

EASYSS10 EVK (MBG10 EVK)

Eval/Dev Environment for Macnica ST 2110 Solutions

Full-stack SDI to 10G IP video transport gateway system with Macnica MBG10 SoM powered by its ST 2110 IP Core



- SMPTE ST 2110-10, -20, -30, -40
 - SMPTE ST 2022-7, -8
 - 6 channels of HD-SDI or 3 channels of 3G-SDI
 - Various Formats of Reference Signals
 - JTAG for FPGA Config
 - RJ45 Control Port
 - UART/USB
 - SD Card Slot for Quick Firmware Upload
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- Perfect evaluation and development environment for Macnica MBG10 System on Module and ST 2110 IP Core Package

The **EASYSS10 EVK** (also known as MBG10 EVK) is a full-stack SDI to 10G IP video transport gateway system to allow quick evaluation and development of Media over IP systems using Macnica's **EASYSS10 System on Module (MBG10 SoM)** and **ST 2110 IP Core Package**.

The EASYSS10 SoM is a small form factor system on module that enables OEM customers to easily add SDI-to-IP gateway functions to their broadcast and professional AV products.

The EASYSS10 SoM is built with the same ST 2110 IP core package that was tested and certified for both ST 2110 and NMOS at JT-NM qualification events (August 2019 and March 2020).

Now, with the EASYSS10 EVK, the manufacturers can jump start the evaluation and development of an IP based system with the support of a comprehensive SDK*1 to easily integrate the power of Macnica solutions into their products.

*1 licensed as an option

EASYSS10 EVK Features

- Full-stack SDI to IP Gateway functions in a compact 19-inch 1RU chassis.
 - EASYSS10 SoM
 - Reference Baseboard
 - Intuitive Web GUI
 - SDK for ST 2110, ST 2059 and NMOS available
 - Optional FPGA Development Package
- 2 x SFP+ 10G redundant IP network connections
- 6 x SDI Tx/Rx ports each side
 - Tx - 6 x HD-SDI or 3 x 3G-SDI
 - Rx - 6 x HD-SDI or 3 x 3G-SDI
- Multicast ready with IGMP2/3
- Multiple formats of reference output
 - NTSC (59.94Hz) / PAL (50Hz)
 - Try-Sync (1080i60/59.94/50)*2
 - HD-SDI (1080i60/59.94/50)*2

*2 optional and future plan
- Multiple control and debug ports
 - JTAG for FPGA Config
 - RJ45 Control Port
 - UART (USB)
 - SD Card Slot for quick firmware update
- Schematics and PCB layout for SoM and Baseboard
- Dimensions: 480(w)/270(d)/44(h) mm (19-inch 1RU size)

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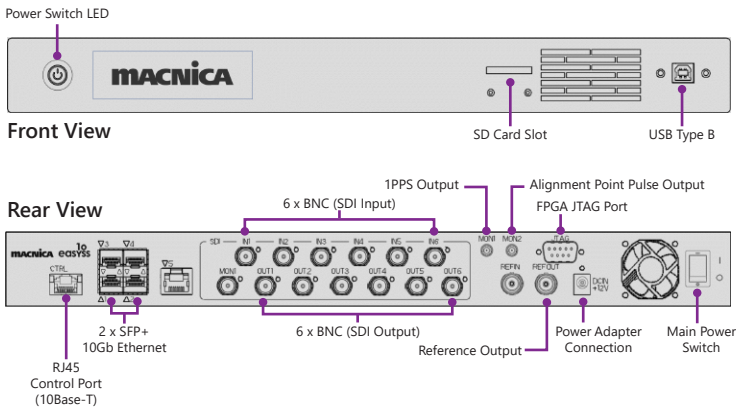
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EASYSS10 EVK Specifications

Function	Specification	Notes
Video Format	HD-SDI (1280x720p, 1920x1080i) 3G-SDI (1920x1080p)	Mapping Structure: 4:2:2@20bpp Frame Rate: 50/59.94/60 Hz *configuring different frame rate for each channel not supported.
SDI Media Ports	Input 6ch / Output 6ch	Maximum usable number of channels for 3G-SDI: 3
10G IP Ethernet Ports	10GBase SFP+ x 2ch	SFP optical modules not included.
Supported SMPTE® IP Profiles	ST 2110-10/-20/-21/-30/-40 ST 2022-7, ST 2059-1/-2	
Supported NMOS	IS-04, IS-05	Need optional "NMOS Package" to control with NMOS.
Supported Communication Protocol	IGMP Version2, Version3 ICMP	
Control Interfaces	10Base-T (RJ-45) UART (USB)	Front panel
Reference Output	NTSC or PAL	NTCS 525i (59.94Hz) / PAL 625i (50Hz). Timing adjustable.
Monitor Output	1PPS and Alignment point	Alignment point NTSC: 29.97Hz, PAL: 25Hz
Temperature Monitor	FPGA Die Temperature	Arria10 SoC built-in temperature sensor. (-75°C~125°C) *Arria10 absolute maximum junction temperature: -55°C~125°C
Dimensions W x D x H (mm)	480 x 270 x 44 (19-inch Rack 1RU size)	Rack mountig brackets (provided) not included in these dimensions.
Power Supply	DC +12V / 2.5A	AC adaptor included.

Interfaces



Intuitive Web GUI



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