



Customer Release Note

AirPrime BC127 Melody 7.1



SIERRA
WIRELESS

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Document History

Version	Date	Updates
1.0	May 21, 2018	Melody 7.1 Production release
2.0	June 04, 2018	Added additional tool references
3.0	June 26, 2018	Melody 7.1 Release Note updated to cover releases from 6.1.5



Contents

CONTENTS	4
LIST OF TABLES	5
1. INTRODUCTION	6
1.1. Document Scope	6
1.2. Document Audience	6
1.3. New Features/Enhancements	6
2. ABBREVIATIONS AND DEFINITIONS	7
3. RELATED DOCUMENTATION	8
4. COMPATIBILITY	9
5. SOFTWARE RELEASE DESCRIPTION	10
5.1. Release Identification	10
5.2. Software Tools Versions	10
6. SOFTWARE CHANGES DESCRIPTION	11
6.1. Validated Corrections/Improvements	11
6.2. Interface Changes	13
6.2.1. Commands	13
6.2.2. Configuration	13
6.2.3. Notifications	14
7. TROUBLESHOOTING	15
8. CERTIFICATION DESCRIPTION	16
9. RESTRICTIONS AND ADDITIONAL INFORMATION	17



List of Tables

Table 1.	New Features/Enhancements	6
Table 2.	Abbreviations and Definitions	7
Table 3.	Related Documentation	8
Table 4.	Hardware Compatibility	9
Table 5.	Software Compatibility	9
Table 6.	Firmware Release Information	10
Table 7.	Software Tools Versions	10
Table 8.	Validated Corrections/Improvements	11
Table 9.	Commands	13
Table 10.	Configuration	13
Table 11.	Notifications	14
Table 12.	Certifications	16
Table 13.	Restrictions and Additional Information	17



1. Introduction

1.1. Document Scope

This document describes AirPrime BC127 firmware release Melody 7.1 and incorporates all changes since Melody 6.1.5.

1.2. Document Audience

This release note may be distributed to all direct and indirect customers.

1.3. New Features/Enhancements

Table 1. New Features/Enhancements

Feature	Description
AGHFP	HFP remote volume control feature (REMOTE_VOLUME command).
AGHFP	Add HSP Audio Gateway (AG) role support.
BA	Add Broadcast Audio support (on BA release only).
BLE	Update BC Smart support (Remote command compatibility with BX310x module)
BLE	Update BC Smart support (Remote command compatibility with BX310x module)
BLE	BLE bonding support (unauthenticated encryption and authenticated encryption).
BLE	BLE simultaneous client/server role support (Peripheral and Central).
BLE	Read local BLE address (VERSION command or LOCAL_ADDR config).
Charger	Module does not reset on charger attach.
General	Module not in connectable and discoverable state at power on by default anymore (see BT_STATE command and BT_STATE_CONFIG config).
IAP	Add config to select supported iAP2 features (App Launch and HID Headset Remote)
IAP	Add config parameter to select supported iAP2 features (App Launch and HID Headset Remote).
MAP	New command MAP_GET_MSG to send a request to retrieve a message.
SPP	Support up to 3 SPP connections (previously limited to 2).



2. Abbreviations and Definitions

Table 2. Abbreviations and Definitions

Abbreviation/Acronym	Definitions
A2DP	Advanced Audio Distribution Profile
AVRCP	Audio/Video Remote Control Profile
BA	Broadcast Audio
BLE	Bluetooth® Low Energy
BR	Basic Rate
BT	Bluetooth®
EDR	Enhanced Data Rate
GPIO	Generic Programmable Input / Output
HFP	Hands-Free Profile
HID	Human Interface Device Profile
I/O	Input / Output
IAP	iPod Accessory Protocol
LED	Light-emitting diode
MAP	Message Access Profile
MFI	“Made for iPhone/iPod/iPad” license
PBAP	Phone Book Access Profile
SPP	Serial Port Profile
TWS	True Wireless Stereo
UART	Universal Asynchronous Receiver Transmitter



3. Related Documentation

Table 3. Related Documentation

Ref. #	Doc. #	Rev.	Document title
[1]	41112426	1	Melody Audio 7 User Guide



4. Compatibility

Table 4. Hardware Compatibility

AirPrime Compatibility List
BC127, BC127-EXT, BC127-HD, BC127-EXT-HD

Table 5. Software Compatibility

Component	Version
N/A	N/A



5. Software Release Description

5.1. Release Identification

Table 6. Firmware Release Information

Component	Version
Maturity / Maturity ID	Melody 7.1
Date of generation	May 21, 2018
IMEI SV	N/A
Baseline version	Melody 7
Firmware images - file and identification information	1526921906_Melody_7_1_STANDARD 1526918985_Melody_7_1_MFI 1526923344_Melody_7_1_BA 1526925062_Melody_7_1_HD

5.2. Software Tools Versions

Table 7. Software Tools Versions

S/W Tools Name	Version	Resource file
BC127 aptX/cVc Demo Updater	V1.5.0	
BC127 Melody BLE db gen	Rev c	
BC127 USB Demo App	1.2	
Melody DFU Tool	V5.0.0	melody-updater-v5.0.0.0.zip
Melody Flash Tool	V2.1	MelodyFlash v2.1.zip



6. Software Changes Description

6.1. Validated Corrections/Improvements

Table 8. Validated Corrections/Improvements

ID	Description	Impacted Domain/Sub-Domain	Fixed in
BC127-20	Fix AGHFP audio parameters negotiation	HFP-AG	6.1.5
BC127-22	Update BLE default advertising flag (Dual mode host and controller when random address is disabled)	BLE peripheral mode	6.1.8
BC127-23	Print READY prompt only after all profiles init	General	6.1.8
BC127-26	Fix inquiry reports Bluetooth name as "unknown"	Inquiry	6.1.8
BC127-32	Fix HFP audio ESCO drift with multiconnections	HFP audio	6.1.8
BC127-33	Update HFP AT command/notification	HFP	7.0
BC127-36	Fix pairing issue when HFP is disabled	Pairing	6.1.8
BC127-45	Fix autoconnection does not stop after max unsuccessful attempts is reached (see AUTOCONN and MAX_REC config)	Autoconnection	6.1.8
BC127-47	Remove automatic App Launch request after connection	IAP	6.1.8
BC127-48	Fix OPEN command does not return an error is an A2DP connection is unsuccessful (device not in range for example)	A2DP	6.1.8
BC127-56	Fix PROFILES config (3 connections) corrupting the unit	General	6.1.8 RC2
BC127-57	Fix ERROR 0x1002 when VPADS is 3.3V	IAP	6.1.8 RC2 MFI
BC127-58	Fix BC127 stays in CONNECTING mode if remote BLE device is not present	BLE	6.1.8 RC2
BC127-61	Incorrectly stored IAP config	IAP	6.1.8 RC3 MFI
BC127-62	BC127 cannot be seen while being in advertising state	BLE	6.1.8 RC3
BC127-63	Fix bad character on UART in Deep Sleep mode.	Deep sleep	7.0.0 B1
BC127-64	Deep sleep does not work on MFI builds	Deep sleep	6.1.8 RC3 MFI
BC127-67	Add config to select iAP2 supported features	IAP	6.1.8 RC3 MFI
BC127-68	Add config to select iAP2 supported features.	IAP	6.1.8 RC3
BC127-69	Update AGHFP codec negotiation updated.	AGHFP	7.0.0 B1
BC127-70	Fix AVRCP playback control (Play, Pause.) with A2DP Source.	A2DP	7.0.0 B1
BC127-72	Fix autoconnection when remote device connects.	Autoconnection	7.0.0 B1

ID	Description	Impacted Domain/Sub-Domain	Fixed in
BC127-77	Disable iAP Multiple EA session support when iAP multiconnection not enabled.	IAP	7.0.0 B1
BC127-82	Fix ROLE and RSSI commands with an AGHFP link ID.	AGHFP	7.0.0 B1
BC127-83	Update POWER OFF command returns ERROR if sent within 3 seconds after power on.	General	7.0.0 B1
BC127-84	Fix UNPAIR command does not close link.	General	7.0.0 B1
BC127-86	High Speed and iOS Sleep Issue	IAP	7.0.0 RC1
BC127-88	Fix BC_SMART_CONFIG missing last parameter.	BC Smart	7.0.0 B1
BC127-79	AGHFP separate volume control	AGHFP	7.0.0 B2
BC127-82	RSSI command does not work with an AGHFP link	AGHFP	7.0.0 B2
BC127-93	IAP accessory name restricted in length	IAP	7.0.0 B2
BC127-94	Escape sequence (\$\$\$\$) does not always exit BLE data mode	BLE	7.0.0 B2
BC127-95	No LED indications when BT Classic is off	LED	7.0.0 B2
BC127-96	Support BLE pairing/authentication	BLE	7.0.0 RC1
BC127-97	Add command to show local BLE address	BLE	7.0.0 B2
BC127-98	Remove unused configuration parameters	Config	7.0.0 B2
BC127-106	Support 3 SPP connections	SPP	7.0.0 B2
BC127-110	Link loss HFP cannot be removed	HFP	7.0.0 B2
BC127-111	Profile disconnection when charger is plugged	Charger	7.0.0 RC1
BC127-112	INQUIRY command with a name filter does not work	Inquiry	7.0.0 B2
BC127-113	TWS profile not compatible between version 6.1.8RC3 and 7.0.0B1	TWS	7.0.0 B2
BC127-115	AVRCP Meta Data are not received	AVRCP	7.0.0 B2
BC127-116	Simultaneous BLE Client/Server	BLE	7.0.0 RC1
BC127-118	Not able to use ROUTE cmd for HFP link when it is not in ACTIVE state	HFP	7.0
BC127-123	Setting BT_VOL_CONFIG returns an error	Config	7.0.0 RC1
BC127-124	linkID not present in AVRCP_MEDIA events	AVRCP	7.0.0 RC1
BC127-125	Issue with MUSIC_META_DATA	AVRCP	7.0.0 RC1
BC127-128	Disable CAPSENSE feature	CAPSENSE	7.0.0 RC1
BC127-129	Audio fades out when switching sources	A2DP profile	7.1 RC1
BC127-151	TONE command resets the module if HFP is disabled	Tones	7.1
BC127-152	ADVERTISING command should return an error if Broadcast Audio is enabled	BLE	7.1
BC127-153	AGHFP fails to auto-connect	Auto-connection	7.1

6.2. Interface Changes

6.2.1. Commands

Table 9. Commands

Name	Comment	Changed in
IAP_PARAMS	iap2_features parameters added	6.1.8 RC3 MFI
BLE_SECURITY	New command and notification for BLE pairing and encryption request.	7.0.0 RC1
CONNECTABLE, DISCOVERABLE	CONNECTABLE and DISCOVERABLE commands replaced by BT_STATE command.	7.0.0 B1
GET_TX_POWER	Replaced by TX_POWER command.	7.0
INQUIRY	Default timeout set to 5 and max number of result set to 0 (unlimited) instead of 16.	7.0
MAP_GET_MSG	New command added.	7.0
READ_AFH_MAP	Replaced by AFH_MAP command.	7.0
REMOTE_VOLUME	New command added.	7.0.0 B2
SET_AFH_MAP	Replaced by AFH_MAP command.	7.0
SET_TX_POWER	Replaced by TX_POWER command.	7.0
VERSION	Add BLE local address added.	7.0.0 B2
ASSOCIATION	New Broadcast Audio association command.	7.1 B1
BROADCAST	New Broadcast Audio start/stop command.	7.1 B1
ROUTE	Add special case with value 7 for Broadcast Audio (BA release only).	7.1 B1
STATUS	Add Broadcast Audio state (BA release only).	7.1 B1

6.2.2. Configuration

Table 10. Configuration

Name	Comment	Changed in
BLE_CONFIG	<role> parameter removed. <adv mode> parameter added. Default local MTU increased to 80.	7.0.0 RC1
BLE_CONN_PARAMS	Default conn interval min and conn attempt timeout values increased.	7.0.0 B2
BT_VOL_CONFIG	Default A2DP volume now in percentage. Default value is 60.	7.0.0 B2
CONN_TO	Configuration removed.	7.0.0 B2
DISCOVERABLE	DISCOVERABLE config replaced by BT_STATE_CONFIG config.	7.0.0 B1
ENABLE_CAPSENSE	Configuration removed.	7.0.0 RC1
GPIO_CONFIG	Analog PIO removed.	7.0.0 B2
IAP	Change default Model name and protocol string.	7.0.0
IAP_PARAMS	iap2_features parameters added.	7.0.0 B1

Name	Comment	Changed in
LOCAL_ADDR	Add BLE local address added.	7.0.0 B2
BA_CONFIG	New Broadcast Audio configuration.	7.1 B1
HFP_CONFIG	Add <ag_uses_hsp> boolean parameter.	7.1 RC1

6.2.3. Notifications

Table 11. Notifications

Name	Comment	Changed in
AT	<CR> and <LF> characters are parsed and removed from the AT notification.	7.0
AVRCP_MEDIA	<link ID> parameter added to the notification.	7.0.0 RC1
BLE_PAIR	New notification for BLE pairing.	7.0.0 RC1
MAP_NEW_SMS	Report added to the notification. The request to retrieve the message is not sent automatically. The user can send the request with MAP_GET_MSG command,	7.0
MAP_MSG_BEGIN, MAP_MSG_END	Replaced by MAP_GET_MSG notification.	7.0
PB_PULL_START, PB_PULL_END, PB_PULL_OK	Replaced by PB_PULL notification.	7.0
ASSOCIATION	New Broadcast Audio association notification.	7.1 B1
ASSOCIATION_IN_PROGRESS	New Broadcast Audio association notification.	7.1 B1
BA_BROADCASTER_START	New Broadcast Audio notification.	7.1 B1
BA_BROADCASTER_STOP	New Broadcast Audio notification.	7.1 B1
BA_RECEIVER_START	New Broadcast Audio notification.	7.1 B1
BA_RECEIVER_STOP	New Broadcast Audio notification.	7.1 B1
CALL_ACTIVE	Profile string removed (redundant with link ID).	7.1 RC1
CALL_DIAL	Profile string removed (redundant with link ID).	7.1 RC1
CALL_END	Profile string removed (redundant with link ID).	7.1 RC1
CALL_IDLE	Replaced by CALL_END.	7.1 RC1
CALL_INCOMING	Profile string removed (redundant with link ID).	7.1 RC1
CALL_MEMORY	Profile string removed (redundant with link ID).	7.1 RC1
CALL_OUTGOING	Profile string removed (redundant with link ID).	7.1 RC1
CALL_REDIAL	Profile string removed (redundant with link ID).	7.1 RC1
DTMF	Profile string removed (redundant with link ID).	7.1 RC1



7. Troubleshooting

Please contact customer service for support and debugging information.



8. Certification Description

The following table summarizes the certifications passed for this release.

Table 12. Certifications

Product	Version	QDID
BT SiG Qualification	Version 5.0	112978



9. Restrictions and Additional Information

This section presents additional information or restrictions that must be taken into account. Issues are sorted by order of ID.

Table 13. Restrictions and Additional Information

ID	Description (What/When)	Impacted Domain/Sub-Domain
BC127-158	[BC127] SPP_UUID config overwrite SSP_CAPS	SPP
BC127-159	BC127 reset with config command over SPP	SPP
BC127-160	Set empty advertising data resets the module	BLE
BC127-161	Set HID descriptor resets the module instead of returning an error	BLE
BC127-163	SCAN and INQUIRY results RSSI value is in dBm and not dB	BT
BC127-166	BLE auto advertising config does not work	BLE