



ISDN ERROR CODES

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ISDN ERROR CODES

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REFERENCE

1 ISDN Error Codes

1.1 Overview

ISDN errors are reported in the **isdnCallHistoryTable**. Errors originating from the ISDN are reported in the **DSS1Cause** and **1TR6Causefc** fields, depending on which service you're using (Euro ISDN and National ISDN respectively). Errors originating locally on the BinTec router are reported in the **LocalCause** field.

1.2 Local Causes (BinTec router)

Local causes are reported in the **LocalCause** field of the **isdnCallHistoryTable**:

Possible Values	Meaning
<i>0x01</i>	ipi: Unknown primitive.
<i>0x02</i>	ipi: Outstate. Message has been sent at inappropriate state of call reference.
<i>0x03</i>	ipi: Mandatory information element (IE) missing.
<i>0x04</i>	ipi: IE not allowed.
<i>0x05</i>	ipi: IL_LOOK.

Possible Values	Meaning
<i>0x06</i>	ipi: No link or L2 error ISDN-cable is not connected, or ISDN-connection is not available or Layer 2 Connection can not be established See isdniftable for Layer 1 details (Layer1State=F7 means connected i.e. Layer 1 is available). You may also use the program bricktrace to display Layer 2 protocol .
<i>0x07</i>	ipi: All call references are used.
<i>0x08</i>	ipi: Provider has not enough memory.
<i>0x09</i>	ipi: Provider is not ready.
<i>0x0a</i>	ipi: Busy An attempt was made to switch off a busy provider.
<i>0x0b</i>	ipi: Channel busy.
<i>0x0c</i>	ipi: L3 timer for incoming calls: The call is received but nobody is responding to this call (please verify if the destination address and the LocalNumber of isdnndispatchtable are corresponding).
<i>0x0d</i>	ipi: L3 restart.
<i>0x0e</i>	ipi: L3 error.
<i>0x0f</i>	ipi: L1 error.
<i>0x10</i>	No controller available.
<i>0x11</i>	aAother application got the call.
<i>-1</i>	No information available.

Table A-1: **LocalCause**

1.3 DSS1 Causes (Euro ISDN)

DSS1 causes are reported in the **DSS1Cause** field of the **isdnCallHistoryTable**:

Possible Values	Meaning
<i>0x80</i>	Normal call clearing No error occurred.
<i>0x81</i>	Unallocated (unassigned) number This cause indicates that the destination, requested by the calling user cannot be reached because, although the number is in a valid format, it is not currently assigned (allocated).
<i>0x82</i>	No route to specified transit network This cause indicates that the equipment sending this cause has received a request to route the call through a particular transit network which it does not recognise. The equipment sending this cause does not recognise the transit network either, because the transit network does not exist or because that particular, while it does exist, does not service the equipment which is sending this cause. This cause is supported on a network-dependent basis.
<i>0x83</i>	No route to destination This cause indicates that the called user cannot be reached because the network through which the call has been routed does not serve the destination desired. This cause is supported on a network-dependent basis.
<i>0x86</i>	Channel unacceptable This cause indicates the channel most recently identified is not acceptable to the sending entity for use in this call.

Possible Values	Meaning
<i>0x87</i>	Call awarded & being delivered This cause indicates that the user has been awarded the incoming call, and that the incoming call is being connected to a channel already established to that similar calls (e.g. packet-mode X.25 virtual calls).
<i>0x90</i>	Normal call clearing This cause indicates that the call is being cleared because one of the users involved in the call has requested that the call be cleared.
<i>0x91</i>	User busy This cause is used when the called user has indicated the inability to accept another call.
<i>0x92</i>	User not responding This cause is used when a user does not respond to a call establishment message with either an alerting or connect indication within the prescribed period of time allocated.
<i>0x93</i>	No answer from user (user alerted) This cause is used when a user has provided an alerting indication but has not provided a connect indication within a prescribed period of time.
<i>0x95</i>	Call rejected This cause indicates that the equipment sending this cause does not wish to accept this call, although it could have accepted the call because the equipment sending this cause is neither busy nor incompatible.
<i>0x96</i>	Number changed This cause is returned to a calling user when the called party number indicated by the calling user is no longer assigned.

Possible Values	Meaning
<i>0x9a</i>	Non-selected user clearing This cause indicates that the user has not been awarded the incoming call.
<i>0x9b</i>	Destination out of order This cause indicates that the destination indicated by the user can not be reached because the interface to the destination is not functioning correctly. The term not functioning correctly indicates that signalling message was unable to be delivered to the remote user; e.g. a physical layer or data link layer failure at the remote user, user-equipment off-line.
<i>0x9c</i>	Invalid number format This cause indicates that the called user can not be reached because the called party number is not in a valid format or is not complete.
<i>0x9d</i>	Facility rejected This cause is returned when a facility requested can not be provided by the network.
<i>0x9e</i>	Response to STATUS ENQUIRY This cause included in the STATUS message when the reason for generating the STATUS message was the prior receipt of a STATUS ENQUIRY message.
<i>0x9f</i>	Normal, unspecified This caused is used to report a normal event only when no other cause in the normal class applies.

Table A-2: **DSS1Cause**

Resource unavailable class

Possible Values	Meaning
<i>0xa2</i>	No circuit/channel available This cause indicates that there is no appropriate circuit/channel presently available to handle the call.
<i>0xa6</i>	Network out of order This cause indicates that the network is not functioning correctly and that the condition is likely to last a relatively long period of time; e.g. immediately reattempting the call is not likely to be successful.
<i>0xa9</i>	Temporarily failure This cause indicates that the network is not functioning correctly and that the condition is not likely to last a long period of time; e.g. the user may wish to try another call attempt almost immediately.
<i>0xaa</i>	Switching equipment congestion This cause indicates that the switching equipment generating this cause is experiencing a period of high traffic.
<i>0xab</i>	Access Information discarded This cause indicates that the network could not deliver access information to the remote user as requested. i.e. a user-to-user information, low layer compatibility, high layer compatibility or subaddress as indicated in the diagnostic.
<i>0xac</i>	Requested circuit/channel not available This cause is returned when the circuit or channel indicated by the requesting entity cannot be provided by the other side of the interface.

Possible Values	Meaning
<i>0xaf</i>	Resources unavailable, unspecified This cause is used to report a resource unavailable event only when no other cause in the resource unavailable class applies.

Table A-3: **DSS1Cause** – Resource unavailable class**Service/option not available class**

Possible Values	Meaning
<i>0xb1</i>	Quality of service unavailable This cause is used to report that the requested quality of service, as defined in the ITU-T recommendation X.213, cannot be provided (e.g. throughput or transit delay cannot be supported).
<i>0xb2</i>	Requested facility not subscribed This cause indicates that the requested supplementary service could not be provided by the network because the user has not completed the necessary administrative arrangements with its supporting network.
<i>0xb9</i>	Bearer Capability not authorized This cause indicates that the user has requested a bearer capability which is implemented by the equipment which generated this cause but the user is not authorized to use.
<i>0xba</i>	Bearer Capability not presently available This cause indicates that the user has requested a bearer capability which is implemented by the equipment which generated this cause but which is not available this time.

Possible Values	Meaning
<i>0xbf</i>	Service or option not available, unspec. This cause is used to report a service or option not available event only when no other cause in the service or option not available class applies.

Table A-4: **DSS1Cause** – Service/option not available class**Service/option not implemented class**

Possible Values	Meaning
<i>0xc1</i>	Bearer capability not implemented This cause indicates that the equipment sending this cause does not support the bearer capability requested.
<i>0xc2</i>	Channel type not implemented This cause indicates that the equipment sending this cause does not support the channel type requested.
<i>0xc5</i>	Requested facility not implemented This cause indicates that the equipment sending this cause does not support the requested supplementary service.
<i>0xc6</i>	Only restricted digital info. bearer cap. is available This cause indicates that one equipment has requested an unrestricted bearer services but that the equipment sending this cause only supports the restricted version or the restated bearer capability.

Possible Values	Meaning
<i>0xcf</i>	Service or option not implemented, unspecified This cause is used to report a service or option not implemented event only when no other cause in the service or option not implemented class applies.

Table A-5: **DSS1Cause** – Service/option not implemented class

Invalid message class

Possible Values	Meaning
<i>0xd1</i>	Invalid call reference value This cause indicates that the equipment sending this cause has received a message with a call reference which is not currently in use on the user-network interface.
<i>0xd2</i>	Identified channel does not exist This cause indicates that the equipment sending this cause has received a request to use a channel not activated on the interface for a call. For example, if a user has subscribed to those channels on a primary rate interface numbered from 1 to 12 and the user equipment or the network attempts to use channels 13 to 30 this cause is generated.
<i>0xd3</i>	A suspended call exist, but call identity does not This cause indicates that a call resume has been attempted with a call identity which differs from that in use for any presently suspended call(s).

Possible Values	Meaning
<i>0xd4</i>	<p>Call identity in use</p> <p>This cause indicates that the network has received a call suspend request. The call suspend request contained a call identity (including the null call identity) which is already in use for a suspended call within the domain of interfaces over which the call might be resumed.</p>
<i>0xd5</i>	<p>No call suspended</p> <p>This cause indicates that the network has received a call resume request. The call resume request contained a call identity information element which presently does not indicate any suspended call within the domain of interfaces over which calls may be resumed.</p>
<i>0xd6</i>	<p>Call with the requested call id has been cleared</p> <p>This cause indicates that the network has received a call resume request. The call resume request contained a call identity information element which once indicated a suspended call; however, that suspended call was cleared while suspended (either by network timeout or by the remote user).</p>
<i>0xd7</i>	<p>Service or option not available</p> <p>This cause indicates that the requested service or option is not available or is rejected.</p>
<i>0xd8</i>	<p>Incompatible destination</p> <p>This cause indicates that the equipment sending this cause has received a request to establish a call which has a low layer compatibility, high layer compatibility or other compatibility attributes (e.g. data rate) which cannot be accommodated.</p>

Possible Values	Meaning
<i>0xdb</i>	Invalid transit network selection This cause that a transit network identification was received, which is of an incorrect format.
<i>0xdf</i>	Invalid message, unspecified This cause is used to report an invalid message event only when no other cause in the invalid message class applies.

Table A-6: **DSS1Cause** – Invalid message class**Protocol error class**

Possible Values	Meaning
<i>0xe0</i>	Mandatory information element is missing This cause indicates that the equipment sending this cause has received a message which is missing an information element which must be present in the message before that message can be processed.
<i>0xe1</i>	Message type non-existent or not implemented This cause indicates that the equipment sending this cause has received a message with a message type it does not recognise either because this is a message not defined or defined but not implemented by the equipment sending this cause.
<i>0xe2</i>	Message not compatible with call state This cause indicates that the equipment sending this cause has received a message such that the procedures do not indicate that this is a permissible message to receive while in the call state, or a STATUS message was received indicating an incompatible call state.

Possible Values	Meaning
<i>0xe3</i>	Information element non-existent or not implemented This cause indicates that the equipment sending this cause has received a message which includes information elements not recognised because the information element identifier is not defined or it is defined but not implemented by the equipment sending the cause. However, the information element is not required to be present in the message in order for the equipment sending the cause to process the message.
<i>0xe4</i>	Invalid information element contents This cause indicates that the equipment sending this cause has received an information element which it has implemented; however, one or more fields in the information element are coded in such a way which has not been implemented by the equipment sending this cause.
<i>0xe5</i>	Message not compatible with call state This cause indicates that the equipment sending this cause has been received which is incompatible with the call state.
<i>0xe6</i>	Recovery on timer expiry This cause indicates that a procedure has been initiated by the expiry of a time in association with error handling procedures.
<i>0xef</i>	Protocol error, unspecified This cause is used to report a protocol error event only when no other cause in the protocol error class applies.

Table A-7: **DSS1Cause** – Protocol error class

Internetworking class

Possible Values	Meaning
<i>0xff</i>	Internetworking, unspecified This cause indicates that there has been interworking with a network which does not provide causes for functions it takes; thus the precise cause for a message which is being sent cannot be ascertained.

Table A-8: **DSS1Cause** – Internetworking class

1.4 1TR6 Causes (National ISDN)

1TR6 causes are reported in the **1TR6Cause** field of the **isdnCallHistoryTable**:

Possible Values	Meaning
<i>0x81</i>	Invalid call reference value.
<i>0x83</i>	Bearer service not implemented indicates that a connection with a specific Service Indicator (SI) cannot be set up, either at the calling or called party's end. Certain SIs have to be applied for and cleared for ISDN basic access and for PBXs.
<i>0x87</i>	Call identity does not exist The call identity used does not bear relation to any call available for matching. This happens for instance when an attempt is made to resume a call using the function IL_RESUME with the wrong call identity.
<i>0x88</i>	Call identity in use.

Possible Values	Meaning
<i>0x8a</i>	No Channel available All available B channels of the ISDN access are occupied (either with other end-devices on the S0 bus or other connections on the same end-device).
<i>0x90</i>	Requested facility not implemented.
<i>0xa0</i>	Outgoing calls barred Outgoing calls are barred from this ISDN access. This is often the case with PBXs if they are restricted locally or nationally.
<i>0xa1</i>	User Busy Corresponds to an engaged tone on a telephone. All the called party's B channels are busy, the exchange is overloaded or no free trunk was available from the local PBX. (Used instead of 0xd9).
<i>0xa2</i>	CUG, access denied The called party is member of a closed user group. In these user groups, which are set up by the German Post Office in Germany, a call is only connected if the caller is member of the same group.
<i>0xa3</i>	Non existent CUG.
<i>0xa5</i>	Not permitted as SPV.
<i>0xb0</i>	Reverse charging not allowed at origination.
<i>0xb1</i>	Reverse charging not allowed at destination.
<i>0xb2</i>	Reverse charging rejected.
<i>0xb5</i>	Destination not obtainable The same meaning as "The number you have dialled is not available, please try again" message. Also appears (after timeout) when the telephone number was incomplete.

Possible Values	Meaning
<i>0xb8</i>	Number changed Occurs when the called number was too long. This can be the case when the EAZ was included in the dialled number.
<i>0xb9</i>	Out of order The number dialled is out of order or temporarily not available.
<i>0xba</i>	User not responding The called party is not accepting or responding to the call for one of the following reasons: -The subscriber's end-device is not switched on or not connected. -The required EAZ was not communicated. -An incorrect number was dialled. -The required SI was not communicated.
<i>0xbb</i>	User access busy Corresponds to an engaged tone on a telephone. All the called party's B channels are busy, the exchange is overloaded or the PBX could not get a free trunk line (instead of 0xd9).
<i>0xbd</i>	Incoming calls barred Incoming calls are not allowed for the called party (barred) or are not possible (e.g. because the line is out of order).
<i>0xbe</i>	Call rejected The called party has refused the call or is not allowed to receive the call.
<i>0xd9</i>	Network congestion The ISDN network is congested (all-trunks-busy condition) at some point. This can occur when calling a PBX and all trunk lines are engaged.
<i>0xda</i>	Remote user initiated.

Possible Values	Meaning
<i>0xf1</i>	Remote procedure error.
<i>0xf2</i>	Remote user suspended.
<i>0xf3</i>	Remote user resumed.
<i>0xf4</i>	User info discarded locally.

Table A-9: **1TR6Cause**

