



**TECHNICAL OF REFERENCE FOR SUPPLY, DELIVERY, INSTALLATION, INTEGRATION
AND COMMISSIONING OF A SOLUTION FOR DIGITAL ACCESS ROOM**

July 2017

1. Digital Access Rooms

Following EDM digital strategy, EDM plans to set up a solution for Digital Access Room (DAR) across the EDM national offices, for remote, real-time face-to-face conferencing, reducing the need for business travel and, consequently, reduce costs and enhancing productivity.

The concept of the EDM digital access room is to have EDM internal and external connect through broadband access (internet) to conduct business and social related activities, such as:

- Virtual online Board meeting
- Distance Operations meeting
- Provide extensive digital access to EDM knowledge center, programs, and learning resources
- Enable EDM internal users to explore and expand their interests and create their own learning experiences
- Distance Outage management process
- Regional coordination meetings
- Interviews
- And other future applications.

EDM has chosen Google Suite (G-Suite) as its corporate communication platform so, to fully leverage the investment, the digital access room will be based on Google G-Suite. Initially 14 sites will be installed, but eventually there will be total 30-50 sites.

The indicative price for the implementation of the DAR, for the 14 sites, including two automatized rooms is USD 237,000.00 (Two hundred and thirty seven thousand USD).

Three types of room and devices will be installed:

- 1) Personal Rooms
- 2) Small Meeting Rooms
- 3) Medium to Large Meeting Rooms

1) Personal Meeting Rooms

Personal meeting rooms, accommodating no more than four seats, are called *huddle rooms* in the Information Technology industry. *Huddle rooms* are mainly used for Interviews and one-on-one meetings (Personal Meetings). Personal room size can be one seater to up to four-person seater with a 24" to 37" single monitor all in one integration. However, a Bluetooth speaker/mic and a small projector can considerably improve the quality of the discussions,

2) Small Meeting Rooms

Small Meeting Rooms are useful to conduct a team discussion, product launch discussion, Manager – Team meeting discussions and more. Having a Video Conferencing facility with a Small Meeting Room turns to a more effective way to use the room for connecting remote offices anywhere in the world and to work collaboratively. With Google Chrome box any small meeting room can be a virtual Telepresence room for holding meetings more efficient and cost effective.

Google Chrome Box with a Single Professional Display of 42” or 50” with high-powered speakers provide a rich experience of the video conferencing. The setup needs to be simple and more powerful to hold meetings and integrated with Google Calendar have best user experience and simple navigation.

3) Medium & Large Meeting rooms

Medium to Large Meeting Rooms are essentials in any office environment to have team meetings, corporate, board meetings, brainstorming sessions, HR interviews, panel interviews and participation of any large meetings from the office. Converting legacy medium or large meeting rooms with Google Chrome CMF meeting setup with a High Definition Camera makes the room a telepresence experience to join the meeting and feel the rich media experience. Google Chrome CMF comes with a HD camera integration features to connect large Displays or Using Professional Projectors for rich media experience.

Medium size rooms are proposed with Dual Large Professional Screens 50” or above with Powered Speakers to accommodate 6 to 10 persons. Large Meeting rooms are proposed with Dual Large Professional Displays 60” or above or Projectors with Audio Visual integration to cover the room for Video and Audio expectations. Design may vary based on the room size and other aesthetics.

Medium & Large Room apps:

- Board Meetings
- Corporate Meetings and Presentation
- Panel Interviews
- Town Hall Meeting Participation
- Team Meetings
- Trainings
- Project Meetings

2. Requirements for the Audio, Video, Web Conferencing Services and Equipment.

EDM chooses Internet based solution for its audio video and conferencing solution. The solution must be G-Suite compliance. Other value add features will be evaluated.

Exceptionally, there is a need to automatize 2 out of 14 meeting rooms above mentioned. The specifications for the equipment & system for automation are the following:

- **Automation Controller**
 - Controller to synchronize audio, video, lighting, air conditioning and projection of the presentations
- **Lighting Automation**
 - Sensor to light up and turn off
 - Switch on via trigger synchronized with the sensor
 - Should be able to switch on/off remotely via an application on smartphone or PC
- **Air Conditioning automation**
 - Sensor to turn on/off
 - Switch on via trigger synchronized with the sensor
 - Should be able to switch on/off remotely via an application on smartphone or PC
 - Temperature monitor
- **Motorized Screen**
 - Electric screen 100 Inch (16:9)221x124mm
 - Should be able to integrate on automation controller
- **Video Collaboration System**
 - Wireless presentation solution for 2 presentations screen sharing
 - Should be able to integrate on automation controller
- **Sound Amplification System**
 - Mix amplifier, with 2 microphones unbalanced TRS 6.3 jack inputs, stereo RCA aux and phono inputs, 30W RMS.
 - Wall mounting 2-way louder speaker with 4" Woofer and 1" tweeter, built-in line transformer and wall mount bracket, 30W/8Ω, 110-20000Hz, white color

3. Scope of Work

PROVIDE – supply as deliverable all essential components of a completely functional system as defined in the project scope document. The initial stage will cover 14 sites:

2 personal sites, 4 medium sites, 8 large sites. Provide a complete design including hardware and software for the 14 sites.

INSTALL – delivery, setup, configuration and testing of all hardware and software components to guarantee compatibility and proper system operation.

INTEGRATION – guarantee proper network operation and interoperability with existing network standards as specified by EDM.

ON –GOING SUPPORT – demonstrated ability to insure proper operation of hardware and software. Ability to provide appropriate levels of support for all components provided as part of the turnkey solution for the term of the contract including helpdesk and onsite maintenance.

Training and knowledge transfer - provide classroom and/or online comprehensive, intensive and advanced training to the technical operation teams in EDM.

4. TECHNICAL PROPOSAL

The technical proposal should address specifically each of the required elements:

- Staff Qualifications – Provide staff resumes/CV and describe qualifications and experience of key staff who will be involved in this project, including their experience in the field of billing in general and water testing billing in particular, if any
- Capability, Capacity, and Qualifications of the Offeror - Please provide a detailed description of the Vendor's experience
- Work plan - Please describe in detail, the framework within which requested billing and collection services will be performed
- Licenses – Please provide the annual cost of licenses of the proposed solution
- Service agreement – provide the cost of a service agreement for technical support for at least 1 year after the commissioning of the DAR
- Specifications of the materials and equipment to be used in the installation of the DARs, in alignment with the Bill of Materials in annex.

BILL OF MATERIALS

Table 1 - BOM Chrombox for Meetings - Huddle Room (Personal Room)

#	Part Type	Huddle Room	Singal Type	Source	Destination	Connector Source	Conector Destination	Notes	Qty
1	Asus 24" CFM Base	Codec + Display							2
2	Software License	License							2
3	2001	Cable & Accessories							2
4	1800	Custom Made Iron Fit						Additional Cost for the Setup on the wall	2

Table 2 - BOM Chrombox for Meetings - Medium Room

#	Part Type	Medium Room	Singal Type	Source	Destination	Connector Source	Conector Destination	Notes	Qty
1	C62	Codec	Main Codec	N/A	N/A	N/a		Chrome box for Meetings Main Codec	4
2	Software License	License	N/A					Annual Software License	4
3	50" Display	Professional Display						Professional Display Units	4
4	MM-RACK1	Custom Made	Iron	Display Unit	Codec	Camera	USB A(3.0)	Custom Made Rack for the Display unit and Codec	4
5	MM-RACK1-Acces	Custom Made	Iron	Display Unit	Codec	Camera	USB A(3.0)	Accessories for the rack	4
6	Extron-Pwd-Speaker	Powered Speakers	Audio Mixer	HDMI				Powered Speakers Audio Mixer	4
7	2002	ALL	USB 2.0	Web Cam	Codec	Built into Camera	USB A(3.0)	Supplied with Camera	4
8	2002	All	USB 2.0	Speaker Connector	Codec	USB Mini B"(20)	USB A(3.0)	Supplied with Speaker	4
9	EXT-HDMI-Cable	All	HDMI	Codec	Display	HDMI	HDMI	Codec to the Display Unit connector	4

#	Part Type	Medium Room	Singal Type	Source	Destination	Connector Source	Conector Destination	Notes	Qty
10	6003-Ext	Dual Display	Right Display				USB A(3.0)	only for Dual Display	4
11	8001-RJ45	All	Ethernet	Codec	EDM Network	RJ45	RJ45	Network Connectivity	4
12	10000	All	Mains Power	Local Power Enclouser	Power Distribution Strip	Regional Specific	IEC		4
13	10001	All	Mains Power	Local Power Display	Primary Display	Regional Specific	IEC		4
14	10002	Dual Display	Mains Power	Local Power Display	Right Display	Regional Specific	IEC		4
15	10002	All	Mains Power	Power Distriution Strip Rack	Codec	IEC C14	IEC		4
16	10003	All	Main Power	Local Power Source for Display + Table	USB Hub	Regional Specific			4
17	1004	All	Main Power	Local Power Source for Display + Table	USB Mic + Speaker	Regional Specific			4

Table 3 - BOM Chrombox for Meetings - Large Meeting Rooms

#	Part Type	Large Room	Singal Type	Source	Destination	Connector Source	Conector Destination	Notes	Qty
1	C62 -CFM	Codec	Main Codec	N/A	N/A	N/a		Chrome box for Meetings Main Codec	8
2	PTZ Camera	PTZ Camera	Main Camera					PAN,TILT and Zoom Camera for 270Degree	8
3	Software License	License	N/A					Annual Software License	8
4	55" Display	Professional Display						55" Professional Display	16
5	MM-RACK2	Custom Made	Iron	Display Units Attachment				Custom Made Rack for the Display unit and Codec	16
6	MM-RACK2	Custom Made	Main Rack for Codec	Codec Rack	Codec	Codec		Custom Made Main Rack	8
7	Extron-Pwd-Speaker	Powered Speakers	Audio Mixer	HDMI				Powered Speakers Audio Mixer	8
8	AV Mixer	Extron/Kramer	Audio Mixer					Audio and Video Mixer for Dual Screen Display	8
9	1001	Local Prensntation Option	VGA+ Line in	Lpatop	HDMI Converter	VGA+Audio	VGA+Audio	Local Presentation for Meetings	8
10	1002	Local Presentation Option	Line Level Audio	HDMI DA	DSP Input	RCA Phono			8
11	3002	ALL	USB 2.0	Web Cam	Codec	Built into Camera	USB A(3.0)	Supplied with Camera	8
12	3003	All	USB 2.0	Speaker Connector	Codec	USB Mini B"(20)	USB A(3.0)	Supplied with Speaker	8
13	4001	Camera Cable	HDMI	Codec	Camera				8
14	EXT-HDMI-Cable	All	HDMI	Codec	Display	HDMI	HDMI	Codec to the Display Unit connector	4
15	6003-Ext	Dual Display	Right Display				USB A(3.0)	only for Dual Display	4
16	8001-RJ45	All	Ethernet	Codec	EDM	RJ45	RJ45	Network Connectivity	4

#	Part Type	Large Room	Singal Type	Source	Destination	Connector Source	Conector Destination	Notes	Qty
					Network				
17	10000	All	Mains Power	Local Power Enclouser	Power Distribution Strip	Regional Specific	IEC		4
18	10001	All	Mains Power	Local Power Display	Primary Display	Regional Specific	IEC		4
19	10002	Dual Display	Mains Power	Local Power Display	Right Display	Regional Specific	IEC		4
20	10002	All	Mains Power	Power Distriruption Strip Rack	Codec	IEC C14	IEC		4
21	10003	All	Main Power	Local Power Source for Display + Table	USB Hub	Regional Specific			4
22	1004	All	Main Power	Local Power Source for Display + Table	USB Mic + Speaker	Regional Specific			4

Table 4 - BOM control and automation

#	Item Name	Description	Quantity
1	Automation controller	Controller of audio, video, lighting, air conditioning and projection of the presentations	1
2	Light sensor	Sensor to turn on/off the light	2
3	trigger	trigger synchronized with the sensor	2
4	Air conditioning sensor	Sensor to switch on/off the Air conditioning	2
5	Temperature Monitor	Sensor to monitor the temperature and send to the controller	2
6	Motorized Screen	Electric screen 100 Inch (16:9)221x124mm	1
7	Video Collaboration System	Wireless presentation solution for 2 presentations screen sharing	2
8	Sound Amplification System	Mix amplifier, with 2 microphones unbalanced TRS 6.3 jack inputs, stereo RCA aux and phono inputs, 30W RMS	2
		Wall mounting 2-way louder speaker with 4" Woofer and 1" tweeter, built-in line transformer and wall mount bracket, 30W/8Ω, 110-20000Hz, white color	2