

CTI METEOR

Single line Caller Display device for the PC

**General Information
for
OEM Applications
Software Developers**

CONTENTS

1.0 GENERAL	3
2.0 EXAMPLES OF DATA.....	3
3.0 CALLER DISPLAY DATA STRUCTURE	4
4.0 POWER LEADS	4
APPENDIX 1	
TYPICAL MESSAGE.....	5
APPENDIX 2	
PARAMETER DEFINITIONS	6
APPENDIX 3	
ADDITIONAL POINTS TO CONSIDER	7

1.0 GENERAL

^{CTI}METEOR is a device for decoding the Calling Line Identity Message from the telephone line and presenting it on a COM Port of a PC. It also detects dialled digits and the telephone going on/off hook.

The following information describes the operation of the device and gives some details about the presentation of the data. This will allow designers to provide turn-key applications.

ActiveCID, an ActiveX component is also available for use with the ^{CTI}Meteor. It can be pulled into software such as Visual Basic Professional, Visual FoxPro Professional etc. It handles all the following data and makes interfacing the hardware very simple.

2.0 EXAMPLES OF DATA

2.1 Ringing with no caller display

EVENT	MESSAGE
Ring	off-line <cr>
Ring	off-line <cr>

2.2 Caller display and ringing followed by answer and then hang-up

EVENT	MESSAGE
Caller display	caller display data
Ring	off-line <cr>
Ring	off-line <cr>
Answer	on-line <cr>
Hang-up	off-line <cr>

2.3 Off-hook, dial and hang-up

EVENT	MESSAGE
Off-hook	on-line <cr>
Dial 653265	653265
Hang-up	off-line <cr>

3.0 CALLER DISPLAY DATA STRUCTURE

The serial data is presented at a baud rate of 1200, with 1 start and 1 stop bit. The CDS message typically consists of the following.

Message type (always sent)	1 byte (= 80H. If not equal to 80H, then CDS can be ignored)
Message length (always sent)	1 byte (= all the bytes to follow, except the Checksum)
Parameter type	1 byte (description to follow)
Parameter length	1 byte (= x)
Parameter	x bytes (actual displayable information)
Parameter type	1 byte
Parameter length	1 byte (= y)
Parameter	y bytes (actual displayable information)
.... (more parameters)	
Checksum	1 byte (See Appendix 1 for a typical message)

4.0 POWER LEDS

The ^{CTI}METEOR is powered from the RS232 interface. When software that interfaces to it is run, (e.g. the supplied utility,) the red LED comes on to indicate that the unit is ready to receive messages. When a call comes in, the red LED flashes to indicate ringing. The green LED flashes briefly to indicate that data is being received. This can be a useful diagnostic, e.g. to check that the service has actually been switched on by BT, or that the telephone line is connected.

APPENDIX 1

TYPICAL MESSAGE

Following is a typical Caller ID message.

Byte (decimal)	Description
128	Message Type
34	Message Length
17	Call Type Parameter
1	Parameter length
1	Call type = 1 (Voice Call)
1	Date & Time Parameter
8	Parameter length = 8
49	1
48	0 (Month = 10)
49	1
48	0 (Day = 10)
48	0
51	3 (Hour = 3)
51	3
48	0 (Minutes = 30)
2	Calling Number parameter
10	Parameter length = 10
49	1
50	2
51	3
52	4
53	5
54	6
55	7
56	8
57	9
48	0 (Number = 1234567890)
7	Calling Name Parameter (Not currently sent)
7	Parameter length = 7
80	P
69	E
84	T
69	E
82	R
32	(Space)
82	R
161	Checksum

If the Windows Terminal program is used, then this type of data structure can be seen, received from ^{CTI}METEOR.

APPENDIX 2

PARAMETER DEFINITIONS

These are explained fully in BT specification SIN 227 (BT Analogue Caller Display Service - Service Description). A brief summary is presented here:

- | | | |
|------------|---|---------------|
| 2.1 | Call Type | 11H |
| | There are three call types defined: | |
| | Voice call | 01H |
| | Ring back when free | 02H |
| | Message waiting | 81H |
| 2.2 | Time & Date | 01H |
| | This parameter is always sent with a length of 8 and is structured as follows. (As long as the Call type is not message waiting, this can be assumed to be "real time" accurate to within 1 minute) | |
| | First 2 bytes | Month |
| | Next 2 bytes | Day |
| | Next 2 bytes | Hours |
| | Last 2 bytes | Minutes |
| 2.3 | Calling Line Number | 02H |
| | The maximum length of the number sent is 18 characters. Spaces and/or dashes are sent as delimiters. | |
| 2.4 | Reason for absence of number | 04H |
| | This parameter is set as follows: | |
| | WITHHELD | 50H (P ASCII) |
| | UNAVAILABLE | 4FH (O ASCII) |
| 2.5 | Calling Line Name | 07H |
| | This parameter is not currently sent with the callers name. However, international calls have "INTERNATIONAL" in this field, and some payphone calls have "PAYPHONE" in this field. | |
| 2.6 | Reason for absence of name | 08H |
| | This parameter is set as follows: | |
| | WITHHELD | 80H (P ASCII) |
| | UNAVAILABLE | 4FH (O ASCII) |
| 2.7 | Network Message System Status | 13H |
| | This parameter advises the number of messages in the proprietary BT service. A value greater than 1 means that there is 1 or more messages, and a value of 0 means that there are no more messages. | |

APPENDIX 3

ADDITIONAL POINTS TO CONSIDER

- 3.1 The parameters can be sent in any order.
- 3.2 Any or no parameters can be sent. e.g. typically parameter "Call Type" is sent as VOICE to indicate a normal call. This is not guaranteed.
- 3.3 Called Directory Number is of very little use, unless Call Divert is in operation. Even in this case, it will cause confusion to the most sophisticated user if presented visually. This is not sent at present and is best ignored if received.
- 3.4 Caller Name/Text is not sent at present and is not expected for another 1 to 2 years. However this remains the most useful feature of the Caller Display Service.
- 3.5 Calling Line Number and Reason for Absence is supposed to be mutually exclusive, i.e. it should not be logically possible to present a number and a reason for absence, e.g. withheld on the same call. However, BT do not exclude this as a condition. If this situation is faced, it is best to interpret the Reason for Absence and display this, rather than the number, to preserve privacy.