INDIAN INSTITUTE OF TROPICAL METEOROLOGY
PASHAN, PUNE-411008

(PS/Tender/03/2013) **TENDER NOTICE**

Director, Indian Institute of Tropical Meteorology (An autonomous Institute under the Ministry of Earth Science, Govt. of India), Dr.Homi Bhabha Road, Pashan, Pune- 411 008 (India) invites sealed tenders (Part-I – Technical Bid, Part-II – Financial Bid) in separate sealed covers from Manufacturers / Suppliers and their accredited selling agents for the supply, installation, commissioning, and satisfactory demonstration of ***"Digital Display System (DDS) for System for Air Quality Forecasting & Research for MUMBAI (SAFAR-MUMBAI) (Turnkey Job)"*** **Qty – 01 System.**

Tender documents with details can be obtained from Purchase & Stores Section of the Institute or can be download from Institute's website.

Last date of receipt of Tender at IITM, Pune : 14th August 2013 at 12:00 hrs.
Opening of Tenders (Technical bids only) : 14th August 2013 at 15:00 hrs.

The Institute reserves the right to reject any or all tenders without assigning any reason thereof. For details please visit Government's Central Procurement Portal (CPP) http://**www.eprocure.gov.in** as well as this Institute's Website: **http://www.tropmet.res.in**

Scientific Officer Gr.-I, for Director
Email :vipin@tropmet.res.in

INDIAN INSTITUTE OF TROPICAL METEOROLOGY
Dr.HomiBhabha Road, Pashan, Pune 400 008

Specifications
Digital Display System (DDS) for SAFAR-MUMBAI
(Turnkey Job)

SAFAR data is defined as the combination of current and forecasted air quality data, meteorological data and social messages. The ***broad scope of the present DDS tender*** is to display these data in various display boards in static, animated, graphics and pictorial formats spread in a radius of 50x50 km form the centre of Mumbai city and surrounding areas called SAFAR-MUMBAI domain. The original static data will be made available by IITM, Pashan /RMC, IMD, Mumbai at central location server in a particular format either in Pune or Mumbai. Further details are outlined in subsequent sections of this tender document. The Supplier of DDS should have good recognition of having supplied LED displays. Following criteria /features must be adhered to and complied:

1. Supplier should have good track record of their company. Individual companies or a consortium of 2 or 3 companies (whether foreign or India) can bid but the foreign component order would be placed on Digital Display OEM Partner.
2. Whether Indian bidder or OEM, they should have at least 10 installations operational for the last 3 years in and around globe.
3. Preference will be given to the manufacturer whose LED boards has ISO9001-2008 certified company, or a documented in-house QA program modelled after ISO9001-2008. A certificate of an accredited authority must be enclosed.

4. The suppliers consolidated turnover for the last 3 years and the consolidated turnover for the last 3 years should be minimum of ~3 Crores or above per year to establish the credibility and reliability of the company.

5. All display boards must have technical sophistication to be connected remotely to Data Acquisition System for providing substantial advantages in communication.

6. The quote and rate contract should be valid and confirmed for a minimum period of 6 months from the placement of firm P.O. in case IITM desire to procure another identical system or part thereof within this period. Any discount on this account should be considered.

Note: Supplier should categorically provide detail feedback on compliance under each and every point mentioned above in chronicle order as well as their response and comments on each of the bullets of following section.

SCOPE OF THE WORK

(Quote exactly as per the format given below in section-wise)

Design, supply, installation, testing, commissioning, maintainace and operations of-

(A) OUTDOOR True Colour LED Display

A1: 12 (Twelve) Numbers of LED display board of minimum Display Size ~**6 feet (width) X 10 feet (height) measuring ~60 sqft minimum** along with customised display software and controller.

A2: 2 (Two) Numbers of LED display board of minimum Display Size ~**12 feet X 8 feet measuring ~96 sqft minimum** along with customised display software and controller.

(B) Fixing and installation of the display boards (Quote separately): Physically fixing and erecting all LED displays on the ground in Mumbai at 12 locations (outdoor) with a pole height of about 14 feet above the ground. Location area will be made available & defined by IITM. This work should include civil works-earth pit, foundation structure, super structure for digital display and earthing. Uni poles should be well painted for rust free and good shining color preferably silver. If bigger display requires 2 poles then it should be mentioned and quoted.

(C) INDOOR Display -4 Nos.
As per specifications enclosed below later

(D) Display and Media Software, Servers and Networking:
Main Display control Server /PC (along with 1 standby as mirror image) with required customized software to capture data from FTP /AQMS server, process and then display remotely in all indoor and outdoor display boards, development of Web portal, content development and SMS-alert service to mobile. Networking of all remote displays to central server by 3G high speed /wireless broadband modems/ in static & video forms.

(E) Operational and Maintenance Contract (OMC):
It should be for 5 yeas (1+4) as per the terms and condition specified and enclosed later. All operations and mainantance without any additional cost to IITM for 5 years.

(A) LED DISPLAY SPECIFICATIONS

MECHANICAL SPECIFICATIONS

Parameter	Range
Enclosure type	Rear access doors for servicing.
Overall Dimensions	1. Size: 10 ft x 6 ft (FOR 12 NUMBERS) 2. Size: 12 ft x 8 ft (FOR 2 NUMBERS)
Weight	~550 Kg maximum
Material	Outer shell: 5052-H32 Aluminum, 3mm (0.125") thick. Structural members: Aluminum 6061-T6. Other hardware: Stainless steel. Lens: Polycarbonate 3mm (1/8"), clear (non-matte)
Mounting	Two 50.8mm (2.0") horizontal Z-brackets on back of sign included.
Exterior finish	Front border: Black Kynar 500 semi-gloss. Face aperture mask: Black Kynar 500 semi-gloss. All other surfaces: Natural Aluminum.
Weather rating	IP55
Welding standard	AWS D1.2., CSA Standard W47.2M All outer seams continuously welded.
Structural standard	AASHTO 2009, 5th edition.

Operational Specifications

Parameter	Range
Input Voltage	230 VAC, single phase
Input Frequency	50 +/- 1Hz
Power	Max: All pixels ON displaying white at max intensity: 1730VA Typ.: 25% of pixels ON displaying amber at max intensity: 950VA (with all fans and sign electronics in operation).
Voltage range	200 to 253 VAC
Power interruption	EN12966-1 section 8.4.1.6
Operating temperature	-34^{o}C to +74^{o}C (-29.2^{o}Fto +165.2^{o}F), 99% relative humidity, non-condensing
Transients	High-Repetition Noise: 300V Low- Repetition High-Energy transients: 600V Non-destructive Transient immunity: 1000V.
Impact Resistance	EN12966-1 section 8.3.4
Vibration	1.2 g over range of 10 to 200 Hz
Ventilation	Thermostatically controlled forced air fan.
Certifications	Quality certifications should be produced if required

Display Specifications

Parameter	Range
Pixel configuration	128 rows by 80 columns. Full matrix, full color.
LED type	Size: 3mm Type: Red, Green and Blue LEDs. High Intensity, solid state, un-tinted, non-diffused, UV-A & UV-B inhibitors. Mfg: CREE/Nichia / Avago Uniformity: Single color and intensity bin sorted. Color: Red 618-630nm Green 520-530nm Blue 465-475nm Operating current: 20 milliamp nominal. Viewing angle: 30^o Horizontal / 30^o Vertical at 50% normalized intensity LED's per pixel: 3 (1 LED per color)
Pixel output	White: 12400 Cd/m^2 minimum Amber: 7500 Cd/m^2 minimum Red: 3100 Cd/m^2 minimum Green: 3720 Cd/m^2 minimum Blue: 1240 Cd/m^2 minimum
Pixel pitch	20.6 mm horizontal and vertical.
Contract Ratio	EN12966-1 Luminance Ratio Class R2
Character height	144 mm and 244 mm
Fonts	144 mm high (5x7 pixels) 288 mm high (10 x14 pixel) Two additional user downloadable fonts plus Graphics.

(B) Display controller - Features

Controller Electronic

The controller is the main intelligent unit of the DIGITAL DISPLAY. It shall be rack mounted microprocessor based DIGITAL DISPLAY Controller (CPU).
The DIGITAL DISPLAY Controller shall be capable of full operations, without the need for external commands from the central computer and also should be able to take data from display server. The controller shall be capable of receiving 24V DC from a battery, in order to provide extended operation time in the event of a power failure.

The DIGITAL DISPLAY Controller shall include a Central Processor Module having a battery backed clock calendar to record power failures and to perform all calculations and logical functions of the DIGITAL DISPLAY Controller.
One DIGITAL DISPLAY Controller shall be capable of operating multiple DIGITAL DISPLAYs.

The DIGITAL DISPLAY Controller shall include one integrated Digital I/O board with 4 inputs and 4 outputs. Additional boards can be added external to the controller. The DIGITAL DISPLAY Controller CPU shall be at least a 32-bit processor which operates at 400 MHz or greater. It shall have at least 20 MB of SRAM, and be capable of expanding its memory at least 16MB more, via use of an industry standard "FLASH" memory card.

B1 Controller Front Panel:

The front panel of the DIGITAL DISPLAY controller shall contain:

- An integral LCD display with illuminated, 64x256 (minimum) pixel screen with keypad, for local diagnostics and control of the sign. Screen and keyboard shall be at the front of the controller.
- A power on/off switch, power ON indicator, fuse, Local/Remote control switch, and an RS232 port for connection to a portable computer.
- LED indicator lights for active status, local/remote control status, communication status, and power to DIGITAL DISPLAY status.

B2 Controller Rear Panel:

The DIGITAL DISPLAY rear panel shall contain, as a minimum:

- Power source cable entry
- One RS485 port
- Two RS232 ports
- Four fiber optic ports for communication to the DIGITAL DISPLAY
- Two fiber optic ports for communications to future devices or auxiliary control panel
- Eight spare I/O inputs.
- One Ethernet 10/100 standard RJ-45 port.

B3 Controller functions

The DIGITAL DISPLAY Controller shall continuously monitor the display of the sign, independent of any external commands, and shall cause the sign to display all appropriate characters.

The DIGITAL DISPLAY Controller shall command the sign to display characters and messages by turning the LED's on and off. In addition, it shall accumulate data about the status of the sign (to be transmitted upon request), and shall receive commands from the Central Computer and Portable Maintenance Computer.

The DIGITAL DISPLAY controller shall have <u>all</u> of following features, as a minimum:

- Continually monitors commands from the central computer

- Capability to respond in the following three ways (user configurable) to a communication loss with the central computer:
    - Blank the display
    - Display a pre-programmed (default) message
    - Continue displaying current message
- Monitor and record internal DIGITAL DISPLAY enclosure temperature
- Detect short-term and long-term power failures. The thresholds for both short and long term power failure shall be user definable.
- Respond to power failure in the following user configurable ways:
    - Blank display
    - Display a pre-programmed message for short power loss
    - Display a pre-programmed message for long power loss
    - Revert to last displayed message at time of power loss
- Status and alarm for DIGITAL DISPLAY door open and DIGITAL DISPLAY controller cabinet door open
- Configuration parameters and message schedule stored in non-volatile memory
- Configurable IP address
- User interface through keypad and display screen without need of portable computer
- Controller reprogramming and reset capability without the need of a portable computer
- Password protected access to controller program configuration and operation
- Hardware watchdog timer
- Communication data watchdog with DIGITAL DISPLAY. If controller loses communication with the DIGITAL DISPLAY, the DIGITAL DISPLAY display shall automatically be blanked.
- Monitor the photosensor system inside the sign and report status, including failed condition
- Justify text lines left, right, and center
- Shall be able to flash single or multiple words within a given line of text
- Shall be able to flash single or multiple lines within a given message
- Individual Pixel test: Upon command from the central computer, or (user configurable) automatically, the controller shall perform a test of every pixel in the DIGITAL DISPLAY and shall report the status. The test shall report fully out and

fully stuck-on (open and short circuit conditions). During the test there shall be no disturbance or flicker to any message being displayed.

- Actual Message Display Verification: The controller shall report a WYSIWYG display of what is displayed on the sign in real-time. Display verification using a representation of the current display or a display of what the memory slot indicates what was commanded to be displayed shall not be acceptable.
- All change-events associated with the DIGITAL DISPLAY and controller, including but not limited to message activation, polling, and error reporting shall be time and date stamped and recorded for record keeping. Faults and failures shall be recorded with what occurred, to what device, what time, and what date.

B4 Fonts:

The DIGITAL DISPLAY controller shall have a minimum of four (4) fonts stored in non-volatile memory. These fonts shall include complete character and number sets. Each font must occupy its own space in memory and shall be downloadable from the central computer.

B5 COMMUNICATION INTERFACES

Each DIGITAL DISPLAY Controller shall be uniquely addressable from the Control Centre via the communication system for control and monitoring. The communication profiles that must be supported by the controller are:

PMPP - NULL, PPP - NULL, Ethernet - UDP/IP, RS-232, RS-422

The DIGITAL DISPLAY Controller shall communicate using Markup Language for Transportation information (MULTI) as defined by NTCIP version2 international protocol.

The DIGITAL DISPLAY controller shall accept simultaneous communication from both Remote and Local ports and shall respond to instructions in the order received. It shall not be possible for an operator at the central computer with administration-level access to be accidentally or otherwise "locked out" of access to the DIGITAL DISPLAY controller.

Local control of the DIGITAL DISPLAY through the DIGITAL DISPLAY controller shall be used to test the sign, perform maintenance duties, and display messages on the sign, if so authorized. It shall be possible to fully test, run diagnostics, and see results on the controller LCD display without the need for a portable computer. A portable computer shall also be able to be connected to the DIGITAL DISPLAY controller through an RS232 port on the front panel of the sign. Using manufacturer provided maintenance software, a technician shall be able to perform all functions, run full diagnostics, and retrieve all functional status, alarms, and error information available from the DIGITAL DISPLAY and controller.

The communication data link between the DIGITAL DISPLAY and its controller shall be fiber optic. Transceivers integral to the DIGITAL DISPLAY and controller shall be provided so that the fiber connects directly to the DIGITAL DISPLAY and to the controller without the need for additional external equipment.

B6 DATA STORAGE

Each individual DIGITAL DISPLAY shall be able to store all the required data for displaying information locally. The DIGITAL DISPLAY controller shall be capable of storing minimum 200 frames that can be triggered on receiving the command from the central computer

B7 DATA COMMUNICATION

Data Communications may be through any of the links like Dedicated line, Leased line from the local service provider, GSM/CDMA- DATA channel, GSM/CDMA- SMS channel.

The DIGITAL DISPLAY controller shall be capable of communicating over wire Ethernet, fiber Ethernet, wireless Ethernet, wireless cellular, WiFi Ethernet, or traditional copper landline. Data communication shall be provided with sufficient security check to avoid unauthorized access.

B8. DESIGN & OPERATIONAL LIFE:

The minimum design life for the equipment before replacement shall be a minimum of twenty (20) years, and an operational life without major overhaul of fifteen (15) years.

Factory Testing:

The first level of testing shall take place at the facility where the DIGITAL DISPLAY are manufactured. Testing shall be carried out on the first production DIGITAL DISPLAY assembly in accordance with the approved test procedure.

(C). LED INDOOR) DISPLAY FOR CONTROL ROOM -4 Nos.

(a) **One number** of Direct LED TV (Sony-bravia or equivalent) with size ~60 inches and **3 numbers** of LCD /Plasma with 3D to be wall mounted and has to be integrated with the display server to show all data in master control room in Pune (where it should also be integrated with existing control room display unit) as well as in local control room in Mumbai.

C1. With customised Display software

C2. Installation of display in control Rooms

(D) DISPLAY/MEDIA SERVERS, SOFTWARE AND NETWORKING:

D1. Display Server Software Features

The central control computer software shall be capable of setting an individual DIGITAL DISPLAY, or group of DIGITAL DISPLAY, to display either one of the pre-set messages, or symbols, or text message. In addition, the central control computer system shall be capable of being programmed to display an individual message on a DIGITAL DISPLAY, or group of DIGITAL DISPLAY, at a pre-set date and time. A sequence of a minimum of 10 messages/symbols per DIGITAL DISPLAY shall be possible per schedule.

The central control software shall be a user-friendly, windows & tabs oriented package that allows complete control, monitoring, and diagnostic capability for all functions of the DIGITAL DISPLAY and DIGITAL DISPLAY controller.

The central control computer shall also store, in a suitable database, complete information about the messages displayed on each DIGITAL DISPLAY. The minimum information to be stored shall be:

- The identification number of the DIGITAL DISPLAY
- The message/symbol content, or the standard message/symbol number
- The start date and time at which the message/symbol was displayed
- The end date and time at which the message/symbol was displayed

The central control computer shall test each individual DIGITAL DISPLAY on a regular (pre-set) basis. This test shall be exhaustive and determine if the system is fully operational, including individual pixel status.

Messages displayed on a DIGITAL DISPLAY are done by using single or multiple-phases. A phase is defined as the limits of the display area available for text, bitmaps, or animation. Messages that require more information than can be shown on a single DIGITAL DISPLAY display space may require the use of multiple phases. Multiple phases allow more than one message to be displayed at a location.

The DIGITAL DISPLAY central software shall have all of the following attributes, as a minimum:

- A WYSIWYG Graphical User Interface for message creation and editing.
- A tabbed browser with the following quick-access tabs as a minimum:
    - Main browser page
    - Message Libraries
    - Fonts
    - Schedules
    - Scenarios
    - Diagnostics

The central software shall be capable of creating and maintaining an unlimited number of message libraries and an unlimited number of messages.

The central software shall support an unlimited number of user accounts. Each account shall have an associated user access level, user name, unique user password.

The central software shall have multiple access levels, including but not limited to Administrator level (all functions/parameters accessible), Operator 1 level (poll signs for diagnostics, execute messages from message libraries), Operator 2 level (poll signs for diagnostics and monitor only).

The central software shall have a font editor with complete control at the pixel level to add, edit, or create fonts and bitmaps.

The central software shall display all diagnostic information polled from the controller. As a minimum, the following diagnostic information shall be available:

- Pixel test: Diagnose each pixel in the DIGITAL DISPLAY and report on the GUI the exact location and status of every pixel in the sign
- Test pattern: Upon command from the central software, the sign shall initiate a checkerboard test pattern across the entire display
- DIGITAL DISPLAY cavity temperature from each individual temperature sensor inside the DIGITAL DISPLAY
- Fan status of each exhaust fan in the DIGITAL DISPLAY
- Individual photosensor readings
- Brightness level setting
- Brightness value as a percentage of full brightness
- Error over-ride status
- Communication and comm. time-out status
- Detailed count of instances of communication loss
- Instantaneous temperature for every power supply
- Instantaneous voltage for every power supply
- Operational status of every power supply
- Door-open status of controller and DIGITAL DISPLAY access door
- Humidity level (if so equipped)

Exact real-time display of what is being displayed on the sign

PROCESSOR	3rd Generation Intel® Core™ i7-3770 Processor (3.10GHz,6MB)
Chipset	Intel 77 gp Express Chipset
OPERATING SYSTEM	Genuine Windows(R) 8 Professional 64bit (English)
MICROSOFT SOFTWARE	Microsoft(R) Office Standard 2013
DISPLAY	21.5in HAS Wide Monitor, VGA/DVI
MEMORY	8GB (2x2GB) Non-ECC DDR3 1333MHz SDRAM Memory
HARD DRIVE (PRIMARY)	1TB 7200 RPM 3.5" SATA Hard Drive
OPTICAL DRIVE	16X Max DVD-ROM Drive
KEYBOARD	USB Keyboard-wireless
MOUSE	USB MOUSE- wireless
FLOPPY DRIVE & CARD READER	19-in-1 Media Card reader
SOFRTWARES and SYSTEM RECOVERY	Windows(R) 7 Professional 64bit Media Kit (Multi-Language). Licensed OFFICE-XP/2007 and all softwares for dynamic website development tools.
USB Ports	2 front & 2 rear
Multimedia	Multimedia Speaker with MIC
	IBM /HP or equivalent branded

D2. Central Display Server Specifications– 2 No

D3. Media Server Software specifications

Customised Media server software with GUI to control all Digital boards and TV's remotely through 3G and wireless broadband. Software should support Video, Image, Text Message, Audio. Software should be customized, meaning that you can easily operate anytime and anywhere. The central software and all software related to LED and LCD used for remote viewing will be property of IITM and all source codes and related tools should be handed over to IITM.The central software should also cover functional parameters mentioned below.

1. The is "**Server**" co-located at the Central station, connected to the AQMS server via FTP server and display Server over LAN connectivity collects regularly [user configurable polling intervals] the required data.

2. The collected **AQ data** may be processed further to make it in the user presentable form and then transfer it over "Data Communication Network" to the respective nodes.

3. **Software** should convert the received DATA into Displayable content and show the content on the target display with pre-set frame stay times & inter-frame delays.

   - **Software** can be configured from to display the latest data received or to display pre-defined play-list slogans/ messages useful to the public Displays will show Air Quality and meteorological data of several parameters for today, captured from 17 locations, in one-after-the other-screen pattern on all locations in map of Mumbai area, with the time duration of around 5 seconds between each screen. There can be an animation and satellite image for any parameter.

- It will repeat above step for the next day's forecast for both air quality and met parameters.

- Parameter values going beyond threshold limit (to be provided by IITM) to be shown blinking, to attract the attention.

- Display should have options for line at the bottom to show text data. The First two lines of Display will show title, real date and time (there should be provision for the same)

- The Date and Time will be of current day in case of air quality or wather -now, whereas in case of air quality or weather -tomorrow, it will show the date of next day. The display should be minimum of 2 lnguages. **English and Marathi** is must. Dynamic data frames for both outdoor and indoor displays should be made as per the design and instructions from IITM during development.

- The last one line to be used to display general messages and explanation of the data /abbreviation / units etc. being displayed in the Display

- Data will be refreshed every hour, till that time, it will keep on showing the same data using above mentioned pattern.

- The software should have compatibility as to work properly in Digital Displays of 2 different sizes and LED /LCD TV.

4. **IITM-configurable parameters at Network Operation Centre**:

- **Poll interval** (for every **X** seconds, Control PC collects the data from SAFAR server)

- **Push interval** (for every **Y** seconds, Control PC pushes the data to the respective Display Nodes)

- **Business logic** for the conversion of standard data into user presentable format (additional parameters, change in units of parameter measures, Min & Max limits of the parameters, the levels of Normal, Medium, Danger for parameter values)

- Parameter **display template in colour**

- Centralized **Diagnostics**, **Configuration** &**Alarm** handling for the displays

- Spontaneous user fed Text Message Display

D3. Networking- 3G/wireless Broadband- Software & Hardware

- The displays to be networked with options for Single point remote Data handling, delivery & updating in near real time.

- Required to be connected to display data Server through 3G /broadband wireless

- Display data Server should be connected media server and to AQMS data server through LAN/wired mode to collect real time data. In addition, it should also collect the forecasted data from another location in IITM (offline) through internet /broadband (provided by IITM /IMD)

- Your data handling Software should be installed at media server from where data will go to display server and to different indoor and outdoor displays.

- All required software and hardware for networking in control room should be installed

- AQMS data Server will be made available by IITM.

- All Displays have to be connected through 3G/Broadband wireless connection. Cost for all locations should be quoted separately by supplier on actual (cost of 3G modem for all displays + operational /recurring costs for all the 3G SIM connections) which must be borne by the vendor. IITM will not incur any expenditure either static or recurring for any operation.

D4.DDS Operations- key feature required

The DDS will project the following in Graphic colour slide format-

- Air Quality –Now (Real Time); Air Quality –Tomorrow (24 hour advance Forecast)

- Meteorological Data –Now (Real Time); Meteorological Data –Tomorrow (24 hour advance Forecast)

- Citywise weather, early warning and 3 day advance forecast data as provided.

- Any social message or other customised, massages relevant to pollution /weather control (both static/ Graphic). Provision in simplistic form for an instant message should be provided which can be handled by IITM personnel with menu driven icon.

- Message of data required to be shown using bar graph /images in colour to make it interesting for the common public.

- Option must be there to display the messages and any other text in English and Marathi

- Data has to be shown in real time – Auto mode; All display data should be seen/mirror image in the Display servers.

- **Activation:** The display should be activated automatically when the power is supplied. The activation sequence starts with a self test. If a major fault is detected, during activation or during normal operation, the display should be blanked. The total activation time to come into normal operation should not be more than 7 seconds. All Displays are interfaced with the central PC thru' G3G/broadband wireless Modem.

Upon configuration of communication and display parameters (i.e. Screens) in software, it should start establishing connection with each display board to send data.

D5. "VIdeograhic documentary for DDS and all SAFAR -Mumbai components as per the IITM script with commentary (20 min and 5 min durations)"

D6. Main Display control Server Specifications -2 Nos

Monitor Software	21.5 Inches Flat screen Widows 2008(or latest) server,SQL,MS office , windows 8 and all software's as required for the media server and NTCIP protocol
Processors:	1X INTEL XEON PROCESSOR E5620 2.4GHZ Dell poweredge 710/IBM X 3650/HP proliant EL380 G7 E5620-Branded or Equivalent
Memory:	16GB MEMORY (2 X 8GB)
Additional Memory Options:	Up to 192GB (18 DIMM slots): 8GB DDR3 1333MHz
Hard Drive(s):	4 X 250GB 7.2K RPM SATA 2.5 INCH HARD DRIVE
Additional Hard Drive Options:	1 TB x 2
Drive Bays:	8 X 2.5 INCH SFF SAS/SATA II/SSD
Raid Controller:	SAS 6/iR - RAID 0,1
Additional Raid Controller Options:	PERC H700, PERC H800
iDRAC:	iDRAC6 EXPRESS
Additional iDRAC Options:	iDRAC6 Enterprise wtihVflash
Optical Drive(s):	DVD-ROM DRIVE
Power Supply(ies):	SINGLE 570W POWER SUPPLY
Additional Power Supply(ies) Options*:	SINGLE OR REDUNDANT 570W OR 870W OUTPUT POWER SUPPLIES
Network Controller:	TWO DUAL PORT EMBEDDED BROADCOM NETXTREME II 5709C GIGABIT ETHERNET NIC WITH FAILOVER AND LOAD BALANCING
Additional Network Controllers:	QUAD PORT NETWORK CONTROLLERS
Slots:	1 x16 + 2 x4 G2 (HDMI cord)
Graphics:	INTEGRATED MATROX 200, 8MB SHARED VIDEO MEMORY

Bezel:	ACTIVE ID BEZEL
Dimensions:	2U RACK 26.80 INCH (68.07CM) X 17.44 INCH (44.31CM) X 3.40 INCH (8.64CM)
Rail Kit:	VERSA OR RAPID RAIL KITS

(E). Operational Maintenance Contract (OMC)

Supplier should quote for the comprehensive Operational maintenance contract (OMC) for a total period of 5 years. It is understood that as per the practice, there should be a total Comprehensive Maintenance Contract (CMC) for initial one year free of cost. Hence, only the man power cost should be included in 1st year. From 2nd year onwards, complete OMC should cover everything supplied by the vendor whether non-consumeable or consumeable or recurring.. This OMC should be included for –

- Digital Displays - hardware and software,
- Indoor Displays – hardware and software,
- Central Media server software
- All consumable; spare parts; recurring expenses viz. 3G-SIM tariff, and regular maintenance for uninterrupted operation (24x7), etc.
- Stationing **ONE** dedicated SOFTWARE trained person in control room for all **software** related issues who will not only maintain the software but will also be regularly involved in upgradation and development of supplied modules as well as new programs as per the instruction of IITM. Software person will work, maintain data, softawres and development during all working days including Saturdays.
  (Persons should be present on all working days including Saturday (in case or emergency as an when required) as per IITM /IMD requirement for the entire duration of the OMC) either placed in IITM Pune or RMC, colaba, IMD, Mumbai or in both stations.
- Stationing minimum **ONE** dedicated trained HARDWAARE person in control room for all **hardware** related issues who will maintain all displays by regular rounds and has to be regularly involved in day to day operation. It will be responsibility of supplier to provide additional manpower in case of major break-down or if multipl e boards are to be repaired so keep up the uptime to optimum limit without fail.
  (Persons should be present on all working days including Saturday (in case or emergency as an when required) as per IITM /IMD requirement for the entire duration of the OMC) either placed in IITM Pune or RMC, colaba, IMD, Mumbai or in both stations.

The OMC should include all consumable; spare parts; regular maintenance for uninterrupted operation and recurring costs like SIM charges, etc. Display should remain operational at least 90% of the total time in a year. In case of non-compliance, penalty will be charged which may include 5% OMC amount per day alongwith extension of OMC period (as decided by IITM). The instrument should be commissioned, regularized and operational after the order is executed without any additional facility and cost to IITM excepting the infrastructure facility viz. space for erecting displays, furnished laboratory space in control room and 230V standard Indian power supply.

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INDIAN INSTITUTE OF TROPICAL METEOROLOGY MUMBAI 411 008
TERMS & CONDITIONS

ENQUIRY NO: PS/128/24/2013 **Tender Notice No.:** PS/Tender/03/2013

1) The Tenderers are requested to give detailed sealed tender in their own forms in two Bids i.e.
Part – I Technical Bid.

Part - II Commercial Bid / Financial Bid,

Both the bids addressed to
The Director,
Indian Institute of Tropical Meteorology,
Dr.Homi Bhabha Road, NCL Post, Pashan, Pune – 411 008, INDIA.

2) This tender is not transferable.

3) If a request is made to IITM for Tender Documents a sum of Rs. 1000/- (Rs. One Thousand only) **(Non-refundable)** has to be paid in the form of Demand Draft drawn in favour of "The Director, Indian Institute of Tropical Meteorology, Pune" **preferably from Nationalized Bank**. In case the bidders download the Tender Documents from the website of the Institute, though they require to be enclosed DD towards Tender Fees while submitting the tender. Otherwise tender will not be considered.

4) Tenders addressed to **The Director, Indian Institute of Tropical Meteorology, Pune 411008** are to be submitted for each item in duplicate in double cover, under two bids system. Superscribed with Tender No.PS/Tender/03/2013 for purchase of **"Digital Display System (DDS) FOR SAFAR -MUMBAI"**

5) You have to submit two separate bids in two separate envelopes and you may keep both the bid envelopes in an envelope for sending to us.

One envelope will contain only the TECHNICAL SPECIFICATIONS of the indented equipment.

Another envelope will contain only the financial bid in which price and any other information, which has financial implications, will only be given.

The main envelope, which will contain both the bids, should be super scribed with
our tender enquiry No**.**

6) Please indicate page nos. on your quotation ex. If the quotation is containing 25 Pages, please indicate as 1/25, 2/25, 3/25 ----------25/25.

7) Cost of the items should be mentioned clearly in the Commercial Offer (Part-II) only.

8) Last date for the receipt of completed tender is up to 12:00 hrs. on the prescribed date**.** Tenders will be opened at 15:00 hrs. the same day in the presence of the representatives of the vendors present.

9) The tender must be valid for a period of at least **90** days from the date of opening.

10) The purpose of certain specific conditions is to get or procure best Equipment / service etc. for IITM. The opinion of Technical Committee shall be guiding factor for Technical short listing.

11) Supplier shall finally warrant that all the stores, equipment and components supplied under the SUPPLY ORDER shall be new and of the first Quality according to the specifications and shall be free from all the defects (even concealed fault, deficiency in the design material and workmanship).

12) Tender must clearly indicate the features offered unit price, VAT tax, transport, transit-insurance, installation charges. Institute cannot furnish any certificate for exemption or reduction in VAT tax or any other duty/tax. The vendor should mention the price of the equipment and the duties/taxes to be paid such as customs duty/excise duty/VAT taxes etc. separately.

13) The complete equipment including operational manuals should be supplied within stipulated period mentioned in the supply order and the vendor should install the equipment within **One Month** after the delivery of the equipment.

14) As this Institute is exempted from payment of **Custom Duty and Excise Duty**, exemption certificate will be issued on request.

15) The Equipment must carry on-site warranty as specified in **OMC section** from the date of taking over of the equipment after the acceptance tests. Warranty period will stand extended for a period of total downtime of the Digital Display system alongwith a panelty as specified in OMC's T&C.

16) The vendor has to furnish a Bank Guarantee to the extent of **10%** of the order value from a nationalized bank in the prescribed format valid for the entire period of warranty including extension if any.

17) No advance can be paid.

18) The **payment terms for indigenous items** shall be as follows:

i) **80%** payment against delivery. In case of foreign supply LC will be opened as per the rules of IITM for the above amount.

ii) **10%** payment after satisfactory installation, and successful completion of acceptance tests and training.

iii) **10%** payment after execution of Bank Guarantee from a Nationalized Bank and successful completion of acceptance test. The Bank Guarantee will remain valid until the expiry of warranty period including the extensions, if any.

For Indian supply, payment terms will also remain the same.

19) The prices quoted should be firm and irrevocable and not subject to any change whatsoever, even due to increase in cost of raw material components and fluctuation in the foreign exchange rates and excise duty.

20) Vendor should arrange appropriate training to the users free of charge.

21) Indicate the names of the Indian reputed Organizations where you have supplied the similar equipment and may attach the satisfactory performance report of the equipment from user Organization.

23) The Institute is autonomous scientific research organization under the Ministry of Earth Sciences and is a recognized center for studies leading to M.Sc. and Ph.D. of the University of Pune and various other Universities. As such, all possible concessions / discounts / rebates applicable for educational Institutions may be given.

24) Any upgrade of OS and associated other software during the warranty period should be supplied free of charge.

25) The vendor should have appropriate facilities and trained personnel for supply, installation and warranty-maintenance of the equipment to be supplied. Detailed information in this regard may be furnished.

26) The Tenderer is required to furnish the Permanent Account Number (PAN) Allotted by the Income Tax Department. If registered with the National Small Industries Corporation, the registration number, purpose of registration and the validity period of registration' etc. should also be provided in Technical Bid for Indian Agents.

27) Vendor should clearly mention the following:

- Make and model of every item quoted.

• Delivery period.

• Company profile with a list of those institutes/users should be attached where vendor has supplied the equipments in question in past.

• A letter of AUTHORISED REPRESENTATIVE from the Principal should invariably be attached with quotation

• A copy of latest Income Tax clearance Certificate from Income Tax Department (INDIA)

28) Discount offered should be mentioned clearly in the commercial bid only.

29) LBT payment if any, the same may please be shown separately.

30) The Tenderers are requested to quote for Educational Institutional Price for equipment and Software, since we are eligible for the same.

31) Acceptance tests to be prescribed later will be carried out after installation and the items will be taken over only after successful completion of the acceptance tests.

32) **The Equipments are required to be supplied directly at RMC, Mumbai or IITM, Pune** (will be intimated at the time of delivery).It should be tested & installed in the given locations. Training is also to be provided to the concerned persons of the Institute /IMD, Mumbai.

33) The item should be supplied with manuals and the manuals including technical / Electronic drawings / circuit diagrams should be complete in all respects to operate the system without any problem.

34) The Tenderer has to state in detail the Electrical Power/UPS requirements, floor Space, head room, foundation needed and also to state whether Air-conditioned environment is needed to house the system and to run the tests. i.e. pre-installation facilities required for installation may please be intimated in the technical bid. *

35) Goods should not be dispatched until the Vendor receives a firm order.

36) The Date and Time of opening for Part-II (Commercial Bid) will be intimated only to pre-qualified and technically acceptable Tenderers for the item at a later date.

37) **Earnest Money Deposit:**

a) The Earnest Money Deposit of **Rs.12,00,000/-** (**Rs. Twelve Lacs only)** must be paid /sent along with your technical bid in the form of a Demand Draft, Banker cheque or Bank Guarantee **(from a Nationalized Bank only)** drawn in favour of The Director, Indian Institute of Tropical Meteorology, Pune payable at Pune, otherwise your technical & financial bids will not be considered at all. The Earnest Money of successful bidder will be returned only after installation, satisfactory demonstration and on acceptance of the equipment by the user Scientist / HOD as per the terms of our purchase order. If the successful bidder fails to fulfil the contractual obligations before the due date, he will forfeit the EMD.
The Earnest Money of the unsuccessful bidder whose technical bid has not been found suitable will be returned within **Forty Five days** after receipt of Technical Committee recommendations.
b) Those who are registered with Central Purchase Organization (e.g. DGS&D), National Small Industries Corporation or the concerned Ministry / Department need not to furnish EMD along with their bids.
c) Though EMD has to be submitted by Demand Draft, Banker's Cheque or Bank Guarantee, we prefer to have Bank Guarantee for easy return to the bidders once a decision is taken by IITM. (Specimen of Bank Guarantee is enclosed at Annexure 'A').

d) Tenders not accompanied with Demand Draft I Bank Guarantee towards "Earnest Money Deposit" will summarily be rejected.

38) Part and incomplete tenders are liable to be rejected.

39) Conditional Offers will not be considered.

40) The tenders must be clearly written or typed without any cancellations / corrections or overwriting.

41) **Fax / E-mail / Telegraphic / Telex tenders will not be considered.**

42) IITM will not be responsible:

a) For delayed / late quotations submitted / sent by Post / Courier etc.

b) For submission / delivery of quotations at wrong places other than the Office of Director, IITM, Pune – 411 008.

43) If the supplier fails to Supply and Install the system as per specifications mentioned in the order within the due date, the Supplier is liable to pay liquidated damages of one percent value of the Purchase Order awarded, per every week delay subject to a maximum of 10% for every week beyond the due date and such money will be deducted from any money due or which may become due to the supplier.

44) In case of any dispute regarding part-shipment, non-compliance of any feature etc., the Director, Indian Institute of Tropical Meteorology, Pune will be the final authority to decide the appropriate action and it will be binding on the vendor.

45) Last Date and Time for receipt of Tenders

46) Director reserves the right to reject any or all tenders without assigning any reason.

Annexure-'A'

BID SECURITY FORM

Whereas 1 (hereinafter called "the Bidder") has submitted its bid dated (*date of submission of bid*) for the supply of _____ (*name and/or description of the goods*)(hereinafter called "the Bid").

KNOW ALL PEOPLE by these presents that WE _____ (*name of bank*) of (*name of the country*), having our registered office at (*address of bank*)(hereinafter called "the Bank"), are bound unto (*name of Purchaser*) (hereinafter called "the Purchaser") in the sum of _____ for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this ___ day of 20___THE CONDITIONS of this obligation are:

1. If the Bidder withdraws it's bid during the period of bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of it's bid by the Purchaser during the period of bid validity:
   a) fails or refuses to execute the Contract Form if required; or
   b) fails or refuses to furnish the performance security, in accordance with the Instruction to Bidders.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, Without· the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee shall remain in force up to forty five days after the period of the bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the Bank)
Name of Bidder