Minimum Technical Requirements for Class 4 De-Centralised Off-Line Cash-In-Ticket-Out Systems

Of the Gambling Act (Class 4 Gambling Equipment) Minimum Standard 2004

1. General

1.1 This revised standard comes into effect on 21 September 2017 and replaces the previous standard 10 June 2016. Any gambling equipment approved under the previous version continues to be approved.

1.2 For the avoidance of doubt, Ticket-In-Ticket-Out functionality (i.e. TITO) is prohibited.

1.3 Any De-Centralised Off-Line Cash-In-Ticket-Out (DOCITO) system must be approved by the Secretary for Internal Affairs (the Secretary) as complying with these minimum technical requirements before it may be used at a Class 4 venue.

1.4 Prior to approval, DOCITO systems must be tested by an Accredited Test Facility to provide assurance that the gambling equipment, including any customised interface to the gaming machine hopper connection, specified in this standard complies with this standard. A DOCITO system will only be considered for approval when the Secretary is satisfied that it meets the requirements of the standards. Such approval may be subject to conditions such as completion of a successful trial of the system.

1.5 Trials of the system may also be required by the Secretary in the event a model of gaming machine not previously approved is proposed to be used with the system.

1.6 For the avoidance of doubt, the Gambling Act (Class 4 Gambling Equipment) Minimum Standard 2004 applies to gambling equipment specified in this standard in respect of all aspects not otherwise detailed in this Standard.¹

2. Definitions

2.1 A De-Centralised Off-Line Cash-In Ticket-Out system (DOCITO system) means a system that:

2.1.1 includes a Ticket Printer device that replaces a gaming machine’s coin hopper and that comprises a ticket printer for the printing of tickets, a ticket printer controller and an interface physical connection that connects the ticket printer controller interface to the gaming machine hopper interface; and

¹ The current Australian/New Zealand Gaming Machine National Standard details general hardware and software requirements that include, for example, cabinet construction, the provision of manuals, security of equipment, printed circuit board, critical memory design etc. Health or safety matters or legislative requirements administered by other regulatory bodies such as for electrical wiring and of radio frequency emission, etc., are the domain and responsibility of the manufacturer, purchaser and operator of the equipment. Each of these parties is required to assure themselves of such matters.
2.1.2 includes a Cashier’s Redemption Terminal device that is operated solely by venue staff who are required to manually insert non-expired tickets for redemption at the venue; and

2.1.3 during normal operation, i.e. when printing, validating or redeeming a ticket, has no direct real-time communication between the ticket printer, the cashier’s redemption terminal or any central controlling server or equipment.

2.1.4 may include an Automated Kiosk situated within a gaming venue in sight of venue staff, that is a stand-alone self-service machine where players can redeem tickets.

2.2 The expiry (void) date printed on a ticket:

2.2.1 is the date after which a ticket can no longer be redeemed at the venue at which the ticket was printed; and

Note: it is sufficient to indicate instead of a specific date the number of days before the ticket expires from the date of issue.

2.2.2 is a date that is seven days from the date the ticket was issued, with the day of issue counting as the first day irrespective of the time of day of issue.

The seventh or last day as printed on the ticket shall finish at midnight on that day.

2.3 Unpaid tickets are expired tickets that can no longer be redeemed at the venue that issued the ticket. An unpaid ticket may only be redeemed by application to the relevant corporate society within three months from the date of issue of the ticket.

3. Operational Requirements

3.1 A DOCITO system must at the venue at which it is installed:

3.1.1 only print tickets up to a whole dollar value of less than $999 that is equal to the equivalent value of coins that would have been dispensed if the hopper had not been removed; and

3.1.2 only validate and redeem non-expired tickets up to a value of less than $999; and

3.1.3 only use machine readable, authenticated tickets.

3.2 Ticket printers must be uniquely paired and enrolled with the venue’s cashier’s redemption terminal so that only tickets printed at that venue can be validated and redeemed at that venue.

3.3 Ticket printers must not print out a ticket until all “coin-out” data has been successfully received and acknowledged by the ticket printer.

3.4 DOCITO systems must have a secure machine-readable method of coding tickets (e.g. barcode) and provide secure encryption for the unique gaming machine serial number, date and time of all tickets printed.
3.5 As a minimum, any barcode should be 2-D format (e.g. PDF417) and use strong encryption keys for generating authentication and encrypted ticket information.

**Note:** It is acceptable for encryption keys to be changed on a regular basis to maintain strong and secure ticket printing and authentication.

3.6 A DOCITO system must implement security measures for the authentication of tickets and payments so that only valid tickets will be accepted and redeemed; and non-valid tickets (e.g. counterfeit or duplicate tickets) will be rejected by the cashier’s terminal.

3.7 A DOCITO system must be able to recover from any system failure including but not limited to:

3.7.1 a power failure (by automatically restarting); and

3.7.2 the loss or corruption of configuration, historical or other data needed to re-enable the system. Any such data must be stored in fault redundant format or off-site to provide for recovery of the system.

3.8 The cashier’s redemption terminal or Kiosk must clearly indicate for a reasonable period of time a legible message showing the reason that any ticket is not accepted for payment i.e. that is considered non-valid. These messages may include the following (or words to the same effect):

3.8.1 Ticket expired;

3.8.2 Ticket has a value of equal to or more than $999;

3.8.3 Ticket already redeemed;

3.8.4 Ticket system unavailable e.g. off-line;

3.8.5 Ticket has a value that exceeds the maximum allowed Kiosk redemption value of $200 unless payment is directly authorised by venue staff see Requirement 7.7; and/or

3.8.6 At a kiosk a message may advise the player to present the ticket at the cashier’s terminal for payment.

3.9 At a minimum, a DOCITO system must be able to report on the following ticket activity:

3.9.1 number of tickets redeemed; and

3.9.2 details of each ticket redeemed, such as the date and time each ticket was issued and redeemed, gaming machine ID and amount of payment; and

3.9.3 date and time rejected tickets were presented and the reason they were rejected.

4. **Gaming Machine Ticket Printer**

4.1 The ticket printer must be installed securely so that access to the ticket printer and/or interface device is only possible when the main door of the gaming machine is opened.
4.2 The gaming machine must be configured with a ‘HOPPER COLLECT’ limit less than or equal to $999.4

4.3 At a minimum, information that is printed on a ticket must include:

4.3.1 an authentication code (e.g. both barcode and numerical number); and
4.3.2 venue name or identification; and
4.3.3 unique gaming machine serial number or ID; and
4.3.4 date and time the ticket was issued; and
4.3.5 the value of the ticket (in both numbers and words); and
4.3.6 a statement that the ticket is “CASH OUT” only; and
4.3.7 the expiry/void date or days to expiry of the ticket; and
4.3.8 details of the local or national problem gambling helpline 0800 telephone number; and
4.3.9 an appropriate responsible gambling message. Appropriate responsible gambling messages may be (but are not limited to) one or more of the following:

4.3.9.1 “Is your gambling affecting others?”; or
4.3.9.2 “Is your gambling hurting others?”; or
4.3.9.3 “Are you hiding your gambling from others?”; or
4.3.9.4 “Are you feeling worried about your gambling”; or
4.3.9.5 “Is your gambling causing you some worries?”; or
4.3.9.6 “Are you feeling guilty about your gambling?”

4.4 The ticket printer must recognise and display an alert for:

4.4.1 no paper;
4.4.2 low paper; and/or
4.4.3 printer jam or failure.

4.5 If a ticket printer malfunctions and a ticket is not able to be printed then payment must be made as for an unsuccessful hopper pay-out.

4.6 A ticket printer must not print a ticket when the gaming machine is in an error state or disabled for any reason.

4.7 A ticket printer must retain a log of the last 25 tickets issued.

4.8 The ticket printer log must be accessible to venue staff to assist in the validating of tickets (e.g. in the event of a system failure).

5. Tickets

2 It is recommended that a note may be left in a conspicuous place within the gaming machine e.g. logic cage to remind technical staff to reset limit as above following a RAM clear.
5.1 Tickets must be such quality and size that ensures that the printed information is legible and the tickets are durable for the purposes of their expected lifespan.

5.2 If a ticket may degrade under environmental conditions (e.g. sunlight), then an appropriate warning should be printed on the ticket.

6. **Automated Kiosk**

6.1 For ticket redemption the Kiosk must be designed to allow secure communication by the Cashier’s Redemption Terminal for the validation of ticket to be redeemed. Ticket redemption limit must able to be configured either at the Kiosk or by Cashier’s Redemption Terminal by a secure means.

6.2 Default ticket redemption limit must not be configured with a value greater than $200

6.3 Kiosk and Cashier’s Terminals will retain a log recording details of all tickets authenticated and redeemed by the Kiosk showing:

6.3.1 number of tickets redeemed; and

6.3.2 details of each ticket redeemed, such as the date and time each ticket was issued and redeemed, gaming machine ID and amount of payment.

6.4 Co-joint use of a Kiosk e.g. as a note breaker is acceptable provided this functionality does not interfere or compromise the requirements of this standard. For the avoidance of doubt this requirement does not imply that note breaking functionality is considered to be an Actual, Reasonable and Necessary cost.

6.5 A Kiosk, including component coin and note dispensers, hardware and software design and build security, should, where applicable, comply with hardware, software and accounting requirements as specified in NS 2016 for Gaming Machines.

6.6 A kiosk must be individually powered from a single 3 pin general power outlet located close to the kiosk. The use of double adapters, power boards, extension leads and expandable modular power systems are not permitted.

6.7 The power supply to the kiosk and connected displays must not be able to be accessed by players.

6.8 A Kiosk must connect to the Cashier’s Validation system by a cable network to facilitate secure communication.

6.9 The cable network must be:

6.9.1 installed to a high standard of workmanship so there is no adverse effect to data transmission; and

6.9.2 all exposed cables must be enclosed in plastic conduits to prevent tampering; there is to be no exposed cable between the Kiosk and the Cashier’s Terminal; and
6.9.3 all cable must be mechanically supported and have sufficient excess left at either end such that there is no strain on the cable; and

6.9.4 where cable and conduit is routed within a gaming machine base that has a cashbox, the cable must not be subject to any damage or disconnection due to normal cashbox activity.

6.10 Secure Communication must as a minimum:

6.10.1 be protocol based and bi-directional; and

6.10.2 employ secure encryption. The encryption algorithm must employ variable keys or similar methodology to preserve secure communication and, for example mitigate intrusion attacks such as a ‘man-in-the-middle attack’.

6.11 Kiosk cabinets must be securely locked.

6.12 Accounting Meters: the following accounting information pertaining solely to ticket redemption shall be maintained in critical memory:

<table>
<thead>
<tr>
<th>METER</th>
<th>Definition</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TICKETS IN</td>
<td>total of all tickets accepted,</td>
<td>[$]</td>
</tr>
<tr>
<td>COINS OUT</td>
<td>total of all coins out from hopper, but not extra coins out or short pays</td>
<td>[$]</td>
</tr>
<tr>
<td>EXTRA COIN OUT</td>
<td>total of all coins detected as dispensed in error from hopper (excluded from “coins out”)</td>
<td>[count]</td>
</tr>
<tr>
<td>MONEY OUT</td>
<td>total value in dollars of credits redeemed from the player’s credit meter by coins or notes, but not extra coin or note out errors or short pays</td>
<td>[$]</td>
</tr>
<tr>
<td>BANKNOTES Out</td>
<td>total of all banknotes out from note dispenser but not extra notes out or short pays</td>
<td>[$]</td>
</tr>
</tbody>
</table>

Note: Depending on Note dispensing functionality additional metering may be necessary.

6.13 Critical Memory is used to store all meter, logs and other data that is considered vital to the operation of the Kiosk. This includes but is not limited to:

6.13.1 accounting meters; and

6.13.2 ticket redeemed log; and
6.13.3 software state such that a Kiosk can recover to a normal operating state from either a system outage or Kiosk operation interruption.

6.14 A Kiosk must retain critical memory data for at least 30 days following power disconnection.

6.15 A Kiosk must detect and display an audible and visual alarm for the following error conditions:

   6.15.1 loss of secure communication; and
   6.15.2 power Reset; and
   6.15.3 security door open/closed (e.g. cabinet, logic area, note acceptor stacker); and
   6.15.4 failed to make cash payment. Where possible the error condition should show the reason why, e.g. Ticket-in jam; and
   6.15.5 low RAM battery (if provided).

7 Ticket redemption

7.1 A ticket can only be redeemed for payment where a player presents the ticket within seven days from the day the ticket was printed.

7.2 If a player presents a ticket after the day on which the ticket was issued, the player must present personal identification before the ticket can be redeemed.

   (Note: “after the day on which the ticket was issued” may be up to 24 hours after the ticket was printed, depending on system configuration).

7.3 Tickets older than seven days:

   7.3.1 must not be redeemed by the venue cashier terminal or Kiosk; and
   7.3.2 may be only redeemed on application to the relevant corporate society.

7.4 Tickets older than three months from the date of issue are forfeit and void and can no longer be redeemed.

7.5 Venue staff may at any time require proof of the player’s identity before any ticket is redeemed.

7.6 Redeemed tickets must be suitably defaced as paid and stored for a period of 90 days.

7.7 Where a ticket with a value greater than $200 is presented for payment at the Kiosk then payment can only be made at the Kiosk by direct intervention of venue staff. This intervention must as a minimum require venue staff to directly authorise payment by the Kiosk by a secure method. For example a venue staff member could access the Kiosk audit screen and cause Kiosk to override $200 limit for this ticket only and pay-out the value of the ticket.