<https://www.centurylink.com/wholesale/pcat/isdnbri.html>

## Resale - Integrated Services Digital Network (ISDN) Basic Rate Interface (BRI) - V20.0



### Product Description

CenturyLink's retail telecommunications service, Integrated Services Digital Network (ISDN) Basic Rate Interface (BRI) is available for resale by Competitive Local Exchange Carriers (CLECs) to their end-users. Additional information about resale of CenturyLink's retail services can be found in [Resale - General](http://www.centurylink.com/wholesale/pcat/resalegeneral.html).

ISDN is an all-digital communications technology that provides services and capabilities not available through standard analog technology. The ISDN digital architecture provides a high-speed, integrated transfer of voice, data and video over the same line, using the Public Switched Network (PSN). CenturyLink's ISDN BRI is compatible with the National ISDN standards (NI-2) and International Telecommunications Union (ITU) standards and protocols and includes circuit-switched voice, circuit-switched data and packet functionality.

ISDN BRI provides for two simultaneous voice connections and a low-speed data connection over existing telephone lines (twisted copper pair) which provides a 2-wire digital connection with a bandwidth of 144 kilobits per second (kbps) which is divided into three channels:

* Two 'B' channels capable of 64 kbps each. Each ISDN BRI channel is capable of switched voice and switched data transmissions, allowing two simultaneous separate 64 kbps connections of either type. B channels do not support packet switched data transmissions or out-of-band message signaling. Depending on the end-user's Customer Provided Equipment (CPE), the two B channels can be combined (bonded) into one high-speed 128 kbps link.
* One 'D' channel capable of 16 kbps. Each D channel supports out-of-band message signaling and packet data functionality, but does not support voice applications. This channel can simultaneously route up to 15 data calls.

In each ISDN capable switch ISDN BRI configuration groups or capability packages are programmed into the ISDN BRI common block according to iconectiv ® National Standards. iconectiv ®. ISDN Ordering Codes (IOCs) identify the different pre-programmed configuration groups or capability packages. The CPE vendor will work with you to select the appropriate IOC for your needs. If you require an ISDN BRI arrangement that is not supported by an IOC, you can request the specific arrangement of features and functions USOCs and FIDs to accommodate your needs.

The CenturyLink ISDN BRI standard feature package includes all standard features identified in the [Tariffs/Catalogs/Price Lists](https://www.centurylink.com/aboutus/legal/tariff-library.html) provided the CPE can support the features. Contact the CPE vendor to determine if the CPE can support the standard features and to learn more about how they work with the CPE.

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| **Standard voice features:** |
| **Feature** | **Definition** |
| Call Appearances (CA) | The position(s) on a terminal to which numbers are assigned. A Directory Number (DN) can be shared by more than one ISDN terminal. The quantity and/or position of CA for the Primary Directory Number (PDN), Secondary Directory Numbers (SDN) and Shared Call Appearances (SCA) are limited by the standard or non-standard configuration and capability package selected depending on the CPE. A total of six CAs per terminal are included in the standard configuration and capability package. |
| Call Exclusion - Automatic Exclusion | Allows you to restrict other end-users that share a DN from bridging onto a call. This option is automatically activated when you pick up the receiver to receive or place a call. |
| Call Exclusion - Manual Exclusion | Allows you to restrict other end-users that share a DN from bridging onto on call. This option is activated by pressing a designated button before dialing or during the call. |
| Call Forwarding Busy Line | All calls (pre-programmed), forwards all voice calls that reach a busy PDN to be forwarded to another telephone number either within the same CO, or in a different CO. |
| Call Forwarding Don’t Answer | All calls (pre-programmed), forwards all voice calls terminating to an idle PDN to be forwarded to another number when the called PDN does not answer after a predetermined number of seconds. |
| Call Forwarding —Variable, All calls | Forwards all PDN voice calls to another telephone number by pressing a designated Call Forwarding-Variable button. The forward-to number is customer changeable. You must activate or deactivate the forwarding function by using either an access code or a designated feature button. |
| Call Hold | Allows you to place a call on hold by pressing a designated button. |
| Call Transfer | Allows you to transfer a call to a third party by pressing a designated button. |
| Caller Identification Blocking, Per call | Allows you control the delivery of the caller name and/or DN by dialing an access code before each call to change the indicator from public status which delivers caller information or to private status preventing the delivery of caller information. |
| Calling Line Identification -Incoming Calling Line Identification (ICLID) | Displays the call number identification and the calling name identification (including non-published and non-listed DNs) prior to the call being answered. Callers have the ability to inhibit the display of calling party information to the terminating number. ICLID is provided to the PDN and to any associated SDNS. ICLID cannot just display to the PDN when the number is shared. |
| Calling Line Identification - Outgoing Calling Line Identification (OCLID) | Provides you with information about the called party and the facility or destination. |
| Conferencing | Allows you to establish a three-way conference call by pressing a designated button. |
| Display | Display is part of selected ISDN terminals providing time, date, calling telephone number, CA identification, called telephone number, and feature activation operation information. |
| Drop | Allows you to drop the last party added to a conference call or to disconnect a two-party call. |
| Intercom | Allows two end-users to be part of an intercom group, allowing calls to be completed by pressing the designated feature button without dialing the entire telephone number. |
| Message Waiting Indication | Available on PDNs and notifies you of a message waiting by providing either an audible stuttered dial tone or a visual illuminated light on the telephone set. Messages may be retrieved by calling the message service center or by accessing a voice mail system. |
| Primary Directory Number (PDN) | The main telephone number assigned to the ISDN terminal. If more than two terminals are attached to a DSL, an additional PDN charge will apply. |
| Ringing Options - Abbreviated Ringing | Abbreviated Ringing follows begins immediately for an incoming call and stops ringing after a designated number of seconds. Ringing for incoming calls that terminate on the SCA of a DN on a per-station basis. |
| Ringing Options - Delayed Ringing | Ringing for an incoming call is delayed for a designated number of seconds, however, the call indicator or status light begins flashing immediately. Ringing for incoming calls that terminate on the SCA of a DN on a per-station basis. |
| Ringing Options - No Ringing | Prevents ringing for an incoming call that terminates on a call appearance of that DN. Ringing for incoming calls that terminate on the SCA of a DN on a per-station basis. |
| Ringing Options - Normal Ringing | Ringing begins immediately for an incoming call and continues until the call is forwarded, answered or abandoned. Ringing for incoming calls that terminate on the SCA of a DN on a per-station basis. |
| Secondary Directory Number (SDN) | Any DN other than the PDN assigned to an ISDN terminal. If more than one SDN is assigned to a terminal, additional charges will apply. |
| Shared Call Appearance (SCA) | Allows several end-users to share one or more CAs for a particular DN. Origination of and termination of calls on one terminal will affect all terminals sharing the CA. All SCA must be provisioned from the same serving CO. |
| Speed Calling | Allows an end-user to dial frequently called telephone numbers by dialing 1 or 2-digit code in place of the entire telephone number. A speed call list allows for up to 30 pre-programmed numbers per terminal. |
| Standard Configuration Group | An arrangement that associates a button of an ISDN station set to a feature. |

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| **Standard B Channel Circuit Switched Data Features** |
| **Feature** | **Definition** |
| Call Forward-Busy Line | Permits all circuit-switched data calls attempting to terminate to a busy PDN, to be redirected to another customer-specified DN. This feature can either be assigned to forward automatically or it can be assigned to a feature button that can be activated or deactivated by the end-user. If the feature is assigned to a feature button, the forward-to DN can be changed by dialing an access code and programming the new forward-to DN. |
| Call Forward-Don’t Answer | Permits all circuit-switched data calls attempting to terminate to an idle PDN to ring a specified number of seconds prior to being forwarded to a predetermined DN. This feature can either be assigned to an end-user on an active basis or it can be assigned to a feature button that can be activated or deactivated by the end-user. If the feature is assigned to a feature button, the forward-to DN can be changed by dialing an access code and programming the new forward-to DN. |
| Call Forward-Variable | Allows all circuit-switched data calls attempting to terminate to a line, to be redirected to another specified line. You must activate or deactivate the forwarding function by either using an access code or a feature button. If the feature is assigned to a feature button, the forward-to DN can be changed by dialing an access code and programming the new forward-to DN. |

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| **Standard D-Channel Packet Data Features** |
| **Feature** | **Definition** |
| X.25 Fast Select | A function of the CPE and is used on a per-call basis allowing the end-user to send up to 128 octets in the end-user data field of the call request packet to a terminal with Fast Select Acceptance. |
| X.25 Flow Control Parameter Negotiation | Permits negotiation on a per-call basis of the flow control parameters associated with a given virtual call, such as packet size and window size for each direction of data transfer. The data window size and the maximum packet size is negotiated automatically during an X.25 data call. |
| X.25 Logical Channels | Virtual circuits rather than physical circuits are used to establish packet switch calls. When a virtual circuit is established, a logical channel is assigned at the CPE and the switch for the duration of the call. A virtual circuit does not use any capacity of the facility unless data is actually being transferred. Two logical channels are provided per DSL. |
| X.25 Reverse Charging | A function of the CPE and allows an end-user to assign billing to the called data telephone number on a per-call basis. |
| X.25 Throughput Class Negotiation | Permits negotiation on a per-call basis of the throughput class for each direction of data transfer associated with a virtual call. The data terminal can negotiate the throughput class for an X.25 data call. |

#### Availability

ISDN BRI is offered where facilities exist throughout [CenturyLink QC.](https://www.centurylink.com/wholesale/pcat/territory.html) CenturyLink's [Network Disclosure](http://centurylink.com/disclosures/netdisclosure402/index402.html) document provides availability of ISDN BRI by CenturyLink switch.

#### Terms and Conditions

Depending on the end-user's CPE and the number of lines ordered, limitations may exist regarding how many ISDN devices can be supported or active at one time. In general, standard network interface CPE supports from one to eight ISDN devices (telephone, facsimile, desktop computers, video units, etc.) with the following limitations per loop:

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| **Switch Type** | **B Channel Terminals** | **D Channel Terminals** | **Additional Information** |
| DMS™-100 | Maximum of two | Maximum of six | A packet device cannot share a telephone number with a B Channel terminal |
| 5ESS® | Maximum of eight | Maximum of six | Generally a maximum of four D channel terminals is observed unless some devices are used only rarely. The sending and receiving process can be inhibited if numerous terminals are using the D Channel at the same time. |

ISDN BRI is available in certain ISDN capable 5ESS and DMS-100 switches, and in some instances their remote switches. Other types of CO switches (such as DMS-10, Ericsson, etc.) do not have ISDN capability. Information describing how to determine ISDN BRI availability is described in [Pre-Ordering](https://www.centurylink.com/wholesale/pcat/isdnbri.html#preorder).

It is your responsibility to provide CenturyLink with accurate end-user location information for state regulated emergency reasons. Information regarding the Enhanced 911 (E911) system is located in [Access to Emergency Services (911/E911)](https://www.centurylink.com/wholesale/pcat/911.html).

CenturyLink will accept one white page directory listing for each main telephone number at no charge. Additional information about directory listings is available in [White Pages Directory Listings](https://www.centurylink.com/wholesale/pcat/whitepagedirlist.html).

Additional terms and conditions, rates and charges can be found for each state in the [Tariffs/Catalogs/Price Lists](http://www.centurylink.com/Pages/AboutUs/Legal/Tariffs/displayTariffLandingPage.html?rid=tariffs).

You may request a specific foreign serving office from which to receive ISDN BRI even if the end-user's serving wire center is equipped for ISDN BRI. You may request a foreign serving office because the end-user desires a certain prefix or to avoid long distance calls. You will be charged mileage charges for the service between the two wire centers.

#### Technical Publications

The technical descriptions contained in the following documents may vary by state and or location based on CO type, software version, or state [Tariffs/Catalogs/Price Lists](https://www.centurylink.com/aboutus/legal/tariff-library.html).

Technical characteristics, including Network Channel/Network Channel Interface (NC/NCI™) Codes are described in:

* [American National Standards Institute (ANSI) Standard Publications](http://webstore.ansi.org/)
* [Technical Publication , CenturyLink High-Speed Internet Services, 77392](http://centurylink.com/techpub/77392/77392.pdf)
* [Technical Publication , CenturyLink Digital Data Service 2-Wire, 77399](http://centurylink.com/techpub/77399/77399.pdf)
* [Technical Publication, Unbundled Switch Elements, 77391](http://centurylink.com/techpub/77391/77391.pdf)
* [Technical Publication, Interconnection — Unbundled Loop, 77384](http://centurylink.com/techpub/77384/77384.pdf)
* [Telecordia Special Reports (SRs), SR-2275, Notes on the Network](https://telecom-info.njdepot.ericsson.net/site-cgi/ido/docs.cgi?ID=271272036SEARCH&KEYWORDS=&TITLE=Notes+on+the+Network&DOCUMENT=sr-2275&DATE=&CLASS=&COUNT=1000)

### Pricing

#### Rate Structure

Recurring charges for ISDN BRI are comprised of the following rate elements:

* Basic Rate ISDN
* Optional Features

ISDN BRI is generally billed on a month-to-month basis or on a fixed period [Contract Service Arrangement (CSA)](https://www.centurylink.com/wholesale/pcat/resalegeneral.html#tariffs). Tariffs, Regulations, and Policies subsection) CSAs are available per the state specific [Tariffs/Catalogs/Price Lists](https://www.centurylink.com/aboutus/legal/tariff-library.html) and may qualify for the resale discount. Contact your [CenturyLink Sale Executive](https://www.centurylink.com/wholesale/clecs/accountmanagers.html) for additional information.

CenturyLink retail rates and rate elements and how they apply to ISDN BRI can be found in the state specific Tariffs/Catalogs/Price Lists.

The Tariffs/Catalogs/Price Lists identify which ISDN BRI features CenturyLink defines as part of a standard feature package and which features are optional features. A configuration group or capability package may require some standard and some optional features to provision the required elements. If you require ISDN BRI features exceeding those identified as part of the CenturyLink standard feature package in the state specific Tariffs/Catalogs/Price Lists, the additional features will be charged as optional features.

A non-standard configuration charge applies per button (N3CPB) when establishing an ISDN BRI arrangement that is not supported by an IOC.

#### Rates

Retail rates can be found in the state specific [Tariffs/Catalogs/Price Lists](https://www.centurylink.com/aboutus/legal/tariff-library.html).

CenturyLink's retail rates for ISDN BRI, less any applicable wholesale discount, apply to resold ISDN BRI. Rates and/or discounts can be found in Exhibit A or the specific rate sheet in your Interconnection or Resale Agreement.

Rates and/or applicable discounts are available in Exhibit A or the specific rate sheet in your Interconnection or Resale Agreement.

#### Tariffs, Regulations and Policies

Tariffs, regulations and policies are located in the state specific [Tariffs/Catalogs/Price Lists](https://www.centurylink.com/aboutus/legal/tariff-library.html).

Additional information can be found in your Interconnection or Resale Agreement.

Some non-ISDN, analog features and/or services are not compatible with ISDN BRI and may cause some ISDN features not to function. These include:

* 800 Wide Area Telecommunications Service (WATS)
* Anonymous Call Rejection
* Automatic Call Back
* Call Forwarding Busy and Don’t Answer (with certain types of CPE)
* Call Waiting
* Home Intercom

Suspend and Restore is not available on ISDN BRI. It is not currently possible to temporarily disconnect ISDN BRI Service.

This type of request must be processed as a complete disconnection of service. No facilities are retained or reserved.

Dual or Duplicate service is not available with ISDN BRI service.

**Optional Features**

ISDN BRI optional feature availability and pricing may vary according to the state specific [Tariffs/Catalogs/Price Lists](https://www.centurylink.com/aboutus/legal/tariff-library.html).

Optional features are available provided the CPE can support the features. Contact the CPE vendor to determine if the CPE can support the optional features and how they work with the CPE.

Optional feature descriptions and ordering information can be found in the [Optional Features Ordering Information.](https://www.centurylink.com/wholesale/downloads/2003/030305/ISDN_Opt_Feature_Ordering.doc)

Additional information describing listings is available in [White Pages Directory Listings](https://www.centurylink.com/wholesale/pcat/whitepagedirlist.html).

### Features/Benefits

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| **Features** | **Benefits** |
| All Digital Communications | * Higher line quality
* Increased transmission speeds
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| Integrated transfer of voice, data and video over the same line | * Cost effective
* Fast call set-up
 |

### Applications

ISDN BRI provides three types of applications:

* Voice only (circuit switched voice)
* Voice and Data (includes circuit switched voice, circuit switched data, and packet switched data)
* Data Only (includes circuit switched data and packet switched data)

### Implementation

#### Product Prerequisites

If you are a new CLEC and are ready to do business with CenturyLink, view [Getting Started as a Facility-Based CLEC](https://www.centurylink.com/wholesale/clecs/clec_index.html) or [Getting Started as a Reseller](https://www.centurylink.com/wholesale/clecs/reseller_index.html). If you are an existing CLEC wishing to amend your Interconnection Agreement or New Customer Questionnaire, additional information is located in the [Negotiations Template Agreement](https://www.centurylink.com/wholesale/clecs/negotiations.html).

End-user ISDN CPE is required in order to utilize this service. CPE can be in the form of Terminal Adapters or ISDN terminal equipment (telephones). Configuration and Capability Package Ordering Codes are available from [iconectiv](https://iconectiv.com/)[®](https://iconectiv.com/)[, , or check with your CPE Vendor/Manufacturer.](https://iconectiv.com/)

#### Pre-Ordering

General pre-ordering activities are described in the [Pre-Ordering Overview](https://www.centurylink.com/wholesale/clecs/preordering.html).

Requirements for pre-ordering are described in [Local Service Ordering Guidelines (LSOG) Pre-Order](https://www.centurylink.com/wholesale/clecs/lsog.html).

New ISDN BRI telephone numbers cannot be reserved in EASE-LSR. CenturyLink will return telephone numbers to you on the Firm Order Confirmation (FOC).

If your end-user wants to convert an existing non-ISDN telephone number to Resale ISDN BRI, check with your CenturyLink Service Manager to see if the telephone number can be converted. Even though the end-user's serving office has ISDN BRI available, not every prefix in the office may be compatible.

CenturyLink strongly suggests that you complete the ISDN loop qualification pre-ordering process in addition to the CO ISDN availability pre-ordering process. That way you will be able to determine if the ISDN BRI service is available to your end-user and if there are facilities available to provision the service.

ISDN BRI pre-qualification is a two-step process.

Step one:
Verify the availability of ISDN BRI in the end-user's CO by referring to the [Network Disclosures](http://centurylink.com/disclosures/netdisclosure402/index402.html). Select the state for the end-user's CO location. If the ISDN BRI DATE column is populated with “Deployed”, ISDN BRI is available.

Step two:
Verify the ISDN loop availability of facilities at the end-user's address as described in the [EASE-LSR User's Guide](https://ease.lumen.com/).

Please note that you can order ISDN BRI even if facilities are not available, however your order may be delayed.

Service is not guaranteed until the ISDN has actually been installed. There could be a rare instance where Facility Check cannot determine a design problem that would prevent installation of the single line service (SLS). In this situation, you would be notified by the receipt of a jeopardy notice. Additional information on the jeopardy process can be found in the [Provisioning and Installation Overview](https://www.centurylink.com/wholesale/clecs/provisioning.html).

Backhauling provides dialtone from an ISDN equipped switch that is not the end-users local serving wire center to the end-users local serving wire center. All backhauling requests should be referred to your [CenturyLink Service Manager](https://www.centurylink.com/wholesale/clecs/accountmanagers.html).

#### Ordering

It is important to understand [Resale - General](https://www.centurylink.com/wholesale/pcat/resalegeneral.html) procedures before ordering ISDN BRI.

General ordering activities are described in the [Ordering Overview](https://www.centurylink.com/wholesale/clecs/ordering.html).

ISDN BRI service requests are submitted using the following [LSOG](https://www.centurylink.com/wholesale/clecs/lsog.html) forms:

* Local Service Request (LSR)
* End User (EU)
* Resale Service (RS)
* Directory Listing (DL), if applicable

Field entry requirements are described in the [LSOG](https://www.centurylink.com/wholesale/clecs/lsog.html).

Service requests should be placed using [EASE-LSR Extensible Markup Language (XML)](https://ease.lumen.com/) or [EASE-LSR Graphical User Interface (GUI)](https://ease-lsr.lumen.com/).

When requesting new ISDN BRI service enter the ISDN Ordering Code (IOC) obtained from the CPE vendor. The IOC must be entered in the FEATURES field on the RS form.

If an IOC is not available, you must enter the USOC and FID information required for your ISDN BRI arrangement in the FEATURE and FEATURE DETAILS fields of the RS form. For assistance in ordering refer to [5ESS Ordering Information](https://www.centurylink.com/wholesale/downloads/2003/030221/5ESS_Ordering_Information.doc) or [DMS-100 Ordering Information](https://www.centurylink.com/wholesale/downloads/2003/030221/DMS100_Ordering_Information.doc) and [Optional Features Ordering Information](https://www.centurylink.com/wholesale/downloads/2003/030305/ISDN_Opt_Feature_Ordering.doc).

To request Loop Conditioning, in the REMARKS field of the LSR form include an entry of "Loop Conditioning authorized". Without an entry in REMARKS, you have not authorized Loop Conditioning. If the service does not loop qualify and if you have not authorized Loop Conditioning the order will be rejected.

#### Provisioning and Installation

General provisioning and installation activities are described in the [Provisioning and Installation Overview](https://www.centurylink.com/wholesale/clecs/provisioning.html).

Upon receipt of an accurate and complete LSR including authorization of Loop Conditioning, you will receive a Firm Order Confirmation (FOC) based on the standard interval found in the Service Interval Guidelines (SIG). If at any time after you receive the FOC, and prior to the scheduled due date, CenturyLink determines that loop conditioning is required, CenturyLink will apply the Loop Conditioning interval and will re-FOC your LSR reflecting the new scheduled due date. The interval will begin on the date CenturyLink determines that loop conditioning is necessary and a supplemental LSR is not required.

If at any time after you receive the FOC, and prior to the scheduled due date, CenturyLink determines that the loop cannot be conditioned to loop qualify, you will receive a jeopardy notification via EASE-LSR. The jeopardy notification will provide you information on how to proceed.

#### Maintenance and Repair

General maintenance and repair activities are described in the [Maintenance and Repair Overview](https://www.centurylink.com/wholesale/clecs/maintenance.html).

#### Billing

~~Customer Records and Information System (CRIS) billing is described in~~[~~Billing Information – Customer Records and Information System (CRIS)~~](https://www.centurylink.com/wholesale/clecs/cris.html)~~.~~ Ensemble is the new billing system for customers. For questions about the bill, please follow the instructions on the reverse side of each billing statement.

The Ensemble bill is described in [Billing Information – Ensemble](https://www.centurylink.com/wholesale/clecs/ensemble.html)

### Training

View CenturyLink courses in the ~~Course~~ [Training Catalog](https://www.centurylink.com/wholesale/training/coursecatalog.html).

### Contacts

CenturyLink contact information is located in [Wholesale Customer Contacts](https://www.centurylink.com/wholesale/clecs/customercontacts.html).

### Frequently Asked Questions (FAQs)

**1. How can I determine if ISDN BRI is available in a specific switch?**
BRI is offered only in 5ESS and DMS-100 switches and their remotes can provide this service. Most CenturyLink Central Offices are equipped to provide ISDN. If the end-user's local serving office (LSO) is not disclosed, ISDN can be 'backhauled' from a distant host switch. You will be billed mileage charges between the two central offices. The [Network Disclosure](http://centurylink.com/disclosures/netdisclosure402/index402.html) webpage provides an update by CO to the locations where CenturyLink plans or has deployed ISDN compatible services.

**Last Update:** March 3, 2020

**Last Reviewed:**  March 21, 2024

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