

Ultra High Definition Television —
Image Parameter Values
for Program Production



Table of Contents	Page
Forward	2
Intellectual Property	2
1 Scope	3
2 Conformance Notation	4
3 Normative References	4
4 General.....	4
5 Image Structure.....	5
6 System Colorimetry.....	5
7 Digital Image Representation.....	6
Annex A Bibliographgy (Informative)	9

Foreword

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Intellectual Property

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1 Scope

1.1 This standard defines a family of progressive image sample structures of 3840 x 2160 or 7680 x 4320 with an aspect ratio of 16x9, called Ultra High Definition Television (UHDTV), as defined in Table 1. This standard specifies:

- R'G'B' color encoding and digital representation
- Y'C_BC_R color encoding and digital representation.

1.2 This standard specifies multiple samples, line and frame rate formats for ten-bit and twelve-bit systems. It is not necessary for an implementation to support all formats to be compliant with this standard. However, an implementation must state which of the Systems are supported.

Table 1 – Image sample structures and frame rates of UHDTV systems

System category	System nomenclature	Luma or R' G' B' samples per line	Lines per frame	Frame rate (Hz)
UHDTV1	3840 x 2160/23.98/P	3840	2160	24/1.001
	3840 x 2160/24/P	3840	2160	24
	3840 x 2160/25/P	3840	2160	25
	3840 x 2160/29.97/P	3840	2160	30/1.001
	3840 x 2160/30/P	3840	2160	30
	3840 x 2160/50/P	3840	2160	50
	3840 x 2160/59.94/P	3840	2160	60/1.001
	3840 x 2160/60/P	3840	2160	60
	3840 x 2160/100/P	3840	2160	100
	3840 x 2160/119.88/P	3840	2160	120/1.001
UHDTV2	7680 x 4320/23.98/P	7680	4320	24/1.001
	7680 x 4320/24/P	7680	4320	24
	7680 x 4320/25/P	7680	4320	25
	7680 x 4320/29.97/P	7680	4320	30/1.001
	7680 x 4320/30/P	7680	4320	30
	7680 x 4320/50/P	7680	4320	50
	7680 x 4320/59.94/P	7680	4320	60/1.001
	7680 x 4320/60/P	7680	4320	60
	7680 x 4320/100/P	7680	4320	100
	7680 x 4320/119.88/P	7680	4320	120/1.001
UHDTV2	7680 x 4320/120/P	7680	4320	120

Note: Throughout this standard, references to signals represented by a single primed letter (e.g., R', G' and B') refer to signals to which the transfer characteristics in Section 6.3 have been applied. Such signals are commonly described as being gamma corrected.