



Integrating AMTELCO XDS Line Interface Boards in an Asterisk® Environment

The AMTELCO XDS Asterisk channel drivers have been designed for use under the Linux Debian, Ubuntu, and CentOS Operating Systems (kernel 2.6) and have been tested for use alongside Asterisk versions 1.4.x, 1.8.x, and 11.x. The AMTELCO installation package includes the XDS device driver as well as the XDS Asterisk channel driver and supporting instructions.

The XDS channel drivers currently provide support for the following XDS PCI and PCIe boards:

H.100 24-Port Station Interface Board	H.100 4-Span T1/E1 Interface Boards
H.100 12/24-Port Loop Start Interface Board	H.100 8-Span T1/E1 Interface Boards
H.100 8-Port E&M Interface Board	H.100 4/16-port Basic Rate Interface Boards
HMP 4-port E&M Interface Board	HMP 16-port Modular Line Interface Board

Included in each channel driver are the basic capabilities to receive and generate calls for each board type within the Asterisk environment. Caller ID (name and number) is also supported for Loop Start, Station, and T1/E1 interface boards. Multiple ringing profiles are supported for station interface ports, as well as support for inbound MF-DID protocols. XDS Radio Interface (E&M) boards support Push-To-Talk VOX signaling, call establishment / disconnection via the radio user, and dynamic gain control to adjust port volume levels through the Asterisk dial plan. T1/E1 span alarms are reported in real time through the Asterisk manager interface.

Systems utilizing the 4-port XDS T1 or E1 interface boards also benefit from optional conferencing capabilities, which are accessible through an AMTELCO conferencing application (included with the XDS channel driver). While this conferencing utility is applicable only to channels associated with XDS interface ports, conferences of this nature can be accommodated using the integrated XDS hardware resources to minimize loading on the PCI bus and the PC host processor.

Native connections made directly between two H.100 XDS ports will have their audio paths established across the external H.100 bus between XDS boards, rather than the PCI bus. This also minimizes loading on the PCI bus and the PC host processor. Audio switching in these cases is managed by the XDS channel driver, and is transparent to applications at the Asterisk layer. If audio is still desired on the PCI bus for these connections (for call logging or other requirements), this can be optionally enabled in the AMTELCO configuration file.

Larger applications can be designed within the Asterisk environment to utilize AMTELCO channels in the same way as those channels associated with other non-AMTELCO resources. This may include wider, more universal conferencing implementations for channels that span multiple vendors, as well as recording and playing back audio from a fixed data drive for voice mail, call logging, broadcasting of automated prompts, or other purposes. The AMTELCO Asterisk channel drivers allows AMTELCO resources to be managed seamlessly within the standard Asterisk programming architecture for a true multi-vendor integration.

For sales assistance regarding the AMTELCO XDS Asterisk channel drivers, as well as any XDS HMP or H.100 line interface products, please contact Jim Becker (jim@amtelco.com) or Bill Curtin (bill@amtelco.com) at 1-800-356-9224.

For technical support, or for assistance in downloading the AMTELCO Asterisk channel driver package or supporting documentation, please contact AMTELCO support personnel at xdssrvc@amtelco.com or at 1-800-781-6120.



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