

# Digital Video Encoders

## Your Digital Gateway to the Analog World

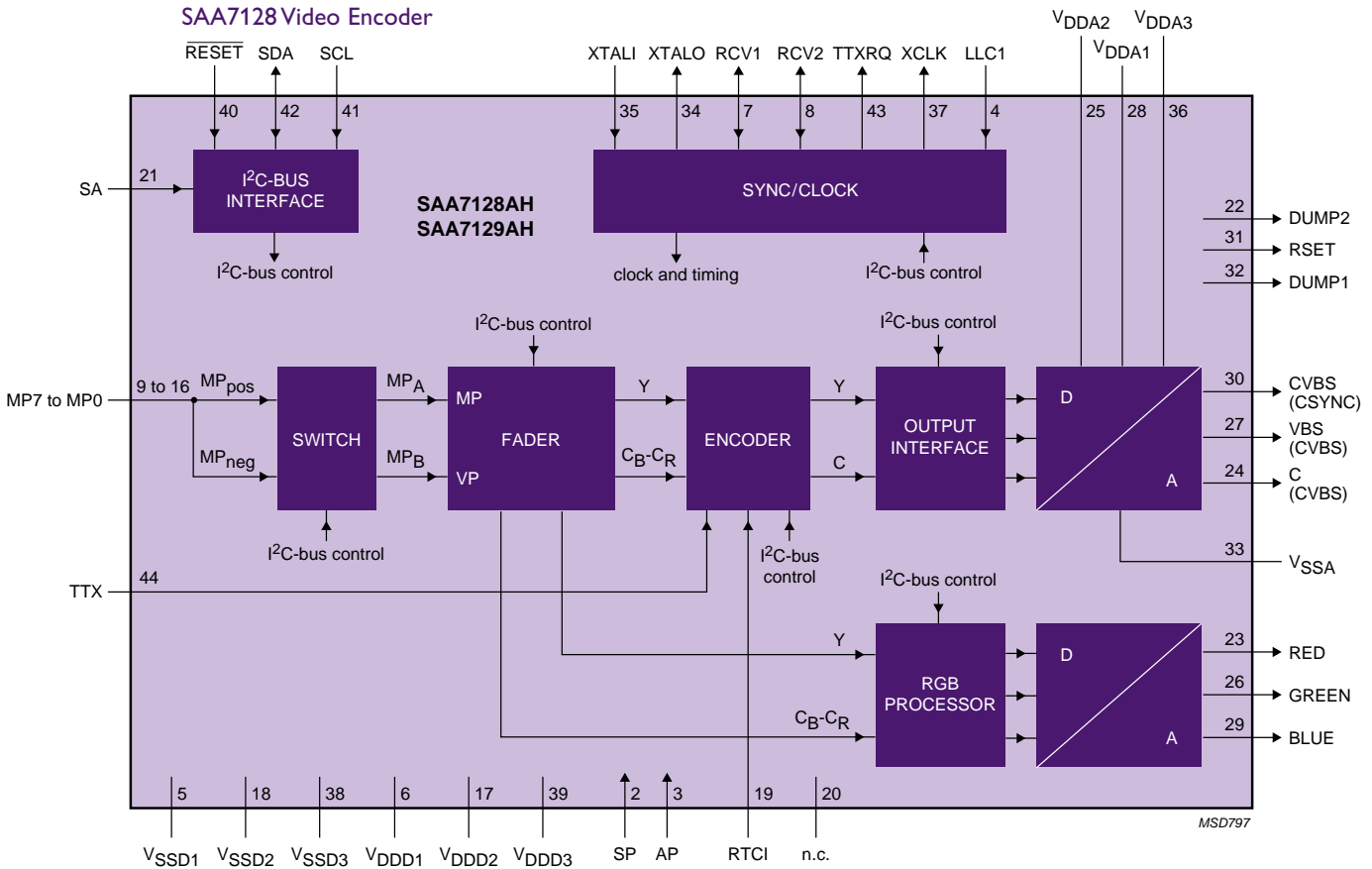


| DEVICE                               | Recommended for New Designs |                     |                     |                       |  |
|--------------------------------------|-----------------------------|---------------------|---------------------|-----------------------|--|
|                                      | SAA7128/<br>SAA7129         | SAA7102/<br>SAA7103 | SAA7120/<br>SAA7121 | SAA7128A/<br>SAA7129A | SAA7104/<br>SAA7105  |
| <b>Input:</b>                        |                             |                     |                     |                       |  |
| 8-bit ITU-656                        | •                           | •                   | •                   | •                     | •  |
| Dual Input Streams                   | •                           |                     |                     | •                     |  |
| 12-bit Multi-Format (VGA)            |                             | •                   |                     |                       |  |
| Video Resolution                     | Standard Definition         | Up to 800 x 600 VGA | Standard Definition | Standard Definition   | Including DVO<br>Up to 1280 x 1024 VGA,<br>1080i and 720p HD |
| <b>Output:</b>                       |                             |                     |                     |                       |  |
| Number of DACs                       | 6                           | 3                   | 3                   | 6                     | 3  |
| DAC Resolution                       | 10-bit                      | 10-bit              | 10-bit              | 10-bit                | 10-bit   |
| Type of DAC                          | Voltage                     | Current             | Voltage             | Current               | Current  |
| TV Detect                            |                             |                     |                     |                       | •  |
| 2 x Luma Over-Sampling Rate          | •                           | •                   | •                   | •                     | •  |
| Analog CVBS and S-Video              | •                           | •                   | •                   | •                     | •  |
| Analog Component RGB and YPbPr       | •                           | •                   |                     | •                     | •  |
| Programmable RGB Output Levels       | •                           |                     |                     | •                     |  |
| Cross-Color Reduction Filter         | •                           | •                   | •                   | •                     | •  |
| HD Output 1080i, 720p                |                             |                     |                     |                       | •  |
| Pixel Accurate H/V Scaler            |                             | •                   |                     |                       | •  |
| High Performance Flicker Filter      |                             | •                   |                     |                       | Enhanced   |
| <b>Video Standards:</b>              |                             |                     |                     |                       |  |
| NTSC                                 | •                           | •                   | •                   | •                     | •  |
| PAL                                  | •                           | •                   | •                   | •                     | •  |
| SECAM                                | •                           |                     |                     | •                     |  |
| <b>Macrovision* Copy Protection:</b> |                             |                     |                     |                       |  |
| Version 7.1 and 6.1                  | SAA7128                     | SAA7102             | SAA7120             | SAA7128A              | SAA7104  |
| Version 1.03 (525p/625p)             |                             |                     |                     |                       | SAA7104  |
| <b>Text &amp; Graphics:</b>          |                             |                     |                     |                       |  |
| Teletext Insertion                   | •                           | •                   | •                   | •                     | •  |
| Closed Caption (Line 21)             | •                           | •                   | •                   | •                     | •  |
| Color Bar Generator                  | •                           | •                   | •                   | •                     | •  |
| Wide Screen Signalling               | •                           | •                   | •                   | •                     | •  |
| VPS (Video Program Service)          | •                           | •                   |                     | •                     | •  |
| <b>General:</b>                      |                             |                     |                     |                       |  |
| Supply Voltage                       | 3.3 V                       | 3.3 V               | 3.3 V               | 3.3 V                 | 3.3 V  |
| Fast I <sup>2</sup> C Bus (400 kHz)  | •                           | •                   | •                   | •                     | •  |
| Remote Genlock via RTC Input         | •                           |                     | •                   | •                     | QFP64  |
| Package                              | QFP44                       | QFP44, BGA156       | QFP44               | QFP44                 | QFP64, BGA156  |
| <b>Availability:</b>                 |                             |                     |                     |                       |  |
| Extended Temp Version                |                             |                     |                     | SAF7129A              |  |
| Status                               | Production                  | Production          | Production          | Production            | Production   |

\* License Required

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