



IPMX AVC (H.264) Video Profile Requirements



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1. Introduction

This document defines the baseline requirements for IPMX devices that transport or receive Advanced Video Coding (AVC, ITU-T Rec. H.264 | ISO/IEC 14496-10) elementary streams using the RTP carriage defined in VSF TR-10-7. 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-10-1:2024](#) — IPMX System Timing and Definitions
- [VSF TR-10-7:2024](#) — IPMX Compressed Video
- [VSF TR-10-11:2024](#) — IPMX Constant Bit-Rate (CBR) Compressed Video
- [VSF TR-10-15 Part 3:2026](#) — IPMX H.264 Codec Requirements for Compressed Video
- [VSF TR-10-8:2026](#) — IPMX NMOS Requirements

3. Scope

These requirements apply to any IPMX Sender (transmitter) or Receiver that claims H.264 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 H.264 Codestream

Element	Requirement
Profiles & Bit-Depth	Receivers shall support both of the following codecs: • Main Profile (4:2:0 8-bit) • High Profile (4:2:0 8-bit) Transmitters shall support at least one of the

Element	Requirement
	two profiles listed above.
Levels	Level signalling shall follow VSF TR-10-15 Part 3. Devices should signal the appropriate Level; when absent, decoders shall cope with streams up to Level 4.2 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 **TR-10-7 or TR-10-11**.
- IPMX Senders *shall* provide an SDP object conforming to VSF TR-10-7 Section 11.

4.3 NMOS Integration

- Devices *shall* conform to **VSF TR-10-8**.
- IS-11** stream-compatibility negotiation, as stated in VSF TR-10-8 Section 7, *shall* be used to advertise decoder constraints.

4.4 Device Capability Summary

IPMX Receivers (mandatory support)

- YUV 4:2:0 8-bit — H.264 *Main* Profile
- YUV 4:2:0 8-bit — H.264 *High* 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 AVC 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