

**OFFICE OF THE DIVISIONAL MANAGER CTU & DIRECTOR TRANSPORT,
UNION TERRITORY; CHANDIGARH,**

e—TENDER NOTICE

E-tenders (Online tenders) are invited for the **Providing Smart Gate Control and Automation System for Entry/Exit of Buses with Electro Mechanical Boom Barrier at ISBT, Sector 43, Chandigarh** in two bid system i.e. technical bid and financial bid which are to be submitted separately. The offer shall be valid for three months (90 days) from the date of opening of technical bid. The prospective bidders can also visit office of the CTU during office hours on any working day by contacting General Manager, CTU-I, Asstt. Controller (F&A), CTU-II/P.M.A.-IV, Plot No. 701, Industrial Area, Phase I, Chandigarh for any kind of information with regard to the job/tender. The detailed terms & conditions of the tender documents may be downloaded from the website of Chandigarh Administration i.e. <http://etenders.chd.nic.in>.

1. Prospective bidders are required to quote their rates including installation/freight charges, civil work and IT Equipments required for the installation along with Comprehensive Maintenance Charges (CMC) excluding taxes (complete job). The taxes shall be as applicable from time to time.
2. EMD of Rs. 2,00,000/- (Rupees Two Lakhs only) must be submitted in physical form in the shape of Bank Draft drawn on any scheduled bank at Chandigarh in favour of the Director Transport, Plot No.701, Industrial Area, Phase-I, Union Territory, Chandigarh in the office of Divisional Manager, CTU & Director Transport, U.T., Chandigarh, Plot No. 701, Industrial Area, Phase I, Chandigarh on or before **02.05.2017 up to 14.00 hours**. Tenders without submission of Earnest Money Deposit (EMD) through bank draft in physical form within the stipulated date and time shall not be considered and shall be rejected out rightly.
3. The detailed bid documents can be downloaded from the website of Chandigarh i.e. <http://etenders.chd.nic.in/nicgep/app>. The pre-bid will be held on **12.04.2017 at 11.30 A.M.** Tender documents completed in all respect duly signed must be uploaded on the above said website on or before **02.05.2017 up to 14.00 hours**. The Technical bids will be opened on **02.05.2017 at 15.00 hours**. Financial Bids of only those bidders will be opened who qualify the technical bids and the date for which will be intimated later. No tender shall be accepted in physical form under any circumstances.
4. The Divisional Manager, CTU & Director Transport, U.T., Chandigarh shall have every right to (a) cancel / withdraw / amend the advertisement or extend the due date at his sole discretion or (b) accept or reject any tender without assigning any reason.
5. The Prospective bidders can approach the Nodal Officer, e-tendering, CTU Chandigarh on any working day between 9.00 a.m. to 5.00 p.m. in case any query/clarification regarding e-tendering process HELPLINE No. 0172-2740641of Department of Information Technology, Chandigarh administration, Sector 9-D, Chandigarh.

Divisional Manager CTU &
Director Transport,
U.T., Chandigarh.



CHANDIGARH TRANSPORT UNDERTAKING

**O/o Director Transport UT, Chandigarh,
Plot No. 701, Industrial Area Phase-1, Chandigarh.**

**REQUEST FOR PROPOSAL FOR PROVIDING SMART
GATE CONTROL AND AUTOMATION SYSTEM FOR
ENTRY/EXIT OF BUSES WITH ELECTRO MECHANICAL
BOOM BARRIER AT ISBT, SECTOR 43, CHANDIGARH
INCLUDING COMPREHENSIVE WARRANTY OF 5 YEARS**

27.03. 2017

Director,
Chandigarh Transport Undertaking,
O/o Director Transport UT, Chandigarh
Plot No. 701, Industrial Area Phase-1,
Chandigarh
Tel No: 0172-2679002
E-mail: ctu-chd@nic.in

CHANDIGARH TRANSPORT UNDERTAKING

O/o Director Transport UT, Chandigarh, Plot No. 701, Industrial Area
Phase-1, Chandigarh

Tel No: 0172-2679002

E-mail: ctu-chd@nic.in

**REQUEST FOR PROPOSAL FOR PROVIDING SMART GATE CONTROL AND
AUTOMATION SYSTEM FOR ENTRY/EXIT OF BUSES WITH ELECTRO MECHANICAL
BOOM BARRIER AT ISBT, SECTOR 43, CHANDIGARH INCLUDING COMPREHENSIVE
WARRANTY OF 5 YEARS**

E-PROCUREMENT SYSTEM

Time Schedule for the bids:

Bid Reference	:	Dated: 27/03/2017
Date of commencement of downloading of bid document	:	03.04.2017 at 11:00 am onwards
Pre-bid meeting	:	12.04.2017 at 11:30 am
Last date and time for bid submission/uploading of bid in e-procurement platform http://etenders.chd.nic.in	:	02.05.2017 Up to 14:00 P.M.
Date and time of opening of technical bids	:	The bids will be opened online by the Authorized Officers on 02.05..2017 at 15:00 P.M.
Date and time of opening of Financial Bids	:	Will be intimated to technically responsive bidders
Place of opening of bids and address for communication	:	Chandigarh Transport Undertaking O/o Director Transport UT, Chandigarh Plot No. 701, Industrial Area Phase-1, Chandigarh

Note:

- (1) In the event of the specified date of opening of bids being declared a holiday for the Purchaser, the bids shall be opened on the next working day at the same time and venue.
- (2) Completed bids shall be uploaded on the e-procurement platform by the Bidders using their user ID and addressed to the **Director, CTU** in the manner described under Instructions to Bidders Section II of Bid Documents on or before the stipulated date & time.

SECTION -1

DISCLAIMER

This RFP is being issued by Divisional Manager, CTU & Director Transport, Union Territory, Chandigarh for inviting tenders for Providing Smart Gate Control and Automation System for Entry/Exit of buses with Electro Mechanical Boom Barrier at ISBT, Sector 43, Chandigarh including comprehensive warranty of 5 years.

It is hereby clarified that this RFP is not an agreement and is not an offer or invitation by Chandigarh Transport undertaking to any party hereunder. The purpose of this RFP is to provide the bidder(s) with information to assist in the formulation of their proposal submission. This RFP document does not purport to contain all the information bidder may require. This RFP document may not be appropriate for all the persons, and it is not possible for Chandigarh Transport Undertaking to consider particular needs of each bidder. Each bidder should conduct its own investigation and analysis, and should check the accuracy, reliability and completeness of the information in this RFP document and obtain independent advice from appropriate sources. Chandigarh Transport Undertaking and their advisors make no representation or warranty and shall incur no liability financial or otherwise under any law, statute, rules or regulations or otherwise as to the accuracy, reliability or completeness of the RFP document.

Chandigarh Transport Undertaking may in their absolute discretion, but without being under any obligation to do so, update, amend or supplement in information in this RFP document.

1. About the Project

CTU desires to have Smart Parking Management at ISBT, Sector-43, Chandigarh by Automating Entry and Exit of the buses by Installing Electromechanical boom barriers and giving complete solution of Automated Gate/Access control System. There are close to 2000 buses of STUs which enter and exit at ISBT-43. To have the System in place it shall entail:-

- Supply and Installation of Electro Mechanical Boom Barrier, Ticket Dispenser/Acceptor, ANPR Camera, Fast Tag (UHF) based Technology.
- Supply and Installation of Welcome Display, Light Signals and Incident Cameras.
- Parking Management Software consists of time stamping of entry of buses/exit of buses, amount calculation based on duration of bus haltage at ISBT-43, recognition of pre-cash loaded RFID tags/number plates reading through ANPR Camera etc., entire software Parking Management System will be as per requirement/customization of CTU.
- Developing MIS for intelligent use of information.
- The successful Bidder may have to integrate with existing Duty Roaster of this Undertaking and generation of MIS reports based on Driver No., Bus No. etc.
- Civil Infrastructure required and associated work.
- Comprehensive maintenance is for 5 years from date of handover.

2. Scope of Project:-

CTU has implemented computerization to some extent; however CTU is inclined to hire the services of Technical Partner for installing and implementing Automation of Smart Parking Management with Electro Mechanical Barrier with parking Management Software.

The Technical partner shall be responsible for the following:-

- Automatic Boom Barrier
- Automatic Ticket Dispenser and Acceptor Machine

- Bar coding ticketing through Automatic ticket dispenser machine functionality for daily pass or return journey through registration number of the bus.
- Pre-paid smart RFID Tags for monthly payment and other periodic payments.
- GUI Parking Management Software Application having computerized cash collection functionality with automatic boom barrier operation, Image capture of bus through ANPR Camera, Bus images review and Integration.
- Developing MIS reports as per requirement of CTU

3. Term of Project:-

The term of the project will be five years including Comprehensive Maintenance period depending upon satisfactory performance and subject to fulfilment of parameters specified in RFP.

4. BID SECURITY / EARNEST MONEY DEPOSIT (EMD) –

- 4.1 The Bidder shall furnish separate Bid security (hereinafter also referred to as Earnest Money Deposit” (EMD) of Rs.2.00 lakh (Rs. Two Lakh only), w.r.t. part of this Bid. The bid security shall be sealed in a separate sealed envelope super scribed “Earnest Money Deposit” for Bid due on 02.05.2017 upto 15.00 hours for PROVIDING SMART GATE CONTROL AND AUTOMATION SYSTEM FOR ENTRY/EXIT OF BUSES WITH ELECTRO MECHANICAL BOOM BARRIER AT ISBT, SECTOR 43, CHANDIGARH INCLUDING COMPREHENSIVE WARRANTY OF 5 YEARS to be deposited. The Earnest Money Deposit (EMD) with validity period of at least 90 days beyond the financial bids validity period should be in the form of “Bank Guarantee” payable in favour of Divisional Manager, CTU, &, Director Transport, Union Territory, Chandigarh payable /en-cashable at Chandigarh of any nationalized / Scheduled Commercial Bank, operating in India.
- 4.2 Any Bid not accompanied with valid and required as per RFP Bid Security / EMD in the acceptable form will be liable to be rejected by the Purchaser considering it as non-responsive.

5. **Bidding Criteria:-**

(i) Bidders are required to quote their rates including installation/freight charges, civil work and IT Equipments required for the installation along with Comprehensive Maintenance Charges (CMC) for a period of six years excluding taxes (complete job). The taxes shall be as applicable from time to time. The lowest bidder (L1) shall be successful.

(ii) The prospective bidders shall quote the rates as per the detail of infrastructure given in Annexure "A".

6. **Eligibility Criteria**

i). Submission of EMD

ii). **Technical Qualification**

- Experience of Similar nature of minimum 2 Projects:- Presentation of live projects/projects executed completely by the prospective bidders will be given to the CTU committee so constituted by Director Transport, U.T. Chandigarh and Divisional Manager, Chandigarh Transport Undertaking. Prospective bidders who will not demonstrate the live completed projects will be out rightly rejected. In addition to Performance certificate from the company where project has been executed is also to required be uploaded along with technical bid.

- Authorization Certificate from the Manufacturer issued by the Company/Manufacturer for which the automatic boom barrier is to be supplied to be uploaded.

iii). **Financial Qualification** (supporting documents to be uploaded with technical bid)

- Financial Turn over minimum 10 Lakhs.

7. **Submission of Bid**

Technical Bid and Price Bid to be submitted/uploaded separately online at <http://etenders.chd.nic.in/>.

8. Important Dates of Bidding:-

Last date for uploading technical bid:-	02.05.2017
Date of Pre-bid meeting:-	12.04.2017
Date of opening of Financial Bid:-	Will be separately intimated.

9. Payment Terms:-

- 1). No upfront charges will be paid to the successful bidder.
- 2). Payment Schedule shall be as under:-
 - (i) After satisfactory installation of the complete hardware Equipments :- 60%
 - (ii) After successful functioning of the Project complete in all respects at ISBT/43 :- 10%
 - (iii) In the first month of each year (starting from 2nd year of commencement each year of the project) :- 6%

10. DISCHARGE OF BID SECURITY OF UNSUCCESSFUL BIDDERS(S)

10.1 The Bid Security of unsuccessful Bidders will be discharged / returned as promptly as possible after the expiry of Bid validity period and / or within 15 days from the date of signing the agreement/Issue of Letter of Award with the successful bidder.

11. DISCHARGE OF BID SECURITY OF SUCCESSFUL BIDDER(S)

11.1 The bid security of the Successful Bidder(s) shall be discharged only after the Successful Bidder(s) furnishes the Contract Performance Security as required.

11.2 If the successful Bidder(s) fails to furnish the Contract Performance Security within the requisite period then the Bid Security shall be liable to be forfeited by the Purchaser.

12. BID VALIDITY

12.1 The bid shall remain valid and open for acceptance for a period of 90 days from the date of opening.

12.2 In exceptional circumstances prior to expiry of the original bid validity period, the Purchaser may request the Bidder for extension in the period of validity. A Bidder may refuse the request without becoming liable for forfeiture of EMD. However this bid may be rejected by the Purchaser on such refusal. Moreover, the bidder agreeing to the request will not be permitted to modify his Bid

13. Time Limit

The time limit for installation and completion will be three months from the date of issue of LOI.

14. PERFORMANCE SECURITY

Within 30 days of dispatch of the '**Letter of Acceptance**' from the Purchaser, the successful Bidder shall furnish to the Purchaser a Performance Security in the shape of Bank Guarranty for an amount equivalent to 5% of the total Contract value for entire CMC period with 03 (Three) months extra period from the date of final acceptance.

15. System Design:-

Design and Architecture of the complete solution is to be got approved from the Director Transport, Chandigarh and Divisional Manager, Chandigarh Transport Undertaking before execution of the work.

16. General Terms and Conditions:-

1. The successful bidder (firms/Companies) is liable to install the complete system as per BOQ/Schedule of requirements i.e. Providing Smart Gate Control And Automation System For Entry/Exit Of Buses With Electro Mechanical Boom Barrier At ISBT, Sector 43, Chandigarh Including Comprehensive Warranty Of 5 Years within Two (2) months from the date of issue of rate acceptance letter. In case, the successful bidder backs out, the Earnest Money Deposited shall be forfeited and the bidder shall be black listed for any future contract as per Chandigarh Administration, Finance Department Notification No. 1927- F&PO(3)-2009/1170 dated 27.2.2009.
2. The work shall start immediately from the date of issuance of work order. Installation/Successful implementation to be done within Two (2) months of placing the work order failing which penalty of 1% of the total

contract value per week will be imposed.

3. The successful bidder will give training to operate the system to the CTU employees without any additional cost for at least three months.
4. The successful bidder (firms/Companies) is liable to maintain the complete system in functioning condition at all time i.e. 24 hrs x 7 days round the clock till entire CMC period and attend the call of the department immediately for any type of repair/defect/malfunctioning during CMC period immediately without any charges in this regard. In case of failure to do so within 24 hours, a penalty of Rs.500/- per hour shall be imposed up to 24 hours. After the expiry of period of 24 hours, a penalty of Rs.1000/- per hour shall be imposed. All the spare parts or any other part for functioning of the system and for the reasons whatsoever is in the scope of the bidder. If successful bidder will not rectify the said defect within 3 days from the time of complaint and if repetition of such defects will occur more than three times in a month for reasons whatsoever then CTU will be at liberty to cancel the contract and forfeit performance security.
5. **Arbitrator**: In case of a dispute arising between the parties with regard to interpretation of these terms and Agreement or their fulfilment, the dispute shall be referred to the Secretary Transport, Chandigarh for arbitration, who will be sole Arbitrator and whose decision shall be final and binding on both the parties. The CTU and the supplier or his nominee both agree to accept the Sole Arbitrator. Further no party shall have the right to go to the court of law for any dispute under this agreement for their fulfillment unless the dispute is first referred to the Sole Arbitrator specified under the Agreement.
6. **Jurisdiction**: Any dispute or difference or claim etc, shall be subject to the exclusive jurisdiction of the courts situated at Chandigarh only. No other court shall have the jurisdiction to entertain or try any matter concerning this supply tender.

Note:- Any conditional terms and conditions mentioned by the firm in their covering letter or in the tender documents will not be considered.

UNDERTAKING BY THE BIDDER ON THE STAMP PAPERS OF RS.15/-.

1. I, Shri _____ S/o Shri _____
_____ working as _____ of the firm namely
M/s. _____ are duly authorized to apply for this
Tender.
2. I, the undersigned, have read and understood the above detailed terms and
conditions as well as Tender Notice and undertake to abide by them.
3. I under that the I/my firm/company has not been blacklisted by the Department
of Govt. of India or any State Govt. or any Union Territory or any Public
undertaking.

Signature of the Tenderer/bidder
Name of the
Tenderer/bidder _____
Address _____
Tel No. _____
Email I.D. _____
PAN/TAN No. _____

Annexure – 'A'

Detail of Components required for Boom Barrier for ISBT Sector 43.

There will be two Gates/Lanes at Entry and two Gates/Lanes at Exit. One Lane will be Fast Tag Lane and other will be ordinary lane. There will be one Pay booth near to the exit Gate.

BOQ		
S.No.	Item Description	Qty.
(A)	PARKING ENTRY/EXIT STATIONS	
1	Supply Installation Testing Commissioning of Automatic Boom Barrier 5 to 6 Meter length of below PLC controller etc. to be integrated with other equipments for smart parking management as per Technical Specifications enclosed.	4
2	Supply Installation Testing Commissioning of Vehicle Loop Detectors & Coils (Presence and exit) for Vehicle Detection and Safety Loop for Barrier with the technical specification enclosed:- i) Two Loop Detectors shall be supplied with Boom Barrier to enable connection with induction loops. ii) One of the loop is triggering loops which first detects the presence of vehicles and then alert the system and keeps its ready for entry/exit. iii) The other loop is closing/safety loops which activates the barrier to close when there is no vehicle over the loop.	8
3	Supply Installation Testing Commissioning of Long Distance UHF Reader (with read range from 06 to 10 Meters) & 2 way controller complete in all respects as per site requirement and technical Specifications enclosed.	2
4	UHF Vehicle Fast Tags with read range from 06 to 10 Meter with operating Frequency as per technical specifications enclosed.	As per Requirement
5	Supply Installation Testing Commissioning of Incident Camera (D/N) Vision HD 12 mm F/2.0 Mega pixel complete in all respects.	6
6	Supply Installation Testing Commissioning of Entrance camera (D/N) Vision HD 12 mm F/2.0 Lens for ANPR/ LPR for parking system.	4
7	UPS BR 2000 G- IN 2 KVA, Inbuilt Battery	4
8	Feeder Panel for AC power supply complete in all respects as per site Requirement and Specifications enclosed.	2
9	Supply Installation of Camera Poles for mounting above said cameras	6 or as per requirement
10	Supply Installation of Traffic Signal Light (Red + Green) at entrance/exit gate	4
11	Supply Installation of Welcome Display as per Specification enclosed	1
12	Supply Installation of Speed Bumps & Breakers [250 x 350 x 50mm] PVC Coated fitted with reflector for night vision for capacity up to 15 Tons.	50 Mtr.
13	Supply Installation Testing Commissioning PVC coated Safety Bollard x 36" Length of High Quality	120 Nos
14	Network Switch with 8 ports 10/100Mbps	As per Requirement
15	Automatic Parking Ticket Dispenser with Cabinet and making weather proof arrangement having an arrangement for keyboard to enter Registration Number by the driver before entering the bus stand and dispensing the ticket.	2
16	The amount of Parking to be paid by the Driver will automatically be calculated by the Parking Management Software and collection will be	2

	made by the CTU employee trained by successful bidder for operation of the system.	
18	VFD (vacuum Fluorescent Display 20x2 Characters)	2
(B) PARKING PAY STATION		
1	Supply Installation Testing Commissioning of Parking POS PC with following components and as per software features enclosed:- i) Intel Core 2 Duo Processor with Processor speed 3.33 GHz ii) 4GB RAM iii) 500 GB HDD iv) DVD Writer v) LAN interface vi) 19"LCD Color Screen vii) Keyboard & Mouse viii) 2 serial, 1 parallel & 4 USB ports ix) Licensed Window 8.1 OS x) Laser Printer	1
2	UPS 2 KVA, Inbuilt Battery Make:- Microtek/Luminous	1
3	Ticket Validator Machine for Validation	1
4	Barcoade scanner	1
5	Programmable Cashier Keyboard	1
6	POS System PC Display LED / TFT 19 Inch	1
7	Cashier Cash Tray	1
8	User Fare Display 20x2 Character	1
9	Customer Receipt Printer with POS 58mm paper width	1
10	Network Router (4G LTE WiFi Router) 4 Ports,10/100 lan & DTS 300 Mbps	1
11	Network Switch [TP-Link TLSF1008D 8-Port 10/100 Mbps]	3
12	Cat 6 Network Cable	As per Requirement
13	Power Cable ISI Marked	As per Requirement
14	PVC Conduit ISI Marked Heavy Duty	As per Requirement
(C) PARKING SERVER STATION		
1	Supply Installation Testing Commissioning of Parking Server Station with following components and as per software features enclosed:- i) Intel Core i5 Processor with Processor speed 3.1 GHz ii) 4GB RAM iii) 1 TB HDD iv) DVD Writer v) LAN interface vi) 19"LCD Color Screen vii) Keyboard & Mouse viii) 1 serial, 1 parallel & 4 USB ports ix) Licensed Window 8.1 OS	1
2	Network Router (4G LTE WiFi Router) 4 Ports,10/100 lan & DTS 300 Mbps	1
3	Network Switch with 8 ports 10/100Mbps	1
4	UPS BR 2000G-IN 2 KVA Built in Battery	1
5	Server System Display LED / TFT 19 Inch	1
6	Dome Camera With 2 Megapixel 1080P	1
7	Network Video Recorder with 16 Channels with 4 TB Hard Drive	1

(D)	CIVIL WORK & INSTALLATION OF EQUIPMENTS	
1	Concrete Flooring for Fixing of Above Components (Including Dismantling of Existing Concrete If Required) Complete in All Respects As per Requirements/Conditions or any other Associated work.	1 job

Note:- The Rates are to be quoted for complete Smart Gate Automation System consisting above components on Per Job basis(excluding taxes) as per BOQ, Bidder shall be decided on the basis of total cost (Excluding Taxes).

Technical Description/Specification of Items

Sr. No.	Item Description	Technical Specifications																										
1.	Vehicle Loop Detector	Supply voltage: 230V AC , 115V AC, 24V DC/AC, 12V DC/AC Voltage tolerance AC: +10% / -15% Voltage tolerance DC: ±15% Power Consumption: 4.5VA Output relays: 240V/5A Operating temperature: -20°C to +65°C Storage temperature: -40°C to +85°C Frequency range: 20 kHz to 170 kHz Reaction time: 10ms Signal holding time: Unlimited / limited when loop is permanently covered 10 minutes Sensitivity: Adjustable in 4 increments Loop inductance: Total loop plus connection wiring: 50µH to 1000µH. Ideal is 100µH to 300µH Size of Housing : 78 x 40 x 108 mm Loop Connection wiring Maximum Length 20 Meters twisted at least 20 times per meter																										
2.	Software Features (should be able to see remotely Internet connection will be provided by CTU)	(i) Interactive GUI (ii) Capable with Image Capturing of License Number Plate of incoming bus at Entry/Exit Point (iv) All entry/exit data of the buses will be saved in Database (v) Customize reports generation by number of vehicle inside the parking lot in any given time (vi) To search the report by Vehicle No., Entry/Exit Date & Time (vii) Integration with Boom Barrier Loop Detector. (viii) Integration of S/W with existing S/W of Duty Roaster of CTU (ix) Any other requirement as per CTU.																										
3.	Loop Detector Coil Loop Cable	100% copper tin coating feeder cable for vehicle presence 1.8mm in diameter 200 meters Totally 1. 600V for voltage; 2. Conductor: copper coating with tin; 3. Teflon material for insulation; 4. Diameter: 1.8mm 5. total length: 50 meters;																										
4.	Welcome Display (VMS)	P10 outdoor led display module <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Item</th> <th style="text-align: left;">Specification</th> </tr> </thead> <tbody> <tr> <td>Pixel Pitch (mm)</td> <td>10</td> </tr> <tr> <td>Pixel LED</td> <td>DIP546</td> </tr> <tr> <td>Pixel Density (dot/m²)</td> <td>10000</td> </tr> <tr> <td>Pixel Configuration</td> <td>1R</td> </tr> <tr> <td>Module Size (Lmm*Hmm)</td> <td>5.0 mtr x 0.16 mtr</td> </tr> <tr> <td>Brightness(CD/m²)</td> <td>5000</td> </tr> <tr> <td>Best Viewing Angle</td> <td>45°H/100°V</td> </tr> <tr> <td>Drive Mode</td> <td>Constant Current drive 1/4 scan</td> </tr> <tr> <td>Drive IC</td> <td>74HC595</td> </tr> <tr> <td>Working Voltage</td> <td>DC 5V</td> </tr> <tr> <td>Environment Temperature</td> <td>Storage: -40°C~90°C Operation: -30°C ~+ 50°C</td> </tr> <tr> <td>Blind Spot Rate</td> <td>Less than.0003(LED display industry standard)</td> </tr> </tbody> </table>	Item	Specification	Pixel Pitch (mm)	10	Pixel LED	DIP546	Pixel Density (dot/m ²)	10000	Pixel Configuration	1R	Module Size (Lmm*Hmm)	5.0 mtr x 0.16 mtr	Brightness(CD/m ²)	5000	Best Viewing Angle	45°H/100°V	Drive Mode	Constant Current drive 1/4 scan	Drive IC	74HC595	Working Voltage	DC 5V	Environment Temperature	Storage: -40°C~90°C Operation: -30°C ~+ 50°C	Blind Spot Rate	Less than.0003(LED display industry standard)
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		Working Humidity	5%-85%
		MTBF	≥10000hours
		Lifespan	≥100000hours

5	Boom Barrier	<p>Tech Specs – Boom Length – 5.0 to 6.0 mtr Type – Electromechanical only Closing / Opening Time – 04 sec to 10 sec configurable Operating Voltage – 100 V to 240 V, Freq. 50 Hz – 60 Hz Operating Temperature– Degree of protection /enclosure rating- IP 54/55/44 Temp. Range 0 – 50 C</p>
6	VHF Reader	<p>i) Range-865-867 Mhz ii) Built in antenna/RFID inlay iii) Reading Range – upto 7 mtr to 12 mtr, Software adjustable iv) Protection rating IP 64 v) Operating Temp- 0 to 50 C vi) Interface – Rs.485, Rs.232 vii) Max Power – Max 1 watt (configurable)</p>
7	Feeder Panel	<p>Powder Coated MS Sheet of box size 3'-0x2'-0x1'-3" and 16Gauge sheet.</p>
8	NVR	<p>All in one recording solution for network surveillance systems of up to 16 channels. An intelligent IP storage device that provides both, a professional video recording solution and ease of operation.</p> <ul style="list-style-type: none"> • Fully featured video recording solution for up to 16 channels. • Robust, secure operation – instant real time access to video • Remote viewing via Video Security App and Video Client • Integrates to full line of IP camera's • Supports for Real Time streaming protocols (RSTP), NVIF profile, PSIA • Pre installed with software having following features:- <p>Main Window:</p> <p>Screen: A multi-channel display area containing up to 16 connected cameras and microphones and all necessary controls to operate and setup the system.</p> <p>Quick Playback: Start video playback of live camera with a few clicks.</p> <p>Navigator Window: A graphical display of recorded video. It contains a set of function buttons used to access the video on-screen.</p> <p>Control Dialog:</p> <p>Toolbar: An area providing access to all major functionality of the system.</p> <p>Display Mode:</p> <p>Control Area: A palette of buttons to set the picture quality (resolution) and refresh mode of the live video display.</p> <p>System:</p> <p>Configuration: A main Settings Menu used for setup of devices, authorization and all other system functions.</p> <p>Function Control:</p>

		<p>Area: A palette of controls used to enable or disable any currently running macros in the system.</p> <p>Network and Sites: Configuration: The network portion of this feature allows setup of all IP address information and a system Nucleus and Backup Nucleus.</p> <p>Installation / configuration notes: <table data-bbox="587 481 1372 548"> <tr> <td>Gross Capacity</td> <td>Bandwidth (read/write)</td> <td>Cameras</td> </tr> <tr> <td>2 x 2 TB</td> <td>100 Mbit/s</td> <td>16</td> </tr> </table> <p>A Maximum of overall 16 channels and replay clients. The storage capacity can be increased by mounting additional hard drives.</p> <p>Parts included: Processor, Chipset, Storage type: 4 trays- 3.5 inch SATA, Graphics memory controller, 1 x 1 GBE RJ45 port, Motherboard Operating System: Genuine Window XP professional or Window Server 2003 RAM memory: 2GB DDR-SDRAM DIMM LAN card: Onboard VGA adapter: Onboard Cooling: Internal Fan Electrical Electrical: Input Voltage: 115-240 VAC ± 10%, 50/60 Hz</p> <p>Environmental: Operating Temp. Range:32 to 104 F (10 degree to 40 degree C) Humidity Range: 0 to 95% relative,</p> </p>	Gross Capacity	Bandwidth (read/write)	Cameras	2 x 2 TB	100 Mbit/s	16
Gross Capacity	Bandwidth (read/write)	Cameras						
2 x 2 TB	100 Mbit/s	16						

LIST OF MAKES

	Make
A) Parking Entry Station / Exit Station	
1) Parking Ticket Dispenser Machine	CUSTOM / EPSON / ELTRA / ZEBRA
2) Electro Mechanical Boom Barrier with 5-6 Mtr. Boom Arm	MAGNETIC / RIB / SKI DATA
3) Loop Detectors (Presence and Exit)	NORTECH / RIB / HID
4) Entrance Camera (D/N Vision) HD 12mm f/2.0 lens	BOSCH / HONEYWELL / AXIS
5) Incident Camera (D/N Vision) HD 12mm f/2.0 Lens	BOSCH / HONEYWELL / AXIS
6) UPS BR 1000G-IN 2KVA Built in Battery	MICROTEK / LUMINOUS / SUKAM
7) UHF Reader	IDCUBE/SKIDATA/STAR
8) PVC Conduit Heavy Class	DIPLAST / KISAN / POLYPLAST
9) Network Switch	CISCO / TP-LINK / D-LINK / NETGEAR
10) Vacuum Fluorescent Display(VFD) 20x2 characters	CUSTOM / EPSON / E-POS/ ZEBRA
B) Parking Pay Station	
1) Payment Validation System Machine	CUSTOM / EPSON / ELTRA / ZEBRA
2) Keyboard + Mouse	SAMSUNG / DELL / MICROSOFT
3) Cashier Display TFT 17"	SAMSUNG / LG / DELL
4) Incident Camera (D/N Vision) HD 12mm f/2.0 lens	AXIS / HONEYWELL / BOSCH
5) UPS BR1000G-IN-2 KVA Built in Battery	MICROTEK / LUMINOUS / SUKAM
6) Customer Receipt Printer	CUSTOM / EPSON / ELTRA / ZEBRA
7) User Fair Display 20X2 Character	ZEBRA / CUSTOM
8) Network Switch	CISCO / TP-LINK / D-LINK / NETGEAR
C) Parking Server Station	
1) i3 Processor Server System / 2 TB HDD / 4 GB RAM	DELL / IBM / HP
2) Network Router	D-LINK / NETGEAR
3) UPS BR1000G-IN-2 KVA Built in Battery	MICROTEK / LUMINOUS / SUKAM
4) Network Switch	CISCO / TP-LINK / D-LINK / NETGEAR
5) Keyboard + Mouse	SAMSUNG / DELL / MICROSOFT
6) Display TFT 17"	SAMSUNG / LG / DELL
7) NVR 16 Channel	PANASONIC /SAMSUNG/HONEYWELL /AXIS/BOSCH