
xxiii.	Back light Compensation (BLC) or High Light Compensation (HLC) or Automatic White Balance	:	Required.
xxiv.	Wide Dynamic Range (WDR)	:	≥ 90 dB
xxv.	Two way/ Bi-directional Audio Input / Output	:	Required for Sound Detection.
xxvi.	Alarm Inputs / outputs	:	1 input & 1 output
xxvii.	Input Voltage	:	220V AC Voltage (Nominal)/ 24V AC or DC/12V DC/ PoE
xxviii.	PoE	:	IEEE 802.3af compliant
xxix.	Operating Temperature	:	0°C to +50°C
xxx.	Humidity	:	20 to 80% RH non- condensing
xxxi.	Ingress Protection	:	IP66 or NEMA-4 or better
xxxii.	Enclosure Protection	:	Vandal proof and Impact resistant
xxxiii.	Regulatory Approvals/ Certifications	:	UL or EN or CE or IEC or IS certification for Safety and CE or FCC Certifications for EMC & Immunity. Note: For EN/IEC/IS/CE/FCC, test certificate to be provided from NABL/NABCB accredited Labs or internationally reputed test agencies along with detailed test reports.
xxxiv.	ONVIF Compliance	:	ONVIF Profile 'S'. The quoted models should appear on the ONVIF website and a confirmation certificate for the offered models to be provided.
xxxv.	MAC Address	:	The MAC address of the IP Cameras must be registered in the name of OEM supplying the Cameras.

2. **Scope of work:**

Supply	As per technical specification
Installation	<ol style="list-style-type: none"> 1. The bidder to prepare a site plan showing exact location of different type of cameras at various locations like parking areas, entrance/exit points, platforms, yards, waiting halls, ticket counters, offices, foot over bridges, circulating areas etc. as per site requirement in consultation with RailTel after the proper site survey. In general, 40 cameras have been planned at each station. The site plan shall be approved by RailTel. 2. Fix camera as per approved site plan & connect cameras on STP CAT-6 cable (RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2016 Revision 4.0 with all amendments) to nearest PoE Switch. Approximately, 25 meter STP CAT-6 cable and associated accessories to be provided by bidder along with each camera.
Commissioning	Free/Open source VMS to be installed in a server (server to be provided by RailTel) for approx. 40 camera/station and display video recording, playback and live display of cameras at stations as well as from any central location through a VMS client. OS for server, if required shall be provided by RailTel.
Warranty and AMC	<p>3 Years warranty after completion of installation and Commissioning</p> <p>5 Years AMC post warranty period</p>

SOR 3 P/T/Z (Pan/Tilt/Zoom) IP Colour Camera:**1. Technical specifications:****P/T/Z (Pan/Tilt/Zoom) IP Colour Camera:****1. Technical specifications:**

The Full HD P/T/Z (Pan/Tilt/Zoom) IP Colour Camera shall have the following minimum specifications:-

S. No.	Parameter	:	Specification
i.	Image Sensor	:	1/ 2.8" or larger, Progressive scan, CMOS sensor
ii.	Pixels	:	2.0 Mega Pixel Full HD (1920x1080)
iii.	Video Compression	:	H.264/H.265
iv.	Dual Stream	:	Dual H.264/H.265 Streams
v.	Video resolutions	:	a) For Main stream : i)1920x1080 (Full HD) ii)Configurable from Full HD to other HD/SD resolution b) For Second Stream: Configuration from D1 to other HD/SD resolutions.
vi.	Resolution and Frame Rate	:	Minimum 25 frames per second (FPS) for both the streams. Full HD@ 25 FPS with H.264/H.265 compression on one stream & D1@ 25 FPS with H.264/H.265 compression on other stream.
vii.	Minimum Illumination :		
	a) Colour Mode	:	0.5 Lux
	b) Night Mode (Black & White)	:	0.05 Lux
viii.	Shutter speed	:	Maximum shutter speed should be 1/8000 sec or higher.
ix.	Signal to Noise Ratio	:	≥ 45 dB
x.	Video Standard	:	PAL
xi.	Lens	:	a) Optical zoom 30x or better IR corrected lens

			suitable for Full HD Camera. b) Focal length of lens: Upper range shall be 125 mm or higher.
xii.	Digital zoom	:	12x or better
xiii.	Focus & Iris	:	Automatic with manual override
xiv.	Pan/Tilt adjustment	:	360° continuous pan; 0° to 90° tilt from horizontal plane

xv.	Preset speed	:	90°/sec ± 0.5° accuracy
xvi.	Pan/Tilt speed	:	1°/sec to 90°/sec
xvii.	Sector Blanking	:	Required. Camera 360 degree pan rotation to be divided in 8 sectors and any sector shall be blanked as required by the operator
xviii.	Preset Titling	:	The Camera shall allow the storage of up to 99 preset scenes with each preset programmable for 16 character titles
xix.	Data rate	:	i) 8 Mbps maximum for H.264/H.265 Video Compression ii) Shall work on 3 Mbps bit rate or less average for Full HD@ 25 FPS at Variable bit rate (VBR) on H.264/ individual (Single) stream with H.265 Video Compression
xx.	Video Streaming	:	Unicast and Multicast streams
xxi.	Text Superimposing	:	Camera shall support superimposing the title and date & time on the video
xxii.	Edge Storage	:	Edge Storage slot suitable for 64 GB SD/SDHC/SDXC memory or higher along with memory card.
xxiii.	Network Connectivity	:	Ethernet, 10/100 Base T
xxiv.	Discovery Interface	:	OEM interface to detect the Camera automatically and configure network settings
xxv.	Network Protocols	:	Suitable and required network protocol stack to work Camera in TCP/IP based Ethernet network environment. (As required for system working)
xxvi.	Web Server	:	Internal Web server required with embedded operating system.
xxvii.	Automatic Gain Control	:	Required

xxviii.	Back light Compensation (BLC) or High Light Compensation (HLC) or Automatic White Balance	:	Required
xxix.	Wide Dynamic Range (WDR)	:	Required
xxx.	Alarm Inputs / outputs	:	1 input & 1 output
xxxi.	Input Voltage	:	220V AC Voltage (Nominal) / 24V AC or DC/ 12VDC
xxxii.	Operating Temperature	:	0°C to + 50°C
xxxiii.	Operating Humidity	:	20 to 80% RH non-condensing
xxxiv.	Enclosure Protection	:	Vandal Proof Impact Resistant Aluminium enclosure with IP66 or NEMA-4 or better.
xxxv.	Regulatory Approvals/ Certifications	:	UL or EN or CE or IEC or BIS certification for Safety and CE or FCC Certifications for EMC & Immunity. Note: For EN/IEC/IS/CE/FCC, test certificate to be provided from NABL/NABCB accredited Labs or internationally reputed test agencies along with detailed test reports.
xxxvi.	Two way/Bidirectional Audio Input/Output	:	Required for Sound Detection.
xxxvii.	ONVIF Compliance	:	ONVIF Profile 'S'. The quoted models should appear on the ONVIF website and a confirmation certificate for the offered models to be provided.
xxxviii.	MAC Address	:	The MAC address of the IP Cameras must be registered in the name of OEM supplying the Cameras.

2. **Scope of work:**

Supply	As per technical specification
Installation	<ol style="list-style-type: none"> 1. The bidder to prepare a site plan showing exact location of different type of cameras at various locations like parking areas, entrance/exit points, platforms, yards, waiting halls, ticket counters, offices, foot over bridges, circulating areas etc. as per site requirement in consultation with RailTel after the proper site survey. In general, 40 cameras have been planned at each station. The site plan shall be approved by RailTel. 2. Fix camera as per approved site plan & connect cameras on STP CAT-6 cable (RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2016 Revision 4.0 with all amendments) to nearest PoE Switch. Approximately, 25 meter STP CAT-6 cable and associated accessories to be provided by bidder along with each camera.
Commissioning	Free/Open source VMS to be installed in a server (server to be provided by RailTel) for approx. 40 camera/station and display video recording, playback and live display of cameras at stations as well as from any central location through a VMS client. OS for server, if required shall be provided by RailTel.
Warranty and AMC	<p>3 Years warranty after completion of installation and Commissioning</p> <p>5 Years AMC post warranty period</p>

SOR 4. 4K UHD Bullet type IP Colour Camera:**1. Technical specifications:**

The 4K UHD Bullet type IP Colour Camera shall have the following minimum specifications:-

S. No.	Parameter	:	Specification
i.	Image Sensor	:	1/ 2.8" or larger, Progressive scan, CMOS sensor
ii.	Pixel Resolution	:	8.0 Mega Pixel Ultra HD (3840x2160) or Higher
iii.	Video Compression	:	H.264/MJPEG/ H.265
iv.	Streaming Capability	:	Dual streams with one H.264/H.265 Stream
v.	Video resolutions	:	a) For Main stream : i) Ultra HD (3840x2160) ii)Configurable from Ultra HD to other HD/SD Resolution. b) For Second Stream: Configuration from Full HD to other HD/SD resolutions.
vi.	Resolution and Frame Rate	:	Ultra HD (3840x2160) @ 25 FPS or more with H.264/H.265 compression on one stream & Full HD @ 15 FPS or more with H.264/H.265/MJPEG compression on other stream.
vii.	Minimum Illumination :		
	a) Colour Mode	:	0.5 Lux
	b) Night Mode (Black & White)	:	0.05 Lux
viii.	Shutter speed	:	Maximum shutter speed should be 1/8000 sec or higher
ix.	Signal to Noise Ratio	:	≥ 45 dB
x.	Video Standard	:	PAL
xi.	Motorized varifocal lens	:	Motorized Varifocal IR corrected lens suitable for 4K UHD Bullet type IP colour camera
xii.	Infrared	:	Built in Infrared illuminator with range 20m or more.
xiii.	Lens Mount	:	CS/C mount or any other mount.
xiv.	Day/Night Camera	:	Auto Day/Night Configuration
xv.	Data rate	:	16 Mbps maximum
xvi.	Video Streaming	:	Unicast and Multicast streams
xvii.	Edge Storage	:	Edge Storage slot suitable for 64 GB SD/SDHC/SDXC memory or higher along with

		memory card.
xviii.	Network Connectivity	: Ethernet, 10/100 Base T
xix.	Discovery Interface	: OEM interface to detect the Camera automatically and configure network settings
xx.	Network Protocols	: Suitable and required network protocol stack to work Camera in TCP/IP based Ethernet network environment. (As required for system working)
xxi.	Web Server	: Internal Web server required with embedded operating system.
xxii.	Automatic Gain Control	: Required
xxiii.	Back light Compensation (BLC) or High Light Compensation (HLC) or Automatic White Balance	: Required
xxiv.	Wide Dynamic Range (WDR)	: Required.
Xxv	Two way/Bi-directional Audio Input/Output	: Required for sound detection.
xxvi.	Alarm Inputs / outputs	: 1 input & 1 output
xxvii.	Input Voltage	: 220V AC Voltage(Nominal)/ 24V AC or DC/ 12V DC/ PoE
xxviii.	PoE	: IEEE 802.3af compliant
xxix.	Operating Temperature	: 0°C to + 50°C
xxx.	Humidity	: 20 to 80% RH non- condensing
xxxi.	Ingress Protection	: IP66 or NEMA4 or Better
xxxii.	Enclosure Protection	: Vandal Proof and Impact resistant.
xxxiii.	Regulatory Approvals/ Certifications	: UL or EN or CE or IEC or BIS certification for Safety and CE or FCC Certifications for EMC & Immunity. Note: For EN/IEC/IS/CE/FCC, test certificate to be provided from NABL/NABCB accredited Labs or internationally reputed test agencies along with detailed test reports.
xxxiv.	ONVIF Compliance	: ONVIF Profile 'S'. The quoted models should appear on the ONVIF website and a confirmation certificate for the offered models to be provided.
xxxv.	MAC Address	: The MAC address of the IP Cameras must be registered in the name of OEM supplying the Cameras.

2. **Scope of work:**

Supply	As per technical specification
Installation	<ol style="list-style-type: none"> 1. The bidder to prepare a site plan showing exact location of different type of cameras at various locations like parking areas, entrance/exit points, platforms, yards, waiting halls, ticket counters, offices, foot over bridges, circulating areas etc. as per site requirement in consultation with RailTel after the proper site survey. In general, 40 cameras have been planned at each station. The site plan shall be approved by RailTel. 2. Fix camera as per approved site plan & connect cameras on STP CAT-6 cable (RDSO Specification of IP Based Video Surveillance System Specification no. RDSO/SPN/TC/65/2016 Revision 4.0 with all amendments) to nearest PoE Switch. Approximately, 25 meter STP CAT-6 cable and associated accessories to be provided by bidder along with each camera.
Commissioning	Free/Open source VMS to be installed in a server (server to be provided by RailTel) for approx. 40 camera/station and display video recording, playback and live display of cameras at stations as well as from any central location through a VMS client. OS for server, if required shall be provided by RailTel.
Warranty and AMC	3 Years warranty after completion of installation and Commissioning 5 Years AMC post warranty period

PROFORMA FOR THE LONG-TERM MAINTENANCE SUPPORT

(To be signed by the O.E.M.)

To
The Executive Director/Operations,
RailTel Corporation of India Limited

I / We hereby confirm
and accept that against RailTel Tender No. ,
there is a requirement of Long Term Maintenance Support as per Clause 15. We
confirm that Long Term Maintenance Support shall be met by us directly or through
Authorized partner, as the case may be based on contracts. I / We have gone through
the requirement mentioned in the Tender document and shall provide services for the
offered supply items.

(Signature of Firm's Authorized Officer)
Seal

Signature of witness:

1.
2.

**Executive Director,
RailTel Corporation of India Ltd.**

Dated:

.....
.....
.....

Subject: Manufacturer Authorisation form (MAF) to M/s for

.....

Ref: GeM Bid No.....dated.....

Dear Sir,

We, M/s....., are established and reputed manufacturer and service provider of
.....(Product details), having our registered office at

.....

We hereby authorise M/s (bidder name), Office
..... to participate in bid and subsequently upon
award of the bid to execute the supply and Installation & Commissioning of our range of
products against your above said bid.

We further extend our warranty for years for our range of products offered by M/s
..... against the above-said bid.

Thanking you,
Best regards,

Authorised Signatory

Consignee Details

The details of 204 Railway stations where the Equipment's/Items are going to supply, install and commission.

Zone and Div.-Wise Bifurcation for A1 and A Category Stations for NR				
Cat ego ry	RailTel- NR	Rly stn	Railway-Zone	Division
A1	4	Chhapra Jn.	NER	BSB
		Amritsar	NR	FZR
		Ludhiana	NR	FZR
		Bareilly	NR	MB
A	77	Fatehpur	NCR	ALD
		Mirzapur	NCR	ALD
		Tundla	NCR	ALD
		Phaphund	NCR	ALD
		Etawah	NCR	ALD
		Lalitpur	NCR	JHS
		Orai	NCR	JHS
		Banda	NCR	JHS
		Mahoba	NCR	JHS
		Ballia	NER	BSB
		Siwan Jn.	NER	BSB
		Deoria Sadar	NER	BSB
		Azamgarh	NER	BSB
		Belthara Road	NER	BSB
		Mau Jn.	NER	BSB
		Rudrapur City	NER	IZN
		Kathgodam	NER	IZN
		Basti	NER	LJN
		Khalilabad	NER	LJN
		Gonda Jn.	NER	LJN
		Muzaffarnagar	NR	DLI
		Panipat	NR	DLI
		Sonipat	NR	DLI
		Karnal	NR	DLI
		Ballabgarh	NR	DLI
		Faridabad	NR	DLI
		Gurgaon	NR	DLI
		Rohtak	NR	DLI

	Pathankot	NR	FZR
	Firozpur Cantt.	NR	FZR
	Beas	NR	FZR
	Phagwara	NR	FZR
	Jalandhar City	NR	FZR
	Jalandhar Cantt.	NR	FZR
	Chakki Bank	NR	FZR
	Udhampur	NR	FZR
	Janghai	NR	LKO
	Akbar Pur	NR	LKO
	Shahganj	NR	LKO
	Faizabad	NR	LKO
	Jaunpur	NR	LKO
	Unnao	NR	LKO
	Barabanki	NR	LKO
	Rae Bareli Jn.	NR	LKO
	Partapgarh	NR	LKO
	Sultanpur	NR	LKO
	Ayodhya	NR	LKO
	Bhadohi	NR	LKO
	Rampur	NR	MB
	Shahjahanpur	NR	MB
	Hardoi	NR	MB
	Moradabad	NR	MB
	Chandausi	NR	MB
	Hapur	NR	MB
	Roorkee	NR	MB
	Jagadhri	NR	UMB
	Rajpura Jn.	NR	UMB
	Kalka	NR	UMB
	Bathinda Jn.	NR	UMB
	Patiala	NR	UMB
	Sirhind Jn.	NR	UMB
	Bhilwara	NWR	AII
	Rani	NWR	AII
	Aburoad	NWR	AII
	Falna	NWR	AII
	Marwar Jn.	NWR	AII
	Lalgarh	NWR	BKN
	Shri Ganganagar	NWR	BKN
	Suratgarh	NWR	BKN
	Hanumangarh Jn.	NWR	BKN
	Phulera	NWR	JP

		Alwar	NWR	JP
		Bandikui	NWR	JP
		Jaipur Gandhinagar	NWR	JP
		Pali Marwar	NWR	JU
		Nagaur	NWR	JU
		Barmer	NWR	JU

Zone and Div.-Wise Bifurcation for A1 and A Category Stations for SR

Category	RailTel-SR	Rly stn	Railway-Zone	Division
A1	0			
A	49	Kakinada Town	SCR	BZA
		Samalkot Jn.	SCR	BZA
		Tuni	SCR	BZA
		Kurnool Town	SCR	HYB
		Jalna	SCR	NED
		Nagarsol	SCR	NED
		Manchiryal	SCR	SC
		Chengalpattu Jn.	SR	MAS
		Jolarpettai Jn	SR	MAS
		Katpadi	SR	MAS
		Kovilpatti	SR	MDU
		Tuticorin	SR	MDU
		Virudhunagar Jn	SR	MDU
		Kanhangad	SR	PGT
		Kannur	SR	PGT
		Kasargod	SR	PGT
		Mangalore Central	SR	PGT
		Palakkad Jn.	SR	PGT
		Payyannur	SR	PGT
		Shoranur Jn.	SR	PGT
		Thalassery	SR	PGT
		Tirur	SR	PGT
		Vadakara	SR	PGT
		Erode Jn	SR	SA
		Karur Jn.	SR	SA
		Salem Jn	SR	SA
		Tiruppur	SR	SA
		Kumbakonam	SR	TPJ
		Mayiladuthurai Jn.	SR	TPJ
		Thanjavur Jn	SR	TPJ

		Villupuram Jn.	SR	TPJ
		Alappuzha	SR	TVC
		Aluva	SR	TVC
		Chengannur	SR	TVC
		Ernakulam Town	SR	TVC
		Kanniyakumari	SR	TVC
		Kayankulam Jn	SR	TVC
		Kottayam	SR	TVC
		Nagercoil Jn	SR	TVC
		Tiruvalla	SR	TVC
		Davangere	SWR	MYS
		Shimoga Town	SWR	MYS
		Bangalore Cantt.	SWR	SBC
		Bangarpet	SWR	SBC
		Kengeri	SWR	SBC
		Krishnarajapuram	SWR	SBC
		Sri Sathya Sai Prashanthi Nilayam	SWR	SBC
		Bijapur	SWR	UBL
		Dharwad	SWR	UBL

Zone and Div.-Wise Bifurcation for A1 and A Category Stations for ER

Category	RailTel-ER	Rly stn	Railway-Zone	Division
A1	2	Mughalsarai Jn.	ECR	MGS
		Gaya Jn.	ECR	MGS
A	40	Bhadrak	ECOR	KUR
		Khurda Road	ECOR	KUR
		Jajpur-Keonjhar Road	ECOR	KUR
		Palasa	ECOR	KUR
		Brahmapur	ECOR	KUR
		Srikakulam Road	ECOR	WAT
		Parashnath	ECR	DHN
		Buxar	ECR	DNR
		Bakhtiyarpur Jn.	ECR	DNR
		Patna Sahib Jn.	ECR	DNR
		Ara Jn.	ECR	DNR
		Kiul Jn.	ECR	DNR
		Mokama	ECR	DNR
		Jamui	ECR	DNR
		Rajendra Nagar(T)	ECR	DNR
		Sasaram Jn.	ECR	MGS

		Anugraha Narayan Road	ECR	MGS
		Dehri-On-Sone	ECR	MGS
		Khagaria Jn.	ECR	SEE
		Barauni Jn.	ECR	SEE
		Madhupur	ER	ASN
		Bandel	ER	HWH
		New Farakka	ER	HWH
		Jamalpur	ER	MLDT
		Naihati Jn.	ER	SDAH
		Coochbehar	NFR	APDJ
		Purnea Jn	NFR	KIR
		Jogbani	NFR	KIR
		Raiganj	NFR	KIR
		Kamakhya	NFR	LMG
		Silchar	NFR	LMG
		Bongaigaon	NFR	RNY
		Barpeta Road	NFR	RNY
		Rangiya Jn.	NFR	RNY
		Dibrugarh Town	NFR	TSK
		Tinsukia	NFR	TSK
		Jorhat Town	NFR	TSK
		Bhilai Power House	SECR	R
		Shalimar	SER	KGP
		Hatia	SER	RNC

Zone and Div.-Wise Bifurcation for A1 and A Category Stations for WR

Category	RailTel-WR	Rly stn	Railway-Zone	Division
A1	0			
A	32	Akola	CR	BSL
		Amravati	CR	BSL
		Badnera	CR	BSL
		Burhanpur	CR	BSL
		Chalisgaon	CR	BSL
		Shegaon	CR	BSL
		Ballarshah	CR	NGP
		Chandrapur	CR	NGP
		Wardha	CR	NGP
		Kolhapur	CR	PA
		Ahmednagar	CR	SUR
		Latur	CR	SUR
		Bina	WCR	BPL

		Habibganj	WCR	BPL
		Hoshangabad	WCR	BPL
		Maihar	WCR	JBP
		Pipariya	WCR	JBP
		Rewa	WCR	JBP
		Bharatpur	WCR	KOTA
		Gandhidham	WR	ADI
		Mahesana	WR	ADI
		New Bhuj	WR	ADI
		Palanpur	WR	ADI
		Viramgam	WR	ADI
		Navsari	WR	BCT
		Udhana	WR	BCT
		Valsad	WR	BCT
		Vapi	WR	BCT
		Bhavnagar Terminus	WR	BVC
		Veraval	WR	BVC
		Chittorgarh Jn.	WR	RTM
		Nagda	WR	RTM

(Shaminder Singh)
Executive Director/Project
For & on behalf of RailTel Corporation of India Ltd.