

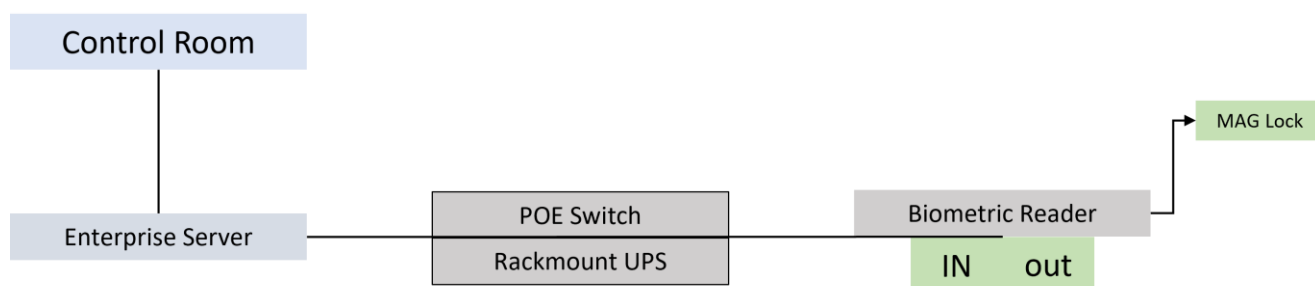


CONTENTS

1. INTRODUCTION	3
2. SHIELDED CAT 6 CABLE	3
3. FIBRE – 24 CORE SINGLE MODE FIBRE	4
4. SURGE PROTECTION – SINGLE PORT POE ETHERNET SURGE ARRESTOR	4
5. SINGLE PORT POE SURGE ARRESTOR TECHNICAL SPECIFICATIONS	5
6. FIELD NETWORK SWITCH SPECIFICATIONS	6
7. RACK MOUNT UPS	7
8. CONTROL ROOM UPS SPECIFICATIONS.....	8
9. ACCESS CONTROL SPECIFICATIONS.....	9
10. TIME AND ATTENDANCE SPECIFICATIONS	14
11. VISITOR MANAGEMENT SPECIFICATIONS.....	17
12. CANTEEN MANAGEMENT SPECIFICATIONS.....	20
13. CONTRACT WORKER MANAGEMENT.....	23
14. ACCESS CONTROL MULTI DOOR SITE CONTROLLER SPECIFICATIONS.....	26
15. ACCESS CONTROL FINGERPRINT AND CARD READER SPECIFICATIONS.....	27
16. ACCESS CONTROL FACE RECOGNITION READER SPECIFICATIONS.....	29
17. ACCESS CONTROL FINGERPRINT AND EM PROXIMITY CARD CONTROLLER SPECIFICATIONS	32
18. ACCESS CONTROL ENROLMENT STATIONS SPECIFICATIONS	34
19. SECURITY SYSTEM MAINTENANCE – NATIONAL.....	34

1. INTRODUCTION

- 1.1 The following specifications needs to be adhered to when bidders submitting their proposals. Failing to do so will lead to disqualification.
- 1.2 The SABS require a full IP Power over Ethernet (POE) access control solution. Meaning every door controller must be powered by POE. The SABS will not consider any system that is dependent on a battery backup for every door.
- 1.3 The SABS requires a system with the following layout:



- 1.4 When a bidder feels there is a need to deviate from the specifications, the bidder must clearly identify these deviations and provide reasons for deviations.
- 1.5 In some instances, below, we require the bidder to provide specifications to meet our requirement. Here, it is expected to receive a comprehensive response in relation to an enterprise solution.

2. SHIELDED CAT 6 CABLE

- 2.1.1 The Category 6 Cable shall be of the highest quality.
- 2.1.2 The cable shall conform to the following flame-resistant standard:
 - a. IEC 60332-1: IEC 60754
- 2.1.3 The cable shall support network data transmission up to 100m.
- 2.1.4 The cable shall be sufficiently shielded to counteract Electromagnetic Interference especially when the cabling shall run in close proximity to power cables.
- 2.1.5 Construction
 - a. Bare Copper Wire conductor shall have a diameter of at least 0.56mm (AWG23/1)
 - b. The insulator shall be a Foam PE with a nominal diameter of 1.34mm
 - c. The sheath material shall be constructed from Low Smoke Zero Halogen materials.
 - d. The overall screen shall be a copper braid tinned material of which the drain wire shall be AWG26 tinned.
 - e. The outer diameter of the cable shall be at least 8.05mm.

2.1.6 Mechanical Properties

Minimum bending Radius without load	8 x Diameter
Minimum bending Radius without load	8 x Diameter
Temperature range during operation	-10 degrees Celsius up to 60 degrees Celsius
Temperature range during installation	-10 degrees Celsius up to 60 degrees Celsius
DC Loop resistance	Less than or equal to 176 Ω /km
Resistance unbalanced	Less than or equal to 2%
Insulation Resistance (500V)	More than or equal to 2000 $M\Omega$ * km
Mutual Capacitance at 800Hz	Nom 43nF/km
Capacitance unbalanced (pair to ground)	Less than or equal to 1500 pF/km
Mean characteristics impedance 100MHz	(100 \pm 5) Ω
Nominal velocity of propagation	Nom 79 %
Propagation delay	Nom. 427 ns/100m
Delay Skew	Nom. 12 ns/100m
Test Voltage (DC, 1min) Core/core and Core Screen	Nom. 1000 V
Transfer Impedance	@ 1 MHz: $\leq 20 M\Omega$ /m @ 10 MHz: $\leq 50 M\Omega$ /m @ 30 MHz: $\leq 100 M\Omega$ /m
Coupling Attenuation	≥ 55 dB

3. FIBRE – 24 CORE SINGLE MODE FIBRE

- 3.1 The fibre layout shall be deployed on the ring principle to ensure redundancy.
- 3.2 Splicing shall comply with the relative IEC or SANS standard, whichever is greater.
- 3.3 The contractor shall provide a layout drawing detailing the rack layout and splicing diagrams.
- 3.4 Splicing methodologies shall be included in each contractor's submission.
- 3.5 The manufacturer shall imprint on the cable at 1m intervals the following information:
 - 3.5.1 Manufacturers Name
 - 3.5.2 Cable Type
 - 3.5.3 Cable Size
 - 3.5.4 Manufacture Year
 - 3.5.5 Mark Of Meters Din Rail Mountable
- 3.6 The colour of the marking shall be white however should reprinting be required this shall be done in yellow in a different position.
- 3.7 Each cable end shall be sealed to heat shrinkable end caps to prevent water ingress.

4. SURGE PROTECTION – SINGLE PORT POE ETHERNET SURGE ARRESTOR

- 4.1 The Surge Arrestor shall support the following features.

- 4.1.1 Din Rail Mountable
- 4.1.2 IEEE 802.3af and IEEE 802.3at compliant
- 4.1.3 All four pairs shall be protected
- 4.1.4 Supply Protection for PoE, Poe+ and HPoE
- 4.1.5 1000 Mbps data rate






5. SINGLE PORT PoE SURGE ARRESTOR TECHNICAL SPECIFICATIONS

Standards Compliance	IEEE 802.3af, IEEE 802.3at
Ethernet input	RJ45 Socket PoE 10/100/1000BASE-T
Ethernet output	RJ45 Socket PoE 10/100/1000BASE-T
Grounding	300mm of 1.5mm stranded earth cable (requires connection to a good electrical earth)
Ethernet and PoE Protection	
Operating Voltage	48 V
Max Voltage	62 V
Operating Current	1.5 A
Max Discharge Current	10KA */20µs
Impulse Life (10/1000µs)	400 times
Operating Temp	--40°C to 75°C
Operating Humidity	0% to 95%; non-condensing

6. FIELD NETWORK SWITCH SPECIFICATIONS

6.1 Highlight Features

- 6.1.1 18-Port gigabit cloud-managed switch with 16 PoE+ ports
- 6.1.2 Cost-Effective Smart Cloud Managed Switches
- 6.1.3 IP Camera Recognition, Unique Value for CCTV Network
- 6.1.4 Automatic Loop Prevention Ensures Service Continuity
- 6.1.5 Lifetime management on Cloud at any time anywhere
- 6.1.6 Ports
 - a. 16 x 10/100/1000Base-T PoE+ ports, 2 SFP uplink
- 6.1.7 Switching capacity
 - a. 36 Gbps
- 6.1.8 MAC address table
 - a. 8000
- 6.1.9 Fan
 - a. Built-in
- 6.1.10 MTBF
 - a. > 200,000
- 6.1.11 PoE
 - a. 240W, IEEE 802.3at / IEEE 802.3af
- 6.1.12 Forwarding rate
 - a. 26.78 Mpps
- 6.1.13 Maximum VLAN
 - a. 16
- 6.1.14 Warranty
 - a. 3 Years

10/100/1000Base-T ports 1000Base-X SFP ports PoE ports Max. PoE budget Switching capacity Forwarding rate MAC address table VLAN Loop prevention Flow control Port isolation Broadcast storm suppression Cloud management Power consumption Power supply Fan Port surge Operating temperature Operating humidity MTBF	16 2 16 240W 36 Gbps 26.78 Mpps 8000 16      ≤ 280W 100 - 240V AC, 6A Built-in, lower than 25 °C stop running 4 kV 0°C to 40°C 10% to 90% RH> 200,000
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7. RACK MOUNT UPS

7.1 1500VA 230V Rack Mount

7.2 Output

- 7.2.1 Output power capacity - 1.0k Watts / 1.5kVA
- 7.2.2 Max Configurable Power (Watts) - 1.0k Watts / 1.5kVA
- 7.2.3 Nominal Output Voltage - 230V
- 7.2.4 Output Voltage Note - Configurable for 220 : 230 or 240 nominal output voltage
- 7.2.5 Output Voltage Distortion - Less than 5% at full load
- 7.2.6 Output Frequency (sync to mains) - 47 - 53 Hz for 50 Hz nominal, 57 - 63 Hz for 60 Hz nominal
- 7.2.7 Other Output Voltages - 220, 240
- 7.2.8 Topology - Line Interactive
- 7.2.9 Waveform type - Sine wave
- 7.2.10 Output Connections - (4) IEC 320 C13 (Battery Backup) (2) IEC Jumpers (Battery Backup)
- 7.2.11 Transfer Time - 2ms typical

7.3 Input

- 7.3.1 Nominal Input Voltage - 230V
- 7.3.2 Input frequency - 50/60 Hz +/- 3 Hz (auto sensing)
- 7.3.3 Input Connections - IEC-320 C14
- 7.3.4 Input voltage range for main operations - 160 - 286V
- 7.3.5 Input voltage adjustable range for mains operation - 151 - 302V
- 7.3.6 Other Input Voltages - 220, 240

7.4 Batteries & Runtime

- 7.4.1 Battery type - Maintenance-free sealed Lead-Acid battery with suspended electrolyte: leak-proof
- 7.4.2 Typical recharge time – 3 hour(s)
- 7.4.3 Expected Battery Life (years) - 4 - 6
- 7.4.4 Battery Volt-Amp-Hour Capacity - 432

7.5 Communications & Management

- 7.5.1 Interface Port(s) - RJ-45 Serial, SmartSlot, USB
- 7.5.2 Control panel - Multi-function LCD status and control console
- 7.5.3 Audible Alarm - Alarm when on battery : distinctive low battery alarm : configurable delays
- 7.5.4 Emergency Power Off (EPO) - Optional
- 7.5.5 Available SmartSlot™ Interface Quantity - 1

7.6 Surge Protection and Filtering

- 7.6.1 Surge energy rating - 459Joules
- 7.6.2 Filtering - Full time multi-pole noise filtering : 0.3% IEEE surge let-through : zero clamping response time : meets UL 1449

8. CONTROL ROOM UPS SPECIFICATIONS

Capacity	400KVA
UPS Structure	Online Double Conversion
Appearance	Low Frequency with Output Isolated Transformer
Overall Efficiency (AC-AC)	94% (With Optional Accessories)
ECO	98%
Noise (In 2 Meters)	67dB
Working Temp.	0-40°C
Storage Temp.	-15 ~ 50°C (without batteries)
Humidity	< 95% Non-Condensing
Protection	Overload, Short-Circuit, Over Temp., Utility Power Voltage High/low, BAT Voltage High/low
DC Start	N/A
Generator Compatibility	Yes
Display	LCD Display(Multi-Language with all kinds of messages)+LED
Mute	Auto
Cabinet Standard	IP20
Cooling System	Intelligent Speed Control Cooling Fan
Elevation	< 1500M, Without Derated
Output Freq	±0.02% (BAT Mode)
Crest Ratio	3:1
Short-Circuit	Circuit Auto-Protection, Bypass Switch Tripping
Output Abnormal	INV. Output Auto-Locked Protection
Bypass Specification	
Static Bypass Transfer Time	0ms

Static Bypass Range	380/400/415Vac(±10%,±15%,±20% Selectable)3 Phase+N(3 Phase+N+PE)
Frequency Range	50/60Hz±10%
Bypass -> INV Transfer Time	2ms
Bypass Overload Ability	200%: 5 Mins; 1000%:10 Seconds
Manual Maintenance Bypass	Available
Battery Specification	
Type	Sealed Lead Acid Maintenance Free
Std. Model Rated Volts/Units	12V,384Vdc/32 Units
Float Charge Voltage	Equalized Charge, Float Charge, Intelligent Battery Management
BAT Low	Shutdown Protection

9. ACCESS CONTROL SPECIFICATIONS

- 9.1 The SABS requires a full IP access control solution. All readers, door controllers (if applicable), and magnetic locks must be powered via **Power over Ethernet (PoE)**.
 - 9.1.1 Due to the size of our campus and the high risk of power failures, the SABS does NOT want the conventional solution with a backup battery in a control box at every door!
- 9.2 The SABS requires an enterprise-grade People Mobility Management solution, covering Access Control, Time and Attendance, Visitor Management, Canteen Management, and Contract Workers Management.
- 9.3 In addition to the above the system/software must allow for field visit management and Employee Self Service Solution.
- 9.4 The following Key Minimum Requirements are required as a minimum:
- 9.5 Access Using Multiple Credentials
 - 9.5.1 Biometric: Fingerprint
 - 9.5.2 RFID Cards: Smart and Proximity, PIN, Palm Reading and Facial Recognition
- 9.6 Automatic Fingerprint Distribution
 - 9.6.1 Eliminate Separate Enrolment at each Door.
- 9.7 Access Control on: User, Zone and Time
 - 9.7.1 Restrict Entry of Employees' in other Departments
 - 9.7.2 Give Access for a Defined Time Period
- 9.8 First-in User Rule

- 9.8.1 Ensures Entry of Designated Person first in certain Work Areas
- 9.8.2 Software Solution for Higher Level of Security is required.
- 9.9 2-Person Rule
 - 9.9.1 Allow Access when Two Users use their Access Rights Simultaneously
 - 9.9.2 For Sensitive Zones like Bank Safes, Lab, Server Room, etc.
- 9.10 Man-Trap
 - 9.10.1 Two or more Doors are Arranged in a Sequence
 - 9.10.2 Allow Opening one Door at a Time
- 9.11 Guard Tour
 - 9.11.1 Guard to Cover Defined Checkpoints in Specific Time
 - 9.11.2 Generate Alarm or Notification on Exception
- 9.12 Occupancy Control
 - 9.12.1 Control Number of Users within a Designated Zone
 - 9.12.2 For example Seminar Halls, Conference Rooms and Cafeterias
- 9.13 Blocked Users
 - 9.13.1 Deactivate the User and Withdraw Rights Temporarily or Permanently
 - 9.13.2 Block User on Absenteeism, Exceeding Attempt Limit, etc.
- 9.14 Route based Access
 - 9.14.1 Access based on a Defined Sequence Written on the Smart Card
- 9.15 Door Auto Relock
 - 9.15.1 Door Relay is Activated for Pre-defined Time to Allow User to Enter
 - 9.15.2 Door Relay Deactivates after Pre-defined and Locks the Door
- 9.16 Dead-Man Zone
 - 9.16.1 User to Punch on the Door Controller at a Pre-defined Time
 - 9.16.2 Alarm Activated if User Fails to Punch
- 9.17 Anti-Pass Back
 - 9.17.1 Ensure that User Shows Card or activate the biometric reader on Exit before next Entry.
 - 9.17.2 Global and Local Anti-pass back
- 9.18 Do Not Disturb (DND) Zone
 - 9.18.1 Users are Restricted to Enter DND Zone
 - 9.18.2 Only VIP User can Override DND Rule, for example the CEO of the SABS.
- 9.19 Smart Card based Identification

- 9.19.1 User's Fingerprints are Stored on Smart Card
- 9.19.2 Unlimited Users can Access Device with this Feature
- 9.20 Who's In (Rule)
 - 9.20.1 Give Details of Users Inside a Specific Area
 - 9.20.2 Generates a List of Users Inside any Specified Zone at a given Time
 - 9.20.3 This is a crucial requirement for the managing of staff during evacuation.
- 9.21 Time Stamping
 - 9.21.1 Integrate Access Control with Video Surveillance
 - 9.21.2 Capture User Photograph when a person tries to Access the Door
- 9.22 Integration with Other Hardware, for example:
 - 9.22.1 With EM Lock, Tripod and Turnstile
 - 9.22.2 With Video Surveillance
 - 9.22.3 With Fire Alarm
- 9.23 Notifications on Exception
 - 9.23.1 Access Rule Violation
 - 9.23.2 Door Held Open
 - 9.23.3 Door Forced Open
- 9.24 Centralized Monitoring and Control
 - 9.24.1 Live Status of all Devices
 - 9.24.2 Real-time Data Transfer to Server
- 9.25 Informative Reports
 - 9.25.1 Reports in Various File Formats: PDF, Excel, Word, CSV, TXT, RTF

Bidders to Complete the included form and submit it as part of their proposal		
Application Software Platform		
Specifications	Compliance (Y/N)	Section of the bidder proposal
Provides User License for 3000 Users		
Web-based user friendly GUI application and real-time monitoring of door controllers from one place		
Built on 3-Tier, .NET Platform with MS-SQL and Oracle database, expandable and modular without change in the hardware		
Facilitates handling large corporations with multiple remote sites		
Supports automatic template distribution of credentials viz. palm vein, fingerprint, and RFID card		
Provides head count of number of users in the premises		
Provides basic door access feature to users		
Provides raw swipe events		
Allows configuration of various software modules		
Supports upto 65000 door controllers and 1 million users in the network		
Provides an administrator's interface to manage-monitor data and the individual application modules		
Provides creation of login roles & rights		
Provides user photo display on large screen during access		
Offers multiple user configuration at a time		
Provides a search tool to allow authorized system users to examine the audit log files		
Allows the assignment of operator levels to define the system components that each operator has access to view, operate, change or delete		
Facilitates the door controllers in network to automatically push the data to server		
Offers database browse-search functionality utilities to browse the database tables		
Supports Dynamic DNS facility, thus eliminating Static IP requirement		
Offers virtual message board facility for posting daily notices, news, announcements		
Offers integration through database to database, through API		
Allows integration with SAP, ERP, HRM, Payroll, Tally through Web API		
Provides integration with different hardware like door controllers, locks, readers, electronic door controlling devices, etc.		
Supports database posting, retrieval, removal, backup and restore options		
Supports Active Directory integration		
Supports automatic and customized SMS & E-mail notifications		
Offers generation of informative reports & charts with various filters, customized report templates; and export reports in Excel, Word, RPT, PDF, CSV and XML etc.		
Supports automatic E-mail scheduler facility for different reports		
Supports automatic database backup facility at scheduled time		
Provides user enrolment management software module with user photograph upload facility, user verification functionality, mass enrolment functionality, user name and ID search functionality, etc.		

Bidders to Complete the included form and submit as part of their proposal

Access Control Module

Specifications	Compliance (Y/N)	Section of the bidder proposal
Supports different access modes such as Palm Vein, Finger, Card, or combination of any.		
Real Time Monitoring and Database Storage to server through Auto Push Technology		
SMS and Email Notification during Access Rule Violation, Access Route Violation, Duress Detection, etc.		
Two person Authentication for high end security at defined Areas		
Anti-pass back restricts Second entry if exit punch not found for first entry		
Integration with door lock and exit reader from single door controller		
Controls user in defined Areas, once the space exceeds the user capacity		
System controls the number of users within designated area.		
Avoids tail-gaiting of doors		
Centralized monitoring connecting multi-location from a central place		
Capable enough to control Door, and supply power to exit switch and door lock		
Read range of 5 cm - 7.5 cm when used with the accepted compatible access card technology.		
Zone, Time and User based Access		
Minimum 99 time-zones to grant time based access rights		
99 access zones with different access levels ranging from 0 to 15 to door controllers and users		
Facility to encode a unique number string in a card as well as door controller. In case where there is failure between door controller and panel, it allows user to access the zone with this code		
Feature for cardholder, when forced to open a door under duress, shall be able to send a high priority alarm up to the operator, in order to alert security of the fact.		
Integration with Fire Alarm, Video Surveillance for high-end security		
Motion sensor, beam detector, vibration sensor, panic button should be integrated with biometric device		
Time stamping functionality takes snapshot of the person accessing a door and generates reports with the photograph.		
Generation of various reports like Access Rule Violation, Guard Tour, Anti - Pass Back, Access Route Violation, etc in PDF, excel, word etc.		

10. TIME AND ATTENDANCE SPECIFICATIONS

10.1 Mark Attendance Using Multiple Credentials

- 10.1.1 Fingerprint Time-Attendance
- 10.1.2 RFID based Smart Cards
- 10.1.3 RFID based Proximity Cards

10.2 Auto Data Push from Device to Server

- 10.2.1 Attendance Data will be Pushed in Real-time
- 10.2.2 Temporary Data will be Stored in Device if Connectivity goes off

10.3 Organizational Hierarchy

- 10.3.1 Create Different Policies for Departments and Designations
- 10.3.2 Define Various Levels of Hierarchy

10.4 Selectable Entry/Exit Modes

- 10.4.1 Single Door Controller for Entry and Exit
- 10.4.2 Interpretation of Punches Depending on Attendance Policy

10.5 Late-In/Early-Out Policy

- 10.5.1 Create and Assign it to Employees or Group of Employees
- 10.5.2 Actions Taken as per Policy Assigned

10.6 Overtime Policy and Authorization

- 10.6.1 Calculate OT on Daily, Weekly or Monthly basis
- 10.6.2 Eliminate Unqualified Salary Payments

10.7 Compensatory Off (C-OFF) Policy and Authorization

- 10.7.1 Convert Overtime Hours to Compensatory Off Hours
- 10.7.2 Offer Additional Leave or Encashment Options

10.8 Absenteeism Policy

- 10.8.1 Weekly Off or Holiday is allowed Before or both Before/After the Leave Period
- 10.8.2 Define Number of Days after which Absent User will be Blocked

10.9 Shifts and Schedules

- 10.9.1 Create Unlimited Shifts and 999 Schedules
- 10.9.2 Auto Shift Correction
- 10.9.3 Resolves Date Rollover Issues

10.10 Holidays and Restricted Holidays

- 10.10.1 Different Holiday Schedules for Multiple Regions
- 10.10.2 30 Holiday Schedule Groups
- 10.10.3 32 Holidays in Each Group

10.11 SMS/Email Notifications

- 10.11.1 Notifications on Events like Missing In/Out Punch, Leave Approval
- 10.11.2 Resolve Attendance Related Issues in Less Time

10.12 Manual Attendance Correction

- 10.12.1 For Exceptional Situations

10.13 Leave Management

- 10.13.1 Leave Types
- 10.13.2 Leave Apply/Approve
- 10.13.3 Leave Balance
- 10.13.4 Auto Leave Credit

10.14 150+ Reports and Charts

- 10.14.1 Allows creating 150+ various time-attendance and leave related reports and colourful charts using various filters and formats.
- 10.14.2 Generate customized reports for a particular organization, department, for selected users and period.
- 10.14.3 Export to various file formats including PDF, Excel, Word, RTF, CSC and TXT.

10.15 Integration with Payroll, ERP or HRM Software

- 10.15.1 Using API, Database to Database or Export Template Methods
- 10.15.2 For Faster and Accurate Process

Bidders are to Complete the included form and submit it as part of their proposal

Time-Attendance Module

Specifications	Compliance (Y/N)	Section of the bidder proposal
Facilitates superlative range of flexible functions such as Multiple Organizations, Late-In, Early-Out Policy, Overtime Policy, Absenteeism Policy, Multiple Holidays, Holiday Schedules, Manual Entry and corrections of Entry-Exit Events and Attendance Summary		
Allows to create multiple branches, department, sections, designations, grades and categories		
Offers the leave management module covering different leave type creation, organization-wise leaves, leave request and approvals, leave balance management, leave accumulation and carry forward option and leave encashment option for organized leave management		
Sends SMS / Email alerts for various pre-defined events such as User Events, Leave Application, Leave Approval/Rejection, Monthly Attendance, and Missing In/Out Punch to multiple users automatically on the occurrence of any such events		
Offers integration through API, database to database, and customized export template		
Allows seamless integration with third party Payroll, HRM, Tally, SAP, ERP, Active Directory, etc.		
Allows creating 150+ time-attendance, leave, and shifts related reports and colorful charts using various filters and formats, also offers customized reports		
Offers generation of various statutory reports		
Offers an option to assign a new shift automatically based on user's punch details		
Manages unlimited shifts and 999 schedules		
Manages continuous shifts as well as overnight shifts		
Interprets User punches for entry or exit depending on attendance policy configuration		
Monitors late-in entry and early-out exit of employees based on their shift timings		
Allows calculating overtime on a daily, weekly, or monthly basis		
Facilitates converting overtime hours to compensatory off hours and offer additional leave or encashment options		
Allows creating multiple shifts and schedules with break time, grace time, off day, repeat days, etc. to manage workforce of organization		
Allows creating 30 holiday schedule groups with 32 holidays in each group		
Facilitates corrections and manual entries of entry-exit events like attendance records, overtime/C-OFF hours, late-in/early-out timings, etc.		
Send customized SMS and email messages to announce gatherings, meetings, latest news, changed rules, etc.		
Offers User-wise and Period-wise options with Late-In, Early-Out, Overtime, C-OFF and Absenteeism Policies		
Generates past adjustment data automatically and includes it into current month's salary calculations		
Offers generation of attendance summary that includes various employee data like attendance, leaves, weekly off and holidays organization-wise, department-wise and user defined period-wise		
Offers creating up to two levels of authorization for leaves and tour approval		

11. VISITOR MANAGEMENT SPECIFICATIONS

11.1 Multi-dimensional Deployment

- 11.1.1 Mobile Application
- 11.1.2 Web Portal
- 11.1.3 Desktop Application

11.2 Visit Creation

- 11.2.1 Host and Visitor can Create, Approve, and Modify a Visit
- 11.2.2 Better Planning

11.3 Role-based Login

- 11.3.1 Host Profile
- 11.3.2 Visitor Profile
- 11.3.3 Security/Reception Profile

11.4 Visit Approvals

- 11.4.1 Timely and Advanced Planning of Single/Team Visits
- 11.4.2 Enhanced Productivity

11.5 Visitor Access Control

- 11.5.1 Pre-defined Visitor Access

11.6 Digital Badge

- 11.6.1 QR Code for Easy and Secured Check-in

11.7 Repeat Visit

- 11.7.1 Schedule One or Recurring Visits
- 11.7.2 Eliminate Re-enrolment + Profile Creation
- 11.7.3 Quick and Easy Check-in

11.8 Visit Live Status Monitoring

- 11.8.1 Security/Host/Visitor can View Monthly, Daily, and Weekly Visit Logs
- 11.8.2 Multiple Tags: Pending, Accepted, Cancelled, Checked-In, Checked-Out, Ongoing, Completed

11.9 Drag and Drop to Re-schedule

- 11.9.1 User-Friendly UI

11.9.2 Reduced Time to Reschedule + Approve a Visit

11.10 Check-in/out

11.10.1 Early Check-in for Timely Arrivals

11.10.2 Check-out/ Surrender from COSEC VMS

11.11 Self Registration

11.11.1 Quick Check-in

11.11.2 Enhanced Experience

11.12 Material Details

11.12.1 Details of Carried Items

11.12.2 Document Scanning

11.12.3 Eliminate Loss/Harm to People or Assets of Organization

11.13 Reports

11.13.1 Monitoring and Analysis of Visits

11.13.2 Visitor Details, Host-wise Visit, Date-wise Visit Reports can be Exported in PDF, Excel and Txt Format

11.14 Auto Push Event Data

11.14.1 Real-time Data Transfer

11.14.2 High Accuracy

11.14.3 No Manual Download

11.15 Encrypted Communication

11.15.1 AES 256 bit Standard Encrypted Communication

11.15.2 High Security

Bidders are to Complete the included form and submit it as part of their proposal

Visitor Management Module

Specifications	Compliance (Y/N)	Section of the bidder proposal
Visitor Pre-Registration		
Controls Single as well as Multiple gates along with controlling single as well as multiple locations from a centralized server		
Seamless Integration with Printer, Scanner, Web cam and Signature pad		
Store Visitor's Personal, Official and Visit Information		
Automatically Notifies the Hosts about a Visitor's Arrival		
Generate Visitor Pass in the form of E-Pass and Paper Pass with Customizations		
Keep Track of Visitor Documents and Vehicle Information		
Limit Access for Particular Areas only		
Live Tracking of Visitors		
Store Visitor's Record for Future Purpose		
Generates Detailed Reports of Visitor Movement		

12. CANTEEN MANAGEMENT SPECIFICATIONS

12.1 Credential Support

- 12.1.1 New-age Touchless Credentials-Face Recognition, Bluetooth
- 12.1.2 Fingerprint
- 12.1.3 RF Cards - Smart/ Proximity Cards

12.2 Auto Recharge/Payment Function

- 12.2.1 Self-activate Recharge and Payment Process at Scheduled Time
- 12.2.2 No Manual Intervention

12.3 Menu Schedule

- 12.3.1 Administrator can Schedule Menus

12.4 Auto-selected Item

- 12.4.1 One Item per Menu can be Defined as Default
- 12.4.2 Order Placement by Showing Credentials

12.5 Cashless Transactions

- 12.5.1 Offers Post-paid and Pre-paid Accounting Options
- 12.5.2 Cashless Cafeteria Processing

12.6 Integration with Printer

- 12.6.1 Devices must Connect Directly with any Standard Printer
- 12.6.2 Prints Receipt with Transaction Details

12.7 Refund Requests

- 12.7.1 Allows Correction in Order if the Item is Out of Stock
- 12.7.2 Easy Refunds available from ESS Portal

12.8 Informative Reports

- 12.8.1 Allows Generation of 30+ Cafeteria Reports
- 12.8.2 Reports support PDF, Excel, Word, text, RTP and CSV

12.9 Blocked Users

- 12.9.1 Blocks User if Consumption Exceeds Pre-fixed Limits
- 12.9.2 Users can be reinstated by depositing either part or full payment.

12.10 Export Data to Payroll and Billing Software (if needed)

- 12.10.1 No Manual Data Entry
- 12.10.2 Supports Integration with any Third Party Payroll
- 12.10.3 User-wise Consumption Details

Bidders are to Complete the included form and submit it as part of their proposal		
Cafeteria Management		
Specifications	Compliance (Y/N)	Section of the bidder proposal
Allows creating 255 items, 99 food menus with 30 items in each menu		
Allows device-wise menu scheduling and facilitates creating 48 menu schedules		
Offers cashless transactions replacing cash & token systems at cafeteria		
Facilitates ordering food items through biometric device using finger, card or combination of both		
Facilitates the cafeteria transaction in postpaid or prepaid mode		
Allows flexibility of assigning default items (Thali) in device which deducts amount on punching (only valid user)		
Allows only one meal or more on a daily or monthly basis to users		
Allows Deduction from User account to Order Placed in Real-time in Post-Paid Mode		
Allows deduction from RFID Smart card (can also be used as Identity card) according to order placed in pre-paid mode on punching		
Allows Defining Discount (subsidy) levels for food items		
Allows blocking the users when their consumption limit exceeds		
Allows employees to view consumption data and apply for correction in transaction in real-time using self service portal		
Allows to export consumption amount data to payroll for deductions (in post-paid mode)		
Generation of Reports on Item-wise Consumption, Daily Consumption, Monthly Consumption, Head Count, etc. in formats viz. PDF, Excel, Word, etc.		

13. CONTRACT WORKER MANAGEMENT

13.1 Profile Creation

- 13.1.1 Contractor Profile
- 13.1.2 Create Contractor's Profile with Details
- 13.1.3 Create Multiple Work Types and Assign to Contractors

13.2 Worker Profile

- 13.2.1 Create and Manage Worker Profile with Details
- 13.2.2 Generate Reports

13.3 Worker Enrolment

- 13.3.1 Worker Enrolment
- 13.3.2 Supports Identification Credentials for Multiple Workers
- 13.3.3 Workers Enrolled when Entering the Site or Pre-enrolled from the Head Office

13.4 Worker Induction

- 13.4.1 Create Multiple Induction Levels
- 13.4.2 Link to Work Orders and Approving Authorities (Managers)

13.5 Worker Pass Creation

- 13.5.1 Creation at the Entrance or in Advance by Respective Contractor
- 13.5.2 Variety of Passes based on Worker Profile, Location, Department, etc.

13.6 Contractor Web Portal

- 13.6.1 Check Assigned Work Orders and Track its Status
- 13.6.2 Add New Workers and Update their Profiles
- 13.6.3 Create Work Orders and Assign them to Contractors
- 13.6.4 Track Status of Work Orders from a Single Window

13.7 Dashboard

- 13.7.1 Overview of Work Orders and Worker Status from a Single Window
- 13.7.2 Information of Work Order Status, Active Contractor Detail, Workers' Attendance Summary, etc.

13.8 Time-Attendance

- 13.8.1 Worker Time-Attendance
- 13.8.2 Create multiple Time-Attendance Policies
- 13.8.3 Manage Shift-Schedules and Overtime

13.9 Access Control

- 13.9.1 Prevents Unauthorized Entry in Pre-defined Areas and Routes
- 13.9.2 Advanced Access Control Features

13.10 Blacklist Contractor

- 13.10.1 Store Data of Blacklisted Contract Workers
- 13.10.2 Prevents Blacklisted Contract Workers from Entering Premises

13.11 Notifications

- 13.11.1 Instant SMS and Email Notifications to Contractors, Workers and Admin
- 13.11.2 Notifications for Exceptional Events

Bidders are to Complete the included form and submit it as part of their proposal		
Contract Workers Management		
Specifications	Compliance (Y/N)	Section of the bidder proposal
Facilitates creating work orders and assigning them to contractors with validity dates		
Creates and manages contractor profile with details like name, address, contact number, validity date, bank account, government licenses, etc.		
Offer flexibility to create multiple work types and link them with contractors		
Create and manages worker profile with personal details, contact details, photograph, bank account details, skills, contractor name, validity date, access rights, identification proofs, etc.		
Supports multiple identification credentials such as palm vein, fingerprint and RFID for enrolment		
Offers to create multiple types of passes depending on worker profile, location, department, etc.		
Allows creating multiple induction levels like medical test, and linking them to work levels and approval managers		
Allows creating time-attendance policies like shifts-schedules, over-time, absenteeism, late-in, early-out, leave, etc. and assigning them to workers		
Offers integration with third party payroll software, HRMS, Tally, ERP, etc.		
Allows importing contractor data, work orders, and other related information from an Excel or CSV files		
Allows admin to blacklist particular workers and alerts managers when their passes are generated		
Offers basic and advanced access control features such as first-in user rule, time based access, guard tour, route based access, smart card based identification, etc.		
Offers a dedicated web portal for contractors to manage their work orders and workers		
Send SMS & Email notifications to contractors, workers, and admin for various events like worker assignment, worker approval, worker entry/exit, monthly attendance, missing in/out punch, etc.		
Offers various informative reports on work orders, contractors, workers, their attendance, and such related parameters		
Offers facility to export reports into various file formats like PDF, Excel, Word, RTF, CSV, and TXT		

14. ACCESS CONTROL Multi Door Site Controller SPECIFICATIONS

Bidders are to Complete the included form and submit it as part of their proposal

Multi-Door Site Controller

	Parameters	Technical Details	Compliance (Y/N)	Section of the bidder proposal
GENERAL	Maximum Door Controllers	255		
	Number of Users	25,000		
	Events Buffer	5,00,000		
CAPACITY	Door Controllers on Ethernet	255		
	Door Controllers on RS-485	32		
COMMUNICATION	Communication Interface	Ethernet or RS-485 (10/100 Mbps on Ethernet)		
	USB	1 USB Port (for Data Transfer and for 2G-3G/Wi-Fi Dongle)		
INTERFACES	AUX-IN Port	Yes, One Port Available		
	AUX-OUT Port	Form C, SPDT Relay (Max 5A@24 VDC or 5A@230 VAC)		
OPERATIONAL MODES	Standalone mode	Uses Built-in GUI to Control Door Controller and Users		
	Network mode	Uses Feature and Capacity Enhancement for Access Control with Connection to Server		
OTHERS	Software	Built-in Interface in Standalone mode with Door Controller		
	Certification	CE, RoHS		
PHYSICAL	Mounting	Din-Rail and Box (Optional)		
AUDIO-VISUAL	Buzzer	Yes		
	LED	Available for Power, Status and Alarm		
ELECTRICAL	Input Power	External Power Adapter (12 VDC @ 2A)		
	Battery Backup	No		
ENVIRONMENTAL	Humidity	5% to 95% RH Non-Condensing		
	Operating Temperature	-10°C to + 55°C		

15. ACCESS CONTROL Fingerprint and Card Reader SPECIFICATIONS

Bidders are to Complete the included form and submit it as part of their proposal				
Fingerprint and Card based Door Reader with POE and IP65				
	Parameters	Technical Details	Compliance (Y/N)	Section of the bidder proposal
GENERAL	Credential Support	Finger, Card and PIN		
	User Capacity	50 000		
	IP65	Verified		
	Type of Card	EM Prox, HID Prox, HID iClass and Mifare (Card Module Required)		
DISPLAY	Display	3.5" TFT Display with Capacitive Touch Panel		
	Display Size	320 x 240		
	Size of Wallpaper	512 Kb		
CAPACITY	Cards Per User	2		
	Template Per User	Up to 10 (Single Template per Finger Mode)		
		Up to 5 (Dual Template per Finger Mode)		
	Events Buffer	5,00,000		
COMMUNICATION	Template Storage Capacity	9600 in 1:N Mode and 1 lac in 1:1 Mode		
	Mobile Broadband	Yes (3G/4G Support)		
	Ethernet	Yes (10/100 Mbps on Ethernet)		
	Wi-Fi	Yes (802.11 b/g/n)		
INTERFACES	PoE	Yes (IEEE 802.3 af)		
	Exit Switch	Yes		
	Door Status Sense	Programmable NO, NC, Supervised		
	Door Lock Relay	Form C, SPDT Relay (Max 2A@30 VDC)		
	Door Lock Power	Internal 12VDC @ 0.5A or External		
	Aux-IN	Programmable NO, NC, Supervised		
	Aux-OUT	Form C, SPDT Relay (Max 2A@30 VDC)		
	Reader Interface types	RS 232, and Wiegand IN/OUT		
	USB	1 USB Port (for Data Transfer and for 2G-3G Dongle)		
AUDIO-VISUAL	Reader Types	1 Port for Card Reader / Finger Reader / Card Finger Combo Reader / Third Party Wiegand reader		
	Buzzer	Yes		

CONFIGURATION	CPU	800 MHz ARM Cortex A8 based Processor		
	Flash Memory	256 MB Flash		
	RAM Memory	512 MB DDR3 RAM		
	Micro SD Card	Yes (Inbuilt 4 GB)		
ELECTRICAL	Input Power	12 VDC @ 2A		
	Reader Power Output	Internal 12 VDC @ 0.5 A or External		
	Backup Battery	No		
ENVIRONMENTAL	Humidity	5% to 85% RH Non-Condensing		
	Operating Temperature	0°C to + 50°C (32°F to 122°F)		
OTHERS	System Integration	Software API for Software Integration		
	Operational Mode	Direct Door with Server		
	Tamper Detection	Yes		
	Certification	RoHS, CE, BIS		
	Shock Proof	Yes		
	Vibration Proof	Yes		
	Real Time Clock	Rechargeable RTC with NTP Server/ GPS Clock		
SENSOR SPECIFICATIONS	Sensing Area	15.9mm x 17.9mm (0.62" x 0.70")		
	Sensor Technology	Suprema Optical Sensor		
	Image Size in Pixels	288 x 288		
	Image Resolution in DPI	500		
	Identification Time	< 1sec		
	Equal Error rate (ERR)	< 0.1%		
	Water-proof	IP65, Scratch Resistance		
	Verification Time	< 1sec (less than 3000 templates)		
	Template Size	384 bytes		
	Fingerprint Module	ISO 19794-2 Compliant		
ISO Card Support	Proximity - 125 KHz	No ISO Standards		
	Mifare Card - 13.56 MHz	ISO 14443 A Supported		
	HID iCLASS Card - 13.56 MHz	ISO 14443 and ISO 15693 Supported		
	DesFire Card - 13.56 MHz	ISO 14443 A Supported (Read Only)		

16. ACCESS CONTROL Face Recognition Reader SPECIFICATIONS

Bidders are to Complete the included form and submit it as part of their proposal			
Face Recognition Reader			
	Parameters	Technical Details	Compliance (Y/N)
Human Face	Yes		
PIN	Yes		
BLE - Mobile	Yes		
User Profiles	50,000		
Face Templates	200,000		
Max. Templates Per User	30		
Event Logs	500,000		
Algorithm	Deep Learning-based Face Recognition		
Fake Face Detection	Yes		
Face Identification	1:200,000 in < 1 sec 1:1 in < 0.5 sec		
Face Enrolment	Enrolment Station Upload Images		
Recognition Distance	30cm - 120cm (0.3m - 1.2m)		
Recognition Height	140cm - 198cm (1.4m - 1.98m)		
Dimensions (HxWxD)	186mm x 74 mm x 50mm (7.3" x 3" x 2")		
Weight	650gms (1.433 lbs)		
Display	3.5" IPS LCD (Touch Screen)		
Display Resolution	480 x 320 Pixel		
Gorilla Glass	Yes (Gorilla Glass 3)		
CPU	Quad-Core ARM Cortex-A7 @ 1.5 GHz		
GPU	Built-in 2 TOPS Neural Network Computing Performance		

RAM	2 GB DDR4		
Flash Memory	16 GB eMMC		
SD Card	No		
Tamper Detection	Yes		
Buzzer	Yes		
IR LEDs	Yes		
Ingress Protection	IP65		
Vandal Proof	IK06		
Certificate	CE, FCC, BIS, UL, RoHS		
Operating Temperature	0°C to 50°C		
Storage Temperature	-20°C to 60°C		
Humidity	5% to 95 % RH Non-Condensing		
RGB Camera	5MP Surveillance Grade, IR Blocked		
Infrared Camera	5MP Surveillance Grade, IR Band Pass		
Camera Sensors	SONY IMX 307, EXMOR Technology, STARVIS Series		
Ethernet	Yes (10/100 Mbps - 1 port)		
PoE	Yes (IEEE 802.3 af)		
WiFi	Yes (802.11 b/g/n)		
3G/4G/LTE	Yes (Additional USB Modem)		
BLE	Yes (8m Range)		
USB	Yes (USB 2.0) Micro USB-Type B		
Exit Switch Interface	Yes		
External Reader Support	Yes (MATRIX and 3rd Party)		
External Reader	Interface <ul style="list-style-type: none"> • RS232 • Wiegand 		

	<ul style="list-style-type: none"> • Power • 12VDC @ 0.5A LED and Buzzer Control Allowed - GREEN LED 		
Wiegand	Yes (Selectable IN/OUT) IN: 26 Bit format OUT: Configurable		
Door Lock Relay	Yes (30VDC @ 2A, Dry Contacts NO/NC/COM)		
Door Lock Power	Internal PoE Power: 12VDC @ 0.250 A Internal Adapter Power 12VDC @ 0.5 A External Power 12VDC @ 2A		
INSTALLATION			
Wall Mount	Yes - Plastic Back Cover with Screws		
Flush Mount	Yes - Metal Bracket with Screws		
Power Adapter	12VDC @ 2A (CE, FCC, UL, BIS)		
Card			
Smart Cards	MIFARE Classic® and NFC Tag and HID iCLASS		
Proximity Cards	EM Prox and HID Prox (Separate variant for each card type. HID PROX requires HID iCLASS type)		

17. ACCESS CONTROL Fingerprint and EM Proximity Card Controller SPECIFICATIONS

Bidders are to Complete the included form and submit it as part of their proposal				
Fingerprint and EM Proximity Card based Door Controller for Access Control and Time-Attendance				
	Parameters	Technical Details	Compliance (Y/N)	Section of the bidder proposal
GENERAL	Credential Support	Finger and Card		
	Template Per User	Up to 10 (Single Template per Finger Mode) Up to 5 (Dual Template per Finger Mode)		
	Card Type	EM Proximity Card		
	Template Storage Capacity	9600		
CAPACITY	Cards Per User	2		
	Events Buffer	50 000		
COMMUNICATION	RS-485	Yes (115.2 Kbps)		
	Battery Backup	No		
	Ethernet	Yes (10/100 Mbps)		
	PoE	Yes (IEEE 802.3 af)		
INTERFACES	Exit Switch	Yes		
	Door Status Sense	Programmable NO, NC, Supervised		
	Door Lock Relay	Form C, SPDT Relay (Max 1A@30 VDC)		
	Door Lock Power	Internal 12VDC @ 0.5A or External		
	Reader Interface types	RS 232, and Wiegand IN/OUT		
AUDIO-VISUAL	Buzzer	Yes		
	LED	Single LED (Tri-Color)		
CONFIGURATION	CPU	32 Bit Micro-controller		
	Flash Memory	512 KB Internal Memory + 4 MB External Flash		
	RAM Memory	128 KB SRAM		
ELECTRICAL	Input Power	12 VDC @ 2A		
ENVIRONMENTAL	Humidity	5% to 85% RH Non-Condensing		
OTHERS	System Integration	Software API for Software Integration		
	Operational Mode	Direct Door with Server		
	Tamper Detection	Yes		
	Real Time Clock	Rechargeable RTC with NTP Server/ GPS Clock		
	IP65	Verified		
	Certification	CE, BIS		
SENSOR SPECIFICATIONS	Sensing Area	15.9mm x 17.9mm (0.62" x 0.70")		
	Sensor Technology	Suprema Optical Sensor		
	Image Size in Pixels	288 x 288		

	Image Resolution in DPI	500		
	Identification Time	< 1sec		
	Equal Error rate (ERR)	< 0.1%		
	Water-proof	IP65, Scratch Resistance		
	Verification Time	< 1sec (less than 3000 templates)		
	Template Size	384 bytes		
	Fingerprint Module	ISO 19794-2 Compliant		

18. ACCESS CONTROL Enrolment stations SPECIFICATIONS

Bidders are to Complete the included form and submit it as part of their proposal			
ENROLL STATION FINGER			
Parameters	Technical Details	Compliance (Y/N)	Section of the bidder proposal
Finger Print Sensor	Optical (Scratch free sensor surface)		
Operating Voltage	Feed from PC / Laptop through USB		
Enrolment Time	< 0.1 Seconds (Typical)		
Interface	USB 2.0 High Speed/ Full Speed, Plug & Play		
Resolution	500 / 256 DPI gray		
Template Size	384 bytes		
Sensing Area	16 x 18 mm		
Image Size	288 x 320 Pixels		
Image quality	Display during enrollment		
Operating System	Microsoft Windows		
Certification	CE, FCC, KCC, WHQL		
Operating Temperature	0°C to + 50°C		

19. SECURITY SYSTEM MAINTENANCE – NATIONAL

- 19.1 The supplier will be required to conduct maintenance on security-related systems and equipment as described below.
- 19.2 The contract will be valid for (3) three years. These services will only be required for add-hock services when needed. The service provider will charge per-hour rate and call-out fees instead of a monthly retainer fee.
- 19.3 Suppliers responding to the bid must prove that the installation and maintenance of security systems is part of their core business.
- 19.4 The supplier will guarantee an uptime of 98%, for the access control system.
- 19.5 The supplier shall guarantee to provide a technician to any SABS offices within 1 hour of logging a call.
- 19.6 The duration of this agreement is for 36 Months.
- 19.7 In this response, the supplier shall provide fixed costing for the duration of the contract for the items listed in the BOQ.

Costing obtained will form part of the evaluation criteria, and will apply throughout the contract period, unless agreed by both parties in writing.