

# VITEC Rugged Encoders

Military-grade video streaming encoding appliances

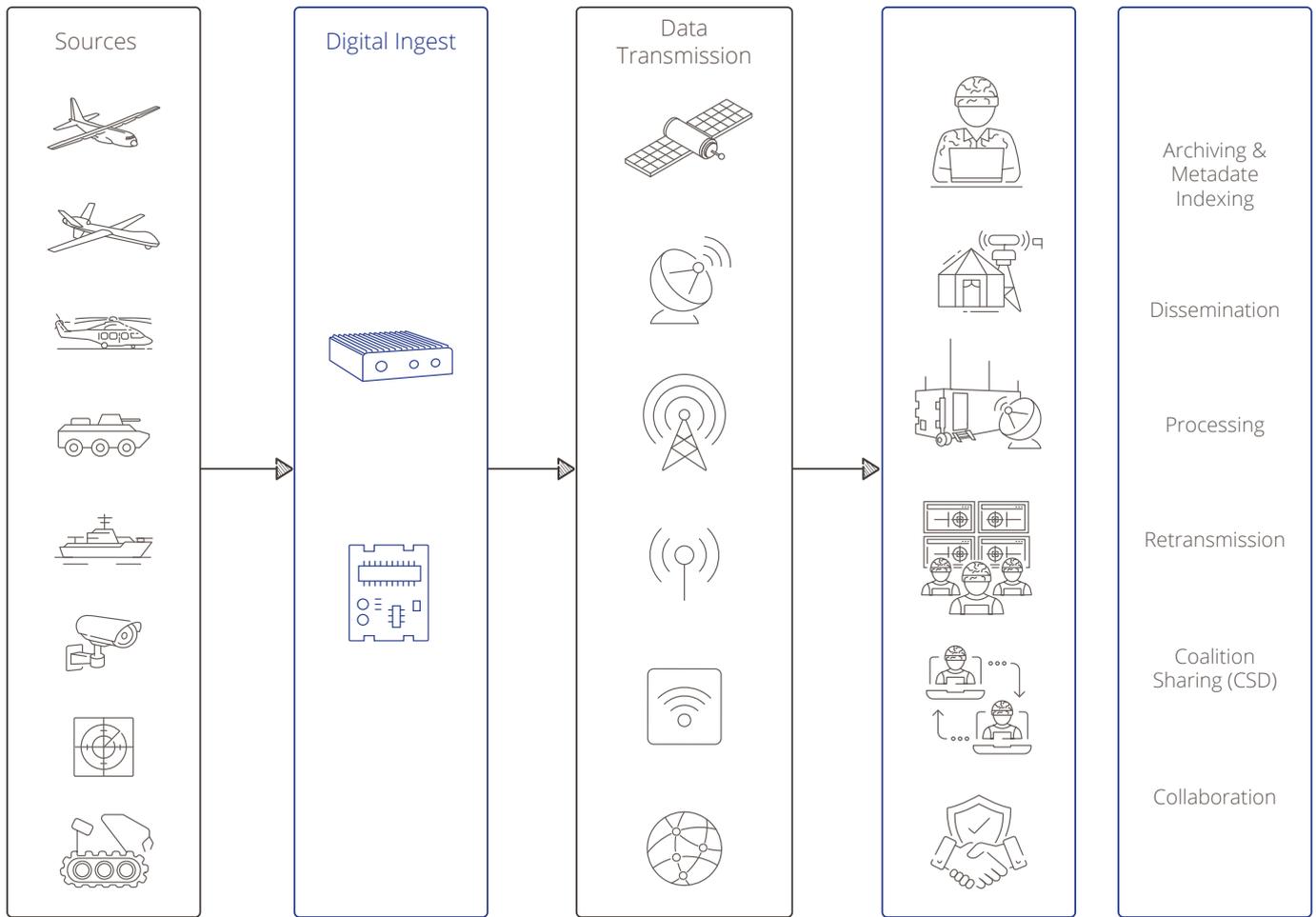
Specifically designed for harsh environments, VITEC's TOUGH portable HEVC & H.264 streaming encoders are military grade and ultra-compact rugged appliances. They deliver Surveillance, Intelligence and Reconnaissance (ISR) video over bandwidth constrained transmission links generated by manned/unmanned aircraft, ground or marine vehicles in extreme conditions.

From a pocket-sized encoder that can be powered by a battery pack, to a high-efficiency multi-channel HEVC encoder, VITEC's military-grade streaming appliances are used in many different global military situations. Live video can be encrypted and streamed to the Command / Headquarters giving them valuable and current information. All of VITEC's rugged encoders support KLV metadata from Serial, SDI or IP and are compliant against JITC-MISB as well as STANAG 4609 standard. This is ideal for pairing of tactical data with associated video to relay tactical information in the lowest latency possible.

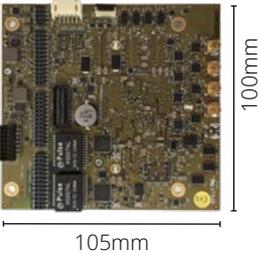
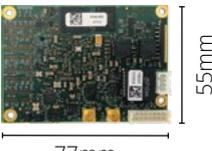
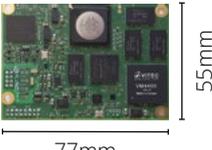
## Features & Benefits

- Withstand harsh environments and extreme conditions
- Support KLV / STANAG 4609 metadata
- Multi-channel, low latency streaming from up to 4x SDI and/or Composite sources
- High Dynamic Range (HDR support for exceptional video contrast, brightness and details)
- Low latency HEVC and H.264 video compression
- Stream transport protection (Zixi™, SRT, RIST and Pro-MPEG)
- Ruggedised enclosure





	MGW Diamond TOUGH	MGW Pico+ TOUGH	MGW Pico TOUGH	MGW Nano TOUGH
3G/HD/SD-SDI	4	1	1	1
HDMI				1
Composite / RS-170	4 mixed with SDI	1	1	1
Analog Unbalanced Audio	✓	✓		
KLV Metadata Ingest / Output over SDI / IP / Serial	✓	✓	✓	✓
Dual Ethernet Port (Management / Streaming)	✓			
MIL-STD 3889 Connectors	✓	✓	✓	✓
HEVC / H.265	✓	✓		
AVC / H.264	✓	✓	✓	✓
On-the-fly bitrate change	✓	✓	✓	
No. of Output Channels	8	2	2	1
UDP TS/ RTP TS/ RTP-ES	✓	✓	✓	✓
AES Support (Encryption)	✓	✓	✓	✓
KLV Metadata Streams STANAG4069 / MISB	✓	✓	✓	✓
Stream Transport Protection (Zixi, SRT, RIST & ProMPEG)	✓	✓	✓ (no RIST/SRT)	✓ (no RIST/SRT)
Web GUI and SSH	✓	✓	✓	✓
HTTPS API	✓	✓	✓	
DC Input - 16-40VDC	✓	✓	✓	✓
MIL-STD - 704F	✓	✓	✓	
Operating temperature (°C)	-55 to 70	-40 to 70	-40 to 70	-40 to 70
Ingress Protection Rating (IP)	67	67	67	65
MIL-STD Certified	✓	✓	✓	✓
Not controlled under ITAR	✓	✓	✓	✓

Encoder	Features and Benefits	Applications
<p><b>MGW Diamond TOUGH</b></p>  <p>Rugged Multi-channel HD/SD HEVC &amp; H.264 Encoder</p> 	<ul style="list-style-type: none"> <li>• SWAP optimised and Rugged Multi-Channel HEVC &amp; H.264 Encoder</li> <li>• 4x SDI and Composite inputs</li> <li>• Up to 8 encoding channels</li> <li>• Low latency HD/SD Streaming</li> <li>• Low bandwidth HEVC Streaming</li> <li>• KLV / STANAG metadata processing for ISR</li> <li>• Available as an <b>OEM board</b> for integrators (4K support)</li> </ul>	<ul style="list-style-type: none"> <li>• IP Video dissemination from multiple video sensors (analog/digital) for Situational Awareness (SA) within ground vehicles, navy ships or aircraft</li> <li>• Streaming Situational Awareness and FMV content across LANs and WANs with KLV / STANAG metadata</li> <li>• Intelligence, Surveillance and Reconnaissance (ISR) video from ground and airborne vehicles over RF or satellite link</li> <li>• Streaming over lossy and bandwidth limited transmission links</li> </ul>
<p><b>MGW Pico+ TOUGH</b></p>  <p>Rugged HD/SD HEVC &amp; H.264 Encoder</p> 	<ul style="list-style-type: none"> <li>• Ultra-small Rugged HEVC &amp; H.264 Encoder</li> <li>• SDI and Composite inputs</li> <li>• 2 Encoding channels</li> <li>• Low latency HD/SD Streaming</li> <li>• Low bandwidth HEVC Streaming</li> <li>• KLV / STANAG metadata processing for ISR</li> <li>• Available as an <b>OEM board</b> for integrators (4K support)</li> </ul>	<ul style="list-style-type: none"> <li>• Real-time IP streaming of 4K/HD/SD content for Situational Awareness (SA) from two sensors (analog/digital)</li> <li>• Intelligence, Surveillance and Reconnaissance (ISR) video from ground and airborne vehicles over RF or satellite link</li> <li>• Streaming over lossy and bandwidth limited transmission links</li> <li>• Broadcast-quality video contribution in harsh environments</li> </ul>
<p><b>MGW Pico TOUGH</b></p>  <p>Rugged HD/SD H.264 Encoder</p> 	<ul style="list-style-type: none"> <li>• Ultra-small Rugged HD/SD H.264 encoder</li> <li>• SDI and Composite inputs</li> <li>• 2 Encoding channels</li> <li>• Low latency HD/SD Streaming</li> <li>• KLV / STANAG metadata processing for ISR</li> <li>• Available as an <b>OEM board</b> for integrators</li> </ul>	<ul style="list-style-type: none"> <li>• Real-time IP streaming of HD/SD content for Situational Awareness (SA) from two sensors (analog/digital).</li> <li>• Situational Awareness (SA) video from ground and aircraft vehicles</li> </ul>
<p><b>MGW Nano TOUGH</b></p>  <p>Rugged HD MPEG-4, H.264 Encoding &amp; Streaming appliance</p>	<ul style="list-style-type: none"> <li>• Rugged H.264 Encoder with HDMI input</li> <li>• 3G, HD/SD-SDI, Composite and HDMI video inputs</li> <li>• KLV Metadata processing for ISR</li> <li>• Low latency HD/SD Streaming</li> </ul>	<ul style="list-style-type: none"> <li>• IP streaming of HD/SD Intelligence, surveillance, reconnaissance (ISR) imagery</li> <li>• Real-time Situational Awareness video from radar or LRU</li> <li>• Streaming Full Motion Video to Desktop, TV and Mobile Devices</li> </ul>

HEVC & H.264

H.264

## The VITEC Advantage

### Flexibility

Able to ingest any source and disseminate to any playback device, enabling coverage of the Last Tactical Mile.

### Scalability

Encoding and transcoding ranging from small form factor, single channel appliances up to multi-source rack-mounted configurations.

### Quality

Best in Class, HEVC HD and 4K resolution with HDR support at the lowest bandwidth consumption.

### Latency

Prime market leader in sub frame latency solutions.

### Interoperability

Certified and compliant to meet demanding challenges across the world stage of defence and security, enabling coalition sharing with ease.

### Reliability

From Solid State appliances to 24/7 operation solutions with options for redundancy.

