Ticketer Corvia Limited
Marlborough House
Charnham Lane
Hungerford
RG17 0EY

20th December 2021

ITSO POST Compliance Certificate

Certificate Number: C00098-3
Product/Service name: TK-L POST, version Windows CE 7.0 (G2K 12)
Compliant with: ITSO TS 1000 Specification Version 2.1.4 Corrigendum 9

Dear Nabeel,

ITSO received a request submitted by Ticketer Corvia Limited, for the re-certification of the TK-L POST (firmware version Windows CE 7.0 (G2K 12)). As indicated in Certification Test Report (ref. Test Report POST-1631277441 – Ticketer TK-L POST – Re-certification), ITSO has found reasonable evidence that the submitted product/service complies to ITSO TS 1000 Specification Version 2.1.4 Corrigendum 9.

Your product/service will be included in the certified products list, published on ITSO website.

Please note that the present Certification is subject to the following general terms and conditions along with conditions/constraints as detailed in Schedule B:

i.   The present Certification is granted on the basis of the ITSO Certification & Compliance Policy and therefore is valid as of today and will expire 7 years from issue, however If the Product/service contains a sub-assembly, the above referenced product will only be valid if the sub-assembly holds a valid ITSO certificate.

ii.   If the Product version number is changed, Ticketer Corvia Limited must notify ITSO of this fact in writing by supplying the release notes. Any change in the Product that may generate a different behaviour with respect to the ITSO TS 1000 Specification version 2.1.4 corrigendum 9 standards may be considered a major modification subject to a new evaluation in order to maintain the present Certification.

iii. The present Certification granted to Ticketer Corvia Limited for the above referenced Product is non-transferable to any other vendor.

iv.   When request by an ITSO Licenced Operator, the ITSO Registered Supplier must supply a copy of the Test Report.

Schedule A

ITSO Manufacturer ID: 000110

The Ticketer TK-L POST is a bus ETM that mounted on bus with base plate. The TK-L POST used Unicard POST Kernel sub-assembly C00163-2 and Gemini CX21 card reader (firmware G2K 12).

The CM supported by this device is shown in the following table:

CM	CMD2	CMD4	CMD7	mCMD2
Customer Media Definition	✓	✓	✓	✓

The IPEs supported are represented in the following table:

IPE	Accept	Create	Modify	Delete
TYP 0 – Private Application				
TYP 2 – Stored Travel Rights	✓	✓	✓	✓
TYP 3 – Loyalty (Type 1)				
TYP 4 – CTA (Mode 1)				
TYP 5 – CTA (Mode 2)				
TYP 14 – Entitlement	✓	✓	✓	✓
TYP 16 – ITSO ID & Entitlement	✓	✓	✓	✓
TYP 17 – Loyalty (Type 2)				
TYP 22 FR1 – Area Based Ticket	✓	✓	✓	✓
TYP 22 FR2 – Area Based Ticket	✓	✓	✓	✓
TYP 23 FR1 – Journey Ticket	✓	✓	✓	✓
TYP 23 FR2 – Journey Ticket	✓	✓	✓	✓
TYP 24 – Journey Ticket with Reservations and Special Restrictions	✓	✓	✓	✓
TYP 25 – Travel Voucher				
TYP 26 – Open System Tolling				
TYP 27 – Period Pass (space saving)	✓	✓	✓	✓
TYP 28 – Carnet (space saving)	✓	✓	✓	✓
TYP 29 – Multi Journey Ticket (space saving) – FR1	✓	✓	✓	✓
TYP 29 – Multi Journey Ticket (space saving) – FR2	✓	✓	✓	✓
Transient Ticket Log FR 1	✓	✓	✓	**n/a**
Transient Ticket Log FR 2	✓	✓	✓	**n/a**
Transient Ticket Log FR 3	✓	✓	✓	**n/a**
Transient Ticket Log FR 4	✓	✓	✓	**n/a**

Schedule A (cont.)

The optional functionality supported by this device is shown in the following tables:

Hot listing support			
Multi (0602)	**Manually Block**	**Manually Unblock**	**Storage**
✓	✓	✓	**10,000 items**

Action list support		
Single (OC03)	**Multi (0603)**	**Storage**
✓	✓	**10,000 items**

Action list Action to Take (ATT) support															
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Interoperability/parameter list support/multi record receipt of multiple types				
ListFR1 Receive 0Axx	**List FR1 Receive 0Bxx**	**List FR2 Receive 0Axx**	**List FR2 Receive 0Bxx**	**Receive multiple types 0600**

Miscellaneous						
POST HOPS queries	**Additional Shell Data 0807**	**Log 1**	**UD Frames Generate 0Exx**	**UD Frames Receive 0Exx**	**UD Frames Generate 0Fxx**	**UD Frames Receive 0Fxx**
		✓				

RSPS3002 Rail Supplementary Functions							
Check in	**Check out**	**Undo Check in**	**Break of Journey**	**Inter-change**	**Pass Activation**	**Lists**	**Inspection**

<u>Schedule A (cont.)</u>

Benchmarking Times

Average read over test – milliseconds (mS)			
	CMD2	**CMD4**	**CMD7**
IPE with Transient Ticket Record Creation	**443.9**	**n/a**	**287.4**
IPE with Value Record Data Group Modification	**530.5**	**112.9**	**395.3**

Image of POST

<u>Schedule B</u>

List of conditions and/or constraints applied by ITSO:

- The reversal of TrxReversal.
- Auto renew before the expiry of IPE.
- Auto renew before all stored tickets are consumed.
- Generation of 0310 Supplementary Data Message.
- Generation of 0801 Supplementary Data Message.
- Entry closed system without product selection.
- Exit closed system without product selection on entry.
- Entry to closed system with product selection on entry.
- Exit to closed system with product selection on entry.
- Inspection only without product selection on entry.
- Inspection only with product selection on entry.
- Inspection with product selection.
- Generation of Long Message with Data# = 1.

ITSO Certificate of Compliance

Supplier: **Ticketer Corvia Limited**

Product/service: **TK-L POST**
Version: **Windows CE 7.0 (G2K 12)**

This is to certify that the above product/service has been tested as required by ITSO for compliance against:

ITSO TS 1000 Specification Version: 2.1.4 Corrigendum 9

Test Report Ref:

Test Report POST-1631277441 – Ticketer TK-L POST – Re-certification

This product supports the functions: ITSO POST and communicates within an ITSO environment as listed in Schedule A of this Certificate.

This product may only be used by ITSO Licensed Members complying with the conditions and constraints listed in Schedule B.

Signed for and on behalf of ITSO:

Name: **Darren Marshall-Sewell**

Title: **Technology Manager**

Dated: **20th December 2021**

Certificate Valid until: **13th August 2027**

Certificate Number C00098-3
TK-L POST

Registered address Aurora House, Deltic Avenue, Milton Keynes, MK13 8LW