LCIE SUD EST
Laboratoire de Moirans
Z.I. Centr'Alp
170, Rue de Chatagnon
38430 MOIRANS - FRANCE

GENERAL INFORMATION

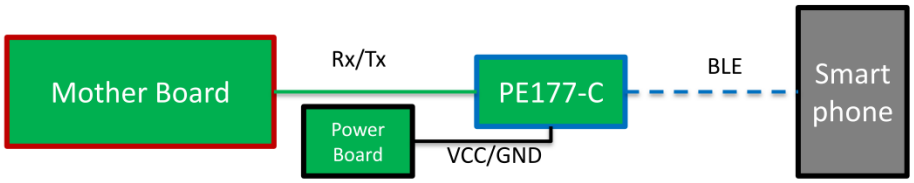
FCCID: **2AGS8-PE177C**

1.1. Product description

GROUPE SEB

Description and user manual

- PE177-C board
  - is a Bluetooth Low Energy serial communication gateway
  - is a daughter board connected to a mother board through UART communication
  - takes payload from UART to BLE and vice versa
  - can be configured by the mother board with specific UART commands
  - is either powered from the mother board or from a dedicated power source



LCIE SUD EST
Laboratoire de Moirans
Z.I. Centr'Alp
170, Rue de Chatagnon
38430 MOIRANS - FRANCE

1.2. Tested System Details

Bluetooth LE Type:	☑ **BLE**	☑ **v4.0**	☐ **v4.1**	☐ **v4.2**
Frequency band:	[2400 – 2483.5] MHz			
Spectrum Modulation:	☑ DSSS (Tested like it)			
Number of Channel:	40			
Spacing channel:	2MHz			
Channel bandwidth:	1MHz			
Antenna Type:	☑ Integral	☐ External	☐ Dedicated	
Antenna connector:	☐ Yes	☑ No	☐ Temporary for test	
Transmit chains:	☑ 1			
	Single antenna			
	Gain 1: 2dBi	Gain 2: XdBi		
Beam forming gain:	No			
Receiver chains	1			
Type of equipment:	☐ Stand-alone	☑ Plug-in	☐ Combined	
Ad-Hoc mode:	☑ Yes	☐ No		
Adaptivity mode:	☐ Yes (Load Based)	☐ Off mode	☑ No	
	Clear Channel Assessment Time:		/	
Duty cycle:	☑ Continuous duty	☐ Intermittent duty	☐ 100% duty	
Equipment type:	☑ Production model	☐ Pre-production model		
Operating temperature range:	Tmin:	☑ -20°C	☐ 0°C	☐ X°C
	Tnom:	20°C		
	Tmax:	☐ 35°C	☐ 55°C	☑ 80°C
Type of power source:	☐ AC power supply	☑ DC power supply : 5Vdc	☐ Battery	
Operating voltage range:	Vnom:	☐ 230V/50Hz	☐ XVdc	
Geo-location capability:	☐ Yes (The geographical location determined by the equipment is not accessible to the end user as defined in section 4.3.2.12.2 of ETSI EN 300 328 V1.9.1 standard)		☑ No	

CHANNEL PLAN			
Channel	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**
Cmin: 0	2402	20	2442
1	2404	21	2444
2	2406	22	2446
3	2408	23	2448
4	2410	24	2450
5	2412	25	2452
6	2414	26	2454
7	2416	27	2456
8	2418	28	2458
9	2420	29	2460
10	2422	30	2462
11	2424	31	2464
12	2426	32	2466
13	2428	33	2468
14	2430	34	2470
15	2432	35	2472
16	2434	36	2474
17	2436	37	2476
18	2438	38	2478
Cmid: 19	2440	**Cmax: 39**	2480

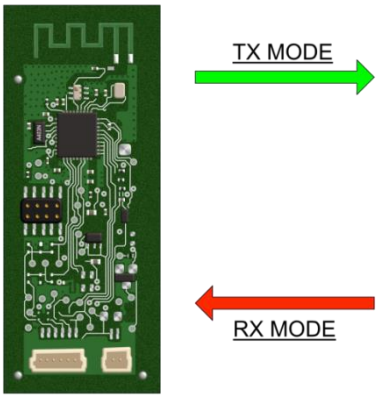
LCIE SUD EST
Laboratoire de Moirans
Z.I. Centr'Alp
170, Rue de Chatagnon
38430 MOIRANS - FRANCE

DATA RATE		
Data Rate (Mbps)	**Modulation Type**	**Worst Case Modulation**
1	GFSK	☑

The EUT is set in the following modes during tests:

TX/RX Mode:

- Permanent emission with modulation on a fixed channel in the data rate that produced the highest power
- Permanent reception

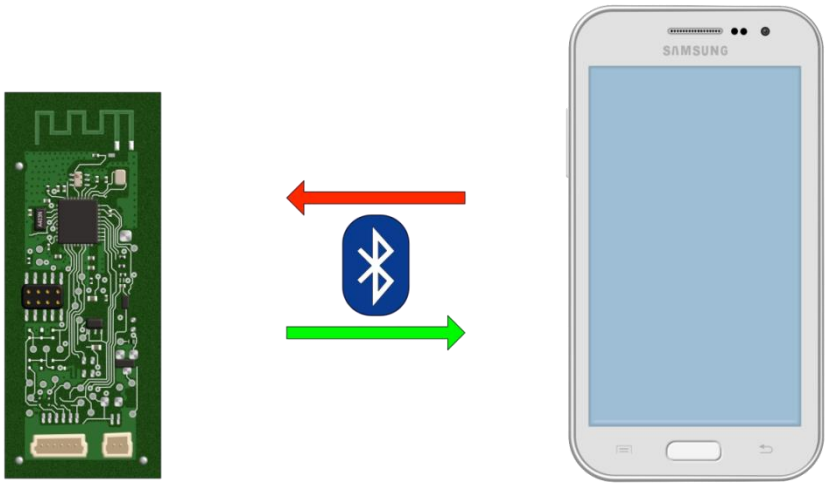


EUT sample Firmware : HostTestRelease_PTMMode_1_4_0
EUT sample Serial number : RADIO 2

LCIE SUD EST
Laboratoire de Moirans
Z.I. Centr'Alp
170, Rue de Chatagnon
38430 MOIRANS - FRANCE

Functional Mode :

A continuous communication is performed between
EUT and Smartphone (Master Control Panel V3.4.1)



EUT sample Firmware: PE177C_CoffeeConnect_v1_1_20151124
EUT sample Serial number: CEM 2

1.3. Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 or ANSI C63.10, FCC Part 15 Subpart 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.

1.4. Test facility

Tests have been performed **from November 25th to 27th, 2015**.

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 and ANSI C63.10 (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.