Product Description for Compliance
Explorer 330, 340 and 350 series Products

Table of Contents

1 Introduction

1.1 Change History

Revision	Date	Comments
Rev 1	November 2005	Keith W. Petersen for Compliance
Rev 2	June 2006	Keith W. Petersen for Compliance
Rev 3	June 2006	Keith W. Petersen for Compliance

1.2 Scope

This document identifies the detailed requirements for the Explorer series Bluetooth headset program for Bluetooth and Conformity Testing & Reporting.

1.3 Glossary

acronym	meaning	notes
AFH	Adaptive Frequency Hopping	
APLA	Asia-Pacific-Latin-America	Region
BOM	Bill of Material	
CLA	Cigarette Lighter Adapter	
CSR	Cambridge Silicon Radio	
EMEA		Region
MMI	Man-Machine-Interface	User Interface Functions and Visual/auditory Feed-Back
NA	North America	Region
PC	Personal Computer	
PSB	Plantronics Serial Bus	Plantronics proprietary Serial Bus for communication with accessories such as OLI or HL
SMIF	Smart Mechanical Inter-Face	Plantronics proprietary Charging Connector
USB	Universal Serial Bus	PC Serial Bus
EDR	Enhanced Data Rate	
eSCO	Extended synchronous connections	

2 Product Requirements

2.1 Product Rendering

Explorer 340 and 350

Explorer 330

2.2 Product Description

Explorer 330, 340 and 350 use case involve a mobile environment in which the series head set will be used to communicate with another Bluetooth device which supports the headset or hands-free profiles such as a Bluetooth enabled mobile device i.e. cell phone or PDA.

The Explorer 330, 340 and 350 will be available as Headset only. Approvals are expected as Headset only.

- The Plantronics Explorer series utilizes the latest Bluetooth technology (v2.0 + EDR or v 1.2) features from CSR, including the single-point feature, to provide seamless operation of the headset with another Bluetooth enabled device. The Headset contains Class 2 Transceivers
- Other performance differentiators include improved 2.4GHz coexistence features such as Adaptive Frequency Hopping (AFH), for best audio performance in an 802.11 interference environment. This will include EDR for optimum data transmission. Toga will not include eSCO.
- There are 3 versions of the Explorer. 330, 340, 350 are identical electrically and functionally. The 340 and 350 variants are distinguished solely by in box accessories for headset stowage. The 330 differs solely in color, material and finish ONLY
- The only difference between the versions is the external plastic finish.

2.2.1 Accessories

- Universal travel charger — Multi-voltage charger with interchangeable pins for SMIF
- Car charging — CLA cable

- Desk Top Headset Holder Plastic holder for h/s while charging. No electronics or power in holder.
- .In car charger cradle Plastic holder for h/s while charging. No electronics or power in holder.

2.3 Technical Description

- The Explorer 330, 340, 350 is a Bluetooth ™ Class 2 (2.5mW maximum) device, which receives and transmits in the frequency range of 2.402-2.480GHz. It is a spread spectrum (frequency hopping) headset; 79 channels, 1MHz Bandwidth, frequency hops at 1600 hops/second per the Bluetooth standard. The product communicates with other Bluetooth products using a Time division duplex scheme that alternates transmission and receive functions, and thus uses the same antenna to transmit and receive at different times.
- The CSR Single chip Bluetooth system provides voltage regulation (1.8V), battery charging, and is provided its clock input from the 16MHz crystal oscillator.
- The same omni directional antenna is used to send and receive RF signals.
- Battery charging is done with a linear constant current to charge a 120mAH rechargeable Li P battery.
- The headset can communicate with other Bluetooth ™ products that support the Headset Profile and Handsfree Profile. See the user guide for basic operation of the products.

2.4 Functional Requirements

Explorer 330, 340 and 350 Headset will use the plug & go version of the CSR BC04 ROM chip or CSR BC03 Flash. Use of ROM or Flash device will be determined by best AG performance and/or market segments. Both versions will be qualified for North America.

- Provides all of the mandatory features of 2.0 (principally AFH) + EDR and 1.2
- Explorer series System Use Cases and functionality

Use Case No.	Description
1	Power on/off the headset
2	Answer a call End a call
3	Initiate a call from the headset using BT AG keypad
4	Initiate a call from a BT headset using BT AG through voice dialing
5	Transfer a call to/from a BT-enabled AG
6	Support voice-quality audio conversations through an AG
7	Interact with devices that support Handsfree and/or Headset Profiles
8	Adjust the headset (Rx) volume via the headset
9	Reject a call via the headset (Handsfree Profile)
10	Redial from the headset (Handsfree Profile)

Use Case No.	Description
11	Charge the headset from 110/220V wall socket
12	Charge the headset from a 12 volt Cigarette Lighter Adapter car system
13	Determine the level of battery charge in the headset
14	Pair headset with another Bluetooth device supporting HSP/HFP
15	Determine presence of incoming call through ring and rapidly blinking LED
16	All Bluetooth headset profile feature/functionality
17	All Bluetooth handsfree profile feature/functionality
18	Bluetooth v 2.0 mandatory features
19	Bluetooth v 1.2 mandatory features

2.4.2 Test Points and Access

Access points, as listed in Table 1 below, shall be provided for in-plastics testing and reprogramming.

Test Point	Description	Signal Type
UART_TX	UART data output active high	CMOS output, tristatable with weak internal pull-up
UART_RX	UART data input active high	CMOS output, tristatable with weak internal pull-down
SPI_CSB	Chip select for SPI interface, active low	CMOS input with weak internal pull-up
SPI_CLK	SPI clock	CMOS input with weak internal pull-down
SPI_MOSI	SPI data input	CMOS input with weak internal pull-down
SPI_MISO	SPI data output	CMOS output, tristatable with weak internal pull-down
Batt	Positive Battery Terminal	Analog
GND	Headset ground reference	Analog

Table 1, PCBA Test Points

2.4.3 Accessories:

items	Description	Product Requirement	Plantronics Part Number	Description
1	Charger for Headset	110 /220voltage charger with interchangeable pins / SMIF	See BOMs	
2	Car charging	CLA cable/SMIF	See BOMs	

2.4.4 User Documentation (11 Languages)

No.	Description	Product Requirement
1	Explorer Headset User Guide	Detailed product functionality information
2	Explorer series safety/warning booklet	Packed with headset safety information.

2.4.5 Firmware

No.	Description	Product Requirement
1	Bluetooth v2.0 + EDR	Support
2	Bluetooth v1.2	Support
3	Hands-free profile	Support
4	Headset profile	Support

2.4.6 User Interface Requirements

No.	Description	Product Requirement
1	Visual indicators	2-color LED (blue and red)
2	Audible indicators	Per Plantronics MMI spec
3	Headset controls	Per Plantronics MMI spec (answer/end, power, volume up, down and mute)