

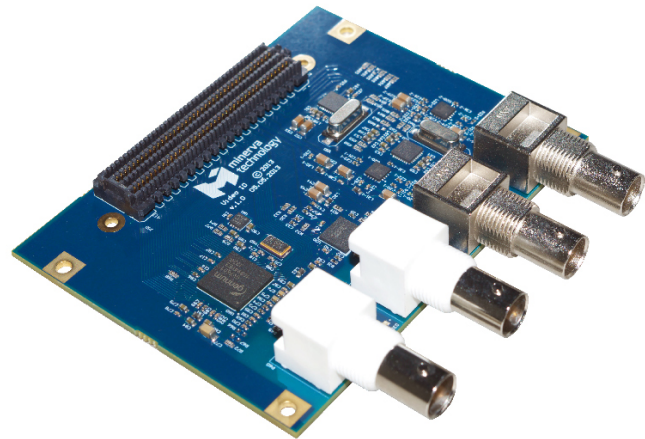


Video IO FMC Mezzanine board (Broadcast/HDCCTV)

Datasheet

Features

- ANSI/VITA LPC (Low Pin Count) FMC compliant
- Two BNC connectors for DVB-ASI or SDI Input. SMPTE 259M/344M
- One BNC connector for 3G/HD/SD-SDI Input
- One BNC connector for 3G/HD/SD-SDI Input/Output
- Two configurable Low-Jitter Clock Generators with Integrated VCO and differential output CDCM61001



Applications

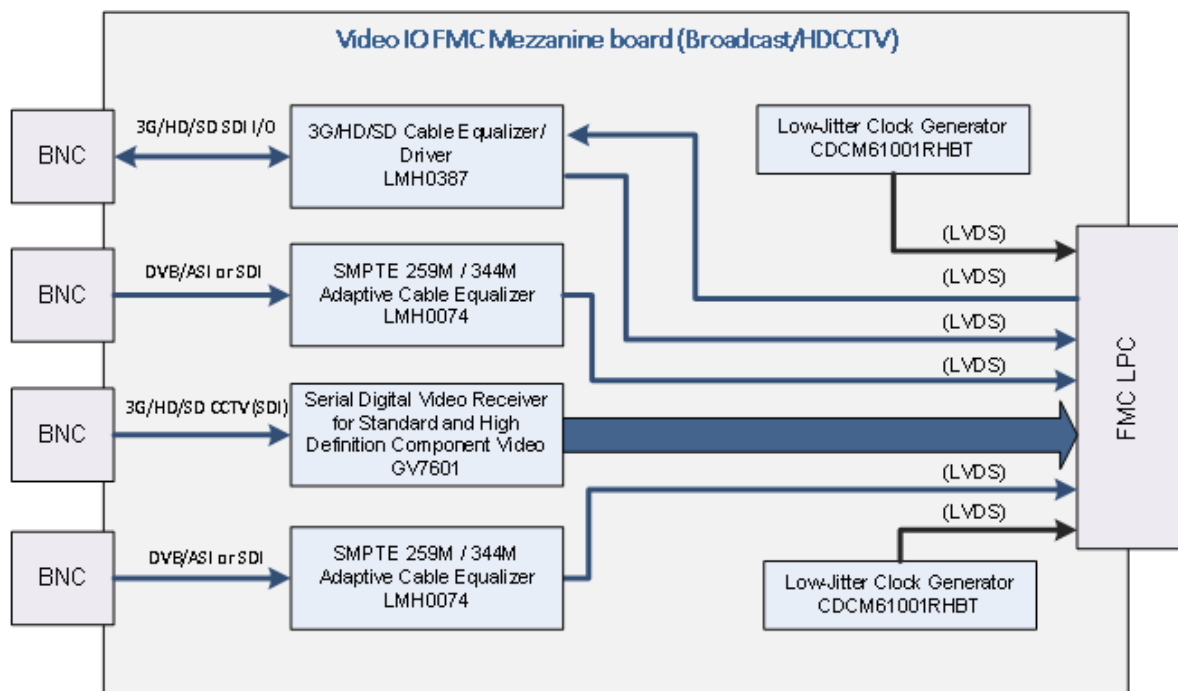
- Industrial Machine Vision
- Surveillance IP/CCTV/HDCCTV
- Video projection
- Broadcast

Introduction

Broadcast/HDCCTV is a Video In/Output FMC daughter board that performs versatile functionality for number of applications. This board offers cable equalization for DVB-ASI/SDI and 3G/HD/SD SDI interfaces. Board performs de-serialization for CCTV(SDI) and data passing In/Out FMC carrier boards.

Board Overview

Block Diagram



Detailed descriptions of the signals presented in the datasheet sections listed in Table 1.

Description	FMC	Description	FMC
DVB-ASI/SDI #1		DVB-ASI/SDI #2	
ASI_P	H10	ASI_P	H7
ASI_P	H11	ASI_P	H8
CD	G12	CD	G9
ASI_LED	G13	ASI_LED	G10
CCTV(SDI)			
VDATA0	G19	SMPTE	C18
VDATA1	H20	DVB_ASI	C19
VDATA2	G21	TIM_681	D17
VDATA3	H22	SW_EN	D27

VDATA4	G22	AUDIO_EN	C15
VDATA5	H23	IOPROC_EN	D23
VDATA6	H25	20BIT	H19
VDATA7	G24	RESET	C27
VDATA8	H26	SPI_MISO	D26
VDATA9	G25	SPI_MOSI	C26
VDATA10	H28	SPI_CLK	D24
VDATA12	G30	SPI_CS	D18
VDATA13	H29	PCLK	C23
VDATA14	G28	IRQ1	G34
VDATA15	H31	IRQ2	H35
VDATA16	G31	LOCK	H37
VDATA17	H32	V_FS	H38
VDATA18	G33	V_VS	G36
VDATA19	H34	V_HS	G37
A_D78	H17	A_MCLK	D20
A_D56	G16	A_CLK	D21
A_D34	H16	A_WCLK	G18
A_D12	G15		
HD SDI I/O			
TX_EN	D15	CS	C11
ASI_O_P	C2	ASI_CARRIER	H13
ASI_O_N	C3	MISO	
ASI_I_P	C7	MOSI	
ASI_I_N	C6	SCLK	
Clock Generator			
CLK_ASI_P	D8	CLK_HSDI_P	D4
CLK_ASI_N	D9	CLK_HSDI_N	D5

Table 1 FMC pin out description

Clock Generator

Board contains two clock generators, which provide clocks for ASI and SDI signals synchronization.

Clock frequency programs by resistors (0 Ohm) R53-R57 for ASI and R61-R65 for SDI. Default clock frequency is 648 MHz.

Detailed descriptions of the possible clock frequencies presented in the datasheet sections listed in Table 2.

	R55/63	●	○	●	○	○	○	
	R56/64	●	●	○	○	●	○	
	R57/65	●	●	●	●	○	○	
R53/61	R54/62							
●	●		648.00	324.00	216.00	162.00	108.00	81.00
○	●		405.00	202.50	135.00	101.25	67.50	50.63
●	○		675.00	337.50	225.00	168.75	112.50	84.38

o	o		540.00	270.00	180.00	135.00	90.00	67.50
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Table 2

Additional Information

Technical Support

For technical support, contact the Minerva Technical Support Team:
tsup@minerva-tech.com

Ordering Information

Please contact Minerva Sales department for pricing and additional information about the product.
sales@minerva-tech.com