Adaptive Digital Technologies, Inc.

Caller ID Voice Coder

PRODUCT DESCRIPTION

Adaptive Digital's Caller ID software generates and detects the Calling Number Delivery signal specified in Telcordia (Bellcore) GR-30-CORE and ETSI ETS 300 778 standards. The transmitter can be configured to operate in either type 1 mode (signal transmitted between ring bursts) or type 2 (signal generated in absence of ring bursts).

FEATURES

- Conforms to Telcordia (Bellcore) GR-30-CORE
- Conforms to ETSI ETS 300 778
- Supports both transmit and receive functions
- Supports multiple channel

AVAILABLILITY

ADT Caller ID is available on the following Platforms: Other configurations are available upon request.

Product Number	Platform	Memory Model	Endian	Code Gen Tool Version
ADT_callerID_c64x	TI TMS320C64x	Mml3	Little	NR
ADT_callerID_c55x	TI TMS320C55x	Large	Little	NR
ADT_callerID_c54x	TI TMS320C54x	Far	N/A	NR
ADT_callerID _cortex-a8 / a9 / a15	Cortex-A8/A9/A15	N/A	Little	GCC (2011_09-70_Linux)

Endian, byte order: "Little Endian" means that the low-order byte of the number is stored in memory at the lowest address, and the high-order byte at the highest address. "Big Endian" means that the high-order byte of the number is stored in memory at the lowest address, and the low-order byte at the highest address.

Acronyms
Mm – Memory Model: Memory Model is specific to Texas Instruments processors.
TI – Texas Instruments
NR – Not Recorded

SPECIFICATIONS

TI TMS320

C64x
CPU UTILIZATION & MEMORY REQUIREMENTS
All Memory usage is given in units of byte.

ADT Type 2 CID (Off-hook data transmission)				
Algorithm	MIPS	Program Memory	Data Memory	Per Channel Data Memory
Tx – Full Format	0.88	13654	4072	456
Rx	0.93	11040	1636	422

All Memory usage is given in units of byte.

ADT Type 1 CID (On-hook data transmission)				
Algorithm	MIPS	Program Memory	Data Memory	Per Channel Data Memory
Tx – Partial Format	(Init function) 0.04	2816	296	224
Tx – Full Format	(Init function) 0.69 0.63	4736	296	224
Rx	0.52	3552	296	192

Last update: 03/25/2011

C55x
CPU UTILIZATION & MEMORY REQUIREMENTS
All Memory usage is given in units of byte.

ADT Type 2 CID (Off-hook data transmission)				
Algorithm	MIPS	Program Memory	Data Memory	Per Channel Data Memory
Tx	0.85	6300	4032	464
Rx	1.44	4591	1656	440

All Memory usage is given in units of byte.

ADT Type 1 CID (On-hook data transmission)				
Algorithm	MIPS	Program Memory	Data Memory	Per Channel Data Memory
Tx – Partial Format	(Init function) 0.06	1394	296	232
Tx	1.4	2092	296	232
Rx	1.16	1439	296	208

Last update: 03/22/2011

C54x
CPU UTILIZATION & MEMORY REQUIREMENTS
All Memory usage is given in units of 16-bit word.

ADT Type 2 CID (Off-hook data transmission)				
Algorithm	MIPS	Program Memory	Data Memory	Per Channel Data Memory
Tx	1.15	1177	2016	188
Rx	2.8	2738	828	162

All Memory usage is given in units of 16-bit word.

ADT Type 1 CID (on-hook data transmission)				
Algorithm	MIPS	Program Memory	Data Memory	Per Channel Data Memory
Tx – Partial Format	(Init function) 0.05	934	148	100
Tx	0.75	1409	148	100
Rx	2.4	875	148	98

Last update: 03/22/2011

ARM® Devices

CID Cortex-A8/9/A15
MEMORY REQUIREMENTS
All Memory usage is given in units of bytes.

Type I caller ID:

	Program	Data	Scratch	Per Channel
TX CID transmit	8784	296		224
RX CID receive				192

ARM® Devices

CID Cortex-A8/9/A15
MEMORY REQUIREMENTS

Type II caller ID:

	Program	Data	Scratch	Per Channel
TX CID transmit	16368	1336		224
RX CID receive				192
Tone Detector	6480	3792	400	168
Tone Generator	4000	300		64

CID Cortex-A8/9/A15
CPU UTILIZATION

Type I caller ID:

	MIPS
TX CID transmit function	0.5
RX CID receive function	1.4

Type II caller ID:

	MIPS
TX CID transmit function	0.5
TX CID transmit detect ACK function	0.8
RX CID receive function	1.8
RX CID receive generate ACK function	0.2

FUNCTION

Type 1 and Type 2 Caller ID:

CIDTX_ADT_init(…)   CIDRX_ADT_init(…)

CIDTX_ADT_transmit(…)   CIDRX_ADT_receive(…)

CIDRX_ADT_parseMessage(…)

Additional Type 2 Caller ID:

CIDRX_ADT_genACK(…)   CIDTX_ADT_detACK(…)

CIDTX_ADT_signalACK(…)

CIDRX_ADT_config(…)   CIDRX_ADT_getConfigStatus(…)

Deliverables

The deliverable items are platform dependent. In general, there is one library. (Sometimes multiple variants of the library are included in the deliverables.) There are also header files, some of which are specific to the product and others are common across many of Adaptive Digital's products. Also included in the deliverables is product documentation, which includes a users guide and usually includes release notes and a data sheet. Sample/test code may be included as well.

Adaptive Digital is a member of the Texas Instruments Developer Network, and ARM Connected Community.

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