

# ISO/IEC 21122-1:2024-07 (E)

## Information technology - JPEG XS low-latency lightweight image coding system - Part 1: Core coding system

---

| <b>Contents</b> |  | <b>Page</b> |
|-----------------|--|-------------|
| Foreword .....  |  | iv          |
| <b>1</b>        | <b>Scope .....</b>   | <b>1</b>    |
| <b>2</b>        | <b>Normative references .....</b>  | <b>1</b>    |
| <b>3</b>        | <b>Terms and definitions, abbreviated terms and symbols .....</b>                            | <b>1</b>    |
| <b>3.1</b>      | <b>Terms and definitions .....</b>   | <b>1</b>    |
| <b>3.2</b>      | <b>Abbreviated terms .....</b>   | <b>6</b>    |
| <b>3.3</b>      | <b>Symbols .....</b>   | <b>6</b>    |
| <b>4</b>        | <b>Conventions .....</b>   | <b>10</b>   |
| <b>4.1</b>      | <b>Conformance language .....</b>  | <b>10</b>   |
| <b>4.2</b>      | <b>Operators .....</b>   | <b>10</b>   |
| <b>4.2.1</b>    | <b>Arithmetic operators .....</b>  | <b>10</b>   |
| <b>4.2.2</b>    | <b>Logical operators .....</b>   | <b>10</b>   |
| <b>4.2.3</b>    | <b>Relational operators .....</b>  | <b>10</b>   |
| <b>4.2.4</b>    | <b>Precedence order of operators .....</b>   | <b>10</b>   |
| <b>4.2.5</b>    | <b>Mathematical functions .....</b>  | <b>11</b>   |
| <b>5</b>        | <b>Functional concepts .....</b>   | <b>11</b>   |
| <b>5.1</b>      | <b>Sample grid, sampling and components .....</b>  | <b>11</b>   |
| <b>5.2</b>      | <b>Interpretation of CFA data .....</b>  | <b>12</b>   |
| <b>5.3</b>      | <b>Wavelet decomposition .....</b>   | <b>12</b>   |
| <b>5.4</b>      | <b>Codestream .....</b>  | <b>13</b>   |
| <b>6</b>        | <b>Encoder requirements .....</b>  | <b>13</b>   |
| <b>7</b>        | <b>Decoder .....</b>   | <b>13</b>   |
| <b>7.1</b>      | <b>Decoding process general provisions .....</b>   | <b>13</b>   |
| <b>7.2</b>      | <b>Decoder requirements .....</b>  | <b>15</b>   |
|                 | <b>Annex A (normative) Codestream syntax .....</b>   | <b>16</b>   |
|                 | <b>Annex B (normative) Image data structures .....</b>                                       | <b>32</b>   |
|                 | <b>Annex C (normative) Entropy decoding .....</b>  | <b>45</b>   |
|                 | <b>Annex D (normative) Quantization .....</b>  | <b>65</b>   |
|                 | <b>Annex E (normative) Discrete wavelet transformation .....</b>                             | <b>70</b>   |
|                 | <b>Annex F (normative) Multiple component transformations .....</b>                          | <b>80</b>   |
|                 | <b>Annex G (normative) DC level shifting, non-linear transform and output clipping .....</b> | <b>91</b>   |
|                 | <b>Annex H (normative) Framebuffer .....</b>   | <b>98</b>   |
|                 | <b>Annex I (informative) Example weight tables .....</b>                                     | <b>106</b>  |
|                 | <b>Bibliography .....</b>  | <b>114</b>  |