

# BERMUDA CASINO GAMING COMMISSION (BCGC)



## BCGC-5 KIOSK STANDARDS

VERSION: 1.0

RELEASE DATE: MARCH 12, 2021

---

Prepared By:

**GAMING LABORATORIES INTERNATIONAL, LLC**

**GLI®**

# BCGC-5 Kiosk Standards

## About This Standard

This equipment standard has been produced by **Gaming Laboratories International, LLC (GLI)** for the purpose of providing independent technical analysis and/or certifications to gaming and betting industry stakeholders for Bermuda indicating the state of compliance for kiosks with the requirements set forth herein.

This document is intended to be used by casino operators and industry suppliers as a compliance guideline for technologies pertaining to kiosks for Bermuda. This standard is not intended to represent a set of prescriptive requirements that every kiosk shall comply with; however, it does establish a standard regarding the technologies used to facilitate these operations.

Suppliers are expected to submit equipment with a request that it be certified in accordance with this equipment standard. Upon completion of testing, the independent testing laboratory will provide a certificate of compliance evidencing the certification to this Standard.

# BCGC-5 Kiosk Standards

## Table of Contents

<b>Chapter 1: Introduction to Kiosks .....</b>	<b>4</b>
1.1 Introduction .....	4
1.2 Purpose of Equipment Standards.....	4
1.3 Other Documents That May Apply .....	5
1.4 Definition of a Kiosk .....	5
<b>Chapter 2: Kiosk Terminal Requirements.....</b>	<b>7</b>
2.1 Introduction .....	7
2.2 Patron Safety .....	7
2.3 Environmental Effects on Integrity.....	7
2.4 Basic Hardware Requirements.....	8
2.5 Custom and Modified Hardware .....	9
2.6 Doors and Security.....	10
2.7 Peripherals.....	12
<b>Chapter 3: Kiosk Software Requirements.....</b>	<b>13</b>
3.1 Introduction .....	13
3.2 Software Requirements.....	13
3.3 Critical Non-Volatile (NV) Memory.....	14
3.4 Kiosk Operations.....	15
3.5 Kiosk Configurations and Functionality.....	16
3.6 Communication Protocol .....	17
3.7 Electronic Meters and Logs.....	18
<b>Glossary of Key Terms .....</b>	<b>22</b>

# BCGC-5 Kiosk Standards

## Chapter 1: Introduction to Kiosks

### 1.1 Introduction

#### 1.1.1 General Statement

This equipment standard has been developed by reviewing and using portions of the GLI-20 Standards for Kiosks with revisions specific to the legislation of the Territory of Bermuda and the regulations enacted by the Bermuda Casino Gaming Commission (hereafter the “Commission”).

### 1.2 Purpose of Equipment Standards

#### 1.2.1 General Statement

The purpose of this equipment standard is as follows:

- a) To eliminate subjective criteria in analyzing and certifying the regulated operations of a kiosk.
- b) To test the criteria that impact the credibility and integrity of a kiosk from both the revenue collection and security perspective.
- c) To create a standard that will ensure that kiosks are fair, secure, and able to be audited and operated correctly.
- d) To distinguish between Bermuda public policy and independent testing laboratory criteria. It is up to the Commission to set public policy with respect to kiosks.
- e) To recognize that non-gaming testing (such as electrical testing) should not be incorporated into this standard but left to appropriate test laboratories that specialize in that type of testing. Except where specifically identified in this standard, testing is not directed at health or safety matters. These matters are the responsibility of the manufacturer, purchaser, and operator of the kiosk.
- f) To construct a standard that can be easily revised to allow for new technology.
- g) To construct a standard that does not specify any particular design, method, or algorithm. The intent is to allow a wide range of methods to be used to conform to the standards, while at the same time encourage new methods to be developed.

# BCGC-5 Kiosk Standards

## 1.2.2 No Limitation of Technology

One should be cautioned that this document shall not be read in such a way that limits the use of future technology. This document should not be interpreted to mean that if the technology is not mentioned, then it is not allowed. To the contrary, the Commission will review this standard and make changes to incorporate minimum standards for any new and related technology.

## 1.3 Other Documents That May Apply

### 1.3.1 Other Equipment Standards

This equipment standard covers the requirements for kiosks. Depending on the technology utilized by a kiosk, additional equipment standards may also apply.

### 1.3.2 Legislated Acts or Regulations

This equipment standard must not contradict any provisions of the following legislation:

- a) Casino Gaming Act, 2014; and
- b) Casino Gaming Regulations, 2018.

## 1.4 Definition of a Kiosk

### 1.4.1 General Statement

Kiosks are patron interface units that, as approved by the Commission, may be used to perform various regulated operations when interfaced (either directly or through a back-office platform installed externally to the kiosk terminal) with a compatible host system including, but not limited to:

- a) Wagering Instrument Issuance and/or Redemption – Kiosks that issue and/or redeem wagering instruments (vouchers and/or coupons) will be interfaced with a host system (Validation System) which supports wagering instruments.

## BCGC-5 Kiosk Standards

- b) Patron Account Management – Kiosks that allow patrons to manage their patron account (e.g. registration, deposits, withdrawals, etc.) and/or redeem their promotional points for cashable credits will be interfaced with a host system (Cashless Wagering System, Promotional System, etc.) which supports patron accounts. This standard will not address the use of kiosks for redemption of promotional points for merchandise and/or services.
- c) Betting – Kiosks that allow patrons to place bets on events and/or redeem winning betting tickets will be interfaced with a host system (Computerised Betting System).
- d) Information Reporting – The kiosk can be used to display marketing information for patrons. This feature is not covered by this standard as it does not affect the integrity of kiosk security and/or accounting.

**NOTE:** Additional requirements beyond this document might apply for kiosks based on their functionality. Please refer to the applicable Bermuda requirements or equipment standards for the compatible systems which the kiosk is intended to work with.

# BCGC-5 Kiosk Standards

## Chapter 2: Kiosk Terminal Requirements

### 2.1 Introduction

#### 2.1.1 General Statement

This chapter sets forth the technical requirements for the key attributes of a kiosk terminal. All proprietary devices developed for kiosks shall meet the applicable requirements within this chapter. Unless otherwise directed by the Commission, this chapter does not apply to kiosks that solely utilize unaltered commercial off-the-shelf (COTS) components, such as PCs or tablets. For kiosks that utilize modified off-the-shelf (MOTS) components, sections of this chapter will apply only to the modifications made to the components unless otherwise directed by the Commission.

### 2.2 Patron Safety

#### 2.2.1 Physical Hazards and Environmental and Electrical Safety Testing

Electrical and mechanical parts and design principles of the kiosk terminal shall not subject a patron to any physical hazards. The independent testing laboratory does not make any findings with regard to Electro-Magnetic Compatibility (EMC) or Radio Frequency Interference (RFI), as that is the responsibility of the manufacturer of the kiosk, or those that purchase the kiosk. Such EMC and RFI testing may be required under separate statute, regulation, law, or act and should be researched accordingly by those parties who manufacture or purchase said kiosk. The independent testing laboratory does not test for, is not liable for, nor makes any findings related to these matters. However, during the course of testing, the independent testing laboratory may inspect for marks or symbols indicating that a kiosk has undergone product safety or other compliance testing by some other party but that is outside the scope of the requirements defined by this equipment standard.

### 2.3 Environmental Effects on Integrity

#### 2.3.1 General Statement

## BCGC-5 Kiosk Standards

This section on integrity is only applicable for a kiosk terminal which has locally stored critical NV memory and/or installed software which has the potential to influence the regulated operations of the kiosk.

### 2.3.2 Kiosk Integrity

The independent testing laboratory shall perform certain tests to determine whether or not an electro-static discharge (ESD) or a power surge impacts the integrity of a kiosk. ESD testing and power surge testing are intended to simulate techniques observed in the field that may be used in an attempt to disrupt the integrity of a kiosk.

### 2.3.3 ESD Effects

Protection against ESD requires that the kiosk terminal's conductive cabinet be earthed in such a way that static discharge energy shall not permanently damage or permanently impact the normal operation of the electronics or other components within the kiosk terminal. A kiosk may exhibit temporary disruption when subjected to a significant external ESD with a severity level of 15kV air discharge. The kiosk shall exhibit a capacity to recover and complete any interrupted operation without loss or corruption of any locally stored control information or critical data following any temporary disruption.

### 2.3.4 Power Surges

The kiosk terminal shall not be adversely affected, other than resets, by surges or dips of  $\pm 10\%$  of the power supply voltage. It is acceptable for the kiosk to reset provided no damage to the equipment or loss or corruption of locally stored data is experienced which cannot be automatically recovered from the back-office platform. Alternatively, the kiosk terminal may be equipped with an Uninterruptible Power Supply (UPS) or battery backup that, when detecting power loss, allows the completion of the current transaction before ceasing operations.

## 2.4 Basic Hardware Requirements

### 2.4.1 Identification Information

The kiosk terminal shall be identifiable by model number, manufacturer identification, and any other information required by the Commission.

# BCGC-5 Kiosk Standards

## 2.4.2 On/Off Switch

An on/off switch that controls the electrical current supplied to the kiosk terminal shall be located in a secured area of the kiosk terminal. The on/off positions of the switch shall be clearly labeled.

## 2.4.3 Touch Screen Displays

Touch screen displays, if in use by regulated operations of the kiosk, shall be accurate, and if required by their design, shall support a calibration method to maintain that accuracy; alternatively, the display hardware may support automatic self-calibration.

## 2.5 Custom and Modified Hardware

### 2.5.1 General Statement

This section only applies to custom and modified hardware components which have the potential to influence the regulated operations of the kiosk.

### 2.5.2 Printed Circuit Board (PCB) Identification Requirements

Each PCB shall be clearly identifiable by an alphanumeric identification and, when applicable, a revision number. If track cuts, patch wires, or other circuit alterations are introduced to the PCB, then a new revision number shall be assigned.

### 2.5.3 Switches and Jumpers

If the kiosk contains switches and/or jumpers, they shall be fully documented for evaluation by the independent testing laboratory.

### 2.5.4 Kiosk Wiring

## BCGC-5 Kiosk Standards

The kiosk terminal shall be designed so that power and data cables into and out of the kiosk terminal can be routed so that they are not accessible to the public.

**NOTE:** The independent testing laboratory will make no determination as to whether the kiosk installation conforms to local electrical codes, or to any other electrical testing standards and practices.

### 2.5.5 Wired Communication Ports

Wired communication ports shall be clearly labeled and shall be securely housed within the kiosk terminal to prevent unauthorised access to the ports or their associated cable connectors.

### 2.5.6 Charging Mechanisms

The kiosk may support the use of an externally accessible charging mechanism, such as a Universal Serial Bus (USB) charging port, or some other analogous technology (e.g., cables, inductive chargers, etc.). The mechanism may be used to provide external power or charging access for an electronic device such as a smartphone, tablet, etc. If so equipped, the charging mechanism shall:

- a) Be appropriately fused and/or electrically-protected;
- b) Not impact the integrity of the regulated operations of the kiosk; and
- c) Not allow any data transmission between the kiosk and the charging mechanism.

## 2.6 Doors and Security

### 2.6.1 General Statement

This section on doors and security is only applicable for a kiosk terminal which:

- a) Performs transactions using peripheral devices installed within the terminal; and/or
- b) Has locally stored critical NV memory and/or installed software which has the potential to influence the regulated operations of the kiosk.

# BCGC-5 Kiosk Standards

## 2.6.2 Physical Security

The kiosk terminal shall be robust enough to resist forced entry into any secured doors, areas, or compartments. In the event that extreme force is applied to the cabinet materials causing a potential breach in kiosk terminal security, evidence of tampering shall be conspicuous. "Secured areas" or "secured compartments" shall include, as applicable, the external doors such as the main door, currency compartment doors such as a drop box door or stacker door, and/or other sensitive access areas of the kiosk terminal.

## 2.6.3 External Doors

The following requirements apply to kiosk terminals which contain external doors into any secured areas or compartments:

- a) External doors shall be manufactured of materials that are suitable for allowing only legitimate access to the inside of the kiosk terminal.
- b) External doors and their associated hinges shall be capable of withstanding determined and unauthorised efforts to gain access to the interior of the kiosk terminal and shall leave conspicuous evidence of tampering if such an attempt is made;
- c) The seal between the kiosk terminal and the external door shall be designed to resist the entry of objects. It shall not be possible to insert an object into the kiosk terminal that disables a door open sensor when the kiosk terminal's door is fully closed, without leaving conspicuous evidence of tampering; and
- d) All external doors shall be secure and support the installation of locks.

## 2.6.4 Door Monitoring

Any doors that provide access to secure areas of the kiosk terminal shall be monitored by door access detection software.

- a) The detection software shall register a door as being open when the door is moved from its fully closed and locked position, provided power is supplied to the kiosk.
- b) When any door that provides access to a secured area or secured compartment registers as open, the kiosk shall cease operation and display an appropriate error message. This error condition shall be communicated to the back-office platform when such functionality is supported.

# BCGC-5 Kiosk Standards

## 2.7 Peripherals and Payments

### 2.7.1 Peripherals and Payments Requirements

A peripheral is defined as an internal or external device connected to the kiosk terminal that supports credit acceptance, credit issuance, patron identification, or other specialized function(s) which are used in the regulated operations of the kiosk. The applicable requirements established within the “Peripherals and Payments” chapter of the *BCGC-1 Gaming Machine Standards* shall be met as supported.

**NOTE:** The requirement for error conditions within the above referenced chapter to “activate the device alert mechanism or flash lights” is not applicable for kiosks. However, these error conditions shall be communicated to the back-office platform when such functionality is supported.

## Chapter 3: Kiosk Software Requirements

### 3.1 Introduction

#### 3.1.1 General Statement

This chapter sets forth the requirements for the kiosk software. Kiosk software refers to the software used to take part in regulated operations which, based on design, is downloaded to or installed on the kiosk terminal, run from the back-office platform, or a combination of the two.

### 3.2 Software Requirements

#### 3.2.1 Software Identification

Kiosk software shall contain sufficient information to identify the software revision level.

#### 3.2.2 Software Validation

The kiosk and/or back-office platform shall have the ability to authenticate that all regulated critical components contained in any kiosk software are valid each time the software is loaded for use and, where supported by the system, on demand. Critical components may include but are not limited to elements that control kiosk communications, peripheral device firmware, or other components that affect regulated operations of the kiosk.

- a) The authentication shall employ a hash algorithm which produces a message digest of at least 128 bits. Other test methodologies shall be reviewed on a case-by-case basis.
- b) In the event of a failed authentication (i.e., programme mismatch or authentication failure), the kiosk shall cease operation and display an appropriate error message. This error condition shall be communicated to the back-office platform when such functionality is supported.

**NOTE:** Programme verification mechanisms will be evaluated on a case-by-case basis and approved by the Commission and the independent testing laboratory based on industry-standard security practices.

# BCGC-5 Kiosk Standards

## 3.2.3 Independent Software Verification

It shall be possible to perform an independent integrity check of the kiosk software from an outside source. This verification is required for all control programmes that affect the integrity of the kiosk. The verification shall be accomplished by being authenticated by a third-party application run from the kiosk and/or back-office platform, by allowing a third-party device to authenticate the media, or by allowing for removal of the media such that it can be verified externally. The independent testing laboratory, prior to software approval, shall evaluate the integrity check method.

## 3.3 Critical Non-Volatile (NV) Memory

### 3.3.1 Contents of Critical NV Memory

Critical Non-Volatile (NV) memory shall be used to store all data elements that are considered vital to the continued operation of the kiosk software. Critical NV memory may be maintained by the kiosk and/or the back-office platform. These data elements include, but are not limited to:

- a) All electronic meters and logs defined in the “Electronic Meters and Logs” section of this standard;
- b) Current patron balance (as applicable); and
- c) Kiosk configuration data (e.g., communications, etc.) and state of operations (e.g., error conditions, etc.).

### 3.3.2 Critical NV Memory Backup

Kiosks whose operation relies on locally stored critical NV memory shall have a backup or archive capability, which allows the recovery of critical NV memory should a failure occur.

### 3.3.3 Critical NV Memory Errors

Critical NV memory storage shall be maintained by a methodology that enables errors to be identified. This methodology may involve signatures, checksums, redundant copies, database error checks, and/or other method(s) approved by the Commission.

# BCGC-5 Kiosk Standards

## 3.3.4 Critical NV Memory Checks

Comprehensive checks of critical NV memory data elements shall be made upon power up and programme resumption. NV memory that is not critical to kiosk integrity is not required to be checked.

## 3.3.5 Unrecoverable Corruption of Critical NV Memory

An unrecoverable corruption of critical NV memory, shall result in an error. Upon detection, the kiosk software shall cease operation and display an appropriate error message. Additionally, the critical NV memory error shall cause any communication external to the kiosk to cease.

**NOTE:** This section is not intended to preclude the use of alternate storage media types, such as hard disk drives, for the retention of critical data. Such alternate storage media is still expected to maintain critical data integrity in a manner consistent with the requirements in this section, as applicable to the specific storage technology implemented.

## 3.4 Kiosk Operations

### 3.4.1 Patron Interface Requirements

The patron interface is defined as an application or programme through which the patron views and/or interacts with the kiosk software. The patron interface shall meet the following:

- a) The functions of all buttons, touch or click points shall be clearly indicated within the area of the button, or touch/click point and/or within the help menu. There shall be no functionality available through any buttons or touch/click points on the patron interface that are hidden or undocumented.
- b) Any resizing or overlay of the patron interface shall be mapped accurately to reflect the revised display and touch/click points.
- c) Patron interface instructions, as well as information on the functions and services provided by the kiosk, shall be clearly communicated to the patron and shall not be misleading or inaccurate.
- d) The display of this information shall be adapted to the patron interface. For example, where a kiosk uses technologies with a smaller display screen, it is permissible to present an abridged version of this information accessible directly from within the transaction screen and make

## BCGC-5 Kiosk Standards

available the full/complete version of this information via another method, such as a secondary screen, help menu, or other interface that is easily identified on the visual transaction screen.

### 3.4.2 Simultaneous Inputs

The kiosk software shall not be adversely affected by the simultaneous or sequential activation of the various inputs and outputs which might, whether intentionally or not, cause malfunctions or invalid results.

### 3.4.3 Current Patron Balance

Where applicable, the current patron balance shall be displayed to the patron any time a transaction may be conducted unless a tilt condition or malfunction exists, or unless the patron opts to view an informational screen such as a menu or help screen item. The amount displayed shall be updated upon every transaction performed.

## 3.5 Kiosk Configurations and Functionality

### 3.5.1 Configuration Settings

Changes to any configuration settings for the regulated operations of the kiosk may only be performed by a secure means.

### 3.5.2 Transaction Limits

The kiosk software shall have the ability to configure transaction limits, where required by the Commission. If a patron attempts a transaction which exceeds these limits, then this transaction may only be processed provided that the patron is clearly notified that they have transacted less than requested.

### 3.5.3 Automated Teller Machine (ATM) Functionality

If allowed by the Commission, the kiosk software may have the ability to issue funds from an automated teller machine (ATM) network however, the ATM network shall not interact with the

## BCGC-5 Kiosk Standards

host system and the kiosk shall be capable of separately identifying and summarizing ATM transactions from other transactions.

**NOTE:** The independent testing laboratory does not make any findings with regard to evaluating or certifying ATM functionality as such requirements fall under Federal (Banking) Regulations. It is the responsibility of the manufacturer of the kiosk and provider of ATM services to ensure these regulations are met prior to installation.

### 3.5.4 Test/Diagnostic Mode

Test/diagnostic mode (sometimes called demonstration or audit mode) allows casino employee to view execute auditing and/or diagnostic functions supported by the kiosk software. If test/diagnostic mode is supported, the following rules shall apply:

- a) Entry to test/diagnostic mode shall only be possible using a secure means.
- b) If the kiosk is in a test/diagnostic mode,
  - i. The kiosk shall clearly indicate that it is in this mode; and
  - ii. Any test or diagnostic that incorporates funds entering or leaving the kiosk shall be completed prior to the resumption of normal kiosk operation.
- c) Any funds on kiosk that were accrued during the test/diagnostic mode shall be automatically cleared when the mode is exited.

## 3.6 Communication Protocol

### 3.6.1 Integrity of Protocol Communications

The kiosk software shall accurately function as indicated by the communications protocol that is implemented, and as required by the Commission. In addition, the following rules shall be met:

- a) The kiosk software shall be designed or programmed such that it may only communicate with authorised system components through secure communications.
- b) After a programme interruption, any communications to an external device shall not begin until the programme resumption routine, including any self-test, is completed successfully.
- c) If communication between the kiosk and the host system is lost, the kiosk software shall cease operations related to that communication and display an appropriate error message. It is

## BCGC-5 Kiosk Standards

permissible for the kiosk software to detect this error when the kiosk tries to communicate with the system. Non-system transactions may continue while system communication is down.

- d) Pursuant to regulation 168(5), if communication between the Cashless Wagering System and the kiosk is lost, a message must be displayed to the patron that cashless transactions cannot currently be processed, and the kiosk must not permit further transactions. In addition, the casino must be immediately notified of that loss.

### 3.6.2 Protection of Sensitive Information

The kiosk software shall not allow any information contained in communication to or from the kiosk that is intended by the communication protocol to be protected, or which is of a sensitive nature, to be viewable through any display mechanism supported by the kiosk. This includes, but is not limited to, validation numbers, secure PINs, patron data, or secure seeds and keys.

### 3.6.3 Kiosk Communication

Any kiosk which is capable of bidirectional communication with internal or external associated equipment, or other equipment, shall utilize a robust communication protocol which ensures that erroneous data or signals do not adversely affect the integrity or operation of the kiosk.

### 3.6.4 Kiosk Clock

If the kiosk maintains an internal clock, it shall be able to accurately reflect the current time and date and synchronize its clock to that of the host system.

## 3.7 Electronic Meters and Logs

### 3.7.1 Information Access

The electronic meters and logs shall only be accessible by an authorised person and shall have the ability to be displayed on demand using a secure means.

### 3.7.2 Electronic Accounting Meters

## BCGC-5 Kiosk Standards

Electronic accounting meters shall be at least ten (10) digits in length. Eight (8) digits shall be used for the dollar amount and two (2) digits used for the cents amount. The meter shall automatically roll over to zero once its maximum logical value has been reached. Meters shall be labeled so they can be clearly understood in accordance with their function. The required electronic accounting meters are as follows:

- a) Handpay. The kiosk software shall have a meter that accumulates the total value of payments made by a casino employee when the kiosk is incapable of making the proper payment;
- b) Voucher In. The kiosk software shall have a meter that accumulates the total value of all wagering vouchers accepted by the kiosk;
- c) Voucher Out. The kiosk software shall have a meter that accumulates the total value of all wagering vouchers issued by the kiosk;
- d) Electronic Funds Transfer In (EFT In). The kiosk software shall have a meter that accumulates the total value of cashable credits electronically transferred to the kiosk from a financial institution through a host system;
- e) Patron Account Transfer In (WAT In). The kiosk software shall have a meter that accumulates the total value of cashable credits electronically transferred to the kiosk from a patron account through a host system;
- f) Patron Account Transfer Out (WAT Out). The kiosk software shall have a meter that accumulates the total value of cashable credits electronically transferred from the kiosk to a patron account through a host system;
- g) Non-Cashable Electronic Promotion In (NCEP In). The kiosk software shall have a meter that accumulates the total value of non-cashable credits electronically transferred to the kiosk from a patron account through a host system;
- h) Non-Cashable Electronic Promotion Out (NCEP Out). The kiosk software shall have a meter that accumulates the total value of non-cashable credits electronically transferred from the kiosk to a patron account through a host system;
- i) Coupon Promotion In. The kiosk software shall have a meter that accumulates the total value of all promotional coupons accepted by the kiosk;
- j) Coupon Promotion Out. The kiosk software shall have a meter that accumulates the total value of all promotional coupons issued by the kiosk; and
- k) Other Meters. Kiosk software that allows for transactions related to regulated operations of the kiosk that would not otherwise be metered under any of the above electronic accounting meters, shall maintain sufficient meters to properly reconcile all such transactions.

**NOTE:** Any accounting meter that is not supported by the functionality of the kiosk, is not required to be implemented by the supplier.

## BCGC-5 Kiosk Standards

### 3.7.3 Electronic Occurrence Meters

Occurrence meters shall be at least eight (8) digits in length however, are not required to automatically roll over. Meters shall be labeled so they can be clearly understood in accordance with their function. The required electronic occurrence meters are as follows:

- a) External Doors. The kiosk software shall have meters that accumulate the number of times any external door (e.g., main or belly door, drop box door, currency area with an external door, etc.) has been opened since the last NV memory clear, provided power is supplied to the kiosk.
- b) Stacker Door. The kiosk software shall have a meter that accumulates the number of times the stacker door has been opened since the last NV memory clear provided power is supplied to the kiosk;
- c) Wagering Instruments Accepted. The kiosk software shall have a specific occurrence meter that records the number of all other notes such as vouchers and coupons, accepted by the kiosk; and
- d) Wagering Instruments Issued. The kiosk software shall have a specific occurrence meter that records the number of all other notes ssuch as vouchers and coupons, issued by the kiosk.

**NOTE:** Any occurrence meter that is not supported by the functionality of the kiosk, is not required to be implemented by the supplier.

### 3.7.4 Transaction Log

There shall be the capacity to display a complete transaction log for the previous thirty-five (35) transactions that incremented any of the meters related to wagering instruments, EFT, and patron account transactions. The following information shall be displayed:

- a) The transaction value in local monetary units in numerical form;
- b) The time of day of the transaction, in twenty-four (24) hour format showing hours and minutes;
- c) The date of the transaction, in any recognized format, indicating the day, month, and year;
- d) For wagering instrument transactions, the validation number with the following conditions:
  - i. Where the log can be displayed from kiosk terminal, only the last four (4) digits may be displayed for voucher-out transactions where the vouchers are yet to be redeemed;
  - ii. Where the log can be displayed from back-office platform, at least the last four (4) digits shall be displayed for voucher-in transactions;

## BCGC-5 Kiosk Standards

- e) For patron account transactions:
  - i. The type of transaction (upload/download) including restrictions (cashable, non-cashable, etc.); and
  - ii. The account number or a unique transaction number, either of which can be used to authenticate the source of the funds (i.e. where funds came from/went to).

**NOTE:** It is acceptable for items accepted by the wagering instrument validator to be omitted from this log if there is a timestamped wagering instrument validator recall log maintained which indicates the item type and value for last five (5) items accepted by the wagering instrument validator. It is also acceptable for issued vouchers to be omitted from this log if there is a timestamped voucher-out log maintained which indicates the above information for the last twenty-five (25) issued vouchers.

### 3.7.5 Significant Event Log

The last one hundred (100) significant events for kiosks shall be stored with an appropriate timestamp in one or more secure logs that are not accessible to the patron and which minimally include the following events, as applicable:

- a) Software verification errors or critical NV memory errors, if technically possible to log these events based on the nature and/or severity of the error;
- b) Changes made to kiosk configurations;
- c) Kiosk communication failure, if supported;
- d) Power resets;
- e) Handpay conditions;
- f) Access to secured areas or secured compartments; and
- g) Peripheral errors, if supported.

# BCGC-5 Kiosk Standards

## Glossary of Key Terms

**Act** – The Casino Gaming Act, 2014.

**Back-Office Platform** – A component external to the kiosk terminal which may govern some or all the regulated operations of the kiosk, such as metering and communications between the host system and the kiosk terminal. The back-office platform may be integrated into the host system. For the purposes of this equipment standard, the back-office platform is considered a part of the kiosk.

**Barcode** – An optical machine-readable representation of data. A good example is a barcode found on printed vouchers.

**Barcode Reader** – A device that is capable of reading or interpreting a barcode. This may extend to some smartphones or other electronic devices that can execute an application to read a barcode.

**Betting** – Making or accepting a wager, other than a wager that is part of a game in a casino, on the outcome of a race, competition or other event or process, the likelihood of anything occurring or not occurring, or whether anything is or is not true.

**Card Reader** – A kiosk peripheral that reads data embedded on a magnetic strip, or stored in an integrated circuit chip, for patron identification.

**Cashable Credits** (aka “Unrestricted Credits”) – Credits that are redeemable for cash.

**Casino** – Any premises, or part of premises, within a designated site where persons may participate in one or more games approved by the Commission under section 91.

**Casino Employee** – An employee having functions in or in relation to a casino.

**Casino Operator** – A person who is the holder of a casino licence.

## BCGC-5 Kiosk Standards

**CEP, *Cashable Electronic Promotion*** – Cashable credits electronically transferred to/from a kiosk from/to a promotional account.

**Commission** – The Bermuda Casino Gaming Commission (BCGC) established under section 6 of the Act

**Control Programme** – A software programme that controls kiosk behaviors relative to any applicable equipment standard and/or regulatory requirement.

**Coupon** – A wagering instrument that is used primarily for promotional purposes and which can be redeemed for cashable or non-cashable credits.

**Coupon Promotion In/Out** – The total value of all promotional coupons accepted or paid out by the kiosk.

**Critical Non-Volatile (NV) Memory** – Memory used to store all data that is considered vital to the continued operation of the kiosk.

**EFT, *Electronic Funds Transfer*; ECT, *Electronic Credits Transfer*** – EFT (or ECT) is a system by which currency can be electronically transferred to or from a kiosk in the form of credits. EFT requires some form of communication between the kiosk and a host system.

**Electronic Accounting Meter** (aka “Software Meter” / “Soft Meter”) – An accounting meter that is implemented in the control programme software of a kiosk.

**EMC, *Electromagnetic Compatibility*** – The principal in which any electronic or electrical appliance should be able to operate without causing, or being affected by, electromagnetic interference.

**EMI, *Electromagnetic Interference*** – Any electromagnetic disturbance that interrupts, obstructs, or otherwise degrades or limits the effective performance of electronics and electrical equipment.

**ESD, *Electro-Static Discharge*** – The release of static electricity when two objects come into contact. It is the sudden flow of electricity between two electrically charged objects caused by contact, an electrical short, or a dielectric breakdown.

## BCGC-5 Kiosk Standards

**Independent Testing Laboratory** – means a laboratory contracted by the Commission for the purposes of determining the suitability of gaming equipment.

**Jumper** – A removable connector (plug, wire, etc.) that electrically joins together or short-circuits two separate physical connections.

**Key Data** – Information relating to account balances, personal identification information (PII) and transactional information.

**Kiosk** – Kiosks are patron interface units that may be used to perform regulated operations when interfaced with a compatible host system. This includes the kiosk terminal and the back-office platform.

**Kiosk Software** – The software used to take part in regulated operations which, based on design, is downloaded to or installed on the kiosk terminal, run from the back-office platform, or a combination of the two.

**Kiosk Terminal** – An electronic device that converts communications from the kiosk software into a human interpretable form and converts human decisions into communication format understood by the kiosk software.

**MI, *Magnetic Interference*** – Any magnetic disturbance that interrupts, obstructs, or otherwise degrades or limits the effective performance of electronics and electrical equipment.

**NCEP, *Non-Cashable Electronic Promotion*** – Non-cashable credits electronically transferred to/from the kiosk from a promotional account.

**Non-Cashable Credits** (aka “Restricted Credits”) – Credits that have no cash redemption value.

**PCB, *Printed Circuit Board*** – A hardware component of a computer or other electronic device, consisting of a flat piece of a non-conductive, rigid material to which Integrated Circuits (ICs) and other electronic components such as capacitors, resistors, etc. are mounted. Electrical connections are made between the ICs and components using a copper sheet that is laminated into the overall board assembly.

## BCGC-5 Kiosk Standards

**Peripheral** – An internal or external device connected to a machine that supports credit acceptance, credit issuance, patron interaction, or other specialized function(s).

**PIN, *Personal Identification Number*** – A numerical code associated with an individual and which allows secure access to a domain, account, network, system, etc.

**Patron Account** – An account to the credit of a patron for purposes of gaming in a casino whether it is a credit account, a cheque cashing account, a deposit account or any other account opened by or on behalf of a patron with a casino operator.

**Patron Account Transfer** (aka “Wagering Account Transfer” or “WAT”) – Cashable credits electronically transferred to/from the kiosk from a patron account.

**Patron Identification Component** – An electronic device controlled by kiosk software which provides a means for patrons to enter their secure identification information. Examples include a card reader, a barcode reader, or a biometric scanner.

**PII, *Personal Identification Information*** – Key data that could potentially be used to identify a particular patron. Examples include a legal name, date of birth, place of birth, social security number (or equivalent government identification number), driver’s license number, passport number, residential address, phone number, email address, debit instrument number, credit card number, bank account number, or other personal information if defined by the Commission.

**Printer** – A kiosk peripheral that prints wagering instruments and other items as necessary.

**Protocol** – A set of rules and conventions that specifies information exchange between devices, through a network or other media.

**Regulations** – The Casino Gaming Regulations, 2018.

**RFI, *Radio Frequency Interference*** – Electromagnetic radiation which is emitted by electrical circuits carrying rapidly changing signals, as a by-product of their normal operation, and which causes unwanted signals (interference or noise) to be induced in other circuits.

## BCGC-5 Kiosk Standards

**Secure Areas or Secure Compartments** – Sensitive areas of a kiosk such as the external doors such as the main door, currency compartment doors such as a drop box door or stacker door, and/or other sensitive access areas of the kiosk terminal.

**Sensitive Information** – Includes information such as PINs, key data, passwords, secure seeds and keys, and other data that shall be handled in a secure manner.

**Stacker** – An electromechanical wagering instrument validator component that loads paper wagering instruments, and other approved items into a locked container for secure storage within the kiosk.

**Tilt** – An error in kiosk operation that halts or suspends operations and/or that generates some intelligent fault message.

**Touch Screen** – A video display device that also acts as a patron input device by using electrical touch point locations on the display screen.

**Voucher** – A wagering instrument which can be redeemed for cash or used to subsequently redeem for credits.

**Voucher In/Out** (aka “Ticket In/Out” or “TITO”) – The total value of all wagering vouchers accepted or paid out by the kiosk.

**Wagering Instrument** – A printed or virtual representative of value, other than a chip or token and includes coupons and vouchers. A virtual wagering instrument is an electronic token exchanged between a patron's mobile device and the kiosk which is used for credit insertion and redemption.

**Wagering Instrument Validator** – A kiosk peripheral that accepts paper wagering instruments, and other approved items in exchange for credits.