PHARMACY, SURI SERI BEGAWAN HOSPITAL KB (SSBHKB)

CLOSED CIRCUIT TELEVISION (CCTV) SURVEILLANCE SYSTEM

SUMMARY OF REQUIREMENTS

	Out-Patient Pharmacy	In-Patient Pharmacy
CAMERA		
Style - DOME	✓	✓
Lens - Single	✓	✓
Resolution - 5MP / 4K	✓	✓
Vision - Day & Night	✓	✓
Quantity	12	7
Network Video Recorder (NVR)		
Channels - 16	✓	✓
HDD Storage slot - 2	✓	✓
Interface - SATA	✓	✓
Capacity - ≥10TB per drive	✓	✓
Data retention time - 60 to 90 days	✓	✓
Wall mounting bracket	✓	✓
Quantity	1	1
Video Wall Controller / Monitor		
Channels - 16	✓	✓
Monitor - 32 inch	✓	✓
Resolution - ≥1080P per Channel	✓	✓
Video Outputs - HDMI (Required), VGA (Optional)	✓	✓
Wall mounting bracket	✓	✓
1.5m HDMI cable	✓	✓
Quantity	1	1
Uninterrupted Power Supply (UPS)		
Capacity - ≥ 1.2kVA	✓	✓
Runtime - 20 to 30 minutes	✓	✓
Surge protection	✓	✓
Quantity	1	1
Others		
Installation, testing & commissioning	✓	✓
User training	✓	✓
Warranty - ≥ 3 Years	✓	✓
Aftersales support	✓	✓
Video management system requirements: - perpetual license(s) for all components - update license can be periodical - software / operating system (OS) for installation within a virtual environment	✓	✓

REQUIREMENTS FOR A CLOSED-CIRCUIT TELEVISION (CCTV) SURVEILLANCE SYSTEM

Device Requirements

The information provided below is designed to assist with supplying a project quotation and should be considered as the minimum acceptable level, rather than a complete or exhaustive specification.

1. Camera Requirements

1.1 Universal

The items below should be considered as a requirement for all cameras in addition to the individual type requirements specified in section 1.2.

- *Removable onboard storage* – All cameras should act as an alternative recording location in the event the connection to the main Network Video Recorder (NVR) is interrupted. The expectation is that once the NVR link is restored, recordings will be automatically copied to the NVR to fill in the blank period(s) caused by the disruption.

- *SD Card* – The following spec must be met by cards supplied in all cameras:
  - Reputable Brand offering a lifetime warranty
  - Minimum 128GB capacity, Class U3 or V30, Capable of 4K Video
  - Environmental factors: Externally rated for operation at -20°C to 85°C

- *IP Rating* - All cameras are required to meet IP67 rating allowing both internal and external use.

- *Secure Connections* - Once installation is completed, all cameras and connections are required to be tamper-proof without use of additional tools.

1.2 Multi-Lens Cameras

Style: Dome

Resolution: ≥4MP per lens / 4K Ultra HD

Low Light: ≥10m based on use / environment

PSU: PoE, with injectors where >30W is required. Responsibility for supply of injector should be defined within quotation i.e. UoS or 3rd Party.

Night vision: Dual-light or infrared (IR) night vision

2. **NVR Requirements**

HDD:

Rating: Enterprise Grade for "Surveillance" use, "NAS" will be considered

Quantity: ≥16 x 3.5" HDDs

Interface: SATA

Capacity: ≥10TB per drive

Data retention time: 60 days to 90 days before rewriting

MTBF: ≥ 2.5M Hr

RAID: 6, multiple arrays is accepted

Warranty: ≥ 3 Years

Channel Count: Capable of processing 128ch or greater

Networking: 4 x 1Gbps connections with optional load balancing

Throughput: ≥ 1Gbps in both directions

Size: ≥3U, 19" Rack mountable

Local Management ports: HDMI / VGA & USB 2.0 or higher

Power: 2 x Hot-Swappable Redundant PSU per chassis

Redundancy: N+1 function with auto switchover is required

3. **Video Wall Controller Requirements**

Channel count: 16 channel(s)

Resolution: ≥1080P per Channel

Streams / Channel: ≥16 streams

Video Outputs: HDMI (Required), VGA (Optional)

Mounting: 1ch ~ desk or wall, >4ch ~ 19" rack mount

4. **Video Management System (VMS) Requirements**

- Central Management Portal
- Separate user client
- Perpetual License(s) for all components
- Update licence can be periodical - requires period notice

- Software / OS suitable for installation within a Virtual environment
- Manufacturer training available for admins and operators

5. Uninterrupted Power Supply (UPS) Requirements

- minimum of 1.2kVA capacity
- runtime: 20 to 30 minutes
- with surge protection

6. Miscellaneous Requirements

- Network Connections – Unless stated otherwise, all devices are required to
- have ≥1 x RJ45 connection capable of auto-negotiating at ≥100Mbps to provide connectivity to the VMS.
- ONVIF – All devices are required to be ONVIF compatible enabling cross-platform inter-operability.
- Installation, testing and commissioning of the system and equipments.
- User training
- Support Contract – Any aftersales support offered by the contractor should be expanded to outline what is/isn't included and for what duration. If this is a chargeable service, it must be itemised as such on any quotation to provide the option of declining the service.
- Warranty - It is required that the full manufacturer warranty is upheld by the installing party. Warranty terms should be detailed within any quote to enable any claims, should they arise, to be settled in a timely manner