



Flowbird Transport Limited
10 Willis Way
Poole
Dorset
BH15 3SS

17th November 2021

ITSO POST Compliance Certificate

Certificate Number: C00217
Product/Service name: Way6S +Axio 4c, version 2.1.5.1
Compliant with: ITSO TS 1000 Specification Version 2.1.4 Corrigendum 9

Dear Mike,

ITSO received a request submitted by Flowbird Transport Limited, for the certification of the Way6S +Axio 4c POST (software version 2.1.5.1). As indicated in Certification Test Report (ref. Flowbird Transport Limited POST-1608114361 - Way6S +Axio 4c POST), 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, Flowbird 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 Flowbird for the above referenced Product is non-transferable to any other vendor.
- iv. When requested by an ITSO Licenced Operator, the ITSO Registered Supplier must supply a copy of the Test Report.

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Schedule A

ITSO Manufacturer ID: 000240

The Flowbird Way6S +Axio 4c is an 'on-bus' device but can also be used as a point of sale terminal, if required. The Flowbird Way6S +Axio 4c is mounted on a bespoke tray that houses the connections for all peripheral devices and power. The Way6S handles smartcards that conform to the ISO14443A/B standard. The Way6S uses Unica's certified POST Kernel certificate number C00163-2.

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

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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
✓			300kb

Action list support		
Single (OC03)	Multi (0603)	Storage
✓	✓	300kb

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 read over test – milliseconds (mS)			
	CMD2	CMD4	CMD7
IPE with Transient Ticket Record Creation	357.2ms	n/a	306.3ms
IPE with Value Record Data Group Modification	483.6ms	n/a	440ms
IPE Data Modification	n/a	155ms	n/a

Image of POST



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



Schedule B

List of conditions and/or constraints applied by ITSO:

The 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. C00217

ITSO Certificate of Compliance

Supplier: **Flowbird Transport Limited**

Product/service: **Way6S +Axio 4c POST**

Version: **2.1.5.1**

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: Flowbird Transport Limited POST-1608114361 - Way6S +Axio 4c POST

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: **17th November 2021**

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

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