Pyramix 6, internal bussing and I/O Capabilities, in 64 channels HDTDM Mode, 128 channels XDTDM Mode, and MassCore mode

Sample Rate Format		Note 1 – Bussing capabilities			AES and AES2 – AES/AES 2 Speed on Physical Wire @ 44.1/48kHz			AES/AES 2 Speed on Physical Wire @ 88.2/96kHz			AES 2 Speed on Physical Wire @ 176.4/192kHz			DUAL		Notes
		HDTDM	XDTDM	MassCore	HDTDM	XDTDM	MassCore	HDTDM	XDTDM	MassCore	HDTDM	XDTDM	MassCore	Stand Alone	MassCore	
44.1/48 kHz	1FS	64	128	384	24	24	24							8+4	8+4	
88.2/96 kHz	2FS	32	64	192	12	12	12	12	24	24						See Note 2
176.4/192 kHz	4FS	16	32	96	6	6	6	6	12	12		24	24			
352.8/384 kHz	8FS	8	16	48	3	3	3	3	6	6		12	12			
DXD	8FS		16	48		3	3	Note 4 → 6	6		12	12			Note 9	See Note 3
DSD (Note 8)	64FS		16	48		8 or 6	8 or 6	Note 5 → 8 or 6	8 or 6	8 or 6		8 or 6	8 or 6			

Sample Rate Format		MADI 2 – MADI2 Standard Mode			MADI2 Extended Mode			ADAT			TDIF			SDIF		
		HDTDM	XDTDM	MassCore	HDTDM	XDTDM	MassCore	HDTDM	XDTDM	MassCore	HDTDM	XDTDM	MassCore	HDTDM	XDTDM	MassCore
44.1/48 kHz	1FS	56	56	56	64	64	64	16	8	16	16	16	16		8	8
88.2/96 kHz	2FS	28	28	28	32	32	32	8	4	8	8	8	8			
176.4/192 kHz	4FS	14	14	14	16	16	16	4	2	4	4	4	4			
352.8/384 kHz	8FS	7	7	7	8	8	8	2	1	2	2	2	2			
DXD	8FS		7	7		8	8	No In !								
DSD (Note 8)	64FS	Note 6,10	16	16		16	16	Note 7							8	8

General information

Between Pyramix V4 to V5, the number of channels was doubled. The inter-board bus was enhanced in terms of bandwidth and the XDTDM bus mode was added meaning: e**X**treme **D**efinition **T**ime **D**omain **M**ultiplex. Some exceptions exist and these are discussed below.

Between Pyramix V5 to V6 **MassCore** has been introduced multiplying all mix engine processing considerably and allowing for higher bussing capabilities.

Detailed notes and information :

1   The column "*Bussing capabilities*" indicates the maximum channels count available in a Pyramix system in V4.x through V6.x modes:
The **HDTDM** mode is the V4.x compatibility mode and offers the same PCM channels count as previously, except that DSD/DXD modes are no longer supported in this mode since V5.x.
The **XDTDM** mode - V5.x and V6.x only - offers twice as many PCM and DSD/DXD channels compared to Pyramix V4.x.
The **MassCore** mode multiplies the number of PCM busses by **6** at all sampling rates and allows for **48 channel of DSD and DXD** recording and playback, giving Pyramix power never before seen in a DAW!

2   The greyed cells indicate that the corresponding mode does not exist for the corresponding daughter cards.

3   DXD / DSD are only available in XDTDM and MassCore modes.

4   In DXD mode, the number of I/O depends on the I/O format speed.

5   In DSD mode, the number of I/O depends on the AES I/O format (Sony or P3D respectively).

6   Although the theoretic maximum DSD channel count with a MADI daughter card is 24, the bus capability has a maximum of 16 DSD channels.

7   The ADAT daughter card supports the XDTDM and MassCore modes with a hardware rework ONLY (shield).
In XDTDM mode, the ADAT daughter card offers 8 output channels through optical output A) replicated on the optical output B) but No Inputs.
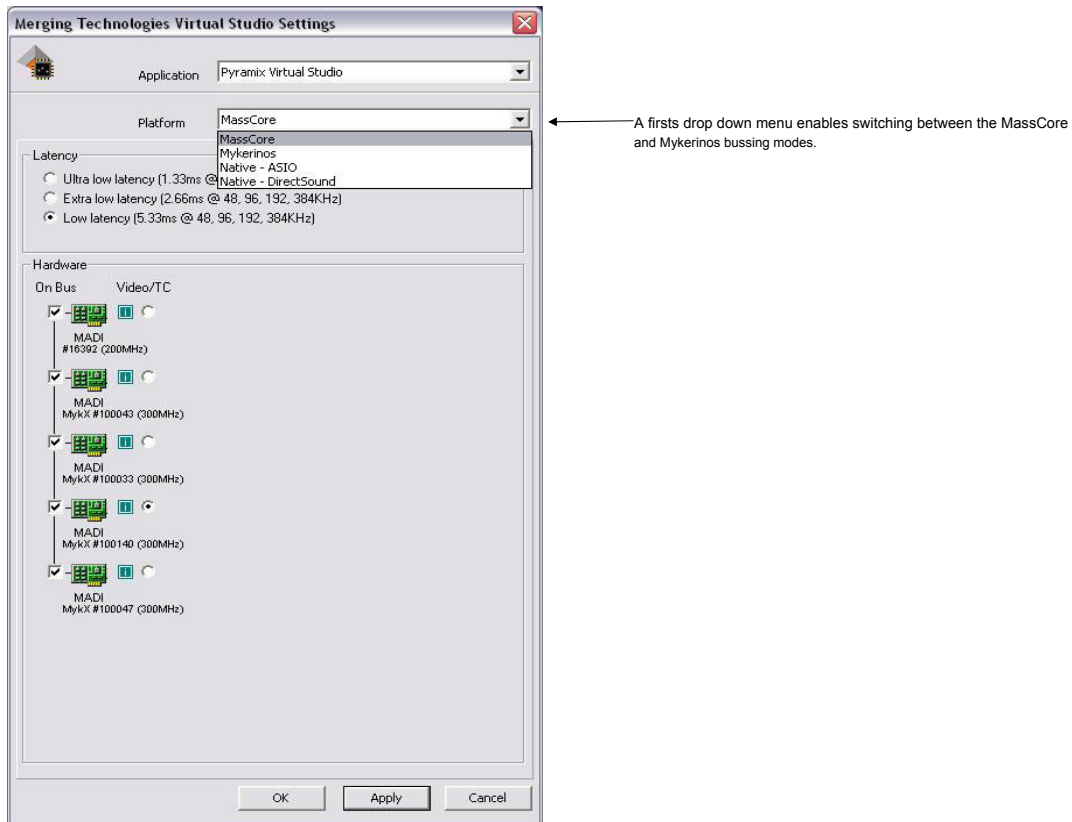
The hardware rework consists of adding a shield to the ADAT similar to the one used for the DUAL daughter card. Please contact your Merging sales partner to order this retrofit kit.
 => Do not try to use the ADAT daughter card in XDTDM or MassCore modes without this required shield!

8   In a mono-board Mykerinos mode system (non MassCore), only 2 DSD channels are available.

9   Dual offers 8 AES and 4 Analog channel I/O per board.

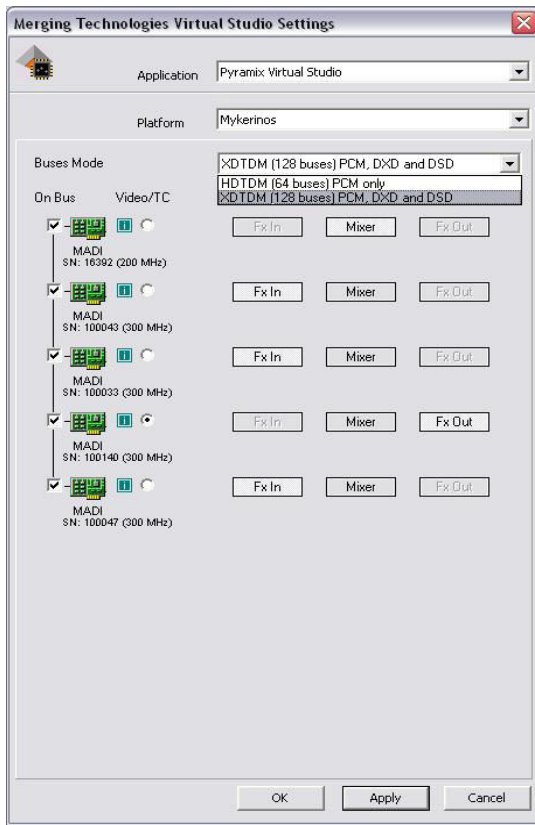**10**   In standalone, non-Masscore mode only 8 channels DSD are available.

Non-MassCore (Mykerinos mode) Multi-board hardware restrictions:

The MADI 1 daughter card does not work in Mutlti-board mode (This includes all MADI daughter cards with serial numbers inferior to 30051)
ADAT daughter cards with serial numbers inferior to 20299 do not function in multi-board mode.
The DUAL daughter cards do not function in multi-board mode.

How do I switch between the HDTDM, XDTDM, and MassCore bussing modes ?

The HDTDM, XDTDM, and MassCore bussing modes are selected in the VS3 Control Panel as shown in the picture below.

A firsts drop down menu enables switching between the MassCore and Mykerinos bussing modes.

Merging Technologies Virtual Studio Settings

Application: Pyramix Virtual Studio

Platform: Mykerinos

Buses Mode: XDTDM (128 buses) PCM, DXD and DSD

HDTDM (64 buses) PCM only
XDTDM (128 buses) PCM, DXD and DSD

On Bus   Video/TC

Fx In   Mixer   Fx Out
MADI
SN: 16392 (200 MHz)

Fx In   Mixer   Fx Out
MADI
SN: 100043 (300 MHz)

Fx In   Mixer   Fx Out
MADI
SN: 100033 (300 MHz)

Fx In   Mixer   Fx Out
MADI
SN: 100140 (300 MHz)

Fx In   Mixer   Fx Out
MADI
SN: 100047 (300 MHz)

OK   Apply   Cancel

If you chose Mykerinos mode in a Multi-board system a second drop down menu enables switching between HDTDM and XDTDM bussing modes.

Mykerinos Daughtercards IO Capabilities.xls

Since V5 the routing functionality has disappeared from the VS3 control panel and has been moved into Pyramix under the "*Pyramix Settings*" window. For information, a screen shot of the Pyramix Settings window is shown below :