TEXAS INSTRUMENTS

Technical Document - Confidential

GSM PROTOCOL STACK

G23

VIB-VIBRATOR

DRIVER INTERFACE

Document Number:	8415.006.99.004
Version:	0.5
Status:	Draft
Approval Authority:	
Creation Date:	1998-Sep-11
Last changed:	2015-Mar-08 by XGUTTEFE
File Name:	8415_006.doc

Important Notice

Texas Instruments Incorporated and/or its subsidiaries (TI) reserve the right to make corrections, modifications, enhancements, improvements, and other changes to its products, software and services at any time and to discontinue any product, software or service without notice. Customers should obtain the latest relevant information during product design and before placing orders and should verify that such information is current and complete.

All products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment. TI warrants performance of its hardware products to the specifications applicable at the time of sale in accordance with TI's standard warranty. Testing and other quality control techniques are used to the extent TI deems necessary to support this warranty. Except where mandated by government requirements, testing of all parameters of each product is not necessarily performed.

TI assumes no liability for applications assistance or customer product design. Customers are responsible for their products and applications using TI products, software and/or services. To minimize the risks associated with customer products and applications, customers should provide adequate design, testing and operating safeguards.

Any access to and/or use of TI software described in this document is subject to Customers entering into formal license agreements and payment of associated license fees. TI software may solely be used and/or copied subject to and strictly in accordance with all the terms of such license agreements.

Customer acknowledges and agrees that TI products and/or software may be based on or implement industry recognized standards and that certain third parties may claim intellectual property rights therein. The supply of products and/or the licensing of software does not convey a license from TI to any third party intellectual property rights and TI expressly disclaims liability for infringement of third party intellectual property rights.

TI does not warrant or represent that any license, either express or implied, is granted under any TI patent right, copyright, mask work right, or other TI intellectual property right relating to any combination, machine, or process in which TI products, software or services are used.

Information published by TI regarding third–party products, software or services does not constitute a license from TI to use such products, software or services or a warranty, endorsement thereof or statement regarding their availability. Use of such information, products, software or services may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

No part of this document may be reproduced or transmitted in any form or by any means, electronically or mechanically, including photocopying and recording, for any purpose without the express written permission of TI.

Change History

Date	Changed by	Approved by	Version	Status	Notes
1998-Sep-11	LM et al.		0.1		1
1999-Mar-23	LM et al.		0.2		
1999-Mar-25	MS et al.		0.3		
2000-Feb-1	OSE et al.		0.4		
2003-May-13	XINTEGRA		0.5	Draft	

Notes:

1. Initial version

Table of Contents

List of Figures and Tables

List of References

[ISO 9000:2000]   International Organization for Standardization. Quality management systems - Fundamentals and vocabulary. December 2000

1.1 References

[C_8415.0026]   8415.026.99.012; March 19, 1999
                       Generic Driver Interface – Functional Specification; Condat

TEXAS INSTRUMENTS

2 Introduction

G23 is a software package implementing Layers 2 and 3 of the ETSI-defined GSM air interface signaling protocol, and as such represents the part of a GSM mobile station's protocol software which is both, platform and manufacturer independent. Therefore, G23 can be viewed as a building block providing standardized functionality through generic interfaces for easy integration.

The G23 suite of products consists of the following items:

- Layers 2 and 3 for speech & short message services,
- Layers 2 and 3 for fax & data services,
- Application Control Interface,
- Slim MMI [02.30] and
- Test and integration support tools.

This document describes the functional interface of the G23 vibrator device driver interface. This driver is used to control a mobile built-in vibrator.

3 Interface description of VIB driver

3.1 Data types

Name	Description
-	-

3.2 Constants

Name	Description
VIB_STATUS_ON	Vibrator is active
VIB_STATUS_OFF	Vibrator is inactive

3.3 Functions

Name	Description
vib_Init	Initialization of EMI
vib_Exit	Termination of EMI
vib_SetStatus	Change the status of the vibrator
vib_GetStatus	Retrieve the status of the vibrator

TEXAS INSTRUMENTS

3.3.1 vib_Init – Driver initialization

Definition:

```
U8 vib_Init
(
    drv_SignalCB_Type in_SignalCBPtr
) ;
```

Parameters:

Name	Description
in_SignalCBPtr	This parameter is reserved for future use.

Return values:

Name	Description
DRV_OK	Initialization successful
DRV_INITIALIZED	Driver already initialized
DRV_INITFAILURE	Initialization failed

Description

The function initializes the internal data of the driver. The function returns DRV_INITIALIZED if the driver has already been initialized and is ready to be used or is already in use. In the case of an initialization failure, i.e. the driver cannot be used, the function returns DRV_INITFAILURE.

TEXAS INSTRUMENTS

3.3.2 vib_Exit – De-initialization of the driver

Definition:

```
void vib_Exit
(
    void
) ;
```

Parameters:

Name	Description
-	-

Return values:

Name	Description
-	-

Description

The function is called when the driver functionality is no longer needed. The function de-allocates the resources.

TEXAS INSTRUMENTS

3.3.3 vib_SetStatus – Change the status of the vibrator

Definition:

```
U8 vib_SetStatus
(
    U8                    in_NewStatus
) ;
```

Parameters:

Name	Description
in_NewStatus	New status of the driver respectively of the device

Return values:

Name	Description
DRV_OK	Function successful
DRV_INVALID_PARARMS	One or more parameters are out of range or not valid

Description

This function is used to change the status of the driver, respectively of the vibrating device. The vibrator can be switched on or off. If the function succeeds, the driver returns DRV_OK. If the driver does not accept the new status value, it returns DRV_INVALID_PARAMS. VIB_STATUS_ON and VIB_STATUS_OFF are valid status values.

Texas Instruments

3.3.4 vib_GetStatus – Retrieve the status of the vibrator

Definition:

```
U8 vib_GetStatus
(
    void
) ;
```

Parameters:

Name	Description
-	-

Return values:

Name	Description
VIB_STATUS_ON	Vibrator is active
VIB_STATUS_OFF	Vibrator is inactive

Description

This function retrieves the status of the driver, respectively of the vibrating device. The vibrator may be active (VIB_STATUS_ON) or inactive (VIB_STATUS_OFF).

Texas Instruments

Appendices

A.   Acronyms

DS-WCDMA   Direct Sequence/Spread Wideband Code Division Multiple Access

B.   Glossary

International Mobile Tel-ecommunication 2000 (IMT-2000/ITU-2000) Formerly referred to as FPLMTS (Future Public Land-Mobile Telephone System), this is the ITU's specification/family of standards for 3G. This initiative provides a global infrastructure through both satellite and terre-strial systems, for fixed and mobile phone users. The family of standards is a framework comprising a mix/blend of systems providing global roam-ing. <URL: http://www.imt-2000.org/>

TEXAS INSTRUMENTS