

Ticketer

Marlborough House
Charnham Lane
Hungerford
Berkshire
RG17 0EY

28th September 2020

ITSO POST Compliance Certificate

Certificate Number: C-00138-1
Product/Service name: HH200 Handheld POST
Version: Firmware ver. 2.7.1 Hardware ver. TX1004 v1.4a
Compliant with: ITSO TS 1000 Specification Version 2.1.4 Corrigendum 9

Dear Nabeel,

ITSO received a request submitted by Ticketer, for the certification of the HH200 Handheld POST (software version Firmware ver. 2.7.1 Hardware ver. TX1004 v1.4a). As indicated in Certification Test Report (ref. POST-1582817341 Ticketer HH200 Handheld ETM), 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 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 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.

Certificate Number C-00138-1 HH200 Handheld POST

Schedule A

The Ticketer HH200 is a handheld ETM that can be used on/off vehicle. The POST uses Unicard POST Kernel (Housekeeping ver.2.1.5.1 / HL2.DLL ver.5.0.2.1) certificate C00163-1.

The CM supported is shown in the following table:

CMD	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 Ticker (space saving) – FR1	✓	✓	✓	✓
TYP 29 – Multi Journey Ticker (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 kB

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

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

Schedule A (cont.)

Benchmarking Times Average in milliseconds (mS)

	Average
POST.0085 – Benchmark Test CMD2: IPE with Transient Ticket Record Creation	668ms
POST.0781 – Benchmark Test CMD2: IPE with Value Record Data Group Modification	611ms
POST.0097 – Benchmark Test CMD4: IPE Data Modification	127ms
POST.0117 – Benchmark Test CMD7: IPE with Transient Ticket Record Creation	340ms
POST.0783 – Benchmark Test CMD7: IPE with Value Record Data Group Modification	406ms

Device Image



Certificate Number C-00138-1 HH200 Handheld POST

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

Schedule B

List of conditions and/or constraints applied by ITSO:

The Ticketer HH200 Handheld POST does not support the following:

- 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.



Certificate No. C-00138-1

ITSO Certificate of Compliance

Supplier: **Ticketer**

Product/service: **HH200 Handheld POST**

Version: **Firmware ver. 2.7.1 Hardware ver. TX1004 v1.4a**

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: POST-1582817341 Ticketer HH200 Handheld ETM

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: **Certification & Compliance Manager**

Dated: **28th September 2020**

Certificate Valid until: **27th September 2027**