Glossary

Note

The goal of this section is to standardize the terms used within the media userspace API documentation. This is Work In Progress.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\userspace-api\media\[linux-master][Documentation][userspace-api][media]glossary.rst, line 14)

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.. glossary::

    Bridge Driver
        A :term:`Device Driver` that implements the main logic to talk with
        media hardware.

    CEC API
        **Consumer Electronics Control API**

        An API designed to receive and transmit data via an HDMI
        CEC interface.

        See :ref:`cec`.

    Device Driver
        Part of the Linux Kernel that implements support for a hardware
        component.

    Device Node
        A character device node in the file system used to control and
        transfer data in and out of a Kernel driver.

    Digital TV API
        **Previously known as DVB API**

        An API designed to control a subset of the :term:`Media Hardware`
        that implements digital TV (e. g. DVB, ATSC, ISDB, etc).

        See :ref:`dvbapi`.

    DSP
        **Digital Signal Processor**

        A specialized :term:`Microprocessor`, with its architecture
        optimized for the operational needs of digital signal processing.

    FPGA
        **Field-programmable Gate Array**

        An :term:`IC` circuit designed to be configured by a customer or
        a designer after manufacturing.

        See https://en.wikipedia.org/wiki/Field-programmable_gate_array.

    Hardware Component
        A subset of the :term:`Media Hardware`. For example an :term:`IÂ²C` or
        :term:`SPI` device, or an :term:`IP Block` inside an
        :term:`SoC` or :term:`FPGA`.

    Hardware Peripheral
        A group of :term:`hardware components <Hardware Component>` that
        together make a larger user-facing functional peripheral. For
        instance, the :term:`SoC` :term:`ISP` :term:`IP Block`
        and the external camera sensors together make a camera hardware
        peripheral.

        Also known as :term:`Peripheral`.

    IÂ²C
        **Inter-Integrated Circuit**

        A  multi-master, multi-slave, packet switched, single-ended,
        serial computer bus used to control some hardware components
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like sub-device hardware components.

See http://www.nxp.com/docs/en/user-guide/UM10204.pdf.

IC
Integrated circuit

A set of electronic circuits on one small flat piece of
semiconductor material, normally silicon.

Also known as chip.

IP Block
Intellectual property core

In electronic design a semiconductor intellectual property core,
is a reusable unit of logic, cell, or integrated circuit layout
design that is the intellectual property of one party.
IP Blocks may be licensed to another party or can be owned
and used by a single party alone.

See https://en.wikipedia.org/wiki/Semiconductor_intellectual_property_core).

ISP
Image Signal Processor

A specialized processor that implements a set of algorithms for
processing image data. ISPs may implement algorithms for lens
shading correction, demosaicing, scaling and pixel format conversion
as well as produce statistics for the use of the control
algorithms (e.g. automatic exposure, white balance and focus).

Media API
A set of userspace APIs used to control the media hardware. It is
composed by:

- :term:`CEC API`;
- :term:`Digital TV API`;
- :term:`MC API`;
- :term:`RC API`; and
- :term:`V4L2 API`.

See Documentation/userspace-api/media/index.rst.

MC API
Media Controller API

An API designed to expose and control the relationships between
multimedia devices and sub-devices.

See :ref:`media_controller`.

MC-centric
:term:`V4L2 Hardware` device driver that requires :term:`MC API`.

Such drivers have ``V4L2_CAP_IO_MC`` device_caps field set
(see :ref:`VIDIOC_QUERYCAP`).

See :ref:`v4l2_hardware_control` for more details.

Media Hardware
Subset of the hardware that is supported by the Linux Media API.

This includes audio and video capture and playback hardware,
digital and analog TV, camera sensors, ISPs, remote controllers,
codecs, HDMI Consumer Electronics Control, HDMI capture, etc.

Microprocessor
Electronic circuitry that carries out the instructions of a
computer program by performing the basic arithmetic, logical,
control and input/output (I/O) operations specified by the
instructions on a single integrated circuit.

Peripheral
The same as :term:`Hardware Peripheral`.

RC API
Remote Controller API

An API designed to receive and transmit data from remote
controllers.

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        See :ref:`remote_controllers`.

    SMBus
        A subset of IÂ²C, which defines a stricter usage of the bus.

    SPI
        **Serial Peripheral Interface Bus**

        Synchronous serial communication interface specification used for
        short distance communication, primarily in embedded systems.

    SoC
        **System on a Chip**

        An integrated circuit that integrates all components of a computer
        or other electronic systems.

    V4L2 API
        **V4L2 userspace API**

        The userspace API defined in :ref:`v4l2spec`, which is used to
        control a V4L2 hardware.

    V4L2 Device Node
        A :term:`Device Node` that is associated to a V4L driver.

        The V4L2 device node naming is specified at :ref:`v4l2_device_naming`.

    V4L2 Hardware
        Part of the media hardware which is supported by the :term:`V4L2 API`.

    V4L2 Sub-device
        V4L2 hardware components that aren't controlled by a
        :term:`Bridge Driver`. See :ref:`subdev`.

    Video-node-centric
        V4L2 device driver that doesn't require a media controller to be used.

        Such drivers have the ``V4L2_CAP_IO_MC`` device_caps field unset
        (see :ref:`VIDIOC_QUERYCAP`).

    V4L2 Sub-device API
        Part of the :term:`V4L2 API` which control
        :term:`V4L2 sub-devices <V4L2 Sub-device>`, like sensors,
        HDMI receivers, scalers, deinterlacers.

        See :ref:`v4l2_hardware_control` for more details.
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