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Letter of Volatility for Speechline Digital Wireless

Sennheiser electronic SE & Co. KG understands the importance of security and data protection for our devices when they are applied in sensitive areas. In support of this, Sennheiser makes the following declarations concerning the memory technologies used in these products.

- None of the devices of this LoV stores digital audio data after power off or reboot
- None of the devices of this LoV has non-volatile memory in audio data path. All temporary stored audio data for processing is in volatile memory only which is not accessible by the user in normal operation.
- The document is valid for all frequency versions

Content

1. SL MCR 2/4 DW

Type and size of	32KB L1 SRAM I-cache
Usage	ARM core instruction cache at i.MX6ULL
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	32KB L1 SRAM D-cache
Usage	ARM core data cache at i.MX6ULL
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	128KB L2 SRAM cache
Usage	ARM core cache at i.MX6ULL
Volatility	Volatile
Location	Integral component of SoC for every core located on mainboard
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	128KB SRAM
Usage	i.MX6ULL internal RAM
Volatility	Volatile
Location	Integral component of SoC located on the mainboard
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	DDR3 4GBIT 256M x 16
Usage	System RAM, OS
Volatility	Volatile
Location	One piece on mainboard
Removable	No. Permanently soldered to mainboard
Process of clearing	Cleared upon power-down, non-recoverable

User modifiable	No
General Use	Not available for general use

Type and size of	**Flash 64 MByte**
Usage	Operating system and persistent user configuration
Volatility	Non-volatile
Location	On mainboard
Removable	No. Permanently soldered to mainboard
Process of clearing	Factory reset clears all user configuration data
User modifiable	Persistent user settings can be modified
General Use	Not available for general use in normal operating modes

Type and size of	**16+4KB SRAM Cache/Trace**
Usage	CR16 core instruction/data cache at SC14441
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	**2KB SRAM**
Usage	Gen2DSP RAM at SC14441
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	**1.25KB SRAM**
Usage	DIP RAM at SC14441
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	**32KB SRAM**
Usage	Shared RAM at SC14441
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC

Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	**32M-BIT Serial SPI Flash**
Usage	Operating system and persistent system configuration
Volatility	Non-volatile
Location	On mainboard
Removable	No. Permanently soldered to mainboard
Process of clearing	Clearing this memory is not possible
User modifiable	No
General Use	Not available for general use

Type and size of	**48KB L1 SRAM I-cache**
Usage	Blackfin core instruction cache at BF512
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	**64KB L1 SRAM D-cache**
Usage	Blackfin core data cache at BF512
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	**4KB SRAM**
Usage	BF512 internal RAM
Volatility	Volatile
Location	Integral component of SoC located on the mainboard
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	**4MB 2M x 16 SRAM**
Usage	External RAM for BF512

Volatility	Volatile
Location	Four pieces on mainboard
Removable	No. Permanently soldered to mainboard
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	DDR2 512MBIT 32M x 16
Usage	System RAM, OS and Audio Buffers for Broadway
Volatility	Volatile
Location	One piece on mainboard
Removable	No. Permanently soldered to mainboard
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	64M-BIT Serial SPI Flash
Usage	Operating System for Broadway
Volatility	Non-volatile
Location	On mainboard
Removable	No. Permanently soldered to mainboard
Process of clearing	Clearing this memory is not possible
User modifiable	No
General Use	Not available for general use

2. SL Rack Receiver DW

Type and size of	128KB SRAM
Usage	STM32 internal RAM
Volatility	Volatile
Location	Integral component of SoC located on the mainboard
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	4KB SRAM
Usage	STM32 internal RAM for special access
Volatility	Volatile
Location	Integral component of SoC located on the mainboard
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	Flash 1 MByte
Usage	STM32 internal for Operating system
Volatility	Non-volatile
Location	On mainboard
Removable	No. Permanently soldered to mainboard
Process of clearing	Clearing this memory is not possible
User modifiable	Persistent user settings can be modified
General Use	Not available for general use in normal operating modes

Type and size of	2-Mbit I²C Serial EEPROM
Usage	Production data and persistent user configuration
Volatility	Non-volatile
Location	On mainboard
Removable	No. Permanently soldered to mainboard
Process of clearing	Clearing of production data is not possible, Factory reset clears all user configuration data
User modifiable	No
General Use	Not available for general use

Type and size of	16+4KB SRAM Cache/Trace
Usage	CR16 core instruction/data cache at SC14441
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	2KB SRAM
Usage	Gen2DSP RAM at SC14441
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	1.25KB SRAM
Usage	DIP RAM at SC14441
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	32KB SRAM
Usage	Shared RAM at SC14441
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	32M-BIT Serial SPI Flash
Usage	Operating system and persistent user configuration
Volatility	Non-volatile
Location	On mainboard
Removable	No. Permanently soldered to mainboard
Process of clearing	Clearing this memory is not possible
User modifiable	No
General Use	Not available for general use

Type and size of	48KB L1 SRAM I-cache
Usage	Blackfin core instruction cache at BF512
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	64KB L1 SRAM D-cache
Usage	Blackfin core data cache at BF512
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	4KB SRAM
Usage	BF512 internal RAM
Volatility	Volatile
Location	Integral component of SoC located on the mainboard
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	4MB 2M x 16 SRAM
Usage	External RAM for BF512
Volatility	Volatile
Location	Four pieces on mainboard
Removable	No. Permanently soldered to mainboard
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

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3. SL Handheld DW, SL Bodypack DW, SL Tablestand DW, SL Boundary DW

Type and size of	16+4KB SRAM Cache/Trace
Usage	CR16 core instruction/data cache at SC14441
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	2KB SRAM
Usage	Gen2DSP RAM at SC14441
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	1.25KB SRAM
Usage	DIP RAM at SC14441
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	32KB SRAM
Usage	Shared RAM at SC14441
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	32M-BIT Serial SPI Flash
Usage	Operating system and persistent user configuration
Volatility	Non-volatile
Location	On mainboard
Removable	No. Permanently soldered to mainboard
Process of clearing	Clearing this memory is not possible

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User modifiable	No
General Use	Not available for general use

Type and size of	32KB L1 SRAM I-cache
Usage	Blackfin core instruction cache at BF592
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	32KB L1 SRAM D-cache
Usage	Blackfin core data cache at BF592
Volatility	Volatile
Location	Integral component of SoC (Mainboard)
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	4KB SRAM
Usage	BF592 internal RAM
Volatility	Volatile
Location	Integral component of SoC located on the mainboard
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

4. CHG 2N, CHG 4N

Type and size of	128KB SRAM
Usage	STM32 internal RAM
Volatility	Volatile
Location	Integral component of SoC located on the mainboard
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	4KB SRAM
Usage	STM32 internal RAM for special access
Volatility	Volatile
Location	Integral component of SoC located on the mainboard
Removable	No, integral component of the SoC
Process of clearing	Cleared upon power-down, non-recoverable
User modifiable	No
General Use	Not available for general use

Type and size of	Flash 1 MByte
Usage	STM32 internal for Operating system
Volatility	Non-volatile
Location	On mainboard
Removable	No. Permanently soldered to mainboard
Process of clearing	Clearing this memory is not possible
User modifiable	Persistent user settings can be modified
General Use	Not available for general use in normal operating modes

Type and size of	2-Mbit I²C Serial EEPROM
Usage	Production data and persistent user configuration
Volatility	Non-volatile
Location	On mainboard
Removable	No. Permanently soldered to mainboard
Process of clearing	Clearing of production data is not possible, Factory reset clears all user configuration data
User modifiable	No
General Use	Not available for general use

Type and size of	16M-BIT Serial SPI Flash
Usage	Persistent data for update procedure for portable devices
Volatility	Non-volatile
Location	On mainboard
Removable	No. Permanently soldered to mainboard
Process of clearing	Clearing this memory is not possible
User modifiable	No
General Use	Not available for general use