**TECHNICAL SPECIFICATION FOR IP CAMERA SYSTEM FOR MCHC**

Mother and Children health Center is 450 bedded hospital required installation of IP cameras which is integrated with Public address system as per attached Diagram.

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| ***Description***  ***(Minimum Specifications)*** | **Approximate Qty.**  **( Quantity Can be increase or decrease )** |
| **2MP Face Recognition Box Network Camera For Main Entrance including Lenses and Weatherproof Housing.**  **Specifications.**   1. 1/1.9” 2Megapixel progressive scan CMOS 2. H.265&H.264 triple-stream encoding 3. 50/60fps@1080P(1920×1080) 4. WDR(120dB), 5. Day/Night(ICR), 3DNR,AWB,AGC,BLC 6. Multiple network monitoring: Web viewer, · 7. Auto back focus(ABF) 8. Micro SD memory, Poe 9. Face Recognition: Built-in deep learning algorithm 10. Support face images capture and facial attributes analysis 11. Support face images matching and management 12. Advanced Intelligent Functions 13. Face Recognition: Support face images matching, 14. support up to 10000 face images and 5 image libraries management; 15. Face Detection: 16. Support 6 kinds of facial features extraction: 17. Age, 18. Gender, 19. Expression(Jolly, Calm, Surprise, Sad, Rage), Glasses, 20. Mask, Moustache; 21. People Counting, 22. Heat Map | **03** |
| **Supply & Installation of 4x2MP 180 Degree Multi-Sensor Starlight H.265 WDR Sensor Panoramic Network IR Bullet Camera, Video Analytics, Vandal Proof Weatherproof Casing, and mounting accessories**  **Specifications:**   1. Four 1/2.8” 2Megapixel progressive scan STARVIS™ CMOS 2. H.265/H.264 triple-stream encoding 3. Max 25fps@4096x1800 4. Support 180-degree panoramic view 5. Day/Night (ICR), 3DNR, AWB, AGC, BLC 6. Smart detection 7. Intelligent Function 8. Max. IR LCDs length 30m 9. Micro SD memory, 10. IP67, 11. IK10, 12. Poe+ | **04** |
| **License Plate Recognition (LPR) Camera for Main Entry Gate.**  **Specifications:**   1. 2 Mega Pixel FULL HD Smart LPR Camera 2. 2MP, 1920(H) x 1080(V) 3. Embedded with LPR algorithm inside the camera 4. Support plate cutout, overview picture snapshot and video recording 5. Embedded with White list database, can control the barrier 6. 50M IR Range 7. Up to 80m of traffic data counting range 8. Micro SD Card for Onboard Recording 9. H.265/H.264M/H.264H/H.264B Compression 10. Powerful 5-50mm manual lens and white light, ideal for monitor ANPR distance as 40m 11. Wide working temperature, IP67 and superior performance for outdoor applications 12. True WDR technology 13. Weather Proof & Vandal Resistant IK-10 14. Operating Temperature: -40°C~+80°C | **02** |
| **8MP IR Bullet Network Camera with 50 Meter IR**   1. 1/2.5” 8Megapixel progressive scan STARVIS™ CMOS 2. H.265&H.264 dual-stream encoding 3. 15fps@4K(3840×2160),25/30fps@3Mp(2304×1296) 4. Day/Night(ICR), 0Lux, 3DNR, AWB, AGC, BLC 5. Intelligent Video Analytics: 6. Tripwire/ 7. Line Crossing, 8. Intrusion, 9. Object Abandoned/Missing 10. Face Detection 11. 2/1 Alarm in/out, 1/1 audio in/out 12. Micro SD memory, IP67, 13. IK10, 14. Poe 15. Multiple network monitoring: 16. Web viewer, 17. 2.7mm ~12mm motorized ZOOM lens 18. Max. IR LEDs Length 50m 19. Built-in audio out for public address system | **40** |
| **4 MEGAPIXEL BULLET IP CAMERA**   1. WDR LXIR Network Camera 2. 1/3” 4Megapixel progressive scan CMOS 3. Support H.264 4. H.265 dual codec 5. 25/30fps@4M(2688×1520) 6. Smart Detection supported 7. WDR(120dB), Day/Night(ICR), 3DNR, AWB, AGC, BLC 8. Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS 9. 3.6mm fixed lens (6mm optional) 10. 1/1 Alarm in/out, 1/1 audio in/out 11. Max. IR LEDs Length 50m 12. Micro SD memory, IP67, PoE 13. Micro SD card slot, up to 128GB 14. PoE+ 15. Built-in high Quality Microphone /Built-in audio out for public address system | **40** |
| **IR PTZ Network Camera 8 Mega Pixel, 48X, 400M IR**  **Specifications:**   1. **12 Megapixel** 4K High Resolution 2. Powerful 6mm~180mm, 48x Optical Zoom, 16X Digital Zoom 3. H.265+/H.265/H.264+/H.264/MJPEG 4. Triple Streaming 5. Pan: 0° ~ 360° endless; Tilt: -20° ~ 90°, auto flip 180° 6. Support Auto Tracking 7. Support Video Analytics: Tripwire/Line Crossing, Intrusion, Abandoned/Missing, Face Detection 8. Support Motion Detection, Region of Interest (ROI), Electronic Image Stabilization, Defog 9. 30fps@4K 10. Support Hi-Poe 11. Smart Wiper 12. Support Defog 13. IR distance up to 450m, 0Lux 14. SD Card for at least 12 Hour recording on board, ANR support 15. IP67 16. Operating Temperature: -40°C ~ 70°C 17. Built-in high Quality Microphone / Built-in audio out for public address system | **04** |
| **Integrated Mount Tester**  **4” IPS screen and QWERTY flip keyboard with 45keys; Support H.264/H.265 HD decoding protocol; Support IP, HDCVI/AHD/TVI/CVBS; Support audio and RS485 control; Support TDR network cable test and digital multi-meter function; Support PoE+, DC12V/2A power out; Replaceable 7.4V/22.2Wh polymer lithium ion battery , which can last 8 hours for normal use; Dual LED flashlight** | **01** |
| **Supply & Installation of Poles up to 10~12 feet including Civil work.** | **8** |
| **Supply & Installation of Triangular Base Tower up to 25 feet including Civil work** | **01** |
| ***Data Center & Monitoring / Control Room.***  ***2 Ton AC with control Room, LED Setting/Paneling, Dressing and other related Accessories.*** | **01** |
| ***Supply & Installation of Branded 7th Gen. PC for Live Monitoring and Alarm Management of CCTV Cameras.***  ***Specifications:***   * Intel 7th Gen Corei7 7700 – 3.60Ghz * 6MB Cache or Better * 2GB Dedicated Nvidia Graphic Card or Better * 8GB DDR3 RAM * 4TB HDD * Gigabit Ethernet, Keyboard, Mouse | **04** |
| **Facial Recognition Access Control System for Control Room**   1. *Face Recognition & Biometric Access Control System* 2. *fast and accurate identification, achieved the advanced level of face recognition* 3. *1000 face and 5000 fingerprint, 300,000 log capacity* 4. *2.8" TFT Color LCD* 5. *Time & Attendance Professional Software* 6. *Include Magnetic Lock for the Door* 7. *Archive record for all the faces* 8. *Lock* | **01** |
| **42 U Rack For Control Room** | **01** |
| **Online UPS 5/6 KVA UPS with 4 X 150 Ampere Dry Batteries for long Backup up to 02 Hours.**  **Features:**   1. Battery Equalization Function 2. Pure sine wave UPS/inverter 3. Selectable input voltage range for home appliances and personal computers 4. Selectable charging current based on applications 5. Configurable AC/Solar input priority via LCD setting 6. Compatible to mains votage or generator power 7. Parallel operation with up to 9 units available in 6KVA models(optional) 8. Overload and short circuit protection 9. Smart battery charger design for optimized battery performance 10. Auto restart while AC is recovering 11. Cold start function 12. Built-in MPPT solar charge charger 13. Monitoring software included 14. Maximum AC Charging Current 30A/60A 15. SNMP Card(optional) 16. Thermal Protection Sensor 17. External Battery Cabinet   Locally Designed & Assembled Cabinet   1. UPS Battery Bank Installation Kit 2. Including Interconnections, DC Breaker, Lugs. | **01** |
| **Central Management System Software with Video Analytics Support**   1. Support IPC, PTZ, NVR, EVS, HCVR, NKB, VDP, Access Control and etc. 2. Support 4K cameras. 3. Support H.265/H.264 streams. 4. Support IPv6 devices. 5. Support Windows 10. 6. Support Smart Track. 7. Support multiple tour tasks. 8. One channel can be split into different windows. 9. Multiple channels can be previewed in channel zero. 10. Auto find/import/export supported. 11. Easy to manage up to 256 devices or 2000 channels. 12. Up to36channelssynchronousplayback. 13. Time bar and events playback modes available. 14. Support joystick to control PTZ cameras. 15. Support fisheye camera Virtual PTZ operation by mouse. 16. Alarm can be triggered via different events including IVS. 17. Support e-map, you can clearly view and manage all device locations. 18. PC-NVR enables local storage recording. 19. Video wall configuration and control. 20. Support VDP monitoring, talking, announcement and configuration. 21. Account management supported; and different users share different privileges. 22. Log for event and user activities. 23. Friendly GUI for an easy operation. 24. Support P2P devices. 25. Support fisheye image correction in both live viewing and playback. | **01** |
| ***55 Inch INDUSTRIAL Grade Screen for 24x7 Surveillance Use***  ***Specifications:***   * 55” Screen * Resolution:3840×2160 * Brightness: 500cd/m2 * 4K ultra-HD resolution * Industrial level DID LCD panel, suitable for extensive 7×24 continuous works * High fidelity digital processing, brilliant and vivid video * Built-in 3D COMB filter and 3D Noise Reduction * 8ms fast response time, no image ghosting * 16.7M color, display every details of video * Brightness smart detection, power-saving * Using Tamper-proof metal housing, no radiation * Professional thermal design to extend equipment lifespan * Built-in power, low energy consumption, ultra-quiet * Abundant interfaces HDMI, DVI, VGA, BNC, USB, support video loop | **06** |
| ***Professional FULL HD Video Wall Controller H.265 Supported with 04 Channel Inputs and 06 channel Output HDMI Ports***  **Specifications:**   * 19” standard 4U ATCA industry box * Easy and flexible configuration with pluggable card module design * With 1 Input Card Support up to 4 CH HDMI Interface * With 1 Output Card support up to 04 Screens on HDMI Interface   (96ch@1080P H.265/H.264 decoding)   * Support Resolution 4096\*2160@30fps,3840\*2160@30fps,   1920\*1080P@60fps, 1280\*1024P@60fps， 1280\*720P@60fps   * Expandable 1280ch@D1 or 320ch@1080P decoding (Optional) * Support 1/4/6/8/9/16/25/36 Split Windows * Support 320ch@1080P H.265 signal decoding (full configured) * Support analog/digital video signals input and matrix output * Support SD/HD video signal matrix switch and output * Support non-compressed digital signal encoding output * 6 RJ-45 gigabit network ports for matrix control, preview and online central storage. * Support TCP/IP/RTP/RTSP/RTCP/TCP/UDP/DHCP/PPPoE and etc. network protocols * Remote cast analog/digital video onto the video-wall * Remote reboot/upgrade/default setting and etc. operations * Support VGA signal automatic adjustment * Redundant Power Supply * Control mode: PC client-end/Local Operate Menu/Network Keyboard/IPAD | **01** |
| **Aluminum Base for Display Unit 55"** | **06** |
| **Aluminum Back Bracket for Each Screen** | **06** |
| High Quality HDMI/DVI Cables for connection between LCD Display Unit and Controller and between NVR and Controller | **06** |
| **Installation Charges of Complete Display Systems** | **01** |
| **08 Port Industrial Grade POE Network Managed Gigabit Switch with 4 SFP Ports Support Ring Network**  **Specifications:**   * 8 Ports Industrial Full Gigabit PoE Managed Switch * Provide 8\* 10/100/1000Base-T Ethernet ports (PoE) +   4\* 1000BASE-X SFP Ports   * Support 4Khigh-definition video transmission; * PoE Function: support IEEE802.3af/at standard, each port supports up to 60W PoE Output; * Support Web-based network management, support VLAN, QoS, RSTP, SNMP, Support IGMP Snooping etc. network function; * Support 4K VLAN, Support 802.1Q Protocol-Based VLAN, Support Port-Based VLAN; * Support Fast Ring as redundant link * Support relay alarm for power off, network broken, PoE off * 6KV surge immunity, 8KV ESD Protection and anti-interference ability; * -40℃～75℃ working temperature * Support redundant Power Supply * Rail/Rack kit Fitting * CE、FCC、ROHS Certified | **14** |
| **Poe + Switch (16 Port) Industrial Grade POE Network Switch with 2 SFP Ports Support Ring Network**   * > Layer 2 management PoE switch > Poe budget: 190W > Support PoE, PoE+, Hi-PoE > 'Orange port' support Hi-PoE, can be used with the PoE extender (PFT1300) > 250 meters long distance PoE transmission > PoE management, PoE Setting/Event Statistics/Green PoE > Search and upgrade via ConfigTool > Support Web management > High lightning protection design > Non-blocking video transmission (190 Watts) 16 Port POE Network Switch + 2 SFP Gigabit Uplink Ports, Ring Supported | **12** |
| **Layer 2 Full Gigabit Fiber Combo Switch Support Both Ring & Star Network.**  > Powerful Processing Capacity > Perfect Security Control Strategy  > Perfect Reliability Protection Mechanism  > Convenient Management and Maintenance  (24 Ports Gigabit Layer 2 Network Switch 16 Dedicated Fiber Gigabit SFP Ports + 8 Gigabit Combo Ports (SFP Ports / Ethernet Ports) | **02** |
| **Compatible SFP or Equivalent.** | **52** |
| **Supply & Installation of Weatherproof DBS Minimum 4U Rack with built in environmental protection equipment for Switch, ODF and UPS.** | **20** |
| **Supply & Installation of CAT-6 Network Cable in PVC Pipe/Duct / Conduit including the RJ-45 Connectors** | **7500**  **Meter** |
| **Supply & Installation of High Quality 12 Core Fiber Optic Cable in PVC Pipe/Duct along with Installation.** | **2000**  **Meter** |
| **Supply & Installation of Electric Cable 40/76**  **2 Core in PVC Pipe / Duct Conduit including Labor** | **2500**  **Meter** |
| **Supply & Installation of High Quality Rack Mount Full Loaded ODF** | **20** |
| **Supply & Installation of High Quality Control Room Full Loaded ODF** | **02** |
| **Supply & Installation of High Quality Fiber Optic Pig tails** | **90** |
| **Supply & Installation of High Quality Patch Cords** | **45** |
| Civil Work, Digging, Back Filling, Road Cutting, Boring and complete in all aspects | **Meter** |
| High Density HD Pipe/UPVC for Undergrounding cable protection. | **Meter** |
| ***128 Channel Super 4K H.265*** ***Network Video Recorder.***   1. *Intel Processor* 2. *up to 128 channel IP cameras connection* 3. *384Mbps incoming bandwidth* 4. *Up to 12Mp resolution preview & playback* 5. *2 HDMI (up to 3840×2160), 1 VGA* 6. *Support 8 hot-swap HDDs* 7. *8 SATA III Ports, Up to 8 TB capacities for each HDD.* 8. *Smart Tracking and Intelligent Video* 9. *Support* *12Mp, 8Mp, 6Mp, 5Mp, 3Mp, 1080P, 1.3Mp, 720P & etc.* 10. ***Record Mode:***      1. *Manual, Schedule (Regular (Continuous), MD(Video detection: Motion detection, Camera blank, Video loss), Alarm), Stop* 11. ***Search Mode:***     1. *Time/Date, Alarm, MD & Exact search (accurate to second), Smart search* 12. ***Playback Function***     1. *Play, Pause, Stop, Rewind, Fast play, Slow play, Next file, Previous file, Next camera, Previous camera, Full screen, Repeat, Shuffle, Backup selection, Digital zoom* 13. ***Backup Mode***     1. *USB Device /Network /Internal SATA burner/*     2. *e-SATA Device* 14. *Support RAID 0/1/5/6/10/50/60* 15. *Support N+M hot standby* 16. *Support iSCSI to expand storage space* 17. *2 RJ-45 ports (10/100/1000Mbps,*  *2 Ethernet ports joint working or 2 independent 1000Mbps Ethernet ports* 18. *Two way Audio Talk* 19. *Compatible with SDK and seamless integrated to other platforms* 20. *Support Multi-brand network cameras: Samsung, Arecont Vision, AXIS, Bosch, Brickcom, Canon, CP Plus, Dynacolor, Honeywell, Panasonic, Pelco, Samsung, Sanyo, Sony, Videotec, Vivotek and etc.* 21. *ONVIF conformance* | **02** |
| **64 Channel Network Video Recorder Intelligent Video Surveillance Server with 4 Channel Back End Face Recognition Cameras,**   * 8HDD Network Video Recorder * Intel dual-core processor · * Max 400Mbps incoming bandwidth · * 64 Channel IP video access · * Up to 4 Channel back end face recognition · Regular/stranger mode · * Search by image · * *Face Recognition Up to 04 channel face recognition* * Face database management · * Supports RAID 0/1/5/10 · * 3HDMI/2VGA video output * Main Processor Intel Dual-core Processor Memory 8GB, up to 32GB Operating System Embedded LINUX * Face Recognition Up to 4 channel face recognition * Metadata Structured data of gender, age, expression, glasses, moustache, and mouth mask information. * Stranger Mode Detect strangers' faces (not in device's face database). * Similarity threshold can be set manually. * Trigger Events Buzzer, snapshot, recording, etc. Support similarity threshold set for each target face image. * Database Management Up to 20 face databases with 100,000 face images in total. Name, gender, birthday, nationality, address, ID information can be added to each face picture. Database Application Each database can be applied to video channels independently. * IP Camera Input 64 Channel Two-way Talk 1 audio input, 2 audio output, RCA * Playback and Backup Sync Playback Up to 16ch sync playback, 64Mbps playback bandwidth Search Mode Time /Date, Video Detection, Face and Exact Search (accurate to second) Backup Mode USB Device/Network * IP Camera Input 64 Channel * Two-way Talk 1 audio input, 2 audio output, RCA * Interface 3 HDMI, 2VGA Resolution HDMI1/2/3 : 3840 × 2160 , 1920 × 1080 , 1280 × 1024, 1280 × 720 VGA1/2 : 1920 × 1080 , 1280 × 1024, 1280 × 720 Decoding Capability 20-ch@1080P(30fps) Multi-screen Display Up to 36 split for each screen OSD Camera title, Time, Camera lock, Motion detection, Recording * Recording Bandwidth 320Mbps * Compression H.265/H.264/MJPEG/MPEG4 Resolution 32MP, 12MP, 8MP, 6MP, 5MP, 4MP, 3MP, 1080P, etc. Record Mode Schedule (Regular, Motion Detection, Alarm) * Video Detection and Alarm Trigger Events Recording, Snapshot, Buzzer, etc. * Video Detection Motion Detection, MD Zones: 396 (22 × 18); Tampering Alarm input 16 Channel Relay Output 8 Channel * 8HDD Intelligent Video Surveillance Server with 4 Channel Back End Face Recognition * Interface 4 RJ-45 Ports (10/100/1000Mbps) Network Port Mode Independent Ethernet Ports, Load Balance, * Fault Tolerance, Link Aggregation Network Function HTTP, HTTPS, TCP/IP, UDP, RTSP, IPv4, NTP, DHCP, DNS, IP Filter, IP Search P2P Interoperability ONVIF 2.4, SDK, CGI * Internal HDD 8 SATA HDDs, Up to 10 TB capacity for each HDD * Mode Single, Raid 0/1/5/10(Enterprise-level HDDs are recommended), Support Global HDD Hot-spare eSATA 1 eSATA Port (Please contact technical engineer to confirm the compatible device) * Certifications * CE * FCC * UL | **01** |
| ***8 TB Enterprise Level/ Grade Storage for NVR.*** | **18** |
| **Complete Installation, testing, configuration** | **01 job** |
| **High Quality Speaker with built-in amplifier for Cameras and Public address system.** | **50** |
| **High Quality External Microphone for IP Cameras** | **50** |