

BQB qualification FCC/CE/e-mark/ITA service

2003

Apr. 11, 2003

Apache Communication Inc.

Apache / SGS

Bluetooth Products Qualification Service

- ✍ SIG Cat. A standard be performed since Jan., 2003
- ✍ All of RF test cases have to follow cat. A standard, except TRC/CA/01/C out-of-band spurious emissions keep in cat.B standard
- ✍ Apache provide **free** pre-test to assure customer's Bluetooth product nearly OK.
- ✍ SGS handle 16 RF test cases + radiated testing + profile testing + review + listing
- ✍ Also providing FCC, CE, E-mark approval

1. Sign back the quotation for confirmation
2. Preparing 5 samples with SMA connector
3. Preparing document – PICS file, CF, hardcopy of membership, others
4. Apache need one week to do pre-test
 - 1) If no problem, send to SGS
 - 2) If there are something wrong, help customer to do modification
5. SGS need two weeks to do all of testing and review if no any extra problems
6. Go for listing

TRM/CA/01/C	Output Power
TRM/CA/02/C	Power Density
TRM/CA/03/C	Power Control
TRM/CA/04/C	TX OUTPUT SPECTRUM - Frequency range
TRM/CA/05/C	TX OUTPUT SPECTRUM - 20dB Bandwidth
TRM/CA/06/C	TX OUTPUT SPECTRUM - Adjacent channel power
TRM/CA/07/C	Modulation Characteristics
TRM/CA/08/C	Initial Carrier Frequency Tolerance
TRM/CA/09/C	Carrier Frequency Drift
TRC/CA/01/C	Out-of-Band Spurious Emissions
RCU/CA/01/C	Sensitivity-Single-slot packets
RCU/CA/02/C	Sensitivity-multi-slot packets
RCU/CA/03/C	C / I Performance
RCU/CA/04/C	Blocking performance
RCU/CA/05/C	Intermodulation Performance
RCU/CA/06/C	Maximun input level

A. 16 RF TC – NT\$ 350,000

B. Radiated testing – NT\$ 70,000

C. Profile testing

1. One profile – NT\$ 45,000

2. Six profiles – NT\$ 140,000

D. BQB review

*1. First product or RF TC cost less than
NT\$200,000 – NT\$45,000*

*2. Second product or RF TC cost more than
NT\$200,000 – NT\$35,000*

- Remark : the above cost reference are excluding VAT

A. One Module only

- 16 RF TC(350,000) + Radiated(70,000) + BQB review(35,000) = 455,000

B. One Module + One Dongle

- 16 RF TC(350,000) + Radiated(70,000) + 6 profiles testing(140,000) + BQB review(35,000x2) = 630,000

C. One Module + One Headset

- 16 RF TC(350,000) + Radiated(70,000) + headset profile testing(45,000) + BQB review(35,000x2) = 535,000

- Remark : the above quotation all are base on NT dollar, without listing fee
- Remark : the above cost reference are excluding VAT

A. Module listing already, One Dongle/Headset

- Dongle – Radiated(70,000) + 6 profiles testing(140,000) + BQB review(35,000) = 245,000
- Headset – Radiated(70,000) + headset profile testing(45,000) + BQB review(45,000) = 160,000
- Since second products or RF testing more than 200,000 – the BQB review cost is 35,000

B. One Module + Two different models use same module

- 16 RF TC(350,000) + 1st model radiated(70,000) + 2nd model radiated(70,000) + BQB review for 2 models(35,000x2) = 560,000 + profiles testing
- Remark : the above quotation all are base on NT dollar, without listing fee
- Remark : the above cost reference are excluding VAT

1. The above cost is for reference. Final cost will be based on official quotation.
2. Payment is T/T into two stages. $\frac{1}{2}$ on quotation signed. $\frac{1}{2}$ on SGS finished testing and before send to SIG, Listing fee should be paid before SGS send to SIG.
3. Sample requirement : 5 samples with SMA connector and S/W to put the product in test mode.
4. SGS/Apache will assist customer's documentation preparation.
5. Testing time : two weeks subject to real arranged schedule which exclude pretest time.
6. Acceptance of SGS/Apache testing reports depends on BQB opinion.

- *Total cost -- NT\$ 90,000*

A. RF Testing (FCC Part 15C) – NT\$ 50,000

B. EMI Testing (FCC Part 15B) – NT\$ 20,000

C. Application fee – NT\$ 20,000

1. Turnaround time: 2 weeks for testing, 2 weeks for application
2. Sample & relevant documentation preparation: Sample per type (完整樣品 5 個), Complete supporting units. (完整操作周邊), PCB Layout (方塊圖), Circuit diagram (電路圖), BOM (零件表), User manual (英文使用手冊), ID number (辨識碼 3~8碼), Letter head (信頭), Label Artwork (標籤及位置), Position and name of applicant (申請人英文姓名、職稱), General Information (工廠及申請公司英文名稱、地址), Product number (產品型號)
3. 附有SMA天線接頭sample一個（因此不用接天線）。若產品的天線為整合在電路版上不可拆卸的，請多鐸一個天線接頭出來做測試；若產品本身就有接頭並外接天線來出貨，請附上要隨著出貨的那一種天線。(SMA 接頭)
4. 請附上 控制這個sample 所使用的軟體，要能控制他Hopping / No hopping，並能在指定頻率發射或接收，或進入 standby mode，且能設定有調變或沒有調變。

- Remark : the above cost reference are excluding VAT

Apache Communication Inc.

- *Total cost -- NT\$ 108,000*

A. RF Testing (ETSI EN 300 328-1) – NT\$ 68,000

B. EMC Testing (ETSI EN 301 489-1&17) – NT\$ 20,000

C. Safety Testing (EN60950) – NT\$ 20,000

1. Turnaround time: 2 weeks for testing, 2 weeks for application
 2. Sample & relevant documentation preparation: Sample per type (完整樣品 5 個), Complete supporting units. (完整操作周邊), PCB Layout (方塊圖), Circuit diagram (電路圖), BOM (零件表), User manual (英文使用手冊), ID number (辨識碼 3~8碼), Letter head (信頭), Label Artwork (標籤及位置), Position and name of applicant (申請人英文姓名、職稱), General Information (工廠及申請公司英文名稱、地址), Product number (產品型號)
 3. 附有SMA天線接頭sample一個 (因此不用接天線)。若產品的天線為整合在電路版上不可拆卸的，請多鐸一個天線接頭出來做測試；若產品本身就有接頭並外接天線來出貨，請附上要隨著出貨的那一種天線。(SMA 接頭)
 4. 請附上 控制這個sample 所使用的軟體，要能控制他Hopping / No hopping，並能在指定頻率發射或接收，或進入 standby mode，且能設定有調變或沒有調變。
- Remark : the above cost reference are excluding VAT

- *E-mark total cost -- NT\$ 85,000*
 - *E 13 complete certification including testing, application, certificate*
- *ITA (International Type Approval) total cost -- NT\$ 55,000*
 - *International type approval including Europe 19 countries approval*

- Remark : the above cost reference are excluding VAT

1. Apache account sales

2. For more details

Kevin Lin tel:02-87917799~630,

THANKS !

射频和天线设计培训课程推荐

易迪拓培训(www.edatop.com)由数名来自于研发第一线的资深工程师发起成立,致力并专注于微波、射频、天线设计研发人才的培养;我们于 2006 年整合合并微波 EDA 网(www.mweda.com),现已发展成为国内最大的微波射频和天线设计人才培养基地,成功推出多套微波射频以及天线设计经典培训课程和 ADS、HFSS 等专业软件使用培训课程,广受客户好评;并先后与人民邮电出版社、电子工业出版社合作出版了多本专业图书,帮助数万名工程师提升了专业技术能力。客户遍布中兴通讯、研通高频、埃威航电、国人通信等多家国内知名公司,以及台湾工业技术研究院、永业科技、全一电子等多家台湾地区企业。

易迪拓培训推荐课程列表: <http://www.edatop.com/peixun/tuijian/>



射频工程师养成培训课程套装

该套装精选了射频专业基础培训课程、射频仿真设计培训课程和射频电路测量培训课程三个类别共 30 门视频培训课程和 3 本图书教材;旨在引领学员全面学习一个射频工程师需要熟悉、理解和掌握的专业知识和研发设计能力。通过套装的学习,能够让学员完全达到和胜任一个合格的射频工程师的要求...

课程网址: <http://www.edatop.com/peixun/rfe/110.html>

手机天线设计培训视频课程

该套课程全面讲授了当前手机天线相关设计技术,内容涵盖了早期的外置螺旋手机天线设计,最常用的几种手机内置天线类型——如 monopole 天线、PIFA 天线、Loop 天线和 FICA 天线的设计,以及当前高端智能手机中较常用的金属边框和全金属外壳手机天线的设计;通过该套课程的学习,可以帮助您快速、全面、系统地学习、了解和掌握各种类型的手机天线设计,以及天线及其匹配电路的设计和调试...

课程网址: <http://www.edatop.com/peixun/antenna/133.html>



WiFi 和蓝牙天线设计培训课程



该套课程是李明洋老师应邀给惠普 (HP)公司工程师讲授的 3 天员工内训课程录像,课程内容是李明洋老师十多年工作经验积累和总结,主要讲解了 WiFi 天线设计、HFSS 天线设计软件的使用,匹配电路设计调试、矢量网络分析仪的使用操作、WiFi 射频电路和 PCB Layout 知识,以及 EMC 问题的分析解决思路等内容。对于正在从事射频设计和天线设计领域工作的您,绝对值得拥有和学习!...

课程网址: <http://www.edatop.com/peixun/antenna/134.html>

CST 学习培训课程套装

该培训套装由易迪拓培训联合微波 EDA 网共同推出,是最全面、系统、专业的 CST 微波工作室培训课程套装,所有课程都由经验丰富的专家授课,视频教学,可以帮助您从零开始,全面系统地学习 CST 微波工作的各项功能及其在微波射频、天线设计等领域的设计应用。且购买该套装,还可超值赠送 3 个月免费学习答疑...

课程网址: <http://www.edatop.com/peixun/cst/24.html>



HFSS 学习培训课程套装

该套课程套装包含了本站全部 HFSS 培训课程,是迄今国内最全面、最专业的 HFSS 培训教程套装,可以帮助您从零开始,全面深入学习 HFSS 的各项功能和在多个方面的工程应用。购买套装,更可超值赠送 3 个月免费学习答疑,随时解答您学习过程中遇到的棘手问题,让您的 HFSS 学习更加轻松顺畅...

课程网址: <http://www.edatop.com/peixun/hfss/11.html>

ADS 学习培训课程套装

该套装是迄今国内最全面、最权威的 ADS 培训教程,共包含 10 门 ADS 学习培训课程。课程是由具有多年 ADS 使用经验的微波射频与通信系统设计领域资深专家讲解,并多结合设计实例,由浅入深、详细而又全面地讲解了 ADS 在微波射频电路设计、通信系统设计和电磁仿真设计方面的内容。能让您在最短的时间内学会使用 ADS,迅速提升个人技术能力,把 ADS 真正应用到实际研发工作中去,成为 ADS 设计专家...

课程网址: <http://www.edatop.com/peixun/ads/13.html>



我们的课程优势:

- ※ 成立于 2004 年,10 多年丰富的行业经验,
- ※ 一直致力并专注于微波射频和天线设计工程师的培养,更了解该行业对人才的要求
- ※ 经验丰富的一线资深工程师讲授,结合实际工程案例,直观、实用、易学

联系我们:

- ※ 易迪拓培训官网: <http://www.edatop.com>
- ※ 微波 EDA 网: <http://www.mweda.com>
- ※ 官方淘宝店: <http://shop36920890.taobao.com>