

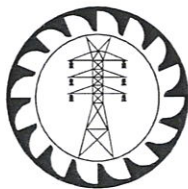
139:2018

CEB  
SPECIFICATION

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# BILL PAYMENT KIOSK MACHINE



CEYLON ELECTRICITY BOARD  
SRI LANKA



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## SPECIFICATION FOR BILL PAYMENT KIOSK MACHINE

### 1.0 SCOPE

This specification covers the general requirements of the design, manufacture of Bill Payment Kiosk machine for Ceylon Electricity Board (CEB) to facilitate self-service utility bill payments for customers of CEB.

### 2.0 SYSTEM PARAMETERS

(a)	Nominal voltage (U)	230V / 400V
(b)	System highest voltage (Um)	240V / 440V
(c)	System frequency	50 Hz
(d)	Earthing System	TT Earthing system

### 3.0 SERVICE CONDITIONS

(a)	Annual average ambient temperature	30 °C
(b)	Maximum ambient temperature	40 °C
(c)	Maximum relative humidity	90%
(d)	Environmental conditions	Humid tropical climate with heavily polluted atmosphere
(e)	Isokeruanic (Thunder days) level	100 days

### 4.0 BASIC FEATURES

Payment Kiosk shall offer a simple and user friendly interface to the customers to pay their Electricity Bills with any valid Sri Lankan currency notes at any time. It shall consist of following components:

- (a) Free-Standing Enclosure which conform to UL 291 (Business hour Level 1) standard.
- (b) Touch Screen Visual Display Unit (VDU)
- (c) Cash Receptor
- (d) Receipt Printer
- (e) Cash Safe
- (f) Key Pad
- (g) Pin Pad
- (h) CPU with Communication Interface (Local Area Network)
- (i) Camera



Preferred conceptual drawing of the Payment Kiosk machine is indicated in Annex A-1. Manufacturer may propose alternative designs based on the conceptual design with the adherence to the functional requirements stipulated herein for the CEB Bill Payment Kiosk machine. Relevant design drawings and documentation complete with the dimensions, tolerances, and description shall be attached in the submission.

The device shall be operated in both online and offline modes. When it is connected with the CEB corporate Virtual Private Network (VPN), device will work in online mode; so that all transactions will be real-time and communicated with the CEB billing servers using the web services provided by CEB. At the same time, it shall be capable of operating in offline mode so that when there is a communication network outage, without inconveniencing the customers;

device shall synchronize the payment transactions automatically when the communication is restored.

It shall be possible to form a network of Kiosks communicating with the central server. Each Kiosk shall be identifiable with a unique Kiosk ID. Several Kiosks may be grouped into different locations so that they can be administrated by different users.

Facility to change Kiosk parameters such as Kiosk ID and location by CEB authorized personnel shall be available. Furthermore, it should provide facility to manage the firmware update and the log viewing at centralized interface.

#### 4.1. Cash Acceptor

Cash Acceptor shall comply with the prevailing monetary rules of the country. A compliance test shall be performed in accordance with the guideline given by the Central Bank of Sri Lanka with the participation of an officer nominated by Ceylon Electricity Board.

Kiosk shall have the capacity of accepting at least 40 notes at one go for bulk deposits. Cash Kiosk shall verify the genuineness of the currency notes while accepting the notes.

Kiosk shall accept all genuine extant series of currency notes of Rs. 10, 20, 50, 100, 500, 1000, 5000 denominations. Kiosk shall reject forged / unknown/soiled/ mutilated notes. Kiosk must provide the facility to accommodate newly introduced currency notes.

## 5.0 FUNCTIONAL FEATURES

### 5.1. User Interface and Software Functions

Interactive (Touch Sensitive) User Interface (UI) shall be provided. It shall be simple and available in all three languages – English, Sinhala and Tamil, with language selection option. All data capturing shall be performed in a single screen page.

The Telephone Number (10 digits) and the Electricity Account Number (10 digits, including one check-digit) shall be captured from the user, who is making the payment. Once captured, the account number shall be verified using the check-digit algorithm (provided by CEB). If online connectivity is available, customer name and address relevant to the entered account number shall be obtained from the central system (using web service provided by CEB) and displayed in the screen. If the account number cannot be verified, a message shall be displayed and operation shall be aborted.

After capturing a valid account number, the customer shall be advised to deposit cash notes (all at once or one at a time). Total deposited amount shall be displayed after acceptance of each currency note and this shall be continued until customer indicates the end of operation by pressing a continue button on screen or waiting a pre-set time period without responding. Any unidentifiable currency notes shall be rejected and returned by the machine.

A receipt must be printed indicating the Kiosk ID, Location Details, Account Number, Name and Address of the customer (if online), Transaction ID, Currency Denominations deposited and the Total Amount accepted by the Kiosk at the end of the deposit operation.

The transaction ID shall be an incrementing serial number, and it is unique to a given Kiosk.

It shall be possible to update Kiosk parameters such as Kiosk ID, Location details etc., by the



authorized CEB personnel either from the Kiosk or remote terminal.

If the internal cash box becomes full, a message shall be displayed and further operation shall be suspended until the cash is unloaded. When cash unloading is to be performed, it shall be possible to print a report from the Kiosk by an authorized user, indicating the total sum of cash collected in the cash box since the last cash unload. Posted and Un-posted transaction totals shall be separately indicated.

For System Administration, web based interface shall be provided to manage following tasks :

- Manage users with different authority/role levels
- Centralized Firmware Update
- Centralized Log Monitoring
- Centralized Device Management
  - Remote Kiosks Configuration
  - Remote Kiosks Monitoring
  - Remote Kiosks Diagnosis
- Centralized Transaction Reports Generation

## 5.2. Backend Operation

All transactions shall be posted in the real-time (or in case of offline operation, uploaded when communication is restored) to the central server at CEB Head Quarters through the VPN using web ID, Kiosk Group ID, Account Number, Deposited Amount, Transaction date and time among other necessary information. If necessary, the system may use suitable middleware at the server side and any resource requirement for such components shall be clearly stated in the offer along with any costs.

## 5.3. System Administration

A web based administration console shall be available to manage the following tasks:

- (a) Create/Change/Delete users with different authority levels.
- (b) Add/Delete/Edit Kiosk machines.
- (c) Create new locations (groups).
- (d) Access to transaction reports.

It shall be possible to grant authority to users to do any or all of the above tasks through a role based security scheme.

## 5.4. Report Generation

It shall be possible to obtain following reports through a web interface:

- (a) List of transactions of a Kiosk posted between any two dates in a serial number (Transaction ID) order with total sum (Transaction Details shall include Kiosk ID, Transaction ID, Account Number, Deposited Amount, Currency Denominations and Date/Time).
- (b) List of transactions in a Kiosk posted between two cash unloads in serial number order with total sum indicated in the corresponding cash unload report taken at the time of unload.
- (c) Details of transactions related to a customer account posted in Kiosk.
- (d) Details of transactions related to a customer account posted between two dates in Kiosk.
- (e) Any other necessary report specified at the time of implementation.



## 6.0 REQUIREMENTS FOR SELECTION

### 6.1. Quality Assurance

The manufacturer shall possess ISO 9001:2015 or latest Quality Assurance Certification valid throughout the delivery period of this bid, for the manufacture of Kiosk Machines for the plant where manufacturing is being done. The Bidder shall furnish a copy of the ISO certificate certified as true copy of the original by the manufacturer, along with the offer.

### 6.2. Manufacturing Experience

The manufacturer shall have minimum of five (5) years experience in manufacturing Kiosk Machines. Offered product shall be in operation in Sri Lanka for the utility bill payments or money deposit at banks. Manufacturer shall furnish a list of purchasers with year and quantity of the product offered with the offer to prove his manufacturing experience.

## 7.0 INFORMATION TO BE FURNISHED WITH THE OFFER

The following shall be furnished with the offer.

- (a) Comprehensive catalogues, relevant dimensional drawings, schematic diagrams on the offered items. It shall necessarily include details about construction, electrical properties and mechanical properties of the item (and material used).
- (b) ISO 9001:2015 or latest Quality Assurance Certificate in accordance with clause 6.1.
- (c) Manufacturer shall furnish a list of supplies with supplied item, purchaser (specifying address contact persons and contact details, country), year & quantity to prove his manufacturing experience and outside the country sales in accordance with Clause 6.2.
- (d) Duly filled and signed 'Annex - B: Schedule of Technical Requirements and Guaranteed Technical Particulars'.
- (e) Any other relevant Technical Details and Calculations

**Not furnishing above documents and details may result in offer being rejected.**

## 8.0 PERFORMANCE GUARANTEES AND WARRANTY

### 8.1. Vendor Responsibility

The Vendor shall be responsible for attending all service calls like removal of stacker jam, cash acceptor slot non-functioning, etc. leading to non-functioning of the Cash Kiosk.

The Vendor shall update the software to support all new variants of currency notes issued by Central Bank of Sri Lanka as well as new denominations, if any, issued subsequently without any extra cost to the CEB during the period of warranty. Bidder shall undertake to upgrade the counterfeit currency detecting software minimum once in six months.

The Vendor shall support to seamlessly integrate Kiosk machine with central system in any



modification of central system web services during warranty period without any service charge.

## 8.2. Warranty

Manufacturer shall provide minimum of two (2) years comprehensive warranty for each Bill Payment Kiosk machine supplied. (For both hardware and software including any movable parts such as Cash Acceptor, Printers etc.).

Vendor should guarantee that the equipment delivered to the CEB is brand new, including all components.

The vendor should also guarantee that all the hardware and software supplied by the vendor are licensed and legally obtained.

Vendor shall be fully responsible for the manufacturer's warranty in respect of proper design, quality and workmanship of all equipment, accessories etc. covered by the offer.

Vendor shall warrant all equipment, accessories, spare parts etc., against any manufacturing defects during the warranty period.

During the warranty period vendor shall maintain the equipment and repair/replace all the defective components at the installed site, at no additional charge to the CEB.

## 9.0 SAMPLES

Not Applicable.

## 10.0 EXTERNAL APPEARANCE

### 10.1. Enclosure

The self-standing enclosure of the device shall be coated with gray color (Pantone 7543: C-77 M-0, Y-0, K-30). Thickness of the coating shall be  $100 \pm 20 \mu\text{m}$ , and the surface shall be smooth without any burrs.

The enclosure shall have approximate dimensions of Width: 500mm ( $\pm 50\text{mm}$ ), Height: 1600mm (max), Depth: 550mm ( $\pm 50\text{mm}$ ) and it shall have lockable and easy access for cash loading/unloading and product maintenance

The IP rating of the enclosure shall be in accordance with the service conditions mentioned in clause 3.0.

### 10.2. Name Board

The name board as per the drawing in Annex A-1 shall be include in the device package, and it shall carry the standard CEB sign board indicated in Annex A-3 with all standard colour codes and preferred dimensions mentioned in Annex A-2. The background of the name board shall be white (Pantone 000c: C-0, M-0, Y-0, K-0) and suitable illumination (back light) shall be provided to improve the visibility of the information indicated in the name board. Material of the name board shall be suitably selected considering the visibility of the information and the durability.

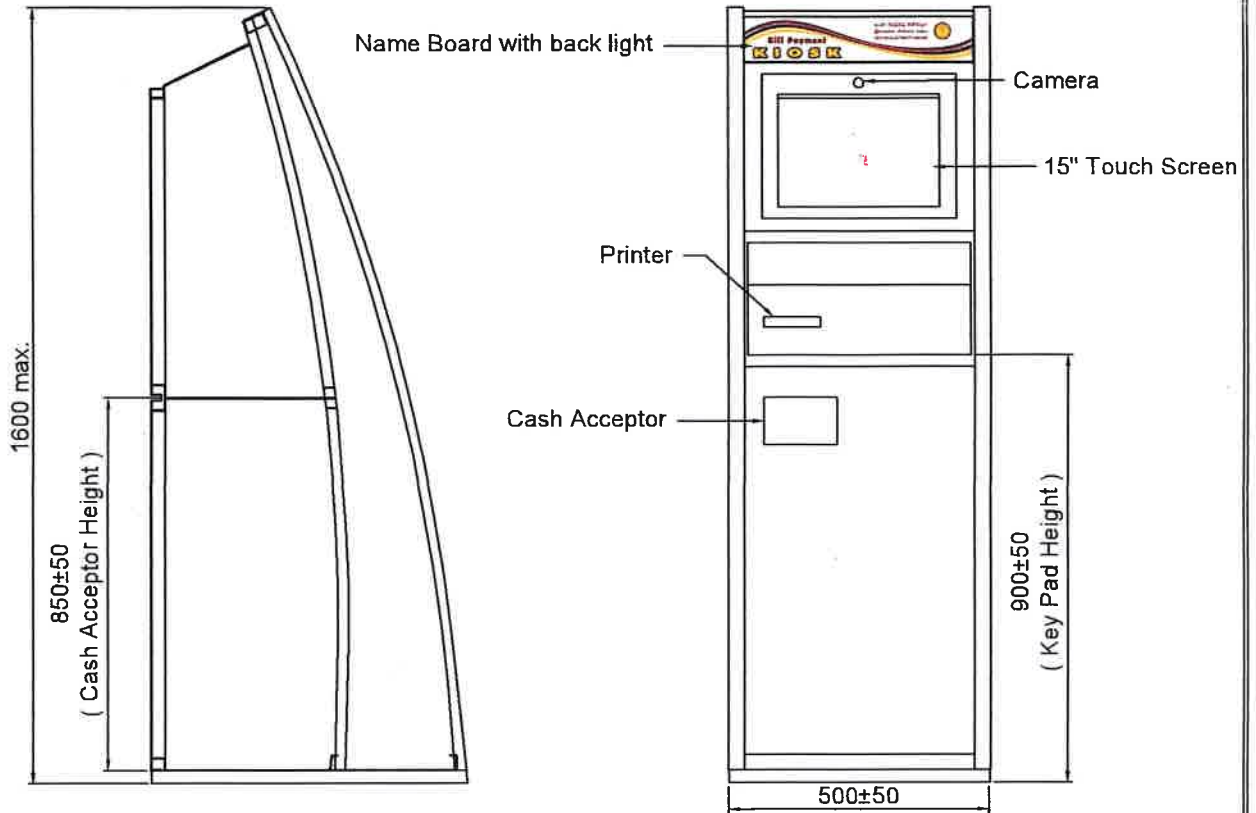


## 11.0 ANNEXES

- Annex - A1: Conceptual drawing of Bill Payment Kiosk Machine
- Annex - A2: Specifications of CEB Sign Board for Bill Payment Kiosk
- Annex - A3: Standard CEB Sign Board for Bill Payment Kiosk Machine
- Annex - B : Schedule of Technical Requirements and Guaranteed Technical Particulars
- Annex - C : Non-Compliance Schedule

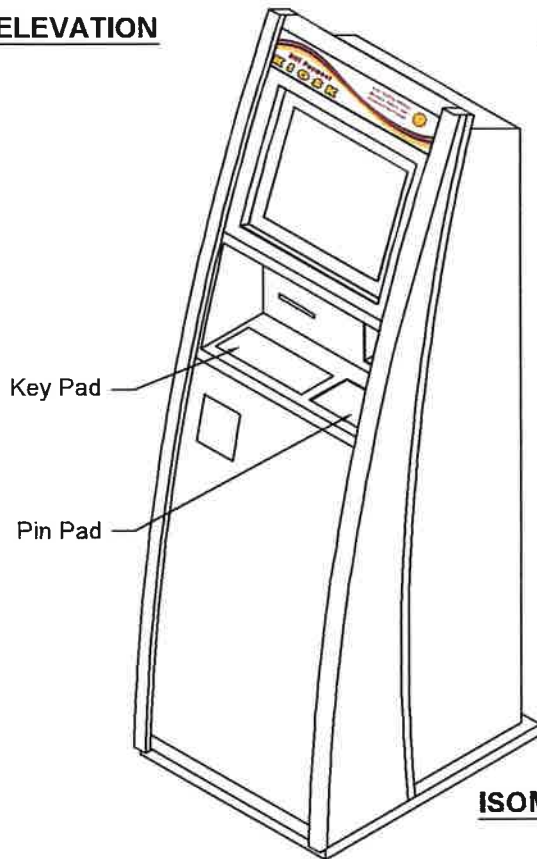







**SIDE ELEVATION**

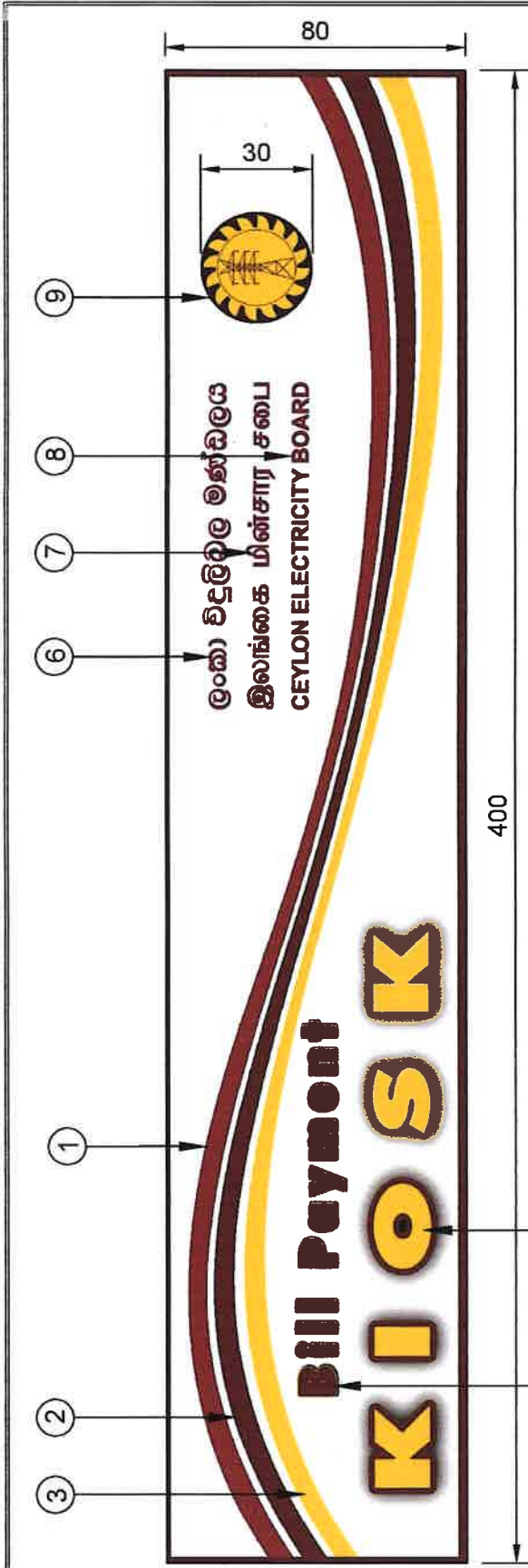
**FRONT ELEVATION**



**ISOMETRIC VIEW**



 <b>CEYLON ELECTRICITY BOARD</b>  DISTRIBUTION COORDINATION BRANCH	<b>DISTRIBUTION STANDARDS &amp; SPECIFICATION</b>		SCALE : NOT TO SCALE
	<b>CONCEPTUAL DRAWING OF BILL PAYMENT KIOSK MACHINE</b>		DRAWN : LALANI
	DESIGNED BY	APPROVED BY	DATE : Jan., 2016
			DRG. NO : DS&S/2016/139A
			CAD NO :
	EE ( DC )	CHAIRMAN, SPECIFICATION COMMITTEE	



Ref. No	Font Name	Font Size (pt)	Colour Code
1	-	-	C-30,M-100,Y-100,K-10 (Pantone 704C)
2	-	-	C-30,M-100,Y-100,K-30 (Pantone 202C)
3	-	-	C-0,M-15,Y-100,K-0 (Pantone 116C)
4	Futura XBikCn BT	57	C-30,M-100,Y-100,K-30 (Pantone 202C)
5	Futura XBik BT	38	C-0,M-15,Y-100,K-0 (Pantone 116C)
6	Iskoola Pota	18	C-30,M-100,Y-100,K-10 (Pantone 704C)
7	Latha	16	C-30,M-100,Y-100,K-10 (Pantone 704C)
8	Arial	16	C-30,M-100,Y-100,K-10 (Pantone 704C)
9	-	-	Standard CEB logo format(Adobe illustrator CS3, Scalable Image will be provided upon request)




	DISTRIBUTION STANDARDS & SPECIFICATION		SCALE : NOT TO SCALE
	SPECIFICATIONS OF CEB SIGN BOARD FOR BILL PAYMENT KIOSK MACHINE		DRAWN : LALANI
DISTRIBUTION COORDINATION BRANCH	DESIGNED BY	APPROVED BY	DATE : Jan., 2016
	EE (DC)	CHAIRMAN, SPECIFICATION COMMITTEE	DRG. NO : DS&S/2016/139B
			CAD NO :



ලංකා විදුලිබල මණ්ඩලය  
இலங்கை மின்சார சபை  
CEYLON ELECTRICITY BOARD

# Bill Payment KIOSK



 CEYLON ELECTRICITY BOARD DISTRIBUTION COORDINATION BRANCH	DISTRIBUTION STANDARDS & SPECIFICATION		SCALE : 1:1.5
	CEB STANDARD SIGN BOARD FOR BILL PAYMENT KIOSK MACHINE		DRAWN : LALANI
DESIGNED BY		APPROVED BY	DATE : Jan., 2016
EE (DC)		CHAIRMAN, SPECIFICATION COMMITTEE	DRG. NO : DS&S/2016/139C
			CAD NO :

## ANNEX-B

**SCHEDULE OF TECHNICAL REQUIREMENTS AND GUARANTEED TECHNICAL PARTICULARS**  
(CEB Requirements shall be filled by the procurement entity and information of the offer shall be filled by the manufacturer)

	CEB Requirement	Offered
<b>General Conditions</b>		
1.	Name of the Manufacturer	
2.	Model No / Brand Name	
3.	Country of Origin	
4.	Operating Environment	Product shall be able to operate under condition as indicated in the clause 2.0 and 3.0
5.	Basic Features	Product shall provide all the basic features as indicated in the clause 4.0
6.	User Interface and Software Functions	Product shall provide all the user interfaces and the software functions as indicated in the clause 5.1
7.	Backend Operation	Product shall provide all the Backend Operations as indicated in the clause 5.2
8.	System Administration	Product shall provide all the System Administration features as indicated in the clause 5.3
9.	Report Generation	Product shall provide all the Report Generation features as indicated in the clause 4.4
10.	Quality Assurance	Manufacturer shall possess quality assurance certification as per clause 6.1
11.	Vendor Responsibility	Vendor shall responsible for all the facts as indicated in the clause 8.1
12.	Warranty	Vendor shall provide comprehensive warranty as indicated in the clause 8.2
13.	Name Board	Product shall consist with the Name board as indicated in the clause 10.2
14.	Whether <b>all</b> information as per clause 7.0 furnished with the offer?	Yes
<b>Hardware Specification</b>		
15.	Enclosure	Product shall consist with the enclosure as indicated in the clause 10.1
16.	Main Power Supply	As per clause 2.0
17.	Backup Power	Device should have integrated backup power mechanism to maintain at least 20 minutes uninterrupted service when a main power failure
18.	Touch Screen	15" touch screen VDV (Anti-glare)
19.	Key Pad	Alpha Numeric Key Pad (with IP65 rating)
20.	Pin Pad	Encrypted Pin Pad (with IP65 rating)
21.	Internal CPU and Memory	Please specify
22.	Operating System	Windows 7 or later



		(The Key shall be provided)	
23.	Processor	Intel® Core™ i3 or Higher	
24.	System Memory	4GB or More	
25.	Hard Disk	500GB or Higher	
26.	USB Ports	4 USB Posts required	
27.	Communication Interface	TCP/IP	
28.	Cash Acceptor	Cash Acceptor shall be able to function as indicated in the clause 4.1	
29.	Receipt Printer	2.5" paper (Dot matrix or Thermal)	
30.	Cash Safe	Made form 12.7mm (minimum) thick high tensile steel with combination lock and key	
31.	Removable Cash Boxes	Minimum 02 required	
32.	Camera	Please specify	

.....  
Signature of the Manufacturer and seal

.....  
Date

I/We certify that the above data are true and correct

.....  
Signature of the Bidder and seal

.....  
Date



**Annex – C**

**Non-Compliance Schedule**

On this schedule the bidder shall provide a list of non-compliances with this specification, documenting the effects that such non-compliance is likely to have on the equipment life and operating characteristics. Each non-compliance shall be referred to the relevant specification clause.

Clause No.	Non-Compliance

.....  
**Signature of the Manufacturer**

.....  
**Date**

**I/We certify that the above data are true and correct**

.....  
**Signature of the Bidder and seal**

.....  
**Date**

