

Red Line Product

BOLIN

EDGE Series

EG40F

FAST HEVC Decoder



FAST HEVC

Standard HEVC Only Faster



FAST HEVC

STANDARD HEVC ONLY FASTER

FPGA Hardware Codec, Utilizing AMD Zynq™ UltraScale+™ MPSoC

Only **45Mbps** Bandwidth That Streams **4K60** at **4:2:2 12bit** Quality in Less Than **2 frames/30ms** Latency

- Extremely Low Latency
- High-quality Image
- Low Bandwidth

The Facts of FAST HEVC Performance

Foundation	Platform	Codec	1080p60			4K60		
			Quality (Up To)	Latency (Point-to Point)	Bandwidth	Quality (Up To)	Latency (Point-to Point)	Bandwidth
H.264/265 AVC/HEVC	Software SOC	Stand HEVC	420SP(NV12)	4 frame/70ms	8Mbps	420SP(NV12)	25 frame/430ms	16Mbps
	Hardware FPGA	FAST HEVC	4:2:2/12bit(NV16)	2 frame/20ms	20Mbps	4:2:2/12bit(NV16)	2 frame/30ms	45Mbps
NDI	Hardware FPGA	Full NDI	4:2:2/10bit	3 frame/50ms	150Mbps	4:2:2/10bit	4 frame/70ms	300Mbps
Dante AV-Ultra	Hardware FPGA	JPEG 2K	4:2:2/12bit	1 frame/6ms	250Mbps	4:2:2/12bit	1 frame/8ms	550Mbps

*Results may vary depending on network configuration and management settings.

Video Format and Standard

Full Format

3840 x 2160P 60/59.94/50/30/29.97/25/24/23.98
1920 x 1080P 120/60/59.94/50/30/29.97/25/24/23.98
1920 x 1080i 60/59.94/50
1280 x 720P 60/59.94/50/30/29.97/25

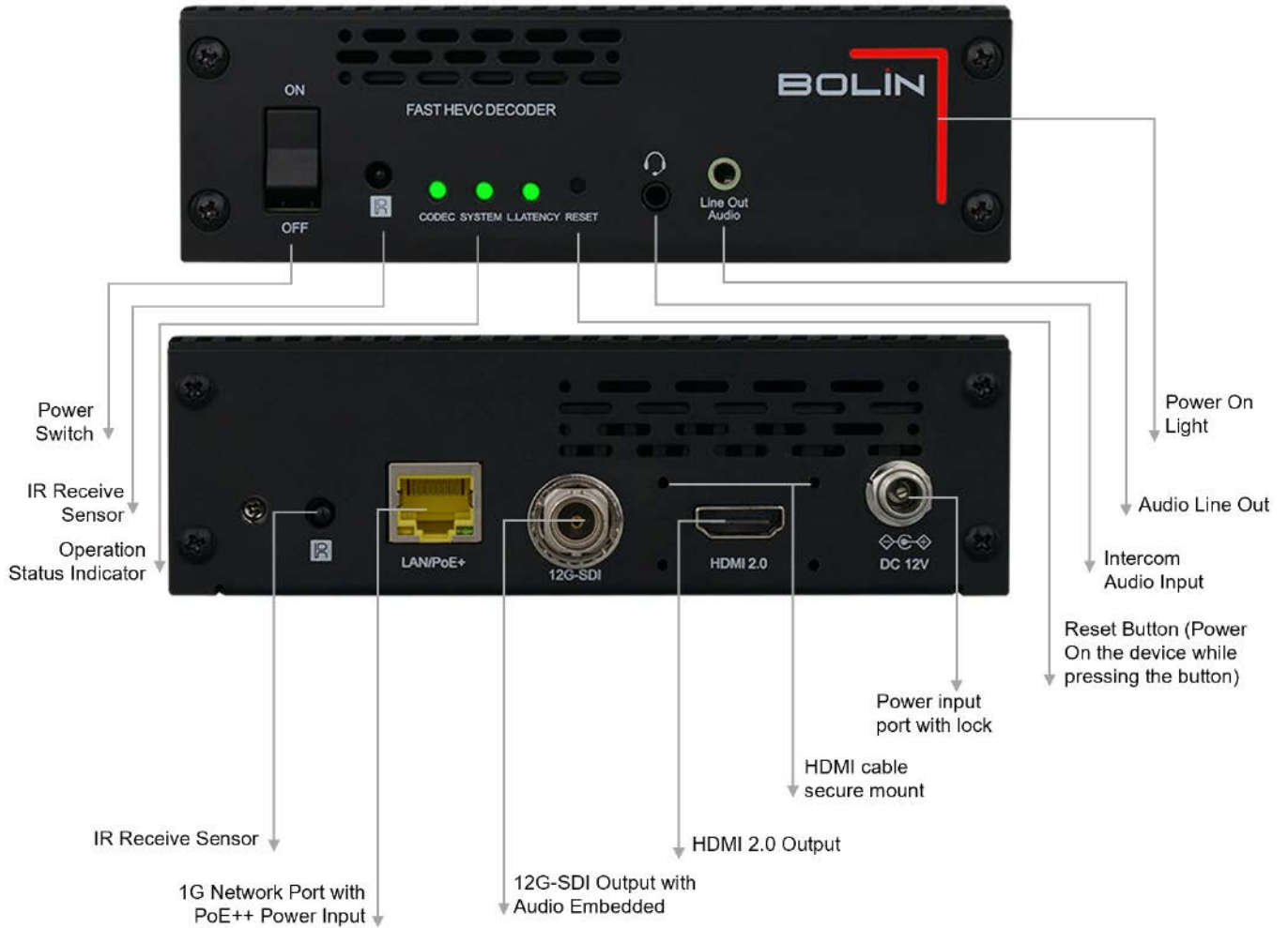
SDI Standard

SMPTE 292M, SMPTE 296M (1.5Gb/s), SMPTE 424M, SMPTE 274M, SMPTE 425-A (3Gb/s), SMPTE 2081(6Gb/s), SMPTE2082-1(12Gb/s) with SMPTE352 SDI Metadata Supported

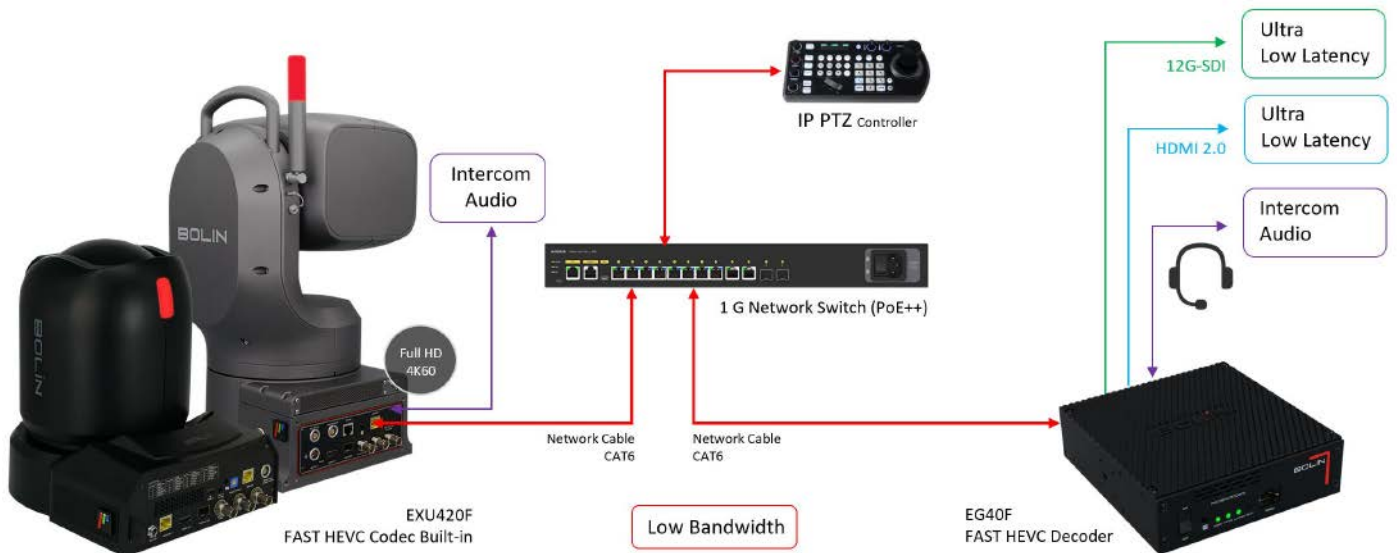
Scaling

Downscaling and Upscaling, Scaling up to 4K60

OUTPUT



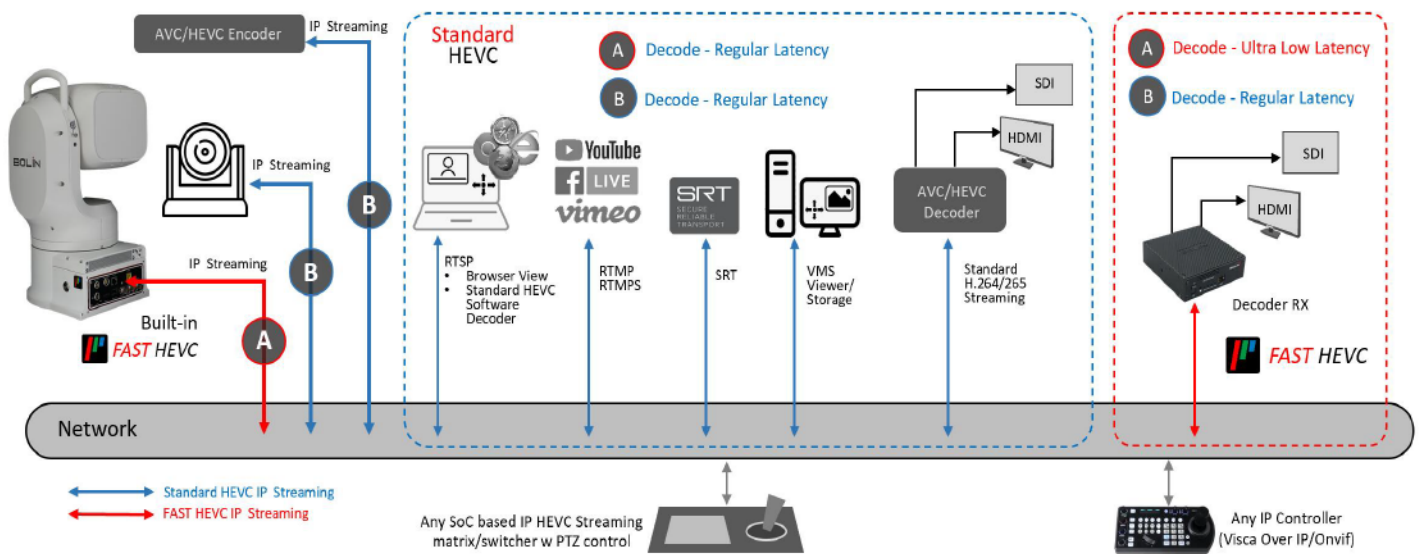
Bolin FAST HEVC Decoder Workflow



FEATURES

- Support up to 4K60
- FAST HEVC FPGA codec back compatible with standard HEVC codec without having Ultra-Low-Latency
- HDMI 2.0 + 12G-SDI video output
- Scaling
- All video with audio embedded
- Audio intercom with frontend device
- On-screen character generator
- Firmware upgrade via IP
- POE+ and 12VDC power input

Open Platform



Bolin FAST HEVC codec camera can be decoded by standard HEVC decoder but not having Ultra Low Latency HEVC codec camera/device can be decoded by Bolin FAST HEVC decoder but not having Ultra Low Latency

NDAA COMPLIANT



NDAA Section 889 Statement of Compliance: Bolin certifies it does not and will not provide “covered telecommunications equipment or services” or products containing “covered telecommunications equipment or services” complying with Section 889(a)(1)(B) of the National Defense Authorization Act (NDAA) for the Fiscal Year 2019 as a part of its offered products or services to customers.

SPECIFICATIONS

Model		EG40F
Connectivity		
Encoder/Decoder		Decoder
Input		IP Only
Output		Simultaneous HDMI 2.0, 12G-SDI
Video Resolutions		3840 x 2160P @60/59.94/50/30/29.97/25/24/23.98 1920 x 1080P @120/60/59.94/50/30/29.97/25/24/23.98 1920 x 1080i @60/59.94/50 1280 x 720P @60/59.94/50/30/29.97/25
IP Input	Codec	H.264 (AVC); H.265 (HEVC), Hardware FPGA Based
	Supported IP Resolutions	3840 x 2160P @60/59.94/50/30/29.97/25/24/23.98 1920 x 1080P @60/59.94/50/30/29.97/25/24/23.98 1280 x 720P @60/59.94/50/30/29.97/25
	Frame Rates	23.98, 24, 25, 30, 29.97, 50, 59.94, 60
	Streaming Protocols	RTP (Unicast or Multicast), RTMP, RTMPS, MPEG-2 TS over UDP, MPEG-2 TS over RTP, SRT (Caller, Listener)
	Gradual Decoding Refresh (GDR)	Yes; Will auto-activate when GDR frames are detected in input stream
	Number of Streams	Single Stream Decode; Preset up to 200 sources
	Latency	As low as 3 frames/ 50ms at 4K60 - Dependent on Encode Settings
HDMI Output	Format	HDMI 2.0
	Supported Resolutions	3840 x 2160P @60/59.94/50/30/29.97/25/24/23.98 1920 x 1080P @120/60/59.94/50/30/29.97/25/24/23.98 1920 x 1080i @60/59.94/50 1280 x 720P @60/59.94/50/30/29.97/25
	Frame Rates (Hz)	23.98, 24, 25, 29.97, 30, 50, 59.94, 60, 120
	Scaling	Yes; Downscaling and Upscaling, Scaling up to 4K60
	Color Space	4K60: RGB 8bit, YUV444 8bit, YUV422 10bit 4K30 & below: RGB 8bit, YUV444 8bit, YUV422 10bit
	Connector	Standard/75Ω
SDI Output	Format	12G-SDI
	Standard	SMPTE 292M, SMPTE 296M (1.5Gb/s), SMPTE 424M, SMPTE 274M, SMPTE 425-A (3Gb/s), SMPTE 2081(6Gb/s), SMPTE2082 1(12Gb/s) with SMPTE352 SDI Metadata Supported
	Supported Resolutions	3840 x 2160P @60/59.94/50/30/29.97/25/24/23.98 1920 x 1080P @60/59.94/50/30/29.97/25/24/23.98 1920 x 1080i @60/59.94/50 1280 x 720P @60/59.94/50/30/29.97/25
	Frame Rates (Hz)	23.98, 24, 25, 29.97, 30, 50, 59.97, 60
	Scaling	Yes; Downscaling and Upscaling, Scaling up to 4K60
	Color Space	YUV422 10bit
	Connector	Standard/75Ω
Audio	Codec	AAC-LC, MPEG-2
	S/N Ratio	≥85dB
	THD+N	≤0.05%
	Audio Noise (RMS)	≤-90dB
	Bit Depth	Sample Rate: 48KHz/44.1KHz, 24bit, 64-256Kbps selectable
Audio Output	HDMI Embedded Audio	Stereo - 2 Channel
	SDI Embedded Audio	Stereo - 2 Channel
	Line Out Connection	3.5mm Analog Line Out
	Format	PCM
Intercom	Mic/Headset	Inactive
Network		
Connection	Network	RJ45, 100/1000BASE-T Ethernet
	POE	IEEE 802.3at Type 3 Class 4 Compliant 1000BASE-T Ethernet
	IR Passthrough	Yes; Transmit PTZ Controls via IR Receiver
IP Protocols	HTTP, IGMPv1/v2; DHCP; SSH; 802.1X Authentication	
Control and Management		
Access	WebUI; Bolin API	
Firmware Upgrade	Via WebUI	
System Reset	Web UI; Physical Button on Decoder	

SPECIFICATIONS

Model		EG40F
Power and Physical		
Power	Power Consumption	13W
	PoE	PoE+, IEEE 802.3at Type 3 class 4 compliant
	Power Adaptor	12V DC, 4A 5.5mm×2.1mm Male DC Power Plug Connector & Screw Lock Female Panel Socket Mount Adaptor
Interface		HDMI 2.0 ; 12G-SDI 12VDC Power Input, Power Switch Reset Button RJ45 (LAN/PoE+) IR Receiver (Front & Back) 3.5mm Comms; 3.5mm Line out LED Indicator Lights (Power, Codec, System, Low Latency)
Storage Temperature		-40° to 60° C
Operating Temperature		0° to 50° C
Humidity		10% to 90% (non-condensing)
Heat Dissipation		Cooling fan, 3 Level - Automatically adjust the fan speed according to the temperature
Acoustic Noise		NC35 or less, variable with cooling fan speed adjustment
Dimension		142*150*44mm (LxDxH), 142*150*50.5mm(with feet mats)
Net Weight		1.05kg (2.31lb)
Chassis		Metal, black finish, heat dissipation surface, fan cooled; vented front and rear
Mounting	Included	HDMI cable secure mount, Base mount
	Optional	19" Single-rack mount, 19" Tri-rack mount, Din rail mount, Surface mount
Size of Screw Hole for Tripod		1/4"
What's Included		Decoder; IR Remote Controller; Power Adaptor (US, EU, UK)

INSTALLATION MOUNT



- Rack Mount
- Base Mount
- Surface Mount
- Pole Mount
- Din Rail Mount
- Tripod Mount

ACCESSORY

Items marked * are optional to purchase



* VCC-RC-2
IR Remote Controller



VCC-P12-4
12VDC 4A Power Adapter



B-BM10
Base Mount Kit



* B-RM23
Tri Rack Mount Kit



* B-RM22
Dual Rack Mount Kit



* B-RM20
Single Rack Mount Kit



* B-DR10
Din Rail Mount Kit



B-SM10
Surface Mount Kit



* BL-PP97
97W POE POWER INJECTOR

ORDER INFORMATION

• EG40F (HDMI 2.0+12G-SDI) Decoder

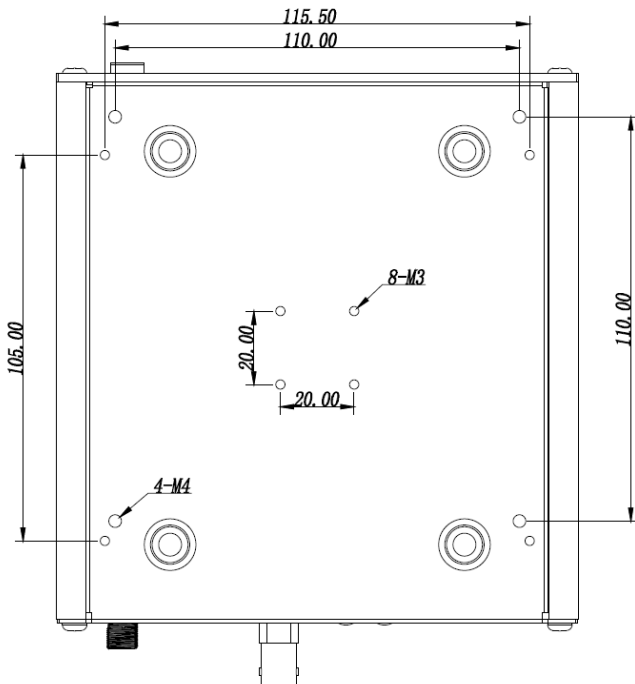
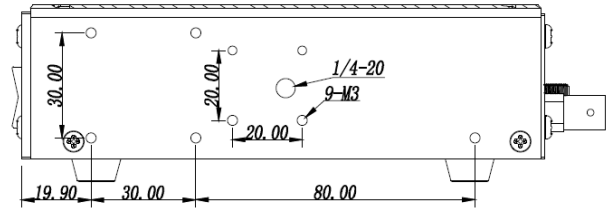
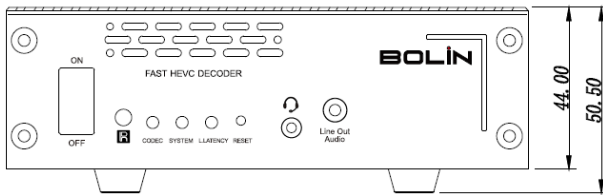
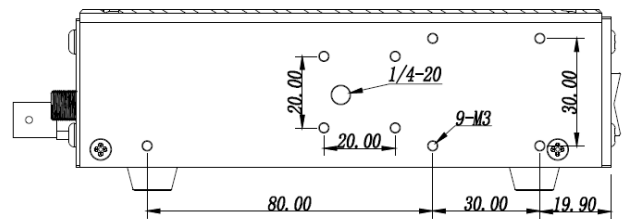
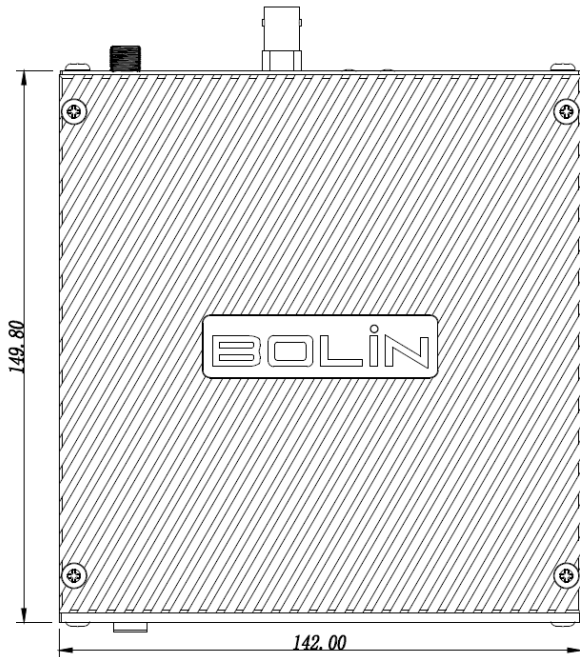
Included: • B-BM10 (Base Mount)
• B-SM10 (Surface Mount)

Optional

- B-RM20 (Single-Rack Mount)
- B-RM22 (Dual-Rack Mount)
- B-RM23 (Tri-Rack Mount)
- B-DR10 (Din Rail Mount)

DIMENSIONS

Unit: mm



All models and specifications are subject to change without notice.
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