

# CB2000-ISDN

## Key features

- Splits one or two PRI links into multiple BRI lines
- One or two PRI port (s)
- 16 or 32 BRI ports with port contention
- Channel reservation for each BRI or PRI port
- Full B channel transparency
- Call filtering/routing via MSN, sub-address and bearer channel capability
- Port to port switching
- Call logging and alarm monitoring
- Software upgradable
- Graphical interface via associated Windows 95/98/NT software

## • Benefits

- Reduces ISDN line rental cost
- Protects your investment in existing ISDN equipment
- Gives direct and complete control of ISDN usage via flexible patching and management
- Easy and economical way to migrate from BRI to PRI access
- Easy to install, configure and operate



## THE SMART ISDN FRONT-END



The CB2000 is a new member of the ISDN product family designed and manufactured by CXR Anderson Jacobson. Available as a stand-alone and rack-mountable unit its main function is to convert a single ISDN PRI into multiple ISDN BRI accesses. Thanks to its software intensive based design, the CB2000 offers numerous yet powerful functionalities which make it the ideal front end device for ISDN access while allowing substantial money savings via more effective use of the available ISDN resources. The CB2000 concentrates and switches up to 16 or 32 ISDN BRI ports into one or two ISDN PRI ports. Each BRI ports carries the two B channels as well as the D signaling channel. Incoming calls can be routed to a specific BRI port or group of ports according to the MSN number, the sub-address, the bearer channel capability or a combination of any of the three parameters. The CB2000 also offers a unique channel reservation mechanism which

guaranties network access for either incoming or outgoing calls to certain BRI or PRI ports. All B channels which are not reserved are available to all ports on a contention basis. The CB2000 is well suited for applications where multiple BRI access is required and where a single PRI access is either more economical and/or mandatory. It is the ideal solution for migrate from BRI to PRI when the number of ports needs to be increased while preserving the investment in existing BRI based terminal equipment. It allows the datacom manager or networking professional to simply and efficiently manage and control the use of ISDN resources without the limitations of a conventional voice PBX.

Thanks to its graphical interface the CB2000 can be easily set-up without having to learn a new command language while still providing the expert the possibility to write complex configuration scripts.

## A RANGE OF PRODUCTS AND OPTIONS

The CB2000 can be used in a wide variety of applications where multiple PRI and BRI access is required. In order to meet the various requirements, the CB2000 is available in three different configurations with optional software options that can be factory installed or down-loaded later when they are required. The basic configuration includes one PRI and 16 BRI ports. Within the same chassis the

extended configuration accommodates two PRI and 32 BRI ports with or without the drop-insert capability. Available software options include remote control, bandwidth reservation, port to port switching and busy-out.

For mission critical applications the CB2000 can also be equipped with an internal 48 volts DC power supply ( 12 and 24 volts are also available on request).

## PRODUCT DESCRIPTION

The CB2000 is a standalone and rack-mountable unit which concentrates up to 32 ISDN BRI ports into one or two ISDN PRI port(s). It delivers two fully transparent 64 kbps channels on each BRI port together with full D channel signaling. Devices connected to the BRI ports can, at any time, originate/answer voice or data calls to/from the ISDN public network. The maximum number of simultaneous calls to or from the public network is limited only by the capacity of the PRI access(s). For a fully equipped PRI access the maximum number of simultaneous calls is equal to 30 assuming each BRI port uses only one B channel per call.

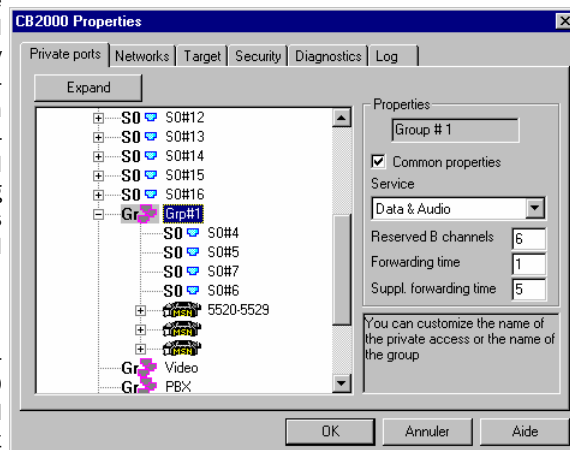
When equipped with the drop/insert option, the CB2000 can use the second PRI port to connect a PRI compatible device (an ISDN PBX for example) while maintaining its concentrating capabilities on the BRI ports. A user programmable channel reservation mechanism determines the way the available B channels are allocated. Through this mechanism, B channels can be permanently reserved for each individual port or group of ports either BRI or PRI. The remaining non reserved B channels are available to all ports on a contention basis.

Incoming calls can be automatically directed to a group of ports/devices by assigning a single phone number to multiple BRI ports to form a hunting group. This reduce the possi-

bility for a caller to get a busy signal.

A specific port/device or even a given function within the device can be automatically accessed by combining the multiple subscriber number (MSN) with a sub-address and even the type of bearer channel supported.

When the corresponding option is installed the CB2000 also offers full switching capabilities and port to port calls can be originated and answered.



Up to three CB2000 units can be daisy-chained via a PRI port to form a distributed concentrator/switch. ISDN access can then be distributed in different parts of a building making the use of ISDN more easy and economical.

With the drop-insert option installed a single PRI access can be shared with an existing ISDN/PRI PABX. Data applications using Terminal adapters, routers, video conferencing systems or Fax servers will not have to go through the PABX to access the ISDN network and by then will not be affected by the limitations usually encountered in ISDN PABX's primarily designed to handle voice traffic. ISDN users will also have full control of ISDN usage and new applications can be installed in a matter of minutes. This flexibility and ease of use will be especially appreciated in applications like show rooms, exhibitions or training centers just to name a few.

*Get full control of  
ISDN usage and  
set-up applications  
in a matter of  
minutes*

## Easy Configuration And Diagnostics

The CB2000 is extremely easy to set-up and operate via the associated Windows 95/98/NT compatible software. No new command language is required to define port attributes or load a previously defined configuration. MSN numbers or sub-addresses can be mapped with physical ports by simply entering a number in the pre-defined box associated with each port graphical representation. Symbolic names can be given to ports or group of ports for easy identification and memorization. Configurations can be viewed, modified, saved or retrieved in a matter of minutes. A given configuration can be expanded or collapsed

for easy access and reading. Detailed live port activity can also be viewed at any time just by clicking the appropriate icon.

For the expert, an easy to learn command language is also available via the command port as well as several diagnostic tools to monitor traffic activity.

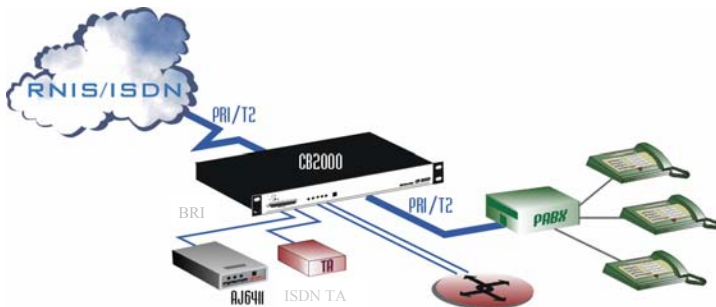
When a PC is attached to the control port a detailed call logging is also available with call direction and duration as well as calling and called numbers.

## APPLICATIONS

The CB2000 can be used in a wide variety of situations where multiple BRI and PRI access is required. The applications listed are just a few examples to illustrate where and how the CB2000 can be used bearing in mind the fact several of these application may coexist in the same context.

### Videoconferencing

Most videoconferencing systems use multiple ISDN/BRI accesses to provide the necessary bandwidth via an aggregation mechanism. The CB2000 can be used to connect the videoconferencing system to the ISDN network via a PRI access while still providing ISDN connectivity to other ISDN devices. But thanks to its switching capability the CB2000 can also be used to connect two or more videoconferencing systems together within the same building or campus without going through the ISDN public network.



### PABX expansion

Users are very often confronted with the problem of expanding their existing ISDN PABX by adding additional BRI ports on the network side. This expansion may require the migration from multiple BRI's to a single PRI, migration which may be either impossible or too expensive to implement on the PABX side. Without modifying the PABX the CB2000 can be used as a PRI/BRI converter while providing additional ISDN connectivity.

### FAX and RAS servers

Small to medium size FAX or RAS servers are usually using multiple BRI's. As traffic and number of users expand a migration from multiple BRI's to a single PRI is very often required. Furthermore connecting multi-port servers to the ISDN network through a PABX is very often a nightmare due to the limitations of most PABX's. The CB2000 provides an easy to install solution to solve this migration problem and to overcome the limitations of PABX's.

### Call centers— and Telemarketing

In call centers specializing in telemarketing

the CB2000 can be used as a low cost ISDN telephone switch. The fact it can be installed in a matter of minutes makes it the ideal solution for situations where calls centers have to be set-up for a short period of time or move to different locations very often.

### In-premises ISDN distribution

The CB2000 can be used as an ISDN dispatcher to provide ISDN connectivity throughout a building or even a campus. By chaining multiple CB2000 units, ISDN ports can be made available where they are needed while having a single PRI connection to the ISDN network.

### ISDN network simulation

Thanks to its switching capability the CB2000 can be used as an inexpensive ISDN network simulator in environments such as showrooms, exhibitions and technical training centers, eliminating the need to have access to the ISDN public network. Acquiring a CB2000 could be a worthwhile investment as it would provide cost savings by not having to pay for ISDN telephone or data calls.

### ISDN over cable

With the deregulation process taking place in telecommunications, cable companies are competing more and more against landline carriers by offering telephony and Internet access services. ISDN over cable is also becoming a reality but it is available only as a multi-channel PRI access due to the fact a single cable is usually routed to the subscriber premises. The CB2000 can be used to provide PRI to BRI conversion allowing cable companies to offer multiple BRI's to their corporate customers.

### Manufacturing

The CB2000 can even be used in manufacturing environments to perform functional and acceptance tests on multiple terminal equipments using single or multiple BRI's.

### Special applications

The CB2000 is presently used in a wide variety of applications and environments. Customized versions have been designed to accommodate special requirements which are not mentioned in this brochure. If you have a special requirement please contact us.

*The CB2000 is presently in use in a wide variety of applications where multiple BRI and PRI connections are required*

ISDN PRI/BRI Concentrator-Switch

## PRODUCT SPECIFICATIONS

### PRI Network interface

One or two ports depending on model  
 Second port configurable as private PRI  
 G.703 with HDB3 coding  
 Signaling : ESTI Q921/931 or VN6  
 Connector : RJ45 120 ohms

### BRI ports

16 or 32 ports depending on model  
 S0 compatible—point to point only  
 No power feeding—100 ohms termination  
 Driving capability: 150 meters on UTP cat. 5  
 Connector: RJ45

### Configuration port

V.24/28 or RS232  
 Up to 19.2 kbps—8 bits—no parity—one stop  
 At command set  
 Password protected  
 Connector: DB 25

### B channels

64 kbps per B channel  
 Fully transparent

### Channel Mapping scheme

Multiple subscriber number (MSN)  
 Sub-addressing  
 Bearer capability (voice or data)  
 Combination of any of the above

### Multi-line hunt group

### Channel/bandwidth reservation:

On a per port or port group basis  
 A group may contain any number of BRI/  
 PRI ports

### Switching capability

Full switching capability  
 Support port to port local calls

### Front panel

Status indicators: LED's  
 PWR, TRUNK1, TRUNK2, CTRL, TEST  
 Reset button

### Management

Via control port and AT command set  
 Graphical user interface via associated Windows 95/98/NT software  
 Remote control via B channel (V.120)

### Graphical User interface

Via PC connected to control port  
 Local or remote  
 Windows 95, 98, or NT  
 Event log file  
 Password protection

### Power supply

Internal: 110/220 volts AC—47 to 63 Hz or  
 12, 24, 48 volts DC (Optional)  
 Power consumption: 35 VA

### Physical

Table-top or rack-mountable via supplied brackets  
 Dimensions: 32 cm deep, 48 cm wide, 4.5 high  
 Weight: 4.3 Kg

### Environmental

Operating temperature : 0 to 40 degree C  
 Humidity: 10 to 80 % non condensing  
 EMC/EMI: EN 55022, EN 50082  
 Security : EN 60950  
 CE Marking

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*The network access product specialist*

## ABOUT CXR

A subsidiary of **Microtel International**, **CXR-SA**, formerly **Anderson Jacobson-SA**, is a well known International manufacturer of telecommunication and data-communication products and systems. The company specializes in transmission and network access products but is also active in the domain of transmission testing through its LEA Division.

The company offers a complete range of professional grade products and services which are marketed worldwide through a network of National and International distributors. The company also manufactures and markets its products in the United States and the United Kingdom through Microtel's affiliated companies and subsidiaries.

CXR-SA is an ISO 9002 certified company



70/86 avenue de la République  
 92325 - Chatillon - cedex  
 France

Phone: 33 1 42 31 40 70  
 Fax: 33 1 47 35 93 80  
 Email: [export@cxr.fr](mailto:export@cxr.fr)

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