



PRODUCT BRIEF

video processing unit with HDMI output for all -XS products

introduction:

Enable Inc., has developed this module to be used with any of the minnie Cam^{TM} -XS or minnie $Scope^{TM}$ -XS products and offer real-time preview on an HDMI monitor with up to 1Mpixel output resolution.

This is a DVI 1080p - 60fps progressive output Video Processing Unit (VPU) with an HDMI connection (VPU-HDMI-XS) that should be used by those that only intend to display the output of the -XS products onto a monitor. A version of this VPU that outputs in both USB3.0 and HDMI is also available (ENA-10011-AS).

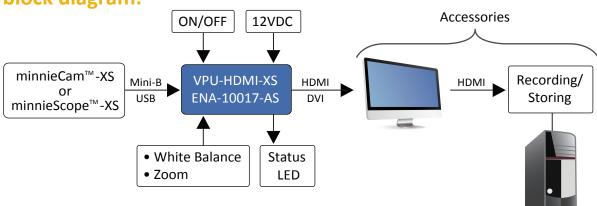
The hardware is compatible with HDMI or DVI monitors. Appropriate adopter (HDMI to DVI) is necessary for DVI monitors (not provided). A universal 12VDC wall plug transformer and HDMI cable are provided with the module.

Enable Inc. also offers additional accessories for recording and storing video or images.

product features:

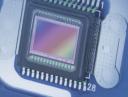
- interface for minnieCam™-XS or minnieScope™-XS products.
- real-time video output support for HDMI/DVI.
- output format HD 1080p at 60fps.
- simple manual White Balance operation.
- interpolation algorithms produce higher resolution video outputs.
- Zoom button toggles among several video output formats; higher in resolution than the native 400x400.
- max of 1Mpixel output available.
- autogain function and autoexposure control built in.

block diagram:



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VPU-HDMI-XS
ENA-10017-AS
HDMI module for all -XS products

product specifications: ENA-10017-AS			
electrical characteristics:		input/output:	
video output	DVI 1080p 60fps	output video port ²	HDMI (type A)
	progressive	camera input port ³	Mini-B USB 5pin
input voltage ¹ (2.1mmx5.5mm receptacle): male center positive	DC 12V typ. 7.5V min / 12V typ. / 18V max	status LED ⁴	indicates different functions
		keyboard (2 buttons)	White Balance (WB)
current consumption @ 12V	200mA typical 155mA min/290mA max		Zoom ⁵ (400x400) to (1000x1000)

- 1 A 12VDC wall-plug transformer is also shipped with this module.
- **2** Compatible with HDMI or DVI ready monitors. When connecting to a DVI monitor, the proper HDMI to **DVI-D single-link** adapter must be used.
- 3 Connect to minnieCam[™]-XS or minnieScope[™]-XS products with corresponding connector. Note that this VPU-HDM-XS model IS NOT COMPATIBLE with -L camera sensors. Damage may occur to both the -L sensor and this VPU-HDMI-XS module.
- 4 See the operating instructions section for more details about the function of the status LED.
- 5 Zoom button changes the output resolution between the native 400x400 pixel output to 1,000x1,000 pixels in 3 steps.

disclosures:

NOTE: We do not guarantee that the VPU-HDMI-XS is compatible with all monitors, TVs, or recorders with an HDMI input port. The HDMI video output of this device is compatible only with displays and recorders that comply with the video specification of the VPU-HDMI-XS.

NOTE: Several TV's may not be able to display video from this VPU (unless they comply with all the specifications of our hardware).

NOTE: We have successfully tested compatibility of the VPU-HDMI-XS with many different commercially available computer monitors (especially those with a DVI input port) for as long as they comply with the video output specifications of this device.

Please contact us for all your imaging needs and more detailed data sheets.

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