Interface Converter G703/G704

Version 1.4 – April 2004

CV / MX 2000

E1 / T1 Converter and Multiplexer

Features / benefits

- CV2000 : E1or T1 network interface converter
- MX2000 : E1 or T1 Drop and Insert Multiplexer
- Rates: Nx64 or Nx56 (T1)
- CV2030/2011/2035/2036 : Data port can be set as a RS530, V11/X21, V35, V36.
- CV2028 : RS232 async / sync interface. Rates 300 BPS to 128 KBPS
- CV20BT : Interface converter with 10BaseT Ethernet transparent or filtering Bridge .
- CV 24BR : carries 4 ISDN BRi interfaces over an E1 or T1 network / link
- MX 2000 : drop and insert mux with RS232/RS530/ X21/V35/V36 data interface
- Optional Asymmetrical rate control : separate downstream and upstream rate and clock management
- State of the art technology for enhanced clock recovery, phase jitter, bandwidth control
- Flexible timeslot allocation
- Easy to install : pre-configuration, user friendly VT100 menus, Windows based GUI software for full administration.
- Remote control : from synchronization bits or through a timeslot
- Very flexible. Most control signals controllable. Can be used with a wide variety of data terminal equipment
- Usable as a short or Long Haul modem for distance up to 1600 meters
- Enhanced test features : LAL, RDL, LDL, V54
- Stand alone with a choice of internal or external power supplies. 230 Vac, 48 Vdc, 12-36 Vdc
- Rack mount card with SNMP management for AMS 4 / 16 chassis

CV2000 is a high integration and cost effective interface adapter which converts an unstructured or structured RS530, RS232, V.11, X.21, V.35, 10BT or ISDN BRi data interface to an E1 or T1 interface operating in clear channel mode or a fractional N x 64K or Nx56K (T1) in framed mode. The CV2000 allows users to connect routers, FRADs, video-codec and other networking devices to 2 MBPS or 1.544 MBPS carrier services without having to incur the expense associated with an E1/T1 interface on their data equipment. The CV2000 can also be used in private networks whenever interface conversion is needed. Its robust design and its ease of installation makes the CV2000 an ideal interface converter for carrier service providers and network installers.

When connected back to back to an other CV2000 via a single copper pair, the CV2000 can also be used as a 2 / 1.544 Mbits long haul modem over a distance up to 1600 meters.

The **CV2000** is easy to configure all settings being made from a Windows ™ graphical software that sets up the unit within a few click and provides enhanced features such as tests, configuration management and diagnostic logs. CV2000 can also be controlled via VT00 or AT command set. It is also extremely flexible and can accommodate a wide variety of data equipment.

The **CV2000** comes either as a standalone version or as rack card compatible with the AMS 4 / 16 chassis. Central site applications take benefit of the AMS16 management card with SNMP protocol.

The **CV 24BR** carries 4 ISDN BRi interfaces over an E1/T1 link or network.

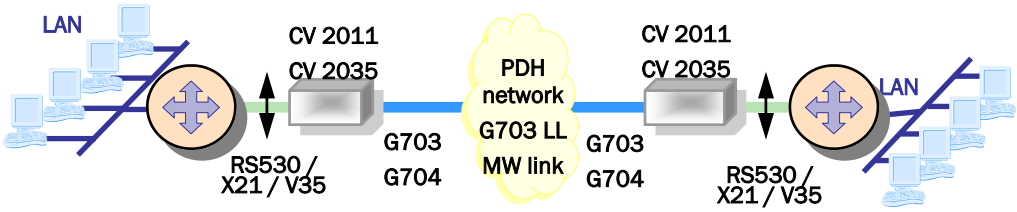
The **MX2000** version is a drop and insert unit that connects both a PBX or E1/T1 terminal as well as an RS530/V11/V35/V36/RS232 data terminal to an E1/T1 network.

CV2028 and MX2028 RS232 interface runs 64 / 128 KBPS synchronous and 300–38,400 BPS asynchronous modes.

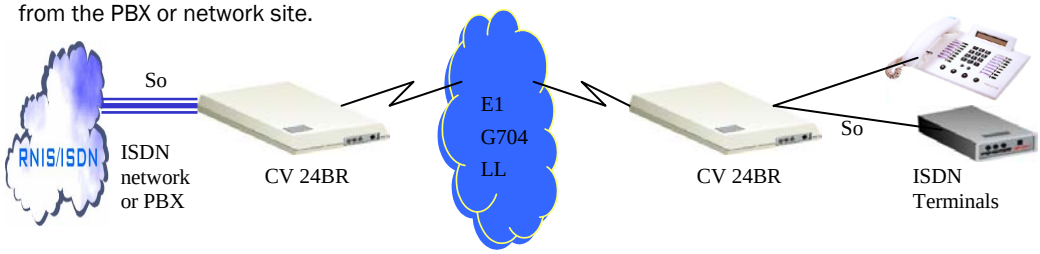
The asymmetrical rate option provides two different clock rates for upstream and downstream data flows on V35 / V36 data interface. This option saves costly multiplexer for such satellite or other asymmetrical rates applications.

Applications

The **CV2000** is used to connect an RS530, X21, V35 or V36 router to an G703 /G704 2Mits carrier service with full bandwidth and clock controls. The CV20BT version may avoid the use of a costly router and provides a plug and play LAN to LAN connection.



Two **CV2000** carry 4 ISDN BRi interfaces over a G704 network or a four wire line. **CV24BR** provide a point to multi-point capability : ISDN BRi terminals can be located at different remote locations from the PBX or network site.



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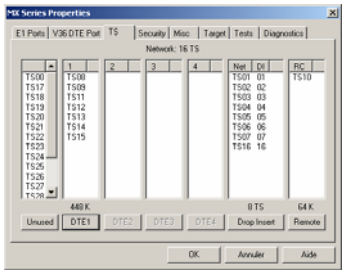
CV2000 stand alone unit and AMS16 chassis - SNMP



MXCFG

graphical management software

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SPECIFICATIONS

E1 Network Interface

- Rate : 2.048 BPS +/- 50 ppm
- Framing: clear G703, framed G704, PCM31, PCM31C
- Jitter: G823.
- Line code : HDB3
- Receive level : 0 to –43 dBm
- Clock : network, internal, terminal.
- Impedance : 120 Ohms, RJ45 socket
- CV2000-BNC option : 75 Ohms / BNC.
- Insulation : 1500V as per ITU--T K20,K21

T1 Network Interface

- Rate : 1,544 BPS +/- 50 ppm
- Framing: clear channel, D4 (SF), ESF
- Jitter: G823.
- Line code : AMI, B8ZS
- DSX-1 and CSU line build outs
- Receive level : 0 to –36 dBm
- Clock : network, internal, terminal.
- Impedance : 100 Ohms, RJ45 socket
- CV2000-BNC option : 75 Ohms / BNC.
- Insulation : 1500V as per ITU--T K20,K21

Timeslot allocation

- Any combination, user defined : no restriction
- Remote control : through a dedicated timeslot or synchronisation bits
- Nx64 (E1) or Nx64/Nx56 (T1)

RS530, X21, V35, V36, RS232 Interfaces

- Models : CV2030, CV2011, CV2035, CV2036, CV2028, MX2030, MX2011, MX2035, MX2036, MX2028
- Synchronous DTE Rates : Nx64 KBPS or Nx56 KBPS (T1) from 56/64 to 1544 / 2048 Kbps
- Asynchronous DTE rates : 300 to 38,400 BPS
- X21 signals : T(103), R(104), C(105), I(109), S(114).
- V35/V35/RS232 signals : 103, 104, 105, 106, 107, 108, 109, 114, 115
- Interface : DB25 , RS530 assignment
- Adaptation cable for V35, X21

Power Supply

- External : 110 / 230 Vac : CV-MX 2000-PVx
- Internal : 110 / 230 Vac : CV-MX 2000-PIx
- Internal : 48 (12-36) Vdc : CV-MX 2000-PCx
- Rack : CV 2000-PRx.

Ethernet Bridge Interface

- Model : CV20BT
- Ethernet : 10BT, IEEE 802.3
- Rate : 10 Mbps.
- Interface : standard RJ45.
- Bridge : transparent of filtering
- MAC address memory : 10,000
- Ethernet frame buffer : 255
- Padding bit compression

Four ISDN BRI interface

- 4 ISDN BRi So interfaces
- RJ45 socket, TE / NT mode through dip switches
- Each B channel is allocated a G704 timeslot
- D channels : multiplexed in a single timeslot, or each D channel is allocated a dedicated timeslot
- Control of layer 1 : activation
- Transparent to layer 2 and 3 protocols
- Optional external So bus powered feeding

Front panel

- Led : POWER indicator
- Led : Interface activation : C/X21, RTS/V35, LAN/10BT
- Led : Network synchronisation - loss of carrier
- Led ERR : CRC error detection or G703 LCV (Line Code Violation)
- Led DATA : active data on G703.
- Led TEST : active test.
- Push button : cancel alarm condition

Administration

- Console port : V24/V28
- Format : 19,200 BPS, 8 bits, parity none
- Mode : friendly VT100 menus, AT commands
- MXCFG Windows ™ graphical software
- Local or remote unit control.
- Diagnostics : local and remote loops - V54 B3 and B4.
- Statistics over 24 hours : CRC, LOS, FAS, BCV
- Administration in the AMS16 rack with the CFIP card : telnet, ftp, SNMP.
- Administration through a network with one time slot (1 to 31) or TS0 with the bit SA4.

Physical

- Standalone : 196mm x 120mm x 44mm.
- Weight : 900g.
- Operating temperature : 0 to 50 degree C
- FCC part 15, CE : EN 60950, EN 50081-1, 50082-1

CV2000 / MX2000 REFERENCES

CV 2XXX - PYZ **MX 2XXX - PYZ**

XXX — Terminal Interface (DTE)

030	RS530
011	V11
035	V35
036	V36
028	RS232 async / sync
4BR	4 ISDN BRi interfaces (CV2000 only)
0BT	Ethernet bridge (CV2000 only)

P Standard front panel with LED indicators

Z- Network interface / country

E E1 / Europe

T T1 / USA

Y– Equipment

C internal power supply 48 Vdc (opt 12-36)

I internal power supply 110 / 240 Vac

R Rack mount card for AMS16/4 chassis

V stand alone with external power supply

Options:

CV2000-BNC : BNC sockets / 75 Ohms

CV2000-ASYM : asymmetrical up&down rates