Addendum No2 to Tender Document

PROVISION, COMMISSIONING, INSTALLATION, CALIBRATION, INTEGRATION, TESTING, AND EXECUTION OF IT SYSTEMS (CCTV SURVEILLANCE, CONNECTIVITY AND VIDEO WALL) FOR MULTAN METROBUS SYSTEM AND FEEDER ROUTES

THE PUNJAB MASSTRANSIT AUTHORITY
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Addendum No.2 to the Tender Document

Due to some clarifications required in the RFP document, the following addendum is hereby issued; which shall form a part and parcel of the original document titled

"Provision, Commissioning, Installation, Calibration, Integration, Testing, and Execution of IT SYSTEMS (CCTV Surveillance, Fiber Optic Connectivity and Video Wall) FOR MULTAN METROBUS SYSTEM AND FEEDER ROUTES"

, issued and uploaded on August 30, 2015.

The contents of this addendum shall supersede/replace pages 121 and 123, of the original RFP document, and shall be read as part of the RFP document uploaded on the following websites:

www.pma.punjab.gov.pk

www.ppra.punjab.gov.pk

NOTE:					
	1. Maximum down time for all components including replacement of the whole unit as per SLA.				
	2. Please mention the country of origin/manufacturing/assembly of the quoted brand/model.				
	3. Vendor/Assembler to provide verification of serial numbers of all products.				

4- The local authorized dealers should mention their service and setup, details of qualified engineers, etc
5- The vendor is responsible for the installation Configuration, Management, software, Server Operating System, and provides training for the efficient configuration and management of the system.

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SAN STORAGE (1000 TB)

SAN Storage Solution (High End) - 1000 TB					
S#	**ITEM**	**DESCRIPTION**	**Yes**	**No**	**Qty**
	SAN Storage Solution		-	-	**1**
1	Architecture	Multi-Protocol storage, supporting simultaneous FC & iSCSI Access			
2	Cache	Minimum 48 GB cache for Storage Controllers			
3	Storage Controller	Redundant Storage Controllers with Active-Active configuration			
4	Front End Ports	8 x 8Gbps FC Ports for SAN (Required) or 4 x 10Gbps iSCSI Ports for SAN (Required)			
5	Supported Protocols	FC, iSCSI			
6	RAID	Supporting RAID 0, 1, 5, 6, 10			
7	Redundancy	End to end redundant connections with no single point of failure			
8	RAW Storage	5 x 400GB SSD Drives (Used as SSD Caching to Improve overall system Performance) 250 x 4TB 3.5 Inch 7.2k NL-SAS Disk Drives			
9	FC Cables	8 x 5m Fiber Optic Cable LC-LC			
10	Modular Design	Should have a Modular Design. Ability to Add or Replace Host connectivity Ports as Required			
11	Multi-path Software	Multi-path software providing path fail-over for all blades connecting to storage			
12	Power & Cooling	Redundant power and cooling			
13	Rack Rails	Rack mount kit with all accessories			
14	Management	Management software along with Storage			
15	Expandability	Should support a minimum of 350 Disk drives or more			
16	Drive Form Factor	Should support both 2.5" and 3.5" Disk Drives			

STORAGE (100 TB) (Direct Attached Storage)
IF PMA management want to save specified video clips/record for a longer period of time i.e. more than 30 days they will be saved on DAS.

S#	ITEM	DESCRIPTION	Yes	No	Qty
	Storage Solution		-	-	**1**
1	Architecture	Multi-Protocol storage, supporting simultaneous FC & iSCSI Access			
2	Cache	Minimum 16 GB cache for Storage Controllers			
3	Storage Controller	Redundant Storage Controllers with Active-Active configuration			
4	Front End Ports	4 x 10Gbps iSCSI Ports for SAN (Required)			
5	Supported Protocols	FC, iSCSI			
6	RAID	Supporting RAID 0, 1, 5, 6, 10			
7	Redundancy	End to end redundant connections with no single point of failure			
8	RAW Storage	25 x 4TB 3.5 Inch 7.2k NL-SAS Disk Drives			
9	FC Cables	8 x 5m Fiber Optic Cable LC-LC			
10	Modular Design	Should have a Modular Design. Ability to Add or Replace Host connectivity Ports as Required			
11	Multi-path Software	Multi-path software providing path fail-over for all blades connecting to storage			
12	Power & Cooling	Redundant power and cooling			
13	Rack Rails	Rack mount kit with all accessories			
14	Management	Management software along with Storage			
15	Expandaility	Should support a minimum of 150 Disk drives or more			
16	Drive Form Factor	Should support both 2.5" and 3.5" Disk Drives			
17	SAN to SAN Replication	Should Support SAN to SAN Replication (If Required in Future)			

Offered Brand (Attachments):	Provide Name	Yes	No
Make / Brand Name:			
Model Name:			
Sub-Model (if any):			
Boucher / Technical Datasheet with Make, Model (Sub-Model (if any)):			
Direct / Authorized Distributor/Dealership certificate (Offered Brand)			
Agreed to provide the requisite quantity with in time frame:			
Agreed to provide the required warranty of the equipment:			
Agreed with other terms & conditions:			
Signed & Stamped documents:			