



IPMX HEVC Video Profile Requirements



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1. Introduction

This document defines the baseline requirements for IPMX devices that transport or receive **High Efficiency Video Coding (HEVC, ITU-T Rec. H.265 | ISO/IEC 23008-2)** elementary streams using the RTP carriage defined in **VSF TR-10-07**. Its purpose is to provide guidance from AIMS to the VSF IPMX working group so that a formal specification can be created.

2. References

- [VSF TR-10-07:2023](#) — *IPMX: Compressed Video*
- [VSF TR-10-11:2024](#) — *IPMX Requirements for Constant-Bit-Rate (CBR) Video*
- [VSF TR-10-1:2022](#) — *IPMX System Timing and Definitions*
- [SMPTE ST 2110-22:2022](#) — *Constant Bit-Rate Compressed Video*
- [ISO/IEC 23008-2:2025 / ITU-T H.265](#) — *High-Efficiency Video Coding*
- [IETF RFC 7798](#) — *RTP Payload Format for HEVC*
- [AMWA BCP-006-03 \(WIP\)](#) — *NMOS With HEVC*
- [AMWA IS-04 / IS-05 / IS-11](#) — *Discovery, Connection, and Stream-Compatibility Management*

3. Scope

These requirements apply to any IPMX Sender (transmitter) or Receiver that claims HEVC capability. They establish the minimum technical baseline needed for interoperability; vendors may implement additional formats or features provided they remain fully compliant with these constraints.

4. Minimum Requirements

4.1 HEVC Codestream

Element	Requirement
Profiles & Bit-Depth	Receivers shall support both of the following codec profiles: • Main Profile (4:2:0 8-bit)

Element	Requirement
	• Main 10 Profile (4:2:0 8 & 10-bit) Transmitters shall support at least one of the two profiles listed above.
Levels	Level signalling shall follow ISO/IEC 23008-2 Annex A. Devices should signal the appropriate Level; <i>when absent</i> , decoders shall cope with streams up to Level 5.1 main tier parameters.
Picture Reordering	Frames shall be transmitted in presentation order; picture re-ordering is not permitted.
GOP Length	There is no specified restriction on GOP length.
Rate Control	CBR and VBR operation is allowed. CBR may be strict (TR-10-11) or relaxed (TR-10-7). VBR must conform to TR-10-7.

4.2 RTP Transport

- Streams *shall* be encapsulated as RTP packets according to **RFC 7798**, with the additional constraints of **TR-10-07** and **TR-10-11**.
- IPMX Senders *shall* provide an SDP object conforming to ST 2110-22 Section 7 as modified by TR-10-07 Section 11.

4.3 NMOS Integration

1. Devices *shall* conform to **BCP-006-03**.
2. **IS-11** stream-compatibility negotiation *shall* be used to advertise decoder constraints.

4.4 Device Capability Summary

IPMX Receivers (mandatory support)

- YUV 4:2:0 8-bit — HEVC *Main* Profile
- YUV 4:2:0 8 & 10-bit — HEVC *Main 10* Profile

IPMX Transmitters (minimum support)

Transmitters *shall* implement **at least one** of the two receiver-mandatory profiles listed above.

4.5 Compliance Statement

A device **conforms to this profile** if and only if it satisfies every *shall* in Sections 1-4. Optional features (*may*) shall not compromise interoperability with baseline-compliant receivers.

5. Conclusion

This profile establishes the foundational requirements for IPMX devices handling HEVC video. Compliance ensures interoperability and performance consistency across the IPMX ecosystem. Feedback and suggestions for this profile are welcome and can be submitted to the AIMS Pro AV Working Group.

Appendix A: Change Log

Version	Date	Summary of Changes
1.0	June, 2026	Initial Release