Equipment Summary

Item	Equipment	Brand	Model	Qt'y	Remark
1	**Server**				
1.1	Fault Tolerant Server - Form Factor : 4U rack - Intel® Xeon® Processor E5-2670(2.60 GHz/ 8-core/20MB) - RAM 32 GB DDR3L-1333 - 2 X 600 GB 10K hot Plug 2.5" SAS HDD - 14 X 200 GB hot plug 2.5" SAS SSD	NEC	Express 5800/R320d-M4	1	
1.2	OPCUA Server			5	
2	**Workstations & Client**				
2.1	TAS Workstations PCs, dual 24" LED screen - Form Factor : Tower - Intel® Core i7-4790 Processor(3.6 GHz) - RAM 16 GB DDR3L - 512 GB 2.5" SATA SSD	HP	Z230	2	Workstations
2.2	TAS Workstations PCs, single 24" LED screen - Form Factor : Tower - Intel® Core i7-4790 Processor(3.6 GHz) - RAM 16 GB DDR3L - 512 GB 2.5" SATA SSD	HP	Z230	4	Workstations
2.3	TAS Workstations Client - Form Factor : Tower - Intel® Core i7-4790 Processor(3.6 GHz) - RAM 16 GB DDR3L - 512 GB 2.5" SATA SSD	HP	Z230	4	Workstations
2.4	SAP Client - Form Factor : Tower - Intel® Core i7-4790 Processor(3.6 GHz) - RAM 16 GB DDR3L - 512 GB 2.5" SATA SSD	HP	Z230	3	Workstations
3	**Instrument Protective System (IPS)**				
3.1	Instrument Protective System (IPS) - Fault Tolerant - 20% Spare I/O - Spare chassis for 2 future gantry	Tricon		1	
4	**Switches**				
4.1	Redundant Switching Hub 36 Port	Cisco	300series	2	
4.2	Switching Hub 48 Port	Cisco	300series	2	
4.3	Switching Power Supply 24VDC 20A	Cisco	300series	2	
5	**Access Control**				
5.1	Card Reader	Mercury	Mercury 2+	21	RS422
5.1A	Card Reader	Toptech	RCU II	21	Ethernet
5.2	LED Traffic Light		Loading Gantry	10	

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5.3	LED Traffic Light		Gate IN-Out	5	
5.4	Gate Barrier	TBA	TBA	7	
6	**Batch Controller**				
6.1	Batch Controller	FMC	Accuload III.Net	25	
7	**Printer**				
7.1	Printer-Dot matrix	EPSON	TBA	5	
7.2	Printer-Laser printer	HP	TBA	2	
8	**Field Junction Box**				
8.1	Field Junction Box	Alloy	DJB series	5	
9	**Cabinet**				
9.1	PLC Safe Guarding System Cabinet	Rittal	19" Rack Type H2100xW800xD1200	1	
9.2	Batch Controller Cabinet	Rittal	19" Rack Type H2100xW800xD1200	5	
9.3	Computer Server Cabinet	Rittal	19" Rack Type H2100xW800xD1200	1	
9.4	Network Equipment Cabinet	Rittal	19" Rack Type H2100xW800xD1200	1	
9.5	FTC Cabinets	Rittal	19" Rack Type H2100xW800xD1200	1	
9.6	Power distribution cabinets	Rittal	19" Rack Type H2100xW800xD1200	1	
10	**Firewall**				
10.1	Juniper Network - Firewall performance (Large packet) 160 Mbps - Firewall performance (IMIX) 90 Mbps - Firewall Packets per Second (64 byte) 30,000 PPS - Maximum security policies 200 - New sessions/second 2,800	Juniper	SSG 5	1	
11	**Antivirus**				
11.1	Antivirus	Symantec	Symantec Endpoint Protection 12	1	
12	**Microsoft Office**				
12.1	Microsoft Office	Microsoft	Microsoft Office Professional 2013	1	
13	**Alarm Display Panel**				
13.1	Annunciator	ESPAN	Annunciator 02	1	
13.2	Console	Rittal	TopConsole system TP	1	
14	**Register Counter (Kiosk)**				
14.1	Steel tower case			2	
14.2	Workstation	HP	Z230	2	
14.3	Surface Acoustic Wave Touch Panel	ATouch	ATouch 23.1"	2	

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14.4	Printer	Epson	TM-T20II	2	
14.5	Card Reader	TBA	HID Card Reader	2	
15	**Time synchronized system**				
15.1	Time synchronized system	Microse mi	Domain Time II	1	