

Certification Report: ITL2101931

N°	Test Performed	Test Methodology	Result
3.	Review of source code	Review of source code was conducted to verify that the implementation of the RNG is in accordance with the technical requirements.	Comply
4.	Statistical testing of raw output of RNG.	<p>Marsaglia's diehard tests were applied to 80 million bits of raw 32 bit random numbers generated by the algorithm. The following diehard tests were conducted on 2 sets of 80 million bits;</p> <ul style="list-style-type: none"> i. BIRTHDAY SPACINGS ii. OVERLAPPING 5-PERMUTATIONS iii. BINARY RANK TEST for 31x31 matrices iv. BINARY RANK TEST for 32x32 matrices v. BINARY RANK TEST for 6x8 matrices vi. BITSTREAM TESTS ON 20-BIT Words vii. BITSTREAM TESTS OPSO, OQSO, DNA viii. COUNT-THE-1's IN A STREAM OF BYTES ix. COUNT-THE-1's IN SPECIFIC BYTES x. PARKING LOT TEST xi. MINIMUM DISTANCE TEST xii. THE 3DSPHERES TEST xiii. THE SQUEEZE TEST xiv. OVERLAPPING SUMS TEST xv. RUNS TEST xvi. CRAPS TEST 	Comply Refer Section 4.1 for results.
5.	Statistical testing of scaled / shuffled data	<p>Chi-square tests were conducted for the following:</p> <p>DOF for Single deck (without joker)</p> <p>Cards/deal: 52 Suits: 156 Ranks: 624 Cards: 2652</p>	Comply Refer Section 4.2 for results
6.	Other issues	None	-

3.2 Compliance to technical standards

N°	Requirement Description	Results	Comments
RTS 7A	<p>Random number generation and game results must be 'acceptably random'. Acceptably random here means that it is possible to demonstrate to a high degree of confidence that the output of the RNG, game, lottery and virtual event outcomes are random, through, for example, statistical analysis using generally accepted tests and methods of analysis. Adaptive behaviour (i.e. a compensated game) is not permitted.</p> <p>Where lotteries use the outcome of other events external to the lottery, to determine the result of the lottery (for example, using numbers from the National Lottery) the outcome must be unpredictable and externally verifiable.</p>	Comply	<p>RNG complies for all requirements for the game types listed in Section 2.1 General Information, Item 3.</p> <p>Note: The requirements that are also influenced by game logic, must be covered by separate game certification.</p>
RTS 7B	As far as is reasonably possible, games and events must be implemented fairly and in accordance with the rules and prevailing payouts, where applicable, as they are described to the customer.	Comply	<p>RNG complies for all requirements for the game types listed in Section 2.1 General Information, Item 3.</p> <p>Note: The requirements that are also influenced by game logic,</p>