



CONVERTIX™
Signaling Conversion System

**Frequently Asked Questions
(FAQs)**

V52 Converter

Q. Why do we sometimes counter noise during calls?

A. The card needs to be plugged in so that it seats properly in all the five connectors. Standard procedure for ejection and removal needs to be followed.

Q. Why is the V5.1 not coming up?

A. The Interface group Identifier on each end of the V5.1 interface (AN and LE) has to be the same.

Q. Will both V5.1 interfaces support ISDN?

A. Yes. ISDN C channels can be provisioned on both V5.1 and V5.2 interfaces.

Q. Is there any problem in multiplexing few C-channels from few V5.1 interface into one interface of V5.2?

A. It is possible, CoPCE1600 will be performing the signaling conversion. CoPCE1600 will support V5 Ig concentration

Q. Can the converter support ISDN BRI, generally and in the current configuration?

A. Yes. The converter can support enveloping passing of enveloped ISDN D channels transparently from V5.2 to V5.1 interfaces and vice versa. For a given ISDN C channel, the number of ISDN BRI interfaces that are multiplexed and the Interface group information on both interface types has to be configured

Q. What will I need to do to define two V5.1 interfaces so that the users will be mapped to one V5.2 interface?

A. Each V5.1 interface group will have unique interface ID. V5.2 ig will maintain mapping table for V5.1 interface Id and port to V5.2 layer-3 address.

Q. In port 1 we saw in the E1 analyzer that the working mode is of 'double frame' instead of 'multi frame' and we receive zero in timeslots 1 - 31?

A. E1 framing for both V5.1 and V5.2 links should always be CRC-4 Multiframe .

Q. How must I change the configuration so V52 will work with links 3 & 4 of your card?

A. In the configuration file, (attach a snapshot of the file) or through the API (snapshot of the API usage)

Q. The equipment that work as V5.1 doesn't succeed to sync against any of your ports. It displays an LOF alarm. However, in your card the link is sync?

A. E1 framing for both V5.1 and V5.2 links should always be CRC-4 Multiframe.

Q. What is the procedure to make the converter work? Does it includes Man Machine interface to configure the converter ?

A. Yes, there is a sample application program for provisioning that can be run from a Solaris or Windows host. The host is connected to the Converter through an Ethernet Interface.

Q. What kind of E1 do you use 120ohm or 75ohm?

A. 120 ohm RJ45 connectors or Telco Patch Panel, For 75 ohms, Telco connector RTB with BNC patch panel can be used.

Q. What comprises a full kit that you will send us?

A. CoPCE1600 V5 Converter Boards (number based on the configuration and E1 densities needed), CPU card, a Compact PCI chassis, User Manual, Installation Guide, Sample Applications, Warranty, Rear Transition boards (same number as CoPCE1600 cards), Patch Panel (optional)

PSTN FAQ's

Q. Can the V5.2 Stack make it possible for the User Application to send an Establish Ack message?

A. Yes it is possible. CoPCE1600 call control API provide complete access to User application to send Establish Ack along with its IE.

Q. Can the V5.2 Stack inform the user application of Establish or Establish Ack message received from the AN?

A. Yes supported. CoPCE1600 will inform User application about received Establish or Establish Ack message along with its IE.

Q. Will the V5.2 Stack make it possible for the application to pass the type of ring in the Establish message sent towards the AN?

A. Yes it is supported. Type of the ring information needs to define by User application. CoPCE1600 API will carry ring type from User app.

Q. Will the V5.2 Stack inform the application of any received pulse digit from the AN?

A. Yes CoPCE1600 boards will collect all pulse digits from AN and send it to the User application.

Q. Will the V5.2 stack inform the user application during the call when the user performs on-Hook followed immediately by Off-Hook (flash) which comes on SIGNAL message.?

A. Once a call is established CoPCE1600 supervises the active call. To monitor the hook flash condition it provides country specific hook flash timings which can be provisioned

Q. Can the V5.2 stack enable the user application to send SIGNAL ACK, DISCONNECT?

A. CoPCE1600 provides User application to invoke DISCONNECT at any time. Since a PSTN SIGNAL message carries a sequence number related to SIGNAL message, CoPCE1600 does not provide access to send SIGNAL ACK message from User app.

Q. Does the V5.2 stack notify the user application when the user off hooks after receiving a ring?

A. Yes.

Q. Does the V5.2 stack enable the user application to send PROTOCOL PARAMETER Message to set values for the protocol variables?

A. CoPCE1600 provides an API to the User application to send a PROTOCOL PARAMETER message towards AN.

Q. Does the V5.2 Stack enable the user application to control allocation and deallocation of V5.2 time slots?

A. Yes CoPCE1600 provides V5.2 time slot allocation and deallocation API for User application

Q. Can the V5.2 Stack provide the reason for the failure in allocation and deallocation of the V5.2 timeslots?

A. Yes. CoPCE1600 returns error cause for allocation or deallocation reject.

Q. Are the following supported?

- 1) Congestion at the AN.
- 2) V5.2 time slot already been allocated for another call.
- 3) V5.2 time slot ID is invalid.
- 4) V5 link ID is Invalid.
- 5) V5.2 time slot is busy carrying a C Channel.
- 6) Unavailable V5 link.
- 7) Subscriber port is not specified.
- 8) Invalid subscriber port TS ID

A. Yes it supports all of the above allocation or deallocation rejection causes.

Board FAQ's

Q. Is the Board cPCI based?

A. Yes, it is a single slot wide, cPCI board of 6U form factor.

Q. If board is run on Ethernet host is MGCP the protocol used?

A. No, the protocol used for control plane is proprietary and works over TCP sockets

Q. Do you support other protocols like H.248 and SIP?

A. No.

Q. Does your board support the V5.2 of the ITU-T G.965?

A. Yes.

Q. Which version on the V5.2 ITU-TG.965 does your card support?

A. We support both versions of ITU G.965 for V-Interfaces at the Local Exchange (LE) - V5.2 Specification and ITU G.964 for V-Interfaces at the Local Exchange (LE) - V5.1 Specification

Q. For the ETSI which version does your board support [1994 or 1999]?

A. It supports both versions.

Q. What is your time plan if we need ISUP board and will it support M3UA?

A. 3 Months

Q. Does your V5.2 board support DTMF detection?

A. Yes, upto 256 channels of DTMF detection is possible.

Q. Does your V5.2 board support DTMF and FSK generation for caller ID?

A. Yes.

Q. Does your V5.2 board support the ITU Q.931 in the API?

A. Q.931 APIs are available for ISDN resource boards when ISDN is packaged on a separate board that works in conjunction with V5.2 resource board

Q. Does your board support ISDN?

A. Yes. It supports ISDN PRI as a standalone feature as well as ISDN NT signaling handling which is enveloped in V5.2 C channels.

Q. Does your card support revision one and revision two of the ETSI standard?

A. Yes we support both revisions of ETSI standards

ETSI 300 324 -1 V2.1.1 for V-Interface at the LE. V5.1 interface for the support of Access Network (AN). Part 1: V5.1 interface specification and; ETSI 300 347-1 V2.2.2 for V-Interface at the LE. V5.2 interface for the support of Access Network (AN). Part 1: V5.2 interface specification.

Q. Is your V5.2 board compatible with the Intel ZT5524A1A chassis?

A. Yes, it is compatible with most cPCI chassis and H.110 TDM backplanes.

ISDN FAQs

Q. Can the V5.2 Stack enable the user application to control allocation and de-allocation of V5.2 time slots to specific ISDN B channels?

A. CoPCE1600 provides V5 ISDN call control API for allocation and de-allocation V5.2 time slots for ISDN B channels

Q. Does the V5.2 Stack inform the user application of the EFAddr from which the ISDN D channel message has arrived?

A. Yes it is supported

Q. What do you mean by ISDN payload? Do you mean ISDN bearer channel or do you mean ISDN signaling channel ?

A. ISDN payload is ISDN user data. V5-ISDN communication (signaling) channel will be nailed up to CoPCE1600 ISDN resource board. This board process ISDN signaling information.

Q. Do you have the call control as part of the stack or you provide access to layer 3 ?

A. CoPCE1600 board with ISDN stack has minimal call control application which processes the received stack events and present in User application understandable format.

Q. In case call control is part of the stack, 1) Do you support different variants ??

2) what variants do you support ?

3) Do you allow the application to choose the B channel or is it done by the stack ?

A. We support following PRI/BRI variants 1) BRI

- a) NI1 (North American)
- b) AT&T (North American)
- c) DMS100 (North American)
- d) NET3 (European)
- e) TR6 (German)
- f) VN3 (French)
- g) INS64 (Japanese)
- h) TS013 (Australian)

2) PRI

- a) NET5PRI (European)
- b) AT&TPRI (North American)
- c) NI1PRI (North American)
- d) DMSPRI (North American)
- e) INS64 (Japanese)
- f) TS014 (Australia)

Q. How flexible is your API?

i. Can the user app access different IE in the message or you just provide what is necessary for basic call scenarios plus some services of their choice?? ii. Can the user app, send and receive facility messages?

A. i) CoPCE1600 API layer provides complete access to Q931 IEs. User application can fill or extract Q931 IEs

ii) Facility API is given by CoPCE1600 to User app.

Q. Can the V5.2 stack provide the user with application performance monitoring data for the V5.2 operation?

A. Yes, it can, by means of the APIs.

Q. Can the V5.2 stack provide the user application different types of Alarms based on thresholds configured by the user application?

A. Yes, currently E1 alarms and threshold setting is implemented.

Q. Does the V5.2 stack comply to the Q interface for the O&M?

A. Yes, it does.

Q. Will the V5.2 stack inform the user application when switching between C Channels occurs? (Protection protocol)

A. Yes, by means of the asynchronous callback or Event APIs.



Tone Generation and Detection FAQs

Q. Does the V5.2 card have DTMF detection and tone generation for its time slots?

A. Yes, DTMF detection and generation is possible on all the timeslots.

Q. Are the number of tone generators and DTMF detector on the board enough for all time slots on the board with no blocking (one to one)?

A. Theoretically yes. But due to certain additional MIPS requirements from DSP core processors for handling DTMF related issues like duty cycle sensitivity, talk-off, echo suppression and debouncing ; the effective limit comes to 256 channels, which is half the number of timeslots supported on the board.

Q. Does the V5.2 card have the resources to send the caller Id info towards the Access Node?

A. Yes.

Q. Can the V5.2 card enable the user application to control the tone generation and the DTMF detection at anytime during the call?

A. Yes, by means of Tone Service APIs

Q. Does the V5.2 card enables the user application to connect the time slot to both DTMF detector and tone generator simultaneously? (Each on one direction).

A. Yes, a timeslot in inward direction can be connected to the DTMF detector and in outward direction (Egress) can be connected to the Tone generator.

Q. Does the V5.2 card allows the application to compose and send the tones specified in the attached document?

A. Currently, the call progress tones and DTMF/MF-R1R2 Tones generation and detection is supported along with basic call progress tones like dialtone, ringback tone, busy tone. Special Information Tones are under development.

H.110 FAQ's

Q. Does the V5.2 card enable the user application to connect or disconnect any timeslot to the H.110 bus during anytime of the call?

A. Yes, APIs are provided that can be used by applications developed on the CPU card (under Solaris or Windows OS) to make/delete cross connects from the V5.1/V5.2 E1 timeslots to timeslots on the backplane H.110 bus.

Q. Is there any blocking in the switching between the time slots and the H.110 bus?

A. CoPCE1600 boards have 16 E1 interfaces. So, 512 timeslots can be handled in the board, including signaling and bearer timeslots. There is sufficient TDM switching capacity on-board that supports simultaneous connections of upto 512 timeslots to the H.110 TDM bus in non-blocking mode and full duplex.

API FAQ's

Q. Does the API itself support all the required features?

A. There are APIs provided along with the V5.2 software builds for various functions like board administration, V5 configuration, bearer channel management, Call Control, Performance Monitoring of E1 links, Statistics and Asynchronous notification of Events

Q. We can define multi group interface from the API on the same host, but can I define multiple group interface on the same board?

A. Yes, multiple interface groups can be defined on the same board. The max limit is 8, since each V5.2 interface group needs minimum of 2 E1s. The limit can be extended to 16 when primary and secondary E1 links are handled on separate boards.

Q. Our application will be running on top of Linux OS not Win NT. Will it work?

A. The standard package includes Linux support only when the APIs are exercised over Ethernet and not PCI bus.

Q. If our user App is one process (multithreaded), will it work?

A. Yes. The user Application however has to bind and register with our lower layers like IPC Manager, which is like an abstraction layer to our system.

Q. Who manages the Q.921 and Q.931 in case of ISDN signaling over V5 protocol?

A. V5 CoPCE1600 board controls the V5.2 signaling and the CoPCE1600 ISDN resource board handles the Layer-2 and all Q.931 layer-3 frames are exported to host user application for further processing. Here V5 ISDN communication channel is nailed up to H.110 back plane time slot of CoPCE1600 ISDN resource board which takes care of ISDN-Q.931 signaling. The bridging between V5 and ISDN signaling will be done by the user application.

Q. Your V5.2 PSTN only supports establish and disconnect. Does this put a limitation on what the user app can do with it?

A. User Application can now have complete control over PSTN, BCC and Channel management aspects of the protocol.