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**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**

**Vendor/Firm Name and Address**  
Raison sociale et adresse du  
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**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

<b>Title - Sujet</b> CCTV AT ATLANTIC INSTITUTIONS	
<b>Solicitation No. - N° de l'invitation</b> 21120-169589/A	<b>Amendment No. - N° modif.</b> 005
<b>Client Reference No. - N° de référence du client</b> 21120-16-2209589	<b>Date</b> 2016-06-15
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$HN-461-70697	
<b>File No. - N° de dossier</b> hn461.21120-169589	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2016-06-28</b>	
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Hallman, Patti	<b>Buyer Id - Id de l'acheteur</b> hn461
<b>Telephone No. - N° de téléphone</b> (819) 420-0339 ( )	<b>FAX No. - N° de FAX</b> ( ) -
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b>	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

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

Solicitation No. - N° de l'invitation  
21120-169589/A  
Client Ref. No. - N° de réf. du client  
21120-169589

Amd. No. - N° de la modif.  
005  
File No. - N° du dossier  
hn461.21120-169589

Buyer ID - Id de l'acheteur  
hn461  
CCC No./N° CCC - FMS No./N° VME

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*La modification 005 est apportée pour que soient ajoutées d'autres questions à la pièce jointe 001 – Questions et réponses.*

## **PIÈCE JOINTE 2**

### **QUESTIONS ET RÉPONSES (suite)**

- Q89)** Pouvez-vous s'il vous plaît fournir les normes suivantes: IS / STD 223, ES / STD 233, ES / STD 234.  
**A89)** La documentation est incluse dans 3 fichiers PDF individuels dans le cadre de cette modification.

**ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED**



**CORRECTIONAL SERVICES CANADA  
TECHNICAL SERVICES BRANCH  
ELECTRONIC SECURITY SYSTEMS**



ES/STD-0223  
Revision 4  
July 2015

**ELECTRONIC ENGINEERING STANDARD  
PAN/TILT/ZOOM NETWORK COLOUR DOME CAMERA  
FOR USE IN FEDERAL CORRECTIONAL INSTITUTIONS**

**AUTHORITY**

Acquisition of a camera for the identified purposes that is not in compliance with this standard must be approved by the Design Authority.

Recommended corrections, additions or deletions should be addressed to the Design Authority at the following address:

Director, Electronic Security Systems  
Correctional Service of Canada  
340 Laurier Avenue West,  
Ottawa, Ontario  
K1A 0P9

Approved by:

A handwritten signature in black ink, appearing to read "M. H. ...", written over a thick horizontal black line.

Director,  
Electronic Security Systems

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### TABLE OF REVISIONS

Revision	Paragraph	Comment
0	N/A	Original
1	Paragraph 7.12 Paragraph 7.21	Optical zoom increased to 30x Added electronic image stabilization
2	All	Reformat and indoor/outdoor standard merge
3	Definitions	Removed
	2.1	Added reference IEC EN 61000-4-3, Radiated RF immunity
	3.2.2.3	Changed humidity to non-condensing 20%-90%
	3.3.1	Interference now uses IEC EN 61000-4-3, Radiated RF immunity
4	2.1/3.3.1	Change IEC EN 61000-4-3, Radiated RF immunity to IEC EN 55024, Immunity characteristics
	3.2.1.11	Removed smoked dome
	5.2.1	Added operate from external 24VAC power source

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## TABLE OF CONTENTS

<b>TABLE OF REVISIONS</b> .....	<b>2</b>
<b>TABLE OF CONTENTS</b> .....	<b>3</b>
<b>TABLE OF ABBREVIATIONS</b> .....	<b>4</b>
<b>1 INTRODUCTION</b> .....	<b>5</b>
<b>1.1 Overview</b> .....	<b>5</b>
<b>1.2 Purpose</b> .....	<b>5</b>
<b>2 REFERENCES</b> .....	<b>6</b>
<b>2.1 Specifications, Standards, and Statements of Work</b> .....	<b>6</b>
<b>3 PHYSICAL</b> .....	<b>7</b>
<b>3.1 Dimensions</b> .....	<b>7</b>
<b>3.2 Environment</b> .....	<b>7</b>
<b>3.3 Interference</b> .....	<b>7</b>
<b>3.4 Reliability</b> .....	<b>7</b>
<b>3.5 Safety</b> .....	<b>7</b>
<b>4 OPERATIONAL</b> .....	<b>8</b>
<b>4.1 Camera</b> .....	<b>8</b>
<b>4.2 Lens</b> .....	<b>8</b>
<b>4.3 PTZ</b> .....	<b>8</b>
<b>4.4 Video</b> .....	<b>8</b>
<b>5 INTERFACE</b> .....	<b>9</b>
<b>5.1 Ports</b> .....	<b>9</b>
<b>5.2 Power</b> .....	<b>9</b>
<b>5.3 Video Management System Compatibility</b> .....	<b>9</b>

---

## TABLE OF ABBREVIATIONS

<b>Abbreviation</b>	<b>Expansion</b>
AGC	Automatic Gain Control
CSC	Correctional Service Canada
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
MJPEG	Motion Joint Photographic Experts Group
MTBF	Mean Time Between Failures
ONVIF	Open Network Video Interface Forum
PoE	Power over Ethernet
PTZ	Pan Tilt Zoom
TCP/IP	Transmission Control Protocol/Internet Protocol

## 1 INTRODUCTION

### 1.1 Overview

- .1 This standard defines the requirements of Correctional Service Canada (CSC) for a pan, tilt, zoom (PTZ), network capable, dome camera for use at federal correctional institutions. PTZ cameras are deployed to allow detailed examination of areas typically covered by fixed cameras or areas without regular evidentiary coverage.

### 1.2 Purpose

- .1 The cameras are deployed primarily for observation use. Given they may be pointed anywhere, they are not assumed to be evidentiary coverage.
- .2 These cameras are for deployment for all outdoor PTZ camera locations.
- .3 These cameras are for deployment for all indoor PTZ camera locations.

## 2 REFERENCES

### 2.1 Specifications, Standards, and Statements of Work

.1 Access to non-government specifications is the responsibility of the contractor.

- IEC EN55024 – International Electrotechnical Commission Information technology equipment – Immunity characteristics – Limits and methods of measurement
- IEC EN60529 – International Electrotechnical Commission Degrees of protection provided by enclosures (IP Code)
- IEC EN60950-1 – International Electrotechnical Commission Information technology equipment – Safety
- IEC EN62262 – International Electrotechnical Commission Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts
- IEEE 802.3at – IEEE Standard for Information technology – Telecommunications and information exchange between systems – Local and metropolitan area networks – Specific requirements Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications Amendment 3: Data Terminal Equipment (DTE) Power via the Media Dependent Interface (MDI) Enhancements
- IEEE 802.3u – IEEE Standards for Local and Metropolitan Area Networks: Supplement to Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications Media Access Control (MAC) Parameters, Physical Layer, Medium Attachment Units, and Repeater for 100 Mb/s Operation, Type 100BASE-T

### 3 PHYSICAL

#### 3.1 Dimensions

- .1 The camera case and dome must:
  - .1 measure a base diameter less than 250mm;
  - .2 measure from base to top of dome of less than 400mm excluding any mount;
  - .3 weigh less than 5kg excluding mounting hardware;

#### 3.2 Environment

- .1 The camera case and dome must:
  - .1 meet or exceed IEC EN60529 IP66 dust and water resistance when mounted;
  - .2 if deployed within 5 metres of inmates, meet or exceed IEC EN62262 IK10 impact resistance;
  - .3 if surface mount, have threaded openings for conduits;
  - .4 if pendant mount, have all cables enter through the attachment pipe;
  - .5 if pendant mount, have no other openings in the enclosure excluding the dome assembly;
  - .6 have a threaded plug to seal all unused openings;
  - .7 have set-screws to secure all conduit and plugs from inside the dome;
  - .8 have tamper resistant heads on all externally accessible screws;
  - .9 have a permanently affixed label on the interior of the unit which identifies the manufacturer, the model or assembly number, the serial number and the power requirement;
  - .10 have a permanently affixed label on the exterior of the unit which identifies the manufacturer, the model or assembly number, the serial number and the power requirement;
- .2 The camera must:
  - .1 be capable of continuous operation;
  - .2 start and operate from -40°C to 50°C;
  - .3 start and operate from 20% to 90% non-condensing humidity;

#### 3.3 Interference

- .1 The camera must be certified compliant to IEC EN 55024, Immunity characteristics.

#### 3.4 Reliability

- .1 The camera must have an MTBF of at least 25,000 hours.

#### 3.5 Safety

- .1 The camera must meet IEC 60950-1 or the CSA equivalent.

## 4 OPERATIONAL

### 4.1 Camera

- .1 The camera must retain its configuration over a power cycle.
- .2 The image sensor must:
  - .1 include automatic or remote back focus;
  - .2 have a minimum of 480,000 pixels (horizontal x vertical);
  - .3 have day (colour) and night (black and white) modes;
  - .4 automatic removable infrared cut filter for day/night transition;
  - .5 1.0 lux or less minimum illumination for day mode;
  - .6 0.1 lux or less minimum illumination for night mode;
  - .7 include Automatic Gain Control (AGC);
  - .8 include extended dynamic range processing;

### 4.2 Lens

- .1 The camera lens must:
  - .1 have a horizontal field of view optical zoom range including 3.5° to 50°;
  - .2 be integral to the camera assembly;

### 4.3 PTZ

- .1 The PTZ must:
  - .1 have a pan range of 360° continuous (endless);
  - .2 have a minimum tilt range of 180°;
  - .3 include automatic image inversion at 90° tilt;
  - .4 have a minimum pan and tilt speed of 0.1°/sec or slower;
  - .5 have a maximum pan and tilt speed of 100°/sec or faster;

### 4.4 Video

- .1 The video encoding must:
  - .1 support H.264 configurable I-frame frequency of at least 3 per second;
  - .2 support H.264 constant bit rate transmission mode;
  - .3 support H.264 frame rate transmission mode;
  - .4 support at least 3 levels of H.264 image quality;
  - .5 support at least 3 levels of MJPEG image quality;
- .2 The video output must:
  - .1 include an on-screen, programmable character generation overlay capability with a minimum of 8 visible characters;
  - .2 support at least two simultaneous H.264 video streams at 30 frames per second with at least 480,000 pixel resolution;
  - .3 support at least two simultaneous video streams, one H.264 and one MJPEG at 15 frames per second with at least 480,000 pixel resolution;

## 5 INTERFACE

### 5.1 Ports

- .1 The camera must:
  - .1 interface over IPV4 TCP/IP;
  - .2 be able to operate on 100Base-TX (IEEE 802.3u);
  - .3 connect using an RJ-45 connector;
  - .4 be ONVIF compliant;

### 5.2 Power

- .1 The camera must be a Type 1 or Type 2 powered device operating from Power over Ethernet (PoE) compliant with IEEE 802.3at Class 0, 1, 2, 3, or 4, or operating from an external 24VAC power source.

### 5.3 Video Management System Compatibility

- .1 The camera model must be identified as “Certified” or “Supported by Design” in the Genetec Omnicast Supported Hardware camera list.



**CORRECTIONAL SERVICES CANADA  
TECHNICAL SERVICES BRANCH  
ELECTRONIC SECURITY SYSTEMS**



ES/STD-0232  
Revision 2  
February 2014

**ELECTRONIC ENGINEERING STANDARD  
FIXED NETWORK COLOUR DOME CAMERA  
FOR USE IN FEDERAL CORRECTIONAL INSTITUTIONS**

**AUTHORITY**

Acquisition of a camera for the identified purposes that is not in compliance with this standard must be approved by the Design Authority.

Recommended corrections, additions or deletions should be addressed to the Design Authority at the following address:

Director, Electronic Security Systems  
Correctional Service of Canada  
340 Laurier Avenue West,  
Ottawa, Ontario  
K1A 0P9

Approved by:

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Director,  
Electronic Security Systems

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### TABLE OF REVISIONS

Revision	Paragraph	Comment
0	N/A	Original
1	All	New structure and change to merge indoor and outdoor.
2	Definitions	Removed
	2.1	Added reference IEC EN 61000-4-3, Radiated RF immunity
	3.2.2.3	Changed humidity to non-condensing 20%-90%
	3.3.1	Interference now uses IEC EN 61000-4-3, Radiated RF immunity

---

## TABLE OF CONTENTS

<b>TABLE OF REVISIONS</b> .....	<b>2</b>
<b>TABLE OF CONTENTS</b> .....	<b>3</b>
<b>TABLE OF ABBREVIATIONS</b> .....	<b>4</b>
<b>1 INTRODUCTION</b> .....	<b>5</b>
<b>1.1 Overview</b> .....	<b>5</b>
<b>1.2 Purpose</b> .....	<b>5</b>
<b>2 REFERENCES</b> .....	<b>6</b>
<b>2.1 Specifications, Standards, and Statements of Work</b> .....	<b>6</b>
<b>3 PHYSICAL</b> .....	<b>7</b>
<b>3.1 Dimensions</b> .....	<b>7</b>
<b>3.2 Environment</b> .....	<b>7</b>
<b>3.3 Interference</b> .....	<b>7</b>
<b>3.4 Reliability</b> .....	<b>7</b>
<b>3.5 Safety</b> .....	<b>7</b>
<b>4 OPERATIONAL</b> .....	<b>8</b>
<b>4.1 Camera</b> .....	<b>8</b>
<b>4.2 Lens</b> .....	<b>8</b>
<b>4.3 Video</b> .....	<b>8</b>
<b>5 INTERFACE</b> .....	<b>9</b>
<b>5.1 Ports</b> .....	<b>9</b>
<b>5.2 Power</b> .....	<b>9</b>
<b>5.3 Video Management System Compatibility</b> .....	<b>9</b>

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<b>Abbreviation</b>	<b>Expansion</b>
AGC	Automatic Gain Control
CSC	Correctional Service Canada
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
MJPEG	Motion Joint Photographic Experts Group
MTBF	Mean Time Between Failures
ONVIF	Open Network Video Interface Forum
PoE	Power over Ethernet
TCP/IP	Transmission Control Protocol/Internet Protocol

## 1 INTRODUCTION

### 1.1 Overview

- .1 This standard defines the requirements of Correctional Service Canada (CSC) for a fixed focus, network capable, dome camera for use at federal correctional institutions.

### 1.2 Purpose

- .1 The cameras are deployed for both observation and evidentiary use.
- .2 These cameras are for deployment for all outdoor fixed camera locations **except**:
  - .1 facility perimeter;
- .3 These cameras are for deployment for all indoor fixed camera locations **except**:
  - .1 observation cells;
  - .2 principal entrance panoramic;

## 2 REFERENCES

### 2.1 Specifications, Standards, and Statements of Work

.1 Access to non-government specifications is the responsibility of the contractor.

- IEC EN60529 – International Electrotechnical Commission Degrees of protection provided by enclosures (IP Code)
- IEC EN60950-1 – International Electrotechnical Commission Information technology equipment – Safety
- IEC EN 61000-4-3 – International Electrotechnical Commission Radiated RF immunity
- IEC EN62262 – International Electrotechnical Commission Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts
- IEEE 802.3at – IEEE Standard for Information technology – Telecommunications and information exchange between systems – Local and metropolitan area networks – Specific requirements Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications Amendment 3: Data Terminal Equipment (DTE) Power via the Media Dependent Interface (MDI) Enhancements
- IEEE 802.3u – IEEE Standards for Local and Metropolitan Area Networks: Supplement to Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications Media Access Control (MAC) Parameters, Physical Layer, Medium Attachment Units, and Repeater for 100 Mb/s Operation, Type 100BASE-T

### **3 PHYSICAL**

#### **3.1 Dimensions**

- .1 The camera case and dome must:
  - .1 measure a base diameter less than 200mm;
  - .2 measure from base to top of dome of less than 175mm excluding any mount;
  - .3 weigh less than 2.5kg;

#### **3.2 Environment**

- .1 The camera case and dome must:
  - .1 meet or exceed IEC EN60529 IP66 dust and water resistance when mounted;
  - .2 meet or exceed IEC EN62262 IK10 impact resistance;
  - .3 have threaded openings for conduits;
  - .4 have a threaded plug to seal all unused openings;
  - .5 have set-screws to secure all conduit and plugs from inside the dome;
  - .6 have tamper resistant heads on all externally accessible screws;
  - .7 have a permanently affixed label on the interior of the unit which identifies the manufacturer, the model or assembly number, the serial number and the power requirement;
  - .8 have a permanently affixed label on the exterior of the unit which identifies the manufacturer, the model or assembly number, the serial number and the power requirement;
- .2 The camera must:
  - .1 be capable of continuous operation;
  - .2 start and operate from -40°C to 50°C;
  - .3 start and operate from 20% to 90% non-condensing humidity;

#### **3.3 Interference**

- .1 The camera must be certified compliant to IEC EN 61000-4-3, Radiated RF immunity

#### **3.4 Reliability**

- .1 The camera must have an MTBF of at least 25,000 hours.

#### **3.5 Safety**

- .1 The camera must meet IEC 60950-1 or the CSA equivalent.

---

## 4 OPERATIONAL

### 4.1 Camera

- .1 The camera must retain its configuration over a power cycle.
- .2 The image sensor must:
  - .1 include automatic or remote back focus;
  - .2 have a minimum of 480,000 pixels (horizontal x vertical);
  - .3 have day (colour) and night (black and white) modes;
  - .4 automatic removable infrared cut filter for day/night transition;
  - .5 have 0.5 lux or less minimum illumination for day mode;
  - .6 have 0.1 lux or less minimum illumination for night mode;
  - .7 include Automatic Gain Control (AGC);
  - .8 include extended dynamic range processing;

### 4.2 Lens

- .1 The camera lens must:
  - .1 have a 35° to 80° or greater horizontal angular view varifocal lens
  - .2 be approved by the manufacturer of the camera for that camera;

### 4.3 Video

- .1 The video encoding must:
  - .1 support H.264 configurable I-frame frequency of at least 3 per second;
  - .2 support H.264 constant bit rate transmission mode;
  - .3 support H.264 frame rate transmission mode;
  - .4 support at least 3 levels of H.264 image quality;
  - .5 support at least 3 levels of MJPEG image quality;
- .2 The video output must:
  - .1 include an on-screen, programmable character generation overlay capability with a minimum of 8 visible characters;
  - .2 support at least two simultaneous H.264 video streams at 30 frames per second with at least 480,000 pixel resolution;
  - .3 support at least two simultaneous video streams, one H.264 and one MJPEG at 15 frames per second with at least 480,000 pixel resolution;

## **5 INTERFACE**

### **5.1 Ports**

- .1 The camera must:
  - .1 interface over IPV4 TCP/IP;
  - .2 be able to operate on 100Base-TX (IEEE 802.3u);
  - .3 connect using an RJ-45 connector;
  - .4 be ONVIF compliant;

### **5.2 Power**

- .1 The camera must be a Type 1 powered device operating solely from Power over Ethernet (PoE) compliant with IEEE 802.3at Class 0, 1, 2, or 3.

### **5.3 Video Management System Compatibility**

- .1 The camera model must be identified as “Certified” or “Supported by Design” in the Genetec Omnicast Supported Hardware camera list.



**CORRECTIONAL SERVICES CANADA  
TECHNICAL SERVICES BRANCH  
ELECTRONIC SECURITY SYSTEMS**



ES/STD-0233  
Revision 2  
February 2014

**ELECTRONIC ENGINEERING STANDARD  
INDOOR NO-GRIP CORNER MOUNT NETWORK COLOUR CAMERA  
FOR USE IN FEDERAL CORRECTIONAL INSTITUTIONS**

**AUTHORITY**

This Standard is approved by the Correctional Service Canada for the procurement and installation of this item in Canadian federal correctional institutions.

Acquisition of a camera for the identified purposes that is not in compliance with this standard must be approved by the Design Authority.

Recommended corrections, additions or deletions should be addressed to the Design Authority at the following address:

Director, Electronic Security Systems  
Correctional Service of Canada  
340 Laurier Avenue West,  
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Director,  
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0	N/A	Original
1	All	New document structure and addition of TCP/IP and PoE interfaces.
2	Definitions	Removed
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---

## TABLE OF CONTENTS

<b>TABLE OF REVISIONS</b> .....	<b>2</b>
<b>TABLE OF CONTENTS</b> .....	<b>3</b>
<b>TABLE OF ABBREVIATIONS</b> .....	<b>4</b>
<b>1 INTRODUCTION</b> .....	<b>5</b>
<b>1.1 Overview</b> .....	<b>5</b>
<b>1.2 Purpose</b> .....	<b>5</b>
<b>2 REFERENCES</b> .....	<b>6</b>
<b>2.1 Specifications, Standards, and Statements of Work</b> .....	<b>6</b>
<b>3 PHYSICAL</b> .....	<b>7</b>
<b>3.1 Dimensions</b> .....	<b>7</b>
<b>3.2 Environment</b> .....	<b>7</b>
<b>3.3 Interference</b> .....	<b>7</b>
<b>3.4 Reliability</b> .....	<b>7</b>
<b>3.5 Safety</b> .....	<b>7</b>
<b>4 OPERATIONAL</b> .....	<b>8</b>
<b>4.1 Camera</b> .....	<b>8</b>
<b>4.2 Lens</b> .....	<b>8</b>
<b>4.3 Camera Case</b> .....	<b>8</b>
<b>4.4 Video</b> .....	<b>8</b>
<b>5 INTERFACE</b> .....	<b>9</b>
<b>5.1 Ports</b> .....	<b>9</b>
<b>5.2 Power</b> .....	<b>9</b>
<b>5.3 Video Management System Compatibility</b> .....	<b>9</b>

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AGC	Automatic Gain Control
CSC	Correctional Service Canada
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
MJPEG	Motion Joint Photographic Experts Group
MTBF	Mean Time Between Failures
ONVIF	Open Network Video Interface Forum
PoE	Power over Ethernet
TCP/IP	Transmission Control Protocol/Internet Protocol

## 1 INTRODUCTION

### 1.1 Overview

- .1 This standard defines the requirements of Correctional Service Canada (CSC) for an indoor, fixed focus, network capable, corner mounted, no-grip camera for use at federal correctional institutions.

### 1.2 Purpose

- .1 The cameras are deployed for both observation and evidentiary use.
- .2 These cameras are for deployment only in:
  - .1 observation cells;

## 2 REFERENCES

### 2.1 Specifications, Standards, and Statements of Work

.1 Access to non-government specifications is the responsibility of the contractor.

- IEC EN60529\*International Electrotechnical Commission Degrees of protection provided by enclosures (IP Code)
- IEC EN60950-1\*International Electrotechnical Commission Information technology equipment – Safety
- IEC EN 61000-4-3 – International Electrotechnical Commission Radiated RF immunity
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### 3 PHYSICAL

#### 3.1 Dimensions

- .1 The camera case must:
  - .1 measure less than 300mm in all dimensions;
  - .2 weigh less than 2.5kg;

#### 3.2 Environment

- .1 The camera case must:
  - .1 meet or exceed IEC EN60529 IP65 dust and water resistance when mounted;
  - .2 meet or exceed IEC EN62262 IK10 impact resistance;
  - .3 have tamper resistant heads on all externally accessible screws;
  - .4 be grip-less and anchor-free;
  - .5 have a permanently affixed label on the interior of the unit which identifies the manufacturer, the model or assembly number, the serial number and the power requirement;
  - .6 have a permanently affixed label on the exterior of the unit which identifies the manufacturer, the model or assembly number, the serial number and the power requirement;
- .2 The camera must:
  - .1 be capable of continuous operation;
  - .2 start and operate from 0°C to 50°C;
  - .3 start and operate from 20% to 90% non-condensing humidity;

#### 3.3 Interference

- .1 The camera must be certified compliant to IEC EN 61000-4-3, Radiated RF immunity

#### 3.4 Reliability

- .1 The camera must have an MTBF of at least 25,000 hours.

#### 3.5 Safety

- .1 The camera must meet IEC 60950-1 or the CSA equivalent.

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## 4 OPERATIONAL

### 4.1 Camera

- .1 The camera must retain its configuration over a power cycle.
- .2 The image sensor must:
  - .1 include automatic or remote back focus;
  - .2 have a minimum of 480,000 pixels (horizontal x vertical);
  - .3 have day (colour) and night (black and white) modes;
  - .4 automatic removable infrared cut filter for day/night transition;
  - .5 have 0.5 lux or less minimum illumination for day mode;
  - .6 have 0 lux minimum illumination for night mode;
  - .7 if required for night mode, use invisible illumination (typically infra-red LEDs);
  - .8 include Automatic Gain Control (AGC);

### 4.2 Lens

- .1 The camera lens must:
  - .1 provide a view of the entire floor and all four walls of a room at least 3.5m x 3.5m including the walls to which it is attached from the mounting height to the floor;
  - .2 be approved by the manufacturer of the camera for that camera;

### 4.3 Camera Case

- .1 The camera case must:
  - .1 have a programmatically controlled visible LED indicator to show when the video feed is being observed;

### 4.4 Video

- .1 The video encoding must:
  - .1 support H.264 configurable I-frame frequency of at least 3 per second;
  - .2 support H.264 constant bit rate transmission mode;
  - .3 support H.264 frame rate transmission mode;
  - .4 support at least 3 levels of H.264 image quality;
  - .5 support at least 3 levels of MJPEG image quality;
- .2 The video output must:
  - .1 include an on-screen, programmable character generation overlay capability with a minimum of 8 visible characters;
  - .2 support at least two simultaneous H.264 video streams at 30 frames per second with at least 480,000 pixel resolution;
  - .3 support at least two simultaneous video streams, one H.264 and one MJPEG at 15 frames per second with at least 480,000 pixel resolution;

## **5 INTERFACE**

### **5.1 Ports**

- .1 The camera must:
  - .1 interface over IPV4 TCP/IP;
  - .2 be able to operate on 100Base-TX (IEEE 802.3u);
  - .3 connect using an RJ-45 connector;
  - .4 be ONVIF compliant;

### **5.2 Power**

- .1 The camera must be a Type 1 powered device operating solely from Power over Ethernet (PoE) compliant with IEEE 802.3at Class 0, 1, 2, or 3.

### **5.3 Video Management System Compatibility**

- .1 The camera model must be identified as “Certified” or “Supported by Design” in the Genetec Omnicast Supported Hardware camera list.