OPERATIONAL DESCRIPTION

1.1. EUT description

Self-Service

iSelf Series

iUI120

Easy and flexible unattended payment solutions for self-service businesses

- Leverage Ingenico unattended solutions to easily integrate payment in your self-service business
- Accept all payment means and comply with latest standards
- Cut complexity in payment and security
- Address all self-service market segments: Hospitality, Vending and Transportation

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Self-Service

iSelf Series

- **Highest Security Levels**

PCI PTS 4.x ready, the iUI120 (part of the **iSelf** Series) meets the highest and latest hardware and software mandatory security requirements. The iUI120 complies with Open Protocol and SRED modules.

- **All payment options**

When connected to an iUR250 and/or an iUC150, the iUI120 enables EMV chip and Magstripe transactions and/or contactless transactions on kiosks while respecting security standards and improving customer interactivity. With this no CVM* solution, transaction are simpler and faster.

- **Telium 2 Technology**

Powered by Ingenico, Telium2 Technology is the result of 30 years' experience in the payment industry. Secure, highly integrated and fast, Telium is the world's best platform to provide payment services. It provides a fully scalable, reliable operating system embedded into the 20 million terminals deployed worldwide.

- **Easy Integration**

Our compact and modular iSelf Series devices are embedded in their enclosure and integrated according to the EVA** market standard. Maintenance requires no additional equipment and our devices can be updated using the iUI120 maintenance display and keypad. It is so flexible that interfacing with the entire kiosk system has never been so easy.

- **Flexible Communication and Connectivity**

The **iSelf** Series provides a wide range of integrated connectivity features to communicate with kiosks, acquirers, hosts or service providers (telemetry). It includes USB (slave, master), RS232, MDB (slave, optional master), Ethernet and optional GPRS, covering most kiosk system requirements.

- **Eco-friendly**

Stand-by-mode guarantees optimal energy efficiency. Ingenico is a reference in safeguarding the environment.Our manufacturing facilities are ISO 14001 certified.

		IUI120
Processor	Type Speed	RISC 32-bits ARM9 RISC 32-bits ARM7 450 MIPS + 50 MIPS
Memory	RAM/Flash	16MB/128MB
Removable memory	µSD Card	1
Communication mode	GPRS Ethernet Bluetooth	Option X Option
SAM		2
SIM		Option
Maintenance Display	Graphic 128 x 64 pixels Backlit	X X
Maintenance Keyboard	Number of keys Key texture	16
Buzzer		X
Connections	RS232 USB Host USB Slave MDB Slave MDB Master	1 or 2 4 1 X Option
Power supply	External power supply Stand by mode	10V-45V DC X
Size	Overall WxHxD mm Cut area W x H mm	120x134x62 NA
Weight		620g
Customization		Layout sheet
Environment	Operating temperature Storage temperature Relative humidity, non condensing	-20°C to +65°C -20°C to +65°C 90% HR at +55°C
PCI PTS	4.x	ready

* Cardholder Verification Method
**European Vending Association

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Discover more about our **iSelf-Services** Solutions:
iSelf-Retail
iSelf-Petrol
iSelf-Hospitality
iSelf-Vending
iSelf-Transportation

1.2. Related Submittal(s) / Grant(s)

All host equipment used in the test configuration are FCC granted, when relevant.

1.3. Tested System Details

The FCC IDs for all equipment, plus description of all cables used in the tested system are:

- Internal max frequencies <500MHz (Declaration of provider)

The system was configured for testing in a typical fashion (as a customer would normally use it).
The equipment IUI120 can be used with several internal option cards:

- COM2 + MDB + Bluetooth Configuration n°1
- COM2 + MDB + Bluetooth + GPRS modular approval Configuration n°2 (Worst case)

The Equipment Under Test will be the configuration n°2 to represent others configurations.
IUI120 has to be is integrated in unattended devices. The test configuration is given by the manufacturer

Power supply:
- DC voltage, 10-45VDC, tested at 12VDC (worst case)
During all the tests, EUT is supplied by an AC/DC adaptor, not supplied with EUT so not tested, PHIHONG PSM36W-120TW, 100-240VAC / 1.5A / 50-60Hz, output 12VDC / 3A or power supply of laboratory.

Input/output:
- 1 x Power supply connector, 2 wires
- 5 x USB
- 1 x LAN
- 2 x COM
- 1 x Earth
- 1 x Jack “Clock”
- 1 x MDB master
- 1 x MDB slave, same connector that power supply
- 2 x SMA connector, GPRS and Bluetooth
- 2 x SAM
- 1 x SIM
- 1 x MicroSD

RF Module contained:
- 1 x GPRS, module certified, FCCID: VW3HILOV2 and IC: 9140A-HILOV2 with antenna, GC300M-011-2500 (not supplied by provider), it’s a deported antenna, none collocation with BT antenna inferior at 20cm.

Auxiliaries used for testing:
- 1 x Laptop TOSHIBA SATELLITE, PS141E-04YC, Sn: 13594938G
- 2 x SAM
- 1 x SIM

I/O cables used for testing:

- 1 x AC power cord, 2 wires, unshielded: 2m
- 1 x DC power supply cable (fixed on mains power unit), with ferrite, unshielded: 1.75m
- 1 x Ethernet cable Type: STP Cat 5e, shielded: 1m
- 5 x USB cables, shielded: 1m
- 2 x RS232 Com cables, RJ11, unshielded, 1.5m (COM 0 & COM 2)
- 1 x MDB-slave '6 pins' <-> MDB-master '8 pins' cable, unshielded, 4 wires with WE ferrite 74271222, length: 1m
- 1 x Jack cable, unshielded, length: 0.2cm

Equipment information: (Declared by provider)

- Frequency band:	[2400.0 – 2483.5] MHz		
- Standard:	☐Wifi	☒Bluetooth	☐Zigbee
- Spectrum Modulation:	☒FHSS		☐DSSS
- Modulation type:	☒GFSK	☒Pi/4 DQPSK	☒8DPSK
Packet type:	1-DH5	2-DH5	3-DH5
Transfert data rate:	1Mbps	2Mbps	3Mbps
- Number of channel:	79		
- Channel separation:	☐5MHz	☐2MHz	☒1MHz
- Channel bandwidth:	☐10MHz	☐20MHz	☒1MHz
- RF mode:	☒TX/RX	☐RX	☐Standby
- Antenna type:	SMA connector + Whip antenna (not supplied)		
- Antenna for test:	Bluetooth antenna, EAD-FBTS35024-SM-ST.		
- Antenna connector:	☒Permanent external	☐Permanent internal	
	☐None	☐Temporary (only for tests)	

For all tests:

A generic program test is loaded on EUT, in order to perform in loop following functions:

- Reading / writing SAM card (SAM1 & SAM2)
- Reading / writing µSD card (MMC)
- RX/TX on Serial port (COM0 & COM2)
- RX/TX between MDB master and slave

With laptop:

- Continuous Ethernet communication is performed from EUT to Laptop (Ping)

For special Bluetooth tests:

With a special mode of EUT a communication is performed with CMU, a permanent link with followings parameters is tested (worst case):

- Permanent emission of the carrier frequency with modulation, highest, middle and lowest channel
- Choice of modulation type: Worst case, packet type DH5 with all modulations
- FHSS mode ON or OFF

1.4. Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4-2003, FCC Part 15 Subpart B and C.
Radiated testing was performed at an antenna to EUT distance of 10 meters. During testing, all equipment's and cables were moved relative to each other in order to identify the worst case set-up.

1.5. Test facility

Tests have been performed from 17th January to 19th March, 2014.

This test facility has been fully described in a report and accepted by FCC as compliant with the radiated and AC line conducted test site criteria in ANSI C63.4-2003 in a letter dated March 25th, 2008 (registration number 94821). This test facility has also been accredited by COFRAC (French accreditation authority for European Union test lab accreditation organization) according to NF EN ISO/IEC 17025, accreditation number 1-1633 as compliant with test site criteria and competence in 47 CFR Part 15/ANSI C63.4 and EN55022/CISPR22 norms for 89/336/EEC European EMC Directive application. All pertinent data for this test facility remains unchanged.