StreamIO Class

Description

A class used to connect streaming data from data stream producers (e.g., video, audio) to data stream consumers (e.g. RTSP, MP4 recording). Can be configured to duplicate a single data stream to multiple consumers, or to combine several data streams into a single consumer.

Syntax

class StreamIO

Members

Public Constructors

StreamIO::StreamIO	Constructs a StreamIO object

Public Methods

StreamIO::begin	Start streaming data from data producer to data consumer.
StreamIO::end	Stop streaming data from data producer to data consumer.
StreamIO::pause	Pause streaming data from data producer to data consumer.
StreamIO::resume	Resume streaming data from data producer to data consumer.
StreamIO::registerInput	Register input data stream from a data producer.
StreamIO::registerInput1	Register first input data stream from a data producer.
StreamIO::registerInput2	Register second input data stream from a data producer.

StreamIO::registerInput3	Register third input data stream from a data producer.
StreamIO::registerOutput	Register output data stream to a data consumer.
StreamIO::registerOutput1	Register first output data stream to a data consumer.
StreamIO::registerOutput2	Register second output data stream to a data consumer.
StreamIO::setStackSize	Configure memory stack size available to StreamIO data processing task.
StreamIO::setTaskPriority	Configure priority of StreamIO data processing task.

StreamIO::StreamIO

Description

A class used to connect streaming data from data stream producers (e.g., video, audio) to data stream consumers (e.g., RTSP, MP4 recording). Can be configured to duplicate a single data stream to multiple consumers, or to combine several data streams into a single consumer.

Syntax

StreamIO::StreamIO(uint8_t numInput, uint8_t numOutput)

Parameters

numInput: number of input data streams
numOutput: number of output data streams

Returns

NA

Example Code

Example: StreamRTSPSingleVideoWithAudio (https://github.com/ambiot/ambpro2_arduino/blob/dev/Arduino_package/hardware/libraries/Video/examples/StreamRTSPSingleVideoWithAudio/StreamRTSPSingleVideoWithAudio.ino)

Notes and Warnings

“StreamIO.h” must be included to use the class function.

StreamIO::begin

Description

Start streaming data from data producer to data consumer.

Syntax

void begin(void);

Parameters

NA

Returns

NA

Example Code

Example: RecordMP4SingleVideoWithAudio (https://github.com/ambiot/ambpro2_arduino/blob/dev/Arduino_package/hardware/libraries/Video/examples/RecordMP4SingleVideoWithAudio/RecordMP4SingleVideoWithAudio.ino)

Notes and Warnings

This function should only be called after configuration of input and output data streams. “StreamIO.h” must be included to use the class function.

StreamIO::end

Description

Stop streaming data from data producer to data consumer.

Syntax

void end(void);

Parameters

NA

Returns

NA

Example Code

NA

Notes and Warnings

“StreamIO.h” must be included to use the class function.

StreamIO::pause

Description

Pause streaming data from data producer to data consumer.

Syntax

void pause(void);

Parameters

NA

Returns

NA

Example Code

NA

Notes and Warnings

“StreamIO.h” must be included to use the class function.

StreamIO::resume

Description

Resume streaming data from data producer to data consumer.

Syntax

void resume(void);

Parameters

NA

Returns

NA

Example Code

NA

Notes and Warnings

“StreamIO.h” must be included to use the class function.

StreamIO::registerInput

Description

Register input data stream from a data producer.

Syntax

void registerInput(const MMFModule& module);

Parameters

module: data stream producer module

Returns

NA

Example Code

Example: RecordMP4SingleVideoWithAudio (https://github.com/ambiot/ambpro2_arduino/blob/dev/Arduino_package/hardware/libraries/Video/examples/RecordMP4SingleVideoWithAudio/RecordMP4SingleVideoWithAudio.ino)

Notes and Warnings

When used on a multi-input StreamIO class, this has the same effect as calling registerInput1.

“StreamIO.h” must be included to use the class function.

StreamIO::registerInput1

Description

Register first input data stream from a data producer.

Syntax

void registerInput1(const MMFModule& module);

Parameters

module: data stream producer module

Returns

NA

Example Code

Example: RecordMP4SingleVideoWithAudio (https://github.com/ambiot/ambpro2_arduino/blob/dev/Arduino_package/hardware/libraries/Video/examples/RecordMP4SingleVideoWithAudio/RecordMP4SingleVideoWithAudio.ino)

Notes and Warnings

When used on a single-input StreamIO class, this has the same effect as calling registerInput.

“StreamIO.h” must be included to use the class function.

StreamIO::registerInput2

Description

Register second input data stream from a data producer.

Syntax

void registerInput2(const MMFModule& module);

Parameters

module: data stream producer module

Returns

NA

Example Code

Example: RecordMP4SingleVideoWithAudio (https://github.com/ambiot/ambpro2_arduino/blob/dev/Arduino_package/hardware/libraries/Video/examples/RecordMP4SingleVideoWithAudio/RecordMP4SingleVideoWithAudio.ino)

Notes and Warnings

When used on a single-input StreamIO class, this has the same effect as calling registerInput.

“StreamIO.h” must be included to use the class function.

StreamIO::registerInput3

Description

Register third input data stream from a data producer.

Syntax

void registerInput3(const MMFModule& module);

Parameters

module: data stream producer module

Returns

NA

Example Code

Example: RecordMP4SingleVideoWithAudio (https://github.com/ambiot/ambpro2_arduino/blob/dev/Arduino_package/hardware/libraries/Video/examples/RecordMP4SingleVideoWithAudio/RecordMP4SingleVideoWithAudio.ino)

Notes and Warnings

When used on a single-input StreamIO class, this has the same effect as calling registerInput.

“StreamIO.h” must be included to use the class function.

StreamIO::registerOutput

Description

Register output data stream to a data consumer.

Syntax

void registerOutput(const MMFModule& module);

Parameters

module: data stream consumer module

Returns

NA

Example Code

Example: RecordMP4SingleVideoWithAudio (https://github.com/ambiot/ambpro2_arduino/blob/dev/Arduino_package/hardware/libraries/Video/examples/RecordMP4SingleVideoWithAudio/RecordMP4SingleVideoWithAudio.ino)

Notes and Warnings

When used on a multi-output StreamIO class, this has the same effect as calling registerOutput1.

“StreamIO.h” must be included to use the class function.

StreamIO::registerOutput1

Description

Register first output data stream to a data consumer.

Syntax

void registerOutput1(const MMFModule& module);

Parameters

module: data stream consumer module

Returns

NA

Example Code

Example: RecordMP4SingleVideoWithAudio (https://github.com/ambiot/ambpro2_arduino/blob/dev/Arduino_package/hardware/libraries/Video/examples/RecordMP4SingleVideoWithAudio/RecordMP4SingleVideoWithAudio.ino)

Notes and Warnings

When used on a single-output StreamIO class, this has the same effect as calling registerOutput.

“StreamIO.h” must be included to use the class function.

StreamIO::registerOutput2

Description

Register second output data stream to a data consumer.

Syntax

void registerOutput2(const MMFModule& module);

Parameters

module: data stream consumer module

Returns

NA

Example Code

Example: RecordMP4SingleVideoWithAudio (https://github.com/ambiot/ambpro2_arduino/blob/dev/Arduino_package/hardware/libraries/Video/examples/RecordMP4SingleVideoWithAudio/RecordMP4SingleVideoWithAudio.ino)

Notes and Warnings

When used on a single-output StreamIO class, this has the same effect as calling registerOutput.

“StreamIO.h” must be included to use the class function.

StreamIO::setStackSize

Description

Configure memory stack size available to StreamIO data processing task.

Syntax

void setStackSize(void);

Parameters

NA

Returns

NA

Example Code

NA

Notes and Warnings

“StreamIO.h” must be included to use the class function.

StreamIO::setTaskPriority

Description

Configure priority of StreamIO data processing task.

Syntax

void setTaskPriority(void);

Parameters

NA

Returns

NA

Example Code

NA

Notes and Warnings

“StreamIO.h” must be included to use the class function.