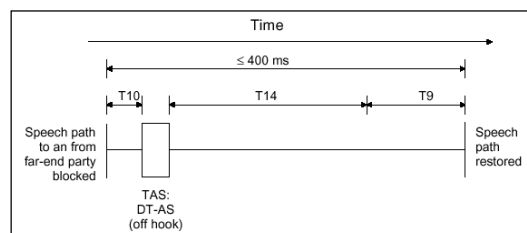


Caller ID Transmitter



Caller ID Transmitter

Analog caller ID is a local-access feature delivered to the customer-premises equipment by the local exchange carrier (LEC). It provides the called terminal equipment (TE) with the directory number and, optionally, the directory name of the calling party, along with the date and time. The data are delivered via a 1200-bps data modem or DTMF during the silent interval of the first ringing cycle for on-hook transmission or anytime for off-hook transmission.



The 60085 CID Transmitter allows the developer of analog access equipment to offer caller ID compatible with PTT specifications in much of the world. In some situations, the message delivery sequence must be coordinated with events outside the scope of the transmitter, such as loop reversals or ringing. The task that controls the CID Transmitter is aware of the timing of these events and provides a signal to the CID Transmitter to indicate when transmission must begin and end. For the off-hook transmission, the TAS (TE Alerting Signal) tone generation and timing are implemented by the CID transmitter. When needed, the Channel Seizure Signal (CSS) and Mark Signal will be generated by the CID transmitter.

The formatting of the data as well as checksum generation are handled by the controlling application and are outside of the scope of this document. Data input/output are via 16-bit linear PCM buffers.

The 60085 CID Transmitter allows the OEM to meet the requirements of the following standards:

1. GR-30-CORE, *LSSGR: Voiceband Data Transmission Interface Section 6.6*, Telcordia Technologies, December 1998.
2. ETS 300 659-1, *Public Switched Telephone Network (PSTN); Subscriber line protocol over the local loop for display (and related) services; Part 1 Onhook data transmission*, ETSI, February 1997.
3. ETS 300 659-2, *Public Switched Telephone Network (PSTN); Subscriber line protocol over the local loop for display (and related) services; Part 2: Off-hook data transmission*, ETSI, September 1997

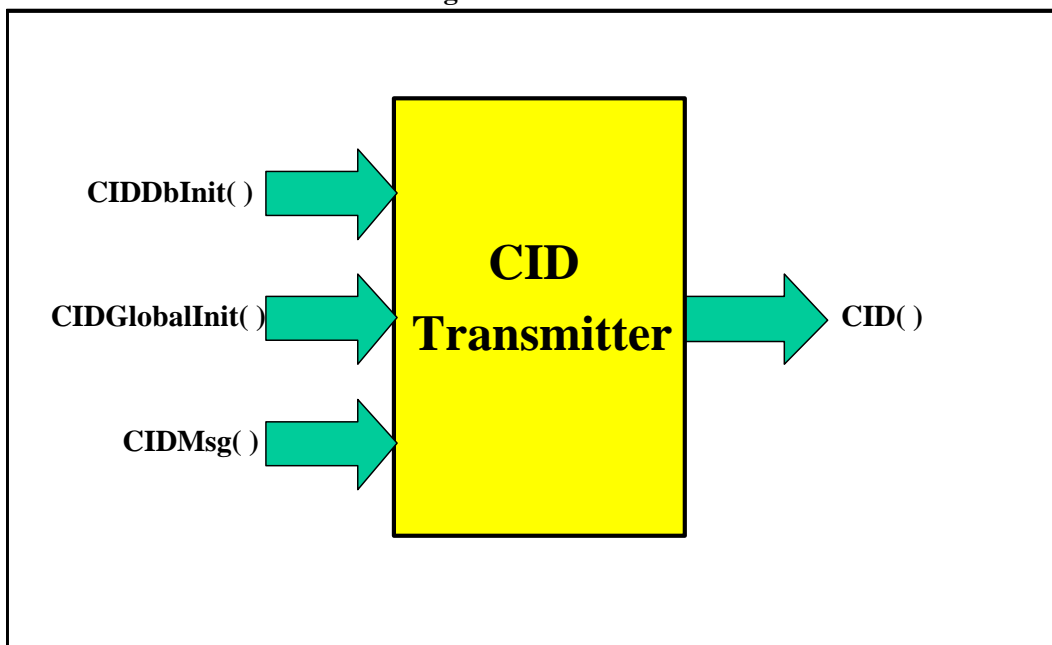
The Caller ID Transmitter provides the ability to transmit caller identification data, in both the on-hook and off-hook states. For the on-hook state, the algorithm implementation will be limited to that of data transmission during the first long silent period between two ring cycles. The implementation is compliant with both Telcordia and ETSI specifications. The following are the major differences between the two standards:

Differences Between Telcordia and ETSI Caller ID

Function	Telcordia specifications	ETSI specifications
FSK Modem frequencies	Mark = 1200 ± 12 Hz Space = 2200 ± 12 Hz	V.23 Mode 2 Mark = 1300 ± 10 Hz Space = 2100 ± 10 Hz
DT-AS Tone duration	80 – 85 ms	100 ms \pm 10 ms

The CID transmitter's external interface is defined by a simple four-function API as shown in the figure below. **CIDDbInit** initializes the CID transmitter database whereas **CIDGlobalInit** does the initialization of the global parameters. Commands and data are supplied to the CID transmitter by the **CIDMsg** function, which calls **cid_processControlEvent**. The output PCM data are generated by the **CID** function, which calls **cid_processMedia**.

Figure 1. External Interface



Features

- Fast detection
- Accurate
- Efficient resource utilization
- Easy-to-use interface

Ordering Information

- | | |
|------------|---------------------------------------|
| PN 60085 | C-Reference Source Code |
| PN 60085-1 | C-Reference plus TI TMS320C5400 |
| PN 60085-2 | C-Reference plus TI TMS320C6000 |
| PN 60085 | C-Reference plus ARC Cores ARCTangent |

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