

Certificate No. C – 00161-1

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# ITSO Certificate of Compliance

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**To: General Information System Ltd  
Unit 2, The Woodlands, Barton Road, Haslingfield  
Cambridge CB23 1LW**

**For: GIS Handy 600S5N (Firmware v.0.08.21)**

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**This is to certify that the above product has been tested as required by ITSO for compliance against ITSO TS 1000 Specification Version: 2.1.4 Corrigendum 9.**

**Test Reports Ref: *6P\_000121 Handy 600S5N POST\_Test Report\_Final***

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

**This sub-assembly 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:**



**Title: General Manager**

**Dated: 14 February 2019**

**Certificate Valid until: 13 February 2026**



## Schedule A

### ITSO Manufacturer ID: 000170

The GIS Handy 600S5N is a handheld POST based on a Samsung S5 Galaxy smartphone with an additional GIS designed and manufactured ITSO module. The additional ITSO module contains an ISAM slot (ISO-7816) and an RFID (ISO-14443) interface as well as a 2D barcode scanner.

**This handheld POST communicates with CMD2 and CMD7.**

**The IPE's supported are represented in the following table:**

IPE	Create	Modify	Accept	Delete
TYP 2 – Stored Travel Rights	✓	✓	✓	✓
TYP 14 – Entitlement	✓	✓	✓	✓
TYP 16 – ITSO ID and Entitlement	✓	✓	✓	✓
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	✓	✓	✓	✓
Transient Ticket Log FR1	✓	✓	✓	n/a
Transient Ticket Log FR2	✓	✓	✓	n/a
Transient Ticket Log FR3	✓	✓	✓	n/a
Transient Ticket Log FR 4	✓	✓	✓	n/a

## Schedule B

List of the conditions and/or constraints applied by ITO.

Optional functionality not supported:

- This POST doesn't have a removable module
- POST does not support the generation of 0310 Supplementary Data Messages
- POST does not support the generation of 0801 Supplementary Data Messages with Hash/MAC
- POST support but does not generate long messages with Data#=1

Following are the benchmark timing achieved by the POST.

### **Samsung Galaxy S5 Neo**

#### Value Record Data Group Modification

CMD Type	Average
CMD2 (B:48 S:32 E:8)	704.02ms
CMD7 (B:64 S:16 E:8)	583.10ms

#### Transient Ticket Record Creation

CMD Type	Average
CMD2 (B:48 S:32 E:8)	713.01ms
CMD7 (B:64 S:16 E:8)	585.11ms

### **Samsung Galaxy S5**

#### Value Record Data Group Modification

CMD Type	Average
CMD2 (B:48 S:32 E:8)	704.69
CMD7 (B:64 S:16 E:8)	583.75

#### Transient Ticket Record Creation

CMD Type	Average
CMD2 (B:48 S:32 E:8)	713.02ms
CMD7 (B:64 S:16 E:8)	585.75ms

## Samsung Note 4

### Value Record Data Group Modification

CMD Type	Average
CMD2 (B:48 S:32 E:8)	721.45ms
CMD7 (B:64 S:16 E:8)	487.56ms

### Transient Ticket Record Creation

CMD Type	Average
CMD2 (B:48 S:32 E:8)	712.01ms
CMD7 (B:64 S:16 E:8)	585.77ms