



Technical note

Teracue encoder configuration

Version 001A_en

Introduction

This document explains how to properly configure a teracue encoder/streamer, in order to play correctly its content through an INNES gekkota platform. This technical note is based on a precise reference of Teracue encoder, at a certain software version. The configuration given here may change with an other encoder product and with an other software version.

Prerequisites

- Gekkota 3.12.24+, on a platform which supports full-HD decode (DMB300, SMA300)
- Teracue encoder ENC-300-DVI-PORTABLE, ver. 5.09_w90

Source product configuration

Teracue encoder has an HDMI input, on which the source product feeds its content. There is one constraint for the configuration of this source product:

- The frame rate must be 50Hz instead of 60Hz, because the Teracue encodes at a frame rate which is the input frame rate divided by an integer number. By default, a 50Hz input frame rate will produce an encoded stream of 25fps (=50/2).
- Because DMB300 can't decode 1920x1080 more than 25fps, the source frame rate must be limited to 50Hz .

Encoder configuration

Page SETTINGS

On web UI, the proper settings are the following:

The screenshot shows the Teracue Encoder ENC-300 web interface. The top navigation bar includes tabs for ENCODER, NETWORK, COMPORT, PRESETS, SYSTEM, and HELP. The left sidebar lists various settings categories: SETTINGS, VIDEO, AUDIO, SAP, SDT, DESTINATION, GPIO, INSERTER, KLV, and XPLAYER. The main content area is titled 'Encoder Settings' and contains the following configuration options:

Setting	Value
Encoder Start	<input checked="" type="checkbox"/>
Stream Mode	TS
VideoLoss	OFF
AudioLoss	SILENCE
Transport Stream Padding	ON
CBR TS Rate [kbps]	10000
PCR/PTS Restart	ON
PCR/PTS Restart Time	00 : 00

- Transport stream padding is ON, which means that we have a constant bitrate. This permits to be sure that we meet the minimum bitrate of DMB300 (which is not the case in COLORBAR mode).
- CBR TS Rate = 10000 Kb/s, to meet the DMB300 bitrate capabilities in H264 mode.
- PCR/PTS Restart = ON, to detect properly a discontinuity of the stream on DMB300.
- PCR/PTS Restart Time = 0.

Page VIDEO

On web UI, the proper settings are the following:

TERACUE		ENCODER ENC-300	
		ENCODER	NETWORK
SETTINGS	Encoder Video		
VIDEO			
AUDIO			
SAP			
SDT			
DESTINATION			
GPIO			
INSERTER			
KLV			
XPLAYER			

Codec	H.264
Bitrate [kbps]	10000
Intra Frame Interval	12
VBV Size [ms]	2500
Profile	High
Aspect Ratio	16:9
Frame Rate Divider	1
Frame Mode	PROGRESSIVE
Down Convert	OFF
Scene change detection	OFF
Chroma Downfilter	NO

- Bitrate is not important here, because when Transport stream padding parameter is ON, this bitrate is not taken into account.
- Intra Frame interval = 12, to meet the constraint of minimum period for IDR/SPS at 10Mb/s bitrate.
- VBV Size = 2500, as recommended by Teracue.
- Frame Rate Divider = 1, which means that the stream will be encoded at 25fps with a 50Hz HDMI input

Page AUDIO

On web UI, the proper settings are the following:

TERACUE		ENCODER ENC-300	
		ENCODER	NETWORK
SETTINGS	Encoder Audio		
VIDEO			
AUDIO			
SAP			
SDT			
DESTINATION			
GPIO			
INSERTER			
KLV			
XPLAYER			

Bitrate [kbps]	96
Group	1-1
Input	LINE
Input Mute	<input type="checkbox"/>
LineIn Gain [-12dB...59.5dB]	3.0
Output Gain (dB)	0.0
Output Mute	<input type="checkbox"/>
Talkback Port (1-65535)	9177
Talkback Rate (Hz)	48000
Talkback Stereo	<input type="checkbox"/>

- Bitrate = 96Kbps is a normal value. The tunings on this page depends on your needs.

Page DESTINATION

On web UI, the proper settings are the following:

TERACUE

ENCODER ENC-300

ENCODERNETWORKCOMPORTPRESETSSYSTEMHELP

SETTINGS

VIDEO

AUDIO

SAP

SDT

DESTINATION

GPI0

INSERTER

KLV

XPLAYER

Encoder Destination

Stream Mode

TS

Transport Protocol

UDP

TTL (1- 255)

2

Join Own Multicast

☒

Packet Size

1316

1

IP address

224.1.1.1

Port (1-65535)

4445

Transmit Mode

multicast

2

UDP Destination

+

3

UDP Destination

+

4

UDP Destination

+

5

UDP Destination

+

Links

- Transport protocol = UDP, the only protocol supported by Gekkota 3.12.xx.
- TTL : this value depends on your network architecture.
- It is adviced to use only one output streams, because Teracue doesn't work properly with more than 1 stream (stream discontinuities may appear).