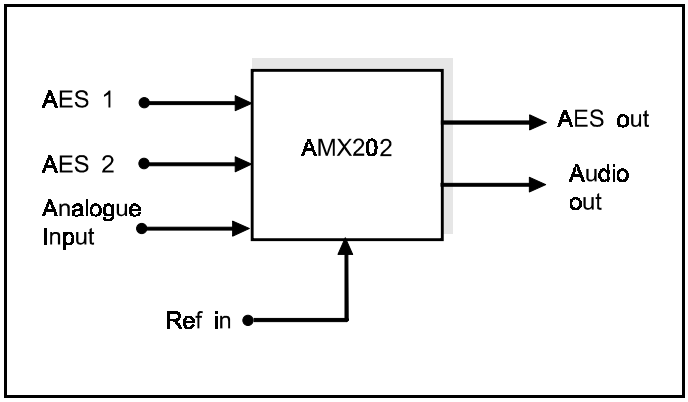
Microvideo

Series 200
AMX202

Audio Mixer Module

- Two AES digital audio inputs
- Mixes two AES digital audio streams
- Reference Input
- Analogue Input Option
- Analogue Output
- 24 bit audio processing



Introduction

The AMX200 is a flexible audio processing module which can be made to perform a wide range of audio functions such as switching or mixing between different AES / Analogue sources, delaying the audio and adjusting levels. Its compact size allows multiple channels to be put into a single frame. It can be used with Microvideo's KEY200 digital video mixer module, allowing a single box solution for audio - video mixing.

The exact functionality of the card is defined by the fitting of different options and software. This Datasheet details the specifications of the AMX202 audio mixer.

Specifications

Digital Audio Inputs / Outputs

2 x AES in, 1 x AES out
24 or 20 bit AES/EBU as described in EBU Tech 3250-E (or AES-3-1992), with 48Khz sample rate.
Standard module uses balanced AES input/output through 15 way D-types.
(Single Ended AES using BNC's can be provided as an option).

Analogue Input (Optional)

1 x Stereo, Balanced, level line, 10K impedance.
Through 15 Way D type.
For Voice Over applications an auto-ducking option can be supplied. Contact Microvideo for details.

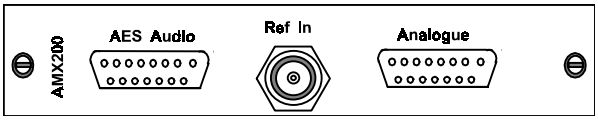
Analogue Ouputs

Stereo Balanced Line Level through 15 Way D-types,
Conversion is performed by 128x oversampling.

Timing Reference Inputs

Analogue Video Reference, for standard 1V Black and Burst into 75R, internally terminated.
TTL Level with Line Clock Timing (for use with Microvideo MUX200 embedder).
Alternatively the reference timing for the module may be taken from AES1**.**

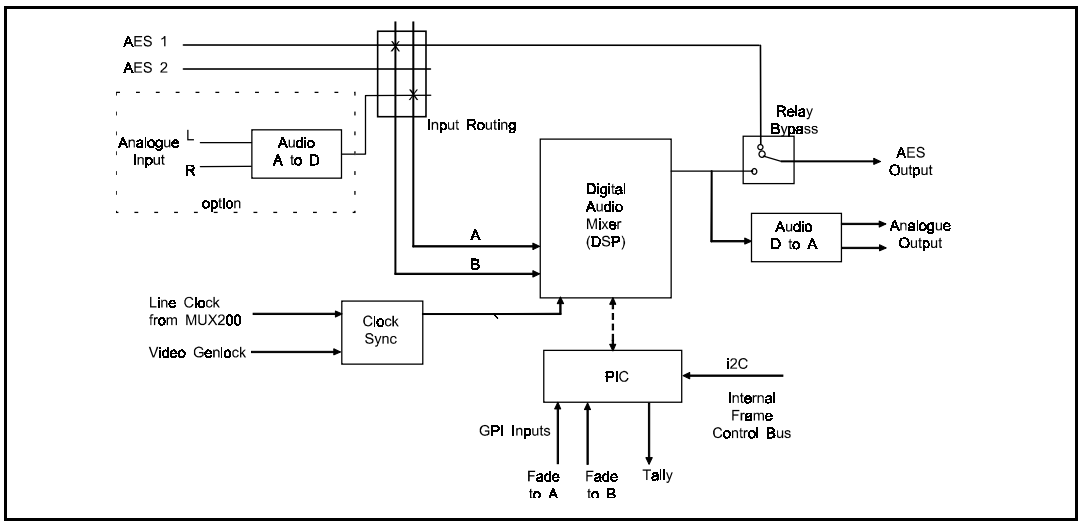
Rear Panel for AMX202 with balanced AES/EBU interfaces.



MICROVIDEO LTD, The Front Office, Copley Hill Farm, Cambridge Road, Babraham, Cambridge, CB2 4AF, ENGLAND
Tel +44 1223 834119, Fax +44 1223 834471 Email - sales@microvideo.co.uk, Web - www.microvideo.co.uk
Data sheet ref - amx202-2.dtp (Aug 00)

Operation

The heart of the card is a Digital Signal Processor (DSP). This performs digital audio mixing on two streams. The two streams are first selected by the input routing matrix. The streams are synchronised, before mixing, to the reference coming from AES1 or an external video signal. The PIC configures and controls the operation of the DSP. It can communicate to a CPU card mounted in the frame to give remote control capability.



Control

DIP switches

With the Standard software (ver 1.0) the following parameters can be set by Dip switches.

Up	Down
External Sync Input	Sync from AES1
625	525
Remote Configuration	Dip Switch Configuartion
A - B mix	A - Analogue Input
Normal Mix	Fade to Silence
20 bit data output	24 bit data output
Normal Op	1KHz Test Tone Output
Process	Bypass (passive relay)

Hex Switch 1 Allows setting of fade time, 16 steps from 0 frames to 75 frames
Hex Switch 2 Adjusts level of Analogue Input Level (if Fitted)

GPI inputs

GPI Inputs allow simple control of the card, enabling Fade up / Fade Down to be activated.
Tally Output indicates whether it is faded to A or B.

CPU card

A CPU Card mounted in the frame allows configuartion and control from an automation system or one of our control panels. See Remote Panel Datasheet for Specification on this option.

Product Codes

AMX202 Digital Audio Mixer Module with 2 x balanced AES inputs
AMX202A Mixer with 2 x AES and 1 x Analogue Input.

Contact Microvideo to discuss options for unbalanced AES i/o.

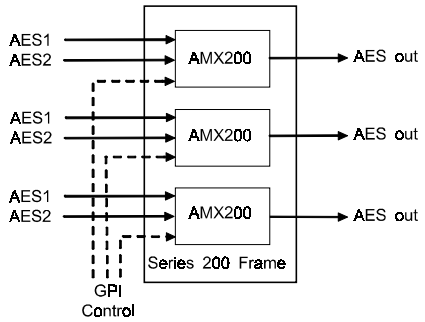
Note - These cards may be mounted in Microvideo's Series 200 1U or 3U frames.

MICROVIDEO LTD, The Front Office, Copley Hill Farm, Cambridge Road, Babraham, Cambridge, CB2 4AF, ENGLAND
Tel +44 1223 834119, Fax +44 1223 834471 Email - sales@microvideo.co.uk, Web - www.microvideo.co.uk
Data sheet ref - amx202-2.dtp (Aug 00)

Applications for the AMX202

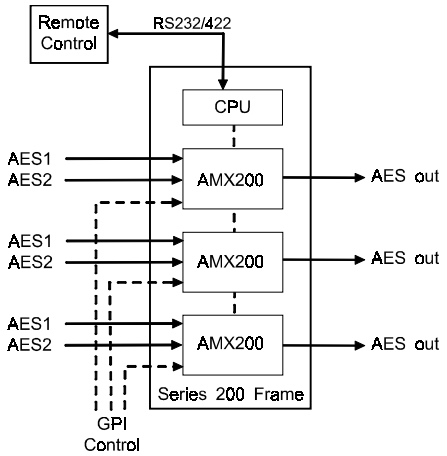
1) Multi-channel with GPI control

Ideal for simple cross fading from one source to another. Default settings for the AMX202 enable cross fading or cutting between AES1 and AES2. Dip switches on the board allow each card to be set to fade to silence or to the analogue input when GPI's are activated.



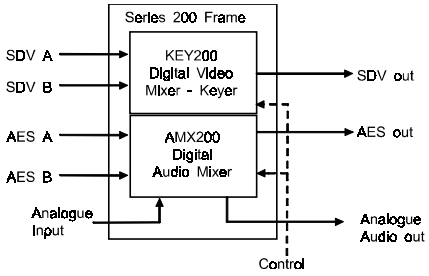
2) Multi-channel with Remote Control

The CPU card in the frame allows the user to configure any of the AMX202 modules. Here we show AES1 and AES2 but the user can change the fade source to any of the AES inputs, silence or the analogue input. They can also set gain levels and fade rates from the remote panel. The GPI's can still be used to initiate the fade or alternatively an automation system may use RS232 or RS422 to control the AMX202 modules.



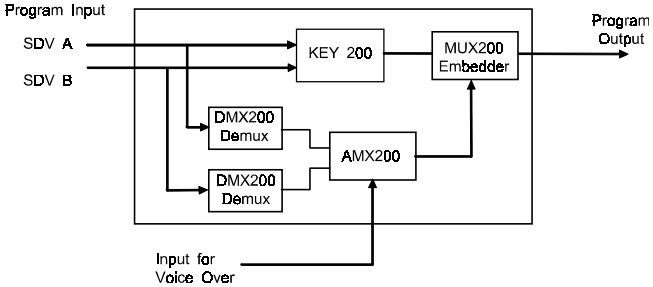
3) Audio and Video Mixing

Using the KEY200 digital video keyer-mixer module in the same frame enables mixing of audio and video. The control of the Key200 can be combined with the AMX202 achieving synchronous control. This allows the audio and video fades to be performed together or separately with fully programmable fade times.



4) Embedded Audio

Using our embedded audio modules a solution can be built to process embedded audio. This may be full mixing and voice over insertion (as shown) or just audio processing to make gain and timing adjustments.



Above are just a few examples of systems that can be offered built around our AMX202. The modular approach we offer allows broadcasters to have a cost effective solution which exactly matches their requirements. Contact us with your system specification and we will provide a detailed proposal.

MICROVIDEO LTD, The Front Office, Copley Hill Farm, Cambridge Road, Babraham, Cambridge, CB2 4AF, ENGLAND
Tel +44 1223 834119, Fax +44 1223 834471 Email - sales@microvideo.co.uk, Web - www.microvideo.co.uk
Data sheet ref - amx202-2.dtp (Aug 00)