Project Name	xxxxxxxxxxxxxxxxxxxx
Revision No.	xxxxxxxxxxxxxxxxxxxx
Date:	xxxxxxxxxxxxxxxxxxxx

SAMPLE - CCTV SYSTEM STORAGE CALCULATION

PRIMARY STORAGE: 120 DAYS

NVR/ Storage server	No. of Channels	Number of HDD Bays	Type of HDD	Size of HDD (TB)	Disk Pool/Array	# of HDD for Each Array	HDD for RAID	Hot Spare HDD	Total #HDD	Number of Cameras	Recording resolution	Recording Codec	FPS	Bitrate (Mbps)	Motion (%)	Recording days	Required storage for 1 camera (TB)	Total storage required (TB)	Available storage (TB)	Proposed Storage (TB)
STORAGE # 1 (Model: xxxxxxxxxx)	512	48	SATA	16	A	11	1	**1**	**48**	**51**	2MP	H.264	15	2.56	100	120	3.09	**157.59**	**165.44**	**176**
					B	11	1			**51**	2MP	H.264	15	2.56	100	120	3.09	**157.59**	**165.44**	**176**
					C	11	1			**51**	2MP	H.264	15	2.56	100	120	3.09	**157.59**	**165.44**	**176**
					D	10	1			**47**	2MP	H.264	15	2.56	100	120	3.09	**145.23**	**150.4**	**160**
STORAGE # 2 (Model: xxxxxxxxxx)	512	24	SATA	16	A	6	1	**1**	**27**	**28**	2MP	H.264	15	2.56	100	120	3.09	**86.52**	**90.24**	**96**
					B	5	1			**24**	2MP	H.264	15	2.56	100	120	3.09	**74.16**	**75.2**	**80**
					C	6	1			**28**	2MP	H.264	15	2.56	100	120	3.09	**86.52**	**90.24**	**96**
					D	5	1			**24**	2MP	H.264	15	2.56	100	120	3.09	**74.16**	**75.2**	**80**
						Grand Total:			**75**	**304**						**Grand Total Storage:**		**939.36**	**977.6**	**1040**

FAILOVER STORAGE: 10 DAYS

STORAGE # 3 (Model: xxxxxxxxxx)	512	24	SATA	16	A	7	1	1	17	100	2MP	H.264	15	2.56	100	10	0.7725	**77.25**	**103.04**	**112**
					B	7	1			100	2MP	H.264	15	2.56	100	10	0.7725	**77.25**	**103.04**	**112**
						Grand Total Number:			**17**	**200**						**Grand Total Storage:**		**154.50**	**206.08**	**224**

Summary (Primary Storage)	
Number of Storage Server:	**2**
Number of HDD:	**75**
Size of HDD:	**16TB**
RAID Type:	**5**
Number of Cameras:	**304**
2MP Recording:	**304**
Total Required Storage:	**939.36**
Total Available Storage:	**977.6**
Total Proposed storage:	**1040**

Summary (Failover Storage)	
Number of Storage Server:	**1**
Number of HDD:	**17**
Size of HDD:	**16TB**
RAID Type:	**5**
Number of Camera:	**207**
2MP Recording:	**207**
Total Required Storage:	**154.50**
Total Available Storage:	**206.08**
Total Proposed Storage:	**224**

CCTV VENDOR STORAGE & BANDWITH

PRIMARY STORAGE

NO.	Channels	Compression	Environment	Resolution	Max FrameRate	FrameRate	Audio	Bitrate/Cl
1	53	H.264	--Environment--	2MP	30	15		2560
2	53	H.264	--Environment--	2MP	30	15		2560
3	53	H.264	--Environment--	2MP	30	15		2560
4	48	H.264	--Environment--	2MP	30	15		2560
5	34	H.264	--Environment--	2MP	30	15		2560
6	34	H.264	--Environment--	2MP	30	15		2560
7	29	H.264	--Environment--	2MP	30	15		2560

Total 304 760.00 Mbps

Disk Requirement | Recording day | RAID Calculator

Recording Day 120

Request Capacity: **939.33TB**

FAILOVER STORAGE

NO.	Channels	Compression	Environment	Resolution	Max FrameRate	FrameRate	Audio	Bitrate/Cl
1	100	H.264	--Environment--	2MP	30	15		2560
2	100	H.264	--Environment--	2MP	30	15		2560

Total 207 517.50 Mbps

SAMPLE - ANPR SYSTEM STORAGE CALCULATION

ANPR STORAGE: 120 DAYS

NVR/ Storage server	Number of Channel	Number of HDD Bay/ Array	Type of HDD	Size of HDD in TB	Disk Pool/ Volume Groups	# HDD for Each group/pool	HDD for RAID	Hot Spare HDD	Total #HDD	Nummer of Camera	Recording resolution	Recording Codec	FPS	Bitrate (Mbps)	Motion (%)	Recording days	Required storage for 1 camera (TB)	Total storage required (TB)	Available storage (TB)	Proposed Storage (TB)
NVR-1	16	8	SATA	8	A	2	0	0	2	2	2MP	H.264	15	2.56	100	120	3.09	6.18	15.04	16
							Grand Total Number		2	2							Grand Total Storage:	6.18	15.04	1040

Summary (ANPR Storage):	
Number of Storage Server:	1
Number of HDD:	2
Size of HDD:	8TB
RAID Type:	N/A
Number of Cameras:	2
2MP Recording:	2
Total Required Storage:	6.18
Total Available Storage:	15.04
Total Proposed storage:	16

Note: Include details of the number plates snaps shots in the storage deployment as per the number of shots per day for 120 days retention

CCTV VENDOR STORAGE & BANDWITH CALCULATION

ANPR STORAGE

NO.	Channels	Compression	Environment	Resolution	Max FrameRate	FrameRate	Audio	Bitrate/Cl
1	2	H.264	--Environment--	2MP	30	15		2560
Total	2							5120.00 kbps

Disk Requirement | Recording day | RAID Calculator

Recording Day: 120

Request Capacity: **6.18 TB**

AFFIX CONTRACTOR STAMP WITH SIGNATURE