CORRIGENDUM-3

Ref. No. IIT(BHU)/IPCELL/2024-25/CCTV/433   **Dated : 09.10.2024**

This is in reference to **Tender Ref. No. : IIT(BHU)/IPCELL/2024-25/CCTV/385 and Corrigendum-1 no. IIT(BHU)/IPCELL/2024-25/CCTV/409, Corrigendum-2 no. IIT(BHU)/ IPCELL/2024-25/CCTV/423 for Campus Surveillance System: Supply, Installation, Testing, Commissioning and Maintenance at IIT (BHU) Varanasi,** the following amendments are incorporated in aforesaid Tender Document.

Amendments in Technical Specifications:

Sr. No	Page No (2)	Content mentioned in Corrigendum-2 (3)	Referred content should be read as (4)
1	Corrigendum 2, Item No. 30, Page No. 27.	**SITC of 55" (or larger) Video Wall (2x3 Matrix) with Controller** **Display Configuration** Composed of multiple LCD modules arranged in a 2-row by 3-column matrix to form a cohesive video wall. **OEM Requirement** For optimal performance and service, the video wall and controller should ideally be sourced from the same manufacturer. However, compatibility with other manufacturers will be considered if they can provide documented proof of successful integration and performance benchmarks in similar applications. **Panel Size** 55 inches or larger with ultra-narrow bezels. **Bezel Width** 1.8 mm or lower for minimal interruption between screens. **Backlight Type** LED or equivalent. **Resolution** Full HD (1920 x 1080) or better, designed for professional use. **Display Colors** Capable of displaying 1.07 billion colors. **Display Mode** Direct LED backlight technology. **Brightness** Typical brightness of at least 500 nits. **Contrast Ratio** Minimum contrast ratio of 2000:1. **Input Ports** Flexible input options including: 1 x Analog RGB (D-Sub) 1 x Digital DVI-D 2 x HDMI 1 x USB 3 x BNC (Component YPbPr) 1 x BNC (Composite, shared with component) 1 x DisplayPort 1 x OPS Slot	**SITC of 55" (or larger) Video Wall (2x3 Matrix) with Controller** **Display Configuration** Composed of multiple LCD modules arranged in a 2-row by 3-column matrix to form a cohesive video wall. **OEM Requirement** **Compatibility and Integration**: For optimal performance, the video wall and controller from the same OEM to ensure seamless integration and reliable service, will always be preferred. However, other manufacturers may be considered if they provide documented proof of successful integration and performance benchmarks in CCVT Surveillance related applications. **Panel Size** 55 inches or larger with ultra-narrow bezels. **Bezel Width** 1.8 mm or lower for minimal interruption between screens. **Backlight Type** LED or equivalent. **Resolution** Full HD (1920 x 1080) or better, designed for professional use. **Display Colors** Capable of displaying 1.07 billion colors. **Display Mode** Direct LED backlight technology. **Brightness** Typical brightness of at least 500 nits. **Contrast Ratio** Minimum contrast ratio of 2000:1. **Input Ports** Flexible input options including: 1 x Analog RGB (D-Sub) 1 x Digital DVI-D 2 x HDMI 1 x USB 3 x BNC (Component YPbPr) 1 x BNC (Composite, shared with component) 1 x DisplayPort

		1 x Audio-In (RCA L/R) 1 x Stereo mini jack **Output Ports** Including: 1 x DVI/DisplayPort 1 x Audio-Out 1 x Speaker Out **Control Interfaces** Multiple control options: 1 x RS232 In 1 x RS232 Out 1 x RJ45 **Power Control** AC power ON/OFF switch. **Audio** Internal or external speakers, delivering a minimum of 10W x 10W for quality sound, with the option to connect external speakers for enhanced audio performance. **Power Input Range** AC input range of 100-240VAC, 50/60Hz. **Power Consumption** Normal mode: <150W; Standby mode: <0.5W. **Dimensions** Approximately 1211.4 x 682.2 x 98.5 mm (with VESA mount) or as required. **Operating Conditions** Operating temperature: 5°C to 40°C. Storage temperature: -20°C to 60°C. Humidity: 10% to 90% (non-condensing). **Operational Life** Expected lifespan of over 50,000 hours. **Controller Features** Capable of managing the video wall as a single logical display area, with the ability to show any combination of inputs in user-defined configurations. **Architecture** Based on a standard PC architecture. **Operating System** Compatible with Windows 7 or higher (64-bit). **Memory** Minimum RAM of 4 GB or higher. **Client Licenses** Provision of 10 client licenses for control from workstations. **Storage** Hard disk drive of 500 GB or larger. **Power Supply** Single or dual redundant power supply options. **Outputs to Video Wall** 9 DVI outputs to the video wall modules. **Inputs for Video Wall** 9 HD inputs to support various signal sources. **Wall Management Software** Includes software to manage layout and configuration on the display. **Layout Management** User-friendly layout scheduling and configuration options, including offline layout creation and auto-launch features based on time or events. **Log File Management**	1 x OPS Slot 1 x Audio-In (RCA L/R) 1 x Stereo mini jack **Output Ports** Including: 1 x DVI/DisplayPort 1 x Audio-Out 1 x Speaker Out **Control Interfaces** Multiple control options: 1 x RS232 In 1 x RS232 Out 1 x RJ45 **Power Control** AC power ON/OFF switch. **Audio** Internal or external speakers, delivering a minimum of 10W x 10W for quality sound, with the option to connect external speakers for enhanced audio performance. **Power Input Range** AC input range of 100-240VAC, 50/60Hz. **Power Consumption** Normal mode: <150W; Standby mode: <0.5W. **Dimensions** Approximately 1211.4 x 682.2 x 98.5 mm (with VESA mount) or as required. **Operating Conditions** Operating temperature: 5°C to 40°C. Storage temperature: -20°C to 60°C. Humidity: 10% to 90% (non-condensing). **Operational Life** Expected lifespan of over 50,000 hours. **Controller Features** Capable of managing the video wall as a single logical display area, with the ability to show any combination of inputs in user-defined configurations. **Architecture** Based on a standard PC architecture. **Operating System** Compatible with Windows 7 or higher (64-bit). **Memory** Minimum RAM of 4 GB or higher. **Client Licenses** Provision of 10 client licenses for control from workstations. **Storage** Hard disk drive of 500 GB or larger. **Power Supply** Single or dual redundant power supply options. **Outputs to Video Wall** 9 DVI outputs to the video wall modules. **Inputs for Video Wall** 9 HD inputs to support various signal sources. **Wall Management Software** Includes software to manage layout and configuration on the display. **Layout Management** User-friendly layout scheduling and configuration options, including offline layout creation and auto-launch features based on time or events. **Log File Management**

Supports user log file management for tracking changes and configurations.

2		**Live View Capabilities** Software GUI provides a live view of all sources in a browser interface. **Region Management** Ability to divide the video wall into multiple regions for specific content display. **Source Carousel** Users can configure multiple signal sources to change sequences after a defined interval. **Mobile Control** Control options available for iPad and Android devices over Wi-Fi. **Scenario Management** Save and load desktop layouts from local or remote machines. **Integration with Third-party Devices** Support for integration with systems like Crestron, AMX, etc. **Live Preview Functionality** Provides a live preview of video wall configurations. **Workspace Allocation** Functionality for administrators to allocate workspaces for specific users or teams. **Authentication** Multi-level authentication system (user accounts, permissions, roles, etc.). **User-friendly Design** Software designed for ease of use. **Ticker Features** Customizable ticker messages, including positioning, font size, color, and background options. **SNTP Support** System supports SNTP functionality. **Software Protection** Hardware license key included to protect software from unauthorized access. **Scalability** GUI designed to scale for any size of video wall. **Scheduler Features** Layout scheduling by specific date, time, or event. **Source Positioning** Single-click positioning of source inputs on the video wall. **App Availability** Control app available for download on app stores. **Transparency Support** Controller supports transparent images and SVG content. **Perspective Sharing** Support for sharing perspectives between operator workstations and the video wall. **Certifications** Supported by industry certifications as required (e.g., CE, FCC, UL, BIS).	Supports user log file management for tracking changes and configurations. **Live View Capabilities** Software GUI provides a live view of all sources in a browser interface. **Region Management** Ability to divide the video wall into multiple regions for specific content display. **Source Carousel** Users can configure multiple signal sources to change sequences after a defined interval. **Mobile Control** Control options available for iPad and Android devices over Wi-Fi. **Scenario Management** Save and load desktop layouts from local or remote machines. **Integration with Third-party Devices** Support for integration with systems like Crestron, AMX, etc. **Live Preview Functionality** Provides a live preview of video wall configurations. **Workspace Allocation** Functionality for administrators to allocate workspaces for specific users or teams. **Authentication** Multi-level authentication system (user accounts, permissions, roles, etc.). **User-friendly Design** Software designed for ease of use. **Ticker Features** Customizable ticker messages, including positioning, font size, color, and background options. **SNTP Support** System supports SNTP functionality. **Software Protection** Hardware license key included to protect software from unauthorized access. **Scalability** GUI designed to scale for any size of video wall. **Scheduler Features** Layout scheduling by specific date, time, or event. **Source Positioning** Single-click positioning of source inputs on the video wall. **App Availability** Control app available for download on app stores. **Transparency Support** Controller supports transparent images and SVG content. **Perspective Sharing** Support for sharing perspectives between operator workstations and the video wall. **Certifications** The video wall and controller must be BIS certified, as per government standards for ensuring compliance in India. In addition, supported by industry certifications as required such as CE, FCC, and UL may be considered.
2	Corrigendum 2, Item No.	**SITC of 32" (or larger) Full HD LED Screen for Workstation** **Diagonal Size**	**SITC of 32" (or larger) Full HD LED Screen for Workstation** **Diagonal Size**

| | 29, Page No. 25 | 32 inches or larger.
Panel Type
Edge LED Backlight or equivalent technology.
Resolution
Full HD (1920 x 1080) or better.
Brightness
Brightness level of at least 400 nits.
Panel Technology
VA (Vertical Alignment) or similar.
Contrast Ratio
Minimum contrast ratio of 4000:1.
Viewing Angle
178° horizontal and vertical for clear visibility from different angles.
Response Time
Response time of 8 ms or lower.
Display Colors
Capable of displaying 1.07 billion colors.
Color Gamut
Supports at least 72% of the color gamut.
Dynamic Contrast Ratio
MEGA or similar dynamic contrast capabilities.
Audio
Built-in speakers (10W + 10W) or comparable audio output.
Input Ports
2 x HDMI 2.0
1 x USB 2.0
1 x Audio Input
Output Ports
Stereo Mini Jack and at least 1 x HDMI.
Duty Cycle
Designed for continuous use (24/7 operation).
Special Features
Includes anti-glare/anti-haze treatment, temperature sensor, pivot display capability, IP5x rating for dust protection, wireless mirroring, and at least 8GB internal memory.
Logo Display
Option for customized logo display when no signal is active.
File Support
Supports direct viewing of PowerPoint, Word, PDF, images, and videos from a USB drive.
Remote Control
Allows remote control of connected laptops/desktops using an external keyboard and mouse through the display.
External Control
RS232C input via stereo jack and RJ45 port for external control options.
Power Consumption
Maximum power consumption of 50W or lower.
Standby Power
Power consumption in standby mode of less than 0.5W.
VESA Mount Compatibility
Compatible with standard VESA mounts (200 x 200 mm).
Operating Temperature
Suitable operating temperature range of 0°C to 40°C.
Humidity Range | 32 inches or larger.
Panel Type
Edge LED Backlight or equivalent technology.
Resolution
Full HD (1920 x 1080) or better.
Brightness
Brightness level of at least 400 nits.
Panel Technology
VA (Vertical Alignment) or similar.
Contrast Ratio
Minimum contrast ratio of 4000:1.
Viewing Angle
178° horizontal and vertical for clear visibility from different angles.
Response Time
Response time of 8 ms or lower.
Display Colors
Capable of displaying 1.07 billion colors.
Color Gamut
Supports at least 72% of the color gamut.
Dynamic Contrast Ratio
MEGA or similar dynamic contrast capabilities.
Audio
Built-in speakers (10W + 10W) or comparable audio output.
Input Ports (atleast**)**
2 x HDMI 2.0
1 x USB 2.0
1 x Audio Input (optional)
Output Ports
Stereo Mini Jack
1 x HDMI (optional)
Duty Cycle
Designed for continuous use (24/7 operation).
Special Features
Includes anti-glare/anti-haze treatment, temperature sensor, pivot display capability, IP5x rating for dust protection, wireless mirroring, and at least 8GB internal memory.
Logo Display
Option for customized logo display when no signal is active.
File Support
Supports direct viewing of PowerPoint, Word, PDF, images, and videos from a USB drive.
Remote Control
Allows remote control of connected laptops/desktops using an external keyboard and mouse through the display.
External Control
RS232C input via stereo jack and RJ45 port for external control options.
Power Consumption
Maximum power consumption of 50W or lower.
Standby Power
Power consumption in standby mode of less than 0.5W.
VESA Mount Compatibility
Compatible with standard VESA mounts (200 x 200 mm).
Operating Temperature
Suitable operating temperature range of 0°C to 40°C.
Humidity Range |

		Operates effectively in a humidity range of 10% to 80%. **Certifications** CE, FCC, UL, BIS, and other relevant certifications as needed.	Operates effectively in a humidity range of 10% to 80%. **Certifications** CE, FCC, UL, BIS, and other relevant certifications as needed must be provided with proper documents and will be always preferred.
3	Corrigendum 2, Item No. 14 Page No. 10	**Supply and Laying of CAT6 F/UTP Cable** Type: CAT6 F/UTP Shielded LSZH Cable 8 X 23 AWG solid bare copper Electrolytic Grade Copper Conductors Twisted as 4 Pairs; Overall Cable Foil Shielded or Better. The twisted pairs are covered with a PVC/LSZH Outer Jacket, Category 6, confirming to ANSI/TIA 568.2-D for Category 6. Support: Supports 10/100/1000Base-T, 155Mbps ATM, IEEE 802.3an (10GBase-T) Standard requirement for Applications such as High-Speed Data, Voice & Video Signals over LANs, Server Farms and Other Bandwidth Sensitive Indoor Applications. Conductors: Solid bare copper 23 AWG Pair Separator + Shape Spline Packing Box of 305 meters Cable Outer Diameter 7.5 ± 0.5 mm Insulation Material : Polyolefin Pairing 2 insulated conductors twisted together Individual Pair shielding: No Overall Shield: Aluminium Polyester Foil Shielded, 100% Coverage with TC Drain Wire Delay Skew: < 45 ns Conductor Resistance: ≤ 95.0 Ω /km @20°C Mutual Capacitance: ≤ 5.6 nF/100 m @1KHz Resistance Unbalance: 5% Max @20°C Capacitance Unbalance: 330 pF/100 m Bend Radius: Minimum 8X cable diameter Pulling Force: 80N or Better Nom. Velocity of Propagation: 67% or Better Temperature Range Operation: -30 °C to +60 °C Flame Properties: Flammability Test : IEC 60332-1 Acid Gas Emission Test : IEC 60754 Smoke Density Test : IEC 61034 ROHS Compliant: Should be Compliant as per RoHS Directive 2011/65/EU OEM Eligibility:	**Supply and Laying of CAT6 F/UTP Cable (35 Box ∼= 10675 Metres Cable or more)** Type: CAT6 F/UTP Shielded LSZH Cable 8 X 23 AWG solid bare copper Electrolytic Grade Copper Conductors Twisted as 4 Pairs; Overall Cable Foil Shielded or Better. The twisted pairs are covered with a PVC/LSZH Outer Jacket, Category 6, confirming to ANSI/TIA 568.2-D for Category 6. Support: Supports 10/100/1000Base-T, 155Mbps ATM, IEEE 802.3an (10GBase-T) Standard requirement for Applications such as High-Speed Data, Voice & Video Signals over LANs, Server Farms and Other Bandwidth Sensitive Indoor Applications. Conductors: Solid bare copper 23 AWG Pair Separator + Shape Spline Packing Box of 305 meters Cable Outer Diameter 7.5 ± 0.5 mm Insulation Material : Polyolefin Pairing 2 insulated conductors twisted together Individual Pair shielding: No Overall Shield: Aluminium Polyester Foil Shielded, 100% Coverage with TC Drain Wire Delay Skew: < 45 ns Conductor Resistance: ≤ 95.0 Ω /km @20°C Mutual Capacitance: ≤ 5.6 nF/100 m @1KHz Resistance Unbalance: 5% Max @20°C Capacitance Unbalance: 330 pF/100 m Bend Radius: Minimum 8X cable diameter Pulling Force: 80N or Better Nom. Velocity of Propagation: 67% or Better Temperature Range Operation: -30 °C to +60 °C Flame Properties: Flammability Test : IEC 60332-1 Acid Gas Emission Test : IEC 60754 Smoke Density Test : IEC 61034 ROHS Compliant: Should be Compliant as per RoHS Directive 2011/65/EU OEM Eligibility:

		OEM should have manufacturing unit in India for at-least 5 years or more. Should have Indian Technical Support Centre, Warehouse and RMA center in India. All passive products from single OEM & should be manufactured as per latest TIA/EIA or ISO/ IEC standard and have 25 years of channel performance. OEM should be a member of TIA organization.	OEM should have manufacturing unit in India for at-least 5 years or more. Should have Indian Technical Support Centre, Warehouse and RMA center in India. All passive products from single OEM & should be manufactured as per latest TIA/EIA or ISO/ IEC standard and have 25 years of channel performance. OEM should be a member of TIA organization.
4	Corrigendum 2, Item No. 33, Page No. 35.	**SITC of 20 KVA Online UPS with Battery Backup of 120 Minutes Capacity** **20 KVA (1+1 Parallel Redundancy)** **AC Input Parameters** **AC Input Voltage**: 320V-480V AC Three Phase **Frequency**: 50 Hz ± 10% (also operational on DG Set) **AC Output Parameters** **Output Voltage**: 220V / 230V AC Single Phase **Technology**: IGBT-PWM with inbuilt isolation transformer **Voltage Regulation**: ±3% (flexible to ensure compatibility with various loads) **Frequency**: 50 Hz ± 0.5% (providing room for variations) **Waveform**: Pure Sinewave **Harmonic Distortion**: Less than 5% (more accommodating for different equipment) **Efficiency**: ≥ 90% (ensures energy savings without compromising performance) **Power Factor**: 0.8 lagging **Overload**: 110% for 10 minutes 200% for 5 cycles (as a robust safety feature) **Output Distortion**: <5% **Transient Recovery**: Within 5 cycles (to accommodate varied loads) **Backup Time**: 120 minutes or higher (100 Ah × 30 nos) for each UPS **Protection Features** **Battery Over Voltage**: Yes **Battery Under Voltage**: Yes **Output AC Over Voltage**: Yes **Output Overload / Short Circuit Protection**: Yes **Indications** **Mains ON**: Yes **Load on Batteries**: Yes **Battery Low**: Yes **Inverter Overload**: Yes **Load on Mains**: Yes **Battery Boost**: Yes **DC Voltage** **DC Voltage**: 360 VDC **Metering** **Digital Metering**: Available for Output Voltage, Battery Voltage, Output Current, Output Frequency, etc. **Ambient Conditions** **Operating Temperature**: 0°C — 50°C **Storage Temperature**: 0°C — 60°C **Relative Humidity**: 95% RH **Operating Altitude**: Up to 2000 meters **Acoustic Noise**: <60 dB at 1 meter	**SITC of 20 KVA Online UPS with Battery Backup of 120 Minutes Capacity** **20 KVA (1+1 Parallel Redundancy)** **AC Input Parameters** **AC Input Voltage**: 320V-480V AC Three Phase **Frequency**: 50 Hz ± 10% (also operational on DG Set) **AC Output Parameters** **Output Voltage**: 220V / 230V AC Single Phase **Technology**: IGBT-PWM with inbuilt isolation transformer **Voltage Regulation**: ±3% (flexible to ensure compatibility with various loads) **Frequency**: 50 Hz ± 0.5% (providing room for variations) **Waveform**: Pure Sinewave **Harmonic Distortion**: Less than 5% (more accommodating for different equipment) **Efficiency**: ≥ 90% (ensures energy savings without compromising performance) **Power Factor**: 0.8 lagging **Overload**: 110% for 10 minutes 200% for 5 cycles (as a robust safety feature) **Output Distortion**: <5% **Transient Recovery**: Within 5 cycles (to accommodate varied loads) **Backup Time**: 120 minutes or higher (100 Ah × 30 nos) for each UPS **Protection Features** **Battery Over Voltage**: Yes **Battery Under Voltage**: Yes **Output AC Over Voltage**: Yes **Output Overload / Short Circuit Protection**: Yes **Indications** **Mains ON**: Yes **Load on Batteries**: Yes **Battery Low**: Yes **Inverter Overload**: Yes **Load on Mains**: Yes **Battery Boost**: Yes **DC Voltage** **DC Voltage**: 360 VDC **Metering** **Digital Metering**: Available for Output Voltage, Battery Voltage, Output Current, Output Frequency, etc. **Ambient Conditions** **Operating Temperature**: 0°C — 50°C **Storage Temperature**: 0°C — 60°C **Relative Humidity**: 95% RH **Operating Altitude**: Up to 2000 meters **Acoustic Noise**: <60 dB at 1 meter

		Cooling: Forced air cooling by internal fans **Features** **Hot Standby Mode**: Yes **Cold Start**: Yes **Battery Parameters**: **Charging Current**: Minimum 10A **Battery Type**: VRLA (Valve Regulated Lead Acid Battery), 12V DC **Battery Shutdown Voltage**: 10.7 V/pcs **Battery Over Voltage Warning Point**: 14.4 V/pcs **Battery Over Voltage Comeback Voltage**: 13.7 V/pcs **Battery Low Voltage Warning Point**: 11.4 V/pcs **Battery Short Protection**: Protected by battery fuse **Battery Charging Current**: Should be suitable for the battery bank **Rack for Battery**: MS battery rack with a minimum 3-inch height from ground level. **Charges**: In-built with UPS with suitable rating. **Certification** **Certifications**: ISO 9001, ISO 14001, ISO 45001, RoHS, CE, EMC Safety, BIS (or equivalent recognized certifications) **Parallel Redundancy** **Load Sharing**: Yes **Warranty** **Warranty**: 5 years for both UPS and battery.	**Cooling**: Forced air cooling by internal fans **Features** **Hot Standby Mode**: Yes **Cold Start**: Yes **Battery Parameters**: **Charging Current**: Minimum 10A **Battery Type**: VRLA (Valve Regulated Lead Acid Battery), 12V DC **Battery Shutdown Voltage**: 10.7 V/pcs **Battery Over Voltage Warning Point**: 14.4 V/pcs **Battery Over Voltage Comeback Voltage**: 13.7 V/pcs **Battery Low Voltage Warning Point**: 11.4 V/pcs **Battery Short Protection**: Protected by battery fuse **Battery Charging Current**: Should be suitable for the battery bank **Rack for Battery**: MS battery rack with a minimum 3-inch height from ground level. **Charges**: In-built with UPS with suitable rating. **Certification** **Certifications**: ISO 9001, ISO 14001, ISO 45001, BIS, CPCB compliance. In addition, RoHS, CE, EMC Safety or equivalent recognized certifications will be preferred. **Parallel Redundancy** **Load Sharing**: Yes **Warranty** **Warranty**: 5 years for both UPS and battery.

Note:

The remaining content of the Tender and subsequent corrigendum will remain unchanged.

Sd/-
(CHAIRPERSON)
CAMPUS SURVEILLANCE SYSTEM
IIT (BHU), VARANASI