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Gatineau, Québec K1A 0S5

Bid Fax: (819) 997-9776

**SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

THIS DOCUMENT CONTAINS A SECURITY
REQUIREMENT / DOCUMENT CONTIENT DES
EXIGENCES RELATIVES À LA SÉCURITÉ

Vendor/Firm Name and Address

**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution

Electrical & Electronics Products Division

11 Laurier St./11, rue Laurier

7B3, Place du Portage, Phase III

Gatineau, Québec K1A 0S5

Title - Sujet Audio-Visual Technology	
Solicitation No. - N° de l'invitation W8474-197662/A	Amendment No. - N° modif. 001
Client Reference No. - N° de référence du client 6000436037	Date 2018-06-14
GETS Reference No. - N° de référence de SEAG PW-\$\$HN-331-74963	
File No. - N° de dossier hn331.W8474-197662	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2018-07-24	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Turner, Louie	Buyer Id - Id de l'acheteur hn331
Telephone No. - N° de téléphone (873) 469-3342 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

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Amendment # 1 is issued to 1) answer a potential bidders question and 2) correct part number VQM-0H0024-LCTX - Fibre Optic Transmitter in Appendix E and G

1) Bidders question and answer:

Question # 1:

In regard to the RFP requirements; we need clarifications on section 3.1.1; you mention that you allow equivalent or substitute product but not for Thinklogical. Why?

Answer # 1:

Thinklogical matrix switching system over fibre has been tested and approved by DIM Secur to operate in secured environment. It has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO) on the network of Department of National Defence (DND).

2) Part Number correction:

Change part number (For Remote PCs) the incorrect Part Number: VQM-0H0024-LCTX Fibre Optic Transmitter changes to Correct Part Number: VTM-U00024-LCTX Fibre Optic Transmitter in Appendix's E and G

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Delete:

APPENDIX E TO ANNEX B – STATEMENT OF WORK

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March 7th 2018

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EQT_1 (HDTV TUNER RACK & THINKLOGICAL AV RACK)

Item	Criteria	Quantity	Notes
Fibre Optic Transmitter (For Remote PCs)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	36	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: VQM-0H0024-LCTX
Fibre Optic Rack Mount Chassis (For Remote PCs)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	18	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: VTS-004200
Fibre Optic Transmitter (For Logo Generator)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	1	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: VQM-AH0003-LCTX
Fibre Optic Rack Mount Chassis (For Logo Generator)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	1	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: CHS-00001

Item	Criteria	Quantity	Notes
Fibre Optic Transmitter (For HDTV TUNERS)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	6	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Models: <ul style="list-style-type: none"> VQM-AH0003-LCTX
Fibre Optic Chassis (For HDTV TUNERS)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	2	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: <ul style="list-style-type: none"> CHS-000004
Fibre Optic Matrix Switch (Matrix Switcher / KVM system)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	1	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: <ul style="list-style-type: none"> TLX-MSA-000320
Controller Card (Matrix Switcher / KVM system)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	1	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: <ul style="list-style-type: none"> TLX-MSM-C00320

Item	Criteria	Quantity	Notes
Fibre Optic Receiver (Input / Output Card)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	16	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: VXM-D00T16 REV A
SMP (System Management Portfolio Module)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	1	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: SMP-M0000320
OSD (On-Screen Display Client Module)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	3	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: SMP-C00001
Fibre Optic Chassis (4 screen Destinations)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	1	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: CHS-000004

Item	Criteria	Quantity	Notes
Control Processor (EQT_1)	<ul style="list-style-type: none"> • Eight RS-232 ports • Eight relay ports • Eight IR ports • LAN port to connect to AV network • Four port switch to extend network over a secure isolated Ethernet network • Ability to communicate with other integrated controllers • PoE Power Output = 70W • Height: 1 RU 	1	<ul style="list-style-type: none"> • Recommended make and model: <ul style="list-style-type: none"> • CRESTRON • PRO3 • If alternate product proposed, please provide manufacturer's specification sheet
Control Pack Inter-Block (For Control Processor)	<ul style="list-style-type: none"> • 2 way device control RS-232/422/485 • Support IR/Serial up to 1.2 MHz or Serial TTL 115.2k Baud • Control indicators • I/O up to 8 • 4 Relays • 2 Bidirectional Ports (RS-232/422/485) • 1 LAN (Ethernet 10/100 Tbase) 	1	<ul style="list-style-type: none"> • Recommended make and model: <ul style="list-style-type: none"> • CRESTRON • DIN-AP3 • If alternate product proposed, please provide manufacturer's specification sheet
Media Converter (Red Pc / Black Pc Racks)	<ul style="list-style-type: none"> • Ability to convert 100BaseFX fibre optic signal to 10BaseT or 100BaseTX electrical signal ST connections 	2	<ul style="list-style-type: none"> • Recommended make and models: <ul style="list-style-type: none"> • Luxcom • OM101-MM-ST • OM1001-SX-ST • If alternate product proposed, please provide manufacturer's specification sheet
Media Converter Mounting Panel (EQT_1)	<ul style="list-style-type: none"> • Ability to hold up to three media converters • Height: 1RU 	1	<ul style="list-style-type: none"> • Recommended make and model: <ul style="list-style-type: none"> • Luxcom • MP05 • If alternate product proposed, please provide manufacturer's specification sheet

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Item	Criteria	Quantity	Notes
Network Switch (EQT_1)	<ul style="list-style-type: none"> • Rear panel ports • Front facing LED lights • Eight PoE+ ports • PoE Power Output: 130W • Two Gigabit RJ-45 • Two Gigabit SFP 	1	<ul style="list-style-type: none"> • Recommended make and model: <ul style="list-style-type: none"> • Luxul • AMS-1208P • If alternate product proposed, please provide manufacturer's specification sheet
Audio Power Amplifier (EQT_1)	<ul style="list-style-type: none"> • Class D Amplifier • Four channel /200 Watts per channel • 4 or 8 ohms / 800 watts rms output power • Energy Star Qualified • Convection Cooled / Fanless operation • Frequency response 20 Hz to 20 kHz, ±1 dB • THD Noise 0.1%, 20 Hz-20 kHz, 8 ohms, 3 dB below clipping • Voltage Gain 23X (27DB) • Control Port (1) 3.5 mm captive screw connector, 2 pole • Power Input: 100-240 VAC 50/60 Hz • Mounting with Rack Mount 	1	<ul style="list-style-type: none"> • Recommended make and model: <ul style="list-style-type: none"> • EXTRON • XPA-2004 • XPA-2003C • If alternate product proposed, please provide manufacturer's specification sheet
Digital Matrix Processor with rack shelf (Audio distribution)	<ul style="list-style-type: none"> • 4x4 Line Level mixer • DSP signal processing • 24bit/48kHz analog/digital converters • Low latency • Configurable (via software) • Serial Host control port RS 232 3.5 mm • Power consumption 3.6 Watts 	1	<ul style="list-style-type: none"> • Recommended make and model: <ul style="list-style-type: none"> • EXTRON • DMP 44 LC • If alternate product proposed, please provide manufacturer's specification sheet

Item	Criteria	Quantity	Notes
Logo Generator	<ul style="list-style-type: none"> • Internal Memory (min 150 MB) • Supports Media files; Still Image or Video files • Supported format: PNG, JPG, TIFF, BMP, MP4 • Resolution up to 1920X1080 pixels • Chroma sub-sampling up to 4:4:4 • Native resolution decoding • Supports H.264 encoding/decoding • Ethernet & RS-232 pass through control • IR wired control • Web interface for configuration • Front accessible USB port • Min of x1 HDMI output 	1	<ul style="list-style-type: none"> • Recommended make and model: <ul style="list-style-type: none"> • Extron • SMD-101 • If alternate product proposed, please provide manufacturer's specification sheet
UPS	<ul style="list-style-type: none"> • Operates on 120 VAC/60Hz current • Capacity of 1500VA/900 Watts • U module - Height: 2RU • Mounting points: 2 • Power Surge protection • Running downtime: 6 to 18 min (Full/Half load) • Power cord: 10' NEMA 5-15 P Plug • Number of outlets: 8 • Greenguard & RoHS EU Directive 2002/95/ EC - 2011/65/EU Compliant • Covering Warranty: 3yrs / 2yrs for battery cells. 	2	<ul style="list-style-type: none"> • Recommended make and model: <ul style="list-style-type: none"> • Middle Atlantic • UPS S-1500R • If alternate product proposed, please provide manufacturer's specification sheet

FLOOR AREA

Item	Criteria	Quantity	Notes
Fibre Optic Transmitter (For Local PCs)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	41	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: VQM-0H0024-LCTX
Fibre Optic Rack Mount Chassis (For Local PCs)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	21	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: VTS-004200
Fibre Optic Receiver (4 screen destinations - Peripherals)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	13	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Models: VQM-HAP001-LCRX
Fibre Optic Receiver (4 screen destinations – video audio)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	26	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: VQM-AHV003-LCRX

Item	Criteria	Quantity	Notes
Fibre Optic Receiver (4 screen destinations – Chassis)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	13	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: CHS-000004
Fibre Optic Receiver (6 screen destinations - Peripherals)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	1	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Models: VQM-HAP001-LCRX
Fibre Optic Receiver (6 screen destinations – video audio)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	3	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: VQM-AHV003-LCRX
Fibre Optic Receiver (6 screen destinations – Chassis)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	1	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: CHS-000004

Item	Criteria	Quantity	Notes
Fibre Optic HDCP Receiver (HD Wall Displays)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	6	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: VEL-0H0003-LCRX
70-inch HD Display (Main Monitor Wall)	<ul style="list-style-type: none"> Not applicable 	4	<ul style="list-style-type: none"> CANADA Supplied Equipment: <ul style="list-style-type: none"> Make: Sharp Model: PN-LE703
55-inch HD Display (Side Wall Display)	<ul style="list-style-type: none"> Not applicable 	2	<ul style="list-style-type: none"> CANADA Supplied Equipment: <ul style="list-style-type: none"> Make: Sharp Model: PN-Y556
HD Scaler (for Main Video Wall and Side Wall Displays)	<ul style="list-style-type: none"> Accepts HDMI video up to 1080p/60 Selectable Output rate HDCP Compliant EDID management HDMI Connector Type A RGB format and YCbCr digital video OSD (front panel control) Power Input 100-240 VAC / Output 12 VDC, 1A, 12 watts Easily mountable behind display frame Low thermal dissipation (-+ 35 BTU/hr) 	6	<ul style="list-style-type: none"> Recommended make and model: <ul style="list-style-type: none"> Extron DSC HD-HD If alternate product proposed, please provide manufacturer's specification sheet

Item	Criteria	Quantity	Notes
Touch Panel	<ul style="list-style-type: none"> Compatible with Control Processor located in EQT_1 15.6-inch touch Screen Table top Powered Via PoE or 24VDC Resolution 1920 x 1080 pixels Brightness 400 nits (cd/m²) Response Time 30ms Color Depth 24-bit, 16,7M LED illumination On-screen keyboard Ethernet Communication 10/100mbps auto-switching /Full-Half-Duplex Supports USB HID Power consumption 25 Watts Temperature : Operate between (0° to 45° C) Mounting with 23° to 45° adjustable tilt Weight: 10.1lb 	5	<ul style="list-style-type: none"> Recommended make and model: <ul style="list-style-type: none"> Crestron TS-1542-TILT If alternate product proposed, please provide manufacturer's specification sheet
Ceiling Speaker	<ul style="list-style-type: none"> Frequency range 75Hz - 20kHz Power Capacity 150 W Cont. Program / 75 W Pink Noise Nominal Coverage Angle 110° Directivity Index 4.6 dB Max SPL 106dB @1m (3.3ft) High Frequency 19mm Dimensions 210 mm X 252 mm Weight 9.7kg (21 lbs) 	4	<ul style="list-style-type: none"> Recommended make and model: <ul style="list-style-type: none"> JBL Control 26CT If alternate product proposed, please provide manufacturer's specification sheet
Front Wall Speaker with Mounting kit	<ul style="list-style-type: none"> Frequency range 65Hz – 19.2kHz Crossover Frequency 2.7 kHz Power Capacity 120 W Cont. Program / 60 W Pink Noise Nominal Coverage Angle 115° Horizontal / 55° Vertical Nominal impedance 8 ohms Weight 4.4kg (9.7 lbs) 	2	<ul style="list-style-type: none"> Recommended make and model: <ul style="list-style-type: none"> Extron SM 26 (speaker) SMK P SM 26/28 (mounting kit) If alternate product proposed, please provide manufacturer's specification sheet
Ceiling Mount Kit (Compatible with Main Monitor Wall Displays – Watch Floor area)	<ul style="list-style-type: none"> Not applicable 	4	<ul style="list-style-type: none"> CANADA supplied Equipment: <ul style="list-style-type: none"> Make: Chief Model: MCM1U

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Item	Criteria	Quantity	Notes
Mount (Compatible with Side Wall Displays – Watch Floor area)	<ul style="list-style-type: none"> Not applicable 	2	<ul style="list-style-type: none"> CANADA supplied Equipment: <ul style="list-style-type: none"> Make: Chief Model: MTM1U
Digital Display Clock	<ul style="list-style-type: none"> Digital / up to 15 characters (alphanumeric) in red, green, yellow and blue color display Display: 4-digit, 7-segment LED Character Height:: 2.5" HR/MIN Character Height:: 1.2" location characters Accurate to one second per year Weight: not to exceed 15.8 lbs 	1	<ul style="list-style-type: none"> Recommended make and model: <ul style="list-style-type: none"> Digital Display Systems BTZ-42425-6ERG If alternate product proposed, please provide manufacturer's specification sheet
Stereo Headphone (At Operation Desks)	<ul style="list-style-type: none"> Lightweight Wired Impedance: 26 Ohms Frequency response: 18 – 18000 Hz Cable: min of 1.4m (symmetrical cable) 	24	<ul style="list-style-type: none"> Recommended make and model: <ul style="list-style-type: none"> Sennheiser HD 2.10 If alternate product proposed, please provide manufacturer's specification sheet

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Item	Criteria	Quantity	Notes
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Fibre Optic Rack Mount Chassis (For Remote PCs)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	18	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: VTS-004200
Fibre Optic Transmitter (For Logo Generator)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	1	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: VQM-AH0003-LCTX
Fibre Optic Rack Mount Chassis (For Logo Generator)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	1	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: CHS-00001

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Fibre Optic Transmitter (For HDTV TUNERS)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	6	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Models: VQM-AH0003-LCTX
Fibre Optic Chassis (For HDTV TUNERS)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	2	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: CHS-000004
Fibre Optic Matrix Switch (Matrix Switcher / KVM system)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	1	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: TLX-MSM-000320
Controller Card (Matrix Switcher / KVM system)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	1	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: TLX-MSM-C00320

Item	Criteria	Quantity	Notes
Fibre Optic Receiver (Input / Output Card)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	16	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: VXM-D00T16 REV A
SMP (System Management Portfolio Module)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	1	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: SMP-M0000320
OSD (On-Screen Display Client Module)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	3	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: SMP-C00001
Fibre Optic Chassis (4 screen Destinations)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	1	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: CHS-000004

Item	Criteria	Quantity	Notes
Control Processor (EQT_1)	<ul style="list-style-type: none"> • Eight RS-232 ports • Eight relay ports • Eight IR ports • LAN port to connect to AV network • Four port switch to extend network over a secure isolated Ethernet network • Ability to communicate with other integrated controllers • PoE Power Output = 70W • Height: 1 RU 	1	<ul style="list-style-type: none"> • Recommended make and model: <ul style="list-style-type: none"> • CRESTRON • PRO3 • If alternate product proposed, please provide manufacturer's specification sheet
Control Pack Inter-Block (For Control Processor)	<ul style="list-style-type: none"> • 2 way device control RS-232/422/485 • Support IR/Serial up to 1.2 MHz or Serial TTL 115.2k Baud • Control indicators • I/O up to 8 • 4 Relays • 2 Bidirectional Ports (RS-232/422/485) • 1 LAN (Ethernet 10/100 Tbase) 	1	<ul style="list-style-type: none"> • Recommended make and model: <ul style="list-style-type: none"> • CRESTRON • DIN-AP3 • If alternate product proposed, please provide manufacturer's specification sheet
Media Converter (Red Pc / Black Pc Racks)	<ul style="list-style-type: none"> • Ability to convert 100BaseFX fibre optic signal to 10BaseT or 100BaseTX electrical signal ST connections 	2	<ul style="list-style-type: none"> • Recommended make and models: <ul style="list-style-type: none"> • Luxcom • OM101-MM-ST • OM1001-SX-ST • If alternate product proposed, please provide manufacturer's specification sheet
Media Converter Mounting Panel (EQT_1)	<ul style="list-style-type: none"> • Ability to hold up to three media converters • Height: 1RU 	1	<ul style="list-style-type: none"> • Recommended make and model: <ul style="list-style-type: none"> • Luxcom • MP05 • If alternate product proposed, please provide manufacturer's specification sheet

Item	Criteria	Quantity	Notes
Network Switch (EQT_1)	<ul style="list-style-type: none"> • Rear panel ports • Front facing LED lights • Eight PoE+ ports • PoE Power Output: 130W • Two Gigabit RJ-45 • Two Gigabit SFP 	1	<ul style="list-style-type: none"> • Recommended make and model: <ul style="list-style-type: none"> • Luxul • AMS-1208P • If alternate product proposed, please provide manufacturer's specification sheet
Audio Power Amplifier (EQT_1)	<ul style="list-style-type: none"> • Class D Amplifier • Four channel /200 Watts per channel • 4 or 8 ohms / 800 watts rms output power • Energy Star Qualified • Convection Cooled / Fanless operation • Frequency response 20 Hz to 20 kHz, ±1 dB • THD Noise 0.1%, 20 Hz-20 kHz, 8 ohms, 3 dB below clipping • Voltage Gain 23X (27DB) • Control Port (1) 3.5 mm captive screw connector, 2 pole • Power Input: 100-240 VAC 50/60 Hz • Mounting with Rack Mount 	1	<ul style="list-style-type: none"> • Recommended make and model: <ul style="list-style-type: none"> • EXTRON • XPA-2004 • XPA-2003C • If alternate product proposed, please provide manufacturer's specification sheet
Digital Matrix Processor with rack shelf (Audio distribution)	<ul style="list-style-type: none"> • 4x4 Line Level mixer • DSP signal processing • 24bit/48kHz analog/digital converters • Low latency • Configurable (via software) • Serial Host control port RS 232 3.5 mm • Power consumption 3.6 Watts 	1	<ul style="list-style-type: none"> • Recommended make and model: <ul style="list-style-type: none"> • EXTRON • DMP 44 LC • If alternate product proposed, please provide manufacturer's specification sheet

Item	Criteria	Quantity	Notes
Logo Generator	<ul style="list-style-type: none"> • Internal Memory (min 150 MB) • Supports Media files; Still Image or Video files • Supported format: PNG, JPG, TIFF, BMP, MP4 • Resolution up to 1920X1080 pixels • Chroma sub-sampling up to 4:4:4 • Native resolution decoding • Supports H.264 encoding/decoding • Ethernet & RS-232 pass through control • IR wired control • Web interface for configuration • Front accessible USB port • Min of x1 HDMI output 	1	<ul style="list-style-type: none"> • Recommended make and model: <ul style="list-style-type: none"> • Extron • SMD-101 • If alternate product proposed, please provide manufacturer's specification sheet
UPS	<ul style="list-style-type: none"> • Operates on 120 VAC/60Hz current • Capacity of 1500VA/900 Watts • U module - Height: 2RU • Mounting points: 2 • Power Surge protection • Running downtime: 6 to 18 min (Full/Half load) • Power cord: 10' NEMA 5-15 P Plug • Number of outlets: 8 • Greenguard & RoHS EU Directive 2002/95/ EC - 2011/65/EU Compliant • Covering Warranty: 3yrs / 2yrs for battery cells. 	2	<ul style="list-style-type: none"> • Recommended make and model: <ul style="list-style-type: none"> • Middle Atlantic • UPS S-1500R • If alternate product proposed, please provide manufacturer's specification sheet

FLOOR AREA

Item	Criteria	Quantity	Notes
Fibre Optic Transmitter (For Local PCs)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	41	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: VQM-0H0024-LCTX
Fibre Optic Rack Mount Chassis (For Local PCs)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	21	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: VTS-004200
Fibre Optic Receiver (4 screen destinations - Peripherals)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	13	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Models: VQM-HAP001-LCRX
Fibre Optic Receiver (4 screen destinations – video audio)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	26	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: VQM-AHV003-LCRX

Item	Criteria	Quantity	Notes
Fibre Optic Receiver (4 screen destinations – Chassis)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	13	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: CHS-000004
Fibre Optic Receiver (6 screen destinations - Peripherals)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	1	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Models: VQM-HAP001-LCRX
Fibre Optic Receiver (6 screen destinations – video audio)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	3	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: VQM-AHV003-LCRX
Fibre Optic Receiver (6 screen destinations – Chassis)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	1	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: CHS-000004

Item	Criteria	Quantity	Notes
Fibre Optic HDCP Receiver (HD Wall Displays)	<ul style="list-style-type: none"> The video switching system has been tested and approved to operate in this environment. The Thinklogical system has undergone the Security Assessment and Authorization (SA&A) process and obtained Authorizations to Operate (ATO). 	6	<ul style="list-style-type: none"> Product cannot be substituted <ul style="list-style-type: none"> Make: Thinklogical Model: VEL-0H0003-LCRX
70-inch HD Display (Main Monitor Wall)	<ul style="list-style-type: none"> Not applicable 	4	<ul style="list-style-type: none"> CANADA Supplied Equipment: <ul style="list-style-type: none"> Make: Sharp Model: PN-LE703
55-inch HD Display (Side Wall Display)	<ul style="list-style-type: none"> Not applicable 	2	<ul style="list-style-type: none"> CANADA Supplied Equipment: <ul style="list-style-type: none"> Make: Sharp Model: PN-Y556
HD Scaler (for Main Video Wall and Side Wall Displays)	<ul style="list-style-type: none"> Accepts HDMI video up to 1080p/60 Selectable Output rate HDCP Compliant EDID management HDMI Connector Type A RGB format and YCbCr digital video OSD (front panel control) Power Input 100-240 VAC / Output 12 VDC, 1A, 12 watts Easily mountable behind display frame Low thermal dissipation (-+ 35 BTU/hr) 	6	<ul style="list-style-type: none"> Recommended make and model: <ul style="list-style-type: none"> Extron DSC HD-HD If alternate product proposed, please provide manufacturer's specification sheet

Item	Criteria	Quantity	Notes
Touch Panel	<ul style="list-style-type: none"> Compatible with Control Processor located in EQT_1 15.6-inch touch Screen Table top Powered Via PoE or 24VDC Resolution 1920 x 1080 pixels Brightness 400 nits (cd/m²) Response Time 30ms Color Depth 24-bit, 16,7M LED illumination On-screen keyboard Ethernet Communication 10/100mbps auto-switching /Full-Half-Duplex Supports USB HID Power consumption 25 Watts Temperature : Operate between (0° to 45° C) Mounting with 23° to 45° adjustable tilt Weight: 10.1lb 	5	<ul style="list-style-type: none"> Recommended make and model: <ul style="list-style-type: none"> Crestron TS-1542-TILT If alternate product proposed, please provide manufacturer's specification sheet
Ceiling Speaker	<ul style="list-style-type: none"> Frequency range 75Hz - 20kHz Power Capacity 150 W Cont. Program / 75 W Pink Noise Nominal Coverage Angle 110° Directivity Index 4.6 dB Max SPL 106dB @1m (3.3ft) High Frequency 19mm Dimensions 210 mm X 252 mm Weight 9.7kg (21 lbs) 	4	<ul style="list-style-type: none"> Recommended make and model: <ul style="list-style-type: none"> JBL Control 26CT If alternate product proposed, please provide manufacturer's specification sheet
Front Wall Speaker with Mounting kit	<ul style="list-style-type: none"> Frequency range 65Hz – 19.2kHz Crossover Frequency 2.7 kHz Power Capacity 120 W Cont. Nominal Coverage Angle 115° Horizontal / 55° Vertical Program / 60 W Pink Noise Nominal impedance 8 ohms Weight 4.4kg (9.7 lbs) 	2	<ul style="list-style-type: none"> Recommended make and model: <ul style="list-style-type: none"> Extron SM 26 (speaker) SMK P SM 26/28 (mounting kit) If alternate product proposed, please provide manufacturer's specification sheet
Ceiling Mount Kit (Compatible with Main Monitor Wall Displays – Watch Floor area)	<ul style="list-style-type: none"> Not applicable 	4	<ul style="list-style-type: none"> CANADA supplied Equipment: <ul style="list-style-type: none"> Make: Chief Model: MCM1U

Item	Criteria	Quantity	Notes
Mount (Compatible with Side Wall Displays – Watch Floor area)	<ul style="list-style-type: none"> Not applicable 	2	<ul style="list-style-type: none"> CANADA supplied Equipment: <ul style="list-style-type: none"> Make: Chief Model: MTM1U
Digital Display Clock	<ul style="list-style-type: none"> Digital / up to 15 characters (alphanumeric) in red, green, yellow and blue color display Display: 4-digit, 7-segment LED Character Height:: 2.5" HR/MIN Character Height:: 1.2" location characters Accurate to one second per year Weight: not to exceed 15.8 lbs 	1	<ul style="list-style-type: none"> Recommended make and model: <ul style="list-style-type: none"> Digital Display Systems BTZ-42425-6ERG If alternate product proposed, please provide manufacturer's specification sheet
Stereo Headphone (At Operation Desks)	<ul style="list-style-type: none"> Lightweight Wired Impedance: 26 Ohms Frequency response: 18 – 18000 Hz Cable: min of 1.4m (symmetrical cable) 	24	<ul style="list-style-type: none"> Recommended make and model: <ul style="list-style-type: none"> Sennheiser HD 2.10 If alternate product proposed, please provide manufacturer's specification sheet

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hn331.W8474-197662

Buyer ID - Id de l'acheteur
hn331
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APPENDIX G TO ANNEX B – STATEMENT OF WORK

Price Sheet

May 25th 2018

Item	Make	Description	Qty	Price
1	Thinklogical	• VQM-0H0024-LCTX	77	
2	Thinklogical	• VTS-004200	39	
3	Thinklogical	• VQM-AH0003-LCTX	7	
4	Thinklogical	• CHS-00001	1	
5	Thinklogical	• CHS-000004	17	
6	Thinklogical	• TLX-MSC-000320	1	
7	Thinklogical	• TLX-MSM-C00320	1	
8	Thinklogical	• VXM-D00T16 REV A	16	
9	Thinklogical	• SMP-M0000320	1	
10	Thinklogical	• SMP-C00001	3	
11	Thinklogical	• VQM-HAP001-LCRX	14	
12	Thinklogical	• VQM-AHV003-LCRX	29	
13	Thinklogical	• VEL-0H0003-LCRX	6	
14	Crestron	• PRO3	1	
15	Crestron	• DIN-AP3	1	
16	Crestron	• TS-1542-TILT	5	
17	Luxcom	• OM101-MM-ST	2	
18	Luxcom	• MP05	1	
19	Luxul	• AMS-1208P	1	
20	Extron	• XPA-2003C	1	
21	Extron	• DMP 44 LC	1	
22	Extron	• SMD-101	1	
23	Extron	• DSC HD-HD	6	
24	Extron	• SM 26	2	
25	Extron	• SMK P SM 26/28	2	
26	Middle Atlantic	• UPS S-1500R	2	
27	JBL	• Control 26CT	4	
28	Digital Display Systems	• BTZ-42425-6ERG	1	
29	Sennheiser	• HD 2.10	24	
30	N/A	Drawings, Installation, testing, training & all other deliverables	lot	

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Item	Make	Description	Qty	Price
31	N/A	Option year 1, one year optional extended warranty, to start after the initial one year warranty period expires (as per warranty clauses 21 and 22 in Annex B, reference clause 23)	ea year	
32	N/A	Option year 2, one year optional extended warranty, to start after the first one year option warranty period expires (as per warranty clauses 21 and 22 in Annex B, reference clause 23)	ea year	
33	N/A	Option year 3, one year optional extended warranty, to start after the second one year option warranty period expires (as per warranty clauses 21 and 22 in Annex B, reference clause 23)	ea year	
34	N/A	Option to extend the manufacturer's warranty of equipment, items 1 to 29 in the Appendix G price list, an additional three years after the first year standard warranty expires (reference clause 24, note c in Annex B)	One lot price	

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APPENDIX G TO ANNEX B – STATEMENT OF WORK

Price Sheet

June 14, 2018

Item	Make	Description	Qty	Price
32	Thinklogical	• VTM-U00024-LCTX	77	
33	Thinklogical	• VTS-004200	39	
34	Thinklogical	• VQM-AH0003-LCTX	7	
35	Thinklogical	• CHS-00001	1	
36	Thinklogical	• CHS-000004	17	
37	Thinklogical	• TLX-MSC-000320	1	
38	Thinklogical	• TLX-MSM-C00320	1	
39	Thinklogical	• VXM-D00T16 REV A	16	
40	Thinklogical	• SMP-M0000320	1	
41	Thinklogical	• SMP-C00001	3	
42	Thinklogical	• VQM-HAP001-LCRX	14	
43	Thinklogical	• VQM-AHV003-LCRX	29	
44	Thinklogical	• VEL-0H0003-LCRX	6	
45	Crestron	• PRO3	1	
46	Crestron	• DIN-AP3	1	
47	Crestron	• TS-1542-TILT	5	
48	Luxcom	• OM101-MM-ST	2	
49	Luxcom	• MP05	1	
50	Luxul	• AMS-1208P	1	
51	Extron	• XPA-2003C	1	
52	Extron	• DMP 44 LC	1	
53	Extron	• SMD-101	1	
54	Extron	• DSC HD-HD	6	
55	Extron	• SM 26	2	
56	Extron	• SMK P SM 26/28	2	
57	Middle Atlantic	• UPS S-1500R	2	
58	JBL	• Control 26CT	4	
59	Digital Display Systems	• BTZ-42425-6ERG	1	
60	Sennheiser	• HD 2.10	24	
61	N/A	Drawings, Installation, testing, training & all other deliverables	lot	

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Item	Make	Description	Qty	Price
62	N/A	Option year 1, one year optional extended warranty, to start after the initial one year warranty period expires (as per warranty clauses 21 and 22 in Annex B, reference clause 23)	ea year	
32	N/A	Option year 2, one year optional extended warranty, to start after the first one year option warranty period expires (as per warranty clauses 21 and 22 in Annex B, reference clause 23)	ea year	
33	N/A	Option year 3, one year optional extended warranty, to start after the second one year option warranty period expires (as per warranty clauses 21 and 22 in Annex B, reference clause 23)	ea year	
34	N/A	Option to extend the manufacturer's warranty of equipment, items 1 to 29 in the Appendix G price list, to three years after the first year standard warranty (reference clause 24, note c in Annex B)	One lot price	

All other terms and conditions remain the same.