R&S®SMCVB-KV15
DVB-T2 Waveforms
User Manual

ROHDE&SCHWARZ

Make ideas real

This document describes the following software option:

- R&S®SMCVB-KV15 DVB-T2 Waveforms (1434.5492.xx)

The following abbreviations are used throughout this manual: R&S®SMCV100B is abbreviated as R&S SMCV100B.

Contents

1 Welcome to the R&S SMCVB-KV15 Option

The R&S SMCVB-KV15 is a waveform library that provides waveform files in accordance with the DVB-T2 digital standard.

This user manual contains a reference description of the functionality that the waveform library provides. All functions not discussed in this manual are described in the R&S SMCV100B user manual. The latest version is available at:

www.rohde-schwarz.com/manual/SMCV100B

1.1 Key Features

The R&S SMCVB-KV15 features:
- Numerous waveform files in accordance with DVB-T2 digital standard
- Efficient use with dedicated waveforms

1.2 Installation

You can find detailed installation instructions in the supplement document of the R&S SMCV100B user manual and in the R&S SMCV100B user manual describing firmware versions later than FW 4.70.176.xx of the R&S SMCV100B.

1.3 Documentation Overview

This section provides an overview of the R&S SMCV100B user documentation. Unless specified otherwise, you find the documents on the R&S SMCV100B product page at:

www.rohde-schwarz.com/manual/smcv100b

1.3.1 Getting Started Manual

Introduces the R&S SMCV100B and describes how to set up and start working with the product. Includes basic operations, typical measurement examples, and general information, e.g. safety instructions, etc. A printed version is delivered with the instrument.

1.3.2 User Manuals and Help

Separate manuals for the base unit and the software options are provided for download:
- Base unit manual

Contains the description of all instrument modes and functions. It also provides an introduction to remote control, a complete description of the remote control commands with programming examples, and information on maintenance, instrument interfaces and error messages. Includes the contents of the getting started manual.

- Software option manual
Contains the description of the specific functions of an option. Basic information on operating the R&S SMCV100B is not included.

The contents of the user manuals are available as help in the R&S SMCV100B. The help offers quick, context-sensitive access to the complete information for the base unit and the software options.

All user manuals are also available for download or for immediate display on the Internet.

1.3.3 Service Manual

Describes the performance test for checking compliance with rated specifications, firmware update, troubleshooting, adjustments, installing options and maintenance.

The service manual is available for registered users on the global Rohde & Schwarz information system (GLORIS):

https://gloris.rohde-schwarz.com

1.3.4 Instrument Security Procedures

Deals with security issues when working with the R&S SMCV100B in secure areas. It is available for download on the Internet.

1.3.5 Printed Safety Instructions

Provides safety information in many languages. The printed document is delivered with the product.

1.3.6 Data Sheets and Brochures

The data sheet contains the technical specifications of the R&S SMCV100B. It also lists the options and their order numbers and optional accessories.

The brochure provides an overview of the instrument and deals with the specific characteristics.

See www.rohde-schwarz.com/brochure-datasheet/smcv100b

1.3.7 Release Notes and Open Source Acknowledgment (OSA)

The release notes list new features, improvements and known issues of the current firmware version, and describe the firmware installation.

The open-source acknowledgment document provides verbatim license texts of the used open source software.

See www.rohde-schwarz.com/firmware/smcv100b

1.3.8 Application Notes, Application Cards, White Papers, etc.

These documents deal with special applications or background information on particular topics.

See www.rohde-schwarz.com/application/smcv100b

2 Available Waveform Files

This chapter contains descriptions (see Chapter 2.3, "Description of the Waveform Files", on page 12) and complete lists of the available waveform files, ordered by file name (see Chapter 2.2, "Waveform Files List, Ordered by Disk Number", on page 11) or disk number (see Chapter 2.1, "Waveform Files List, Ordered by File Name", on page 10).

2.1 Waveform Files List, Ordered by File Name

Waveform file	Description	Size/Mbyte
DVBT2_VV001_A_SF12.wv	V&V ref. no. 001	232
DVBT2_VV001_A_SF26.wv		504
DVBT2_VV001_A_SF52.wv		1007
DVBT2_VV001_B_SF12.wv	V&V ref. no. 001	232
DVBT2_VV001_B_SF26.wv		504
DVBT2_VV001_B_SF52.wv		1007
DVBT2_VV003_A_SF12.wv	V&V ref. no. 003	232
DVBT2_VV003_A_SF26.wv		504
DVBT2_VV003_A_SF52.wv		1007
DVBT2_VV003_B_SF12.wv	V&V ref. no. 003	232
DVBT2_VV003_B_SF26.wv		504
DVBT2_VV003_B_SF52.wv		1007
DVBT2_VV012_SF12.wv	V&V ref. no. 012	242
DVBT2_VV012_SF26.wv		524
DVBT2_VV012_SF52.wv		1048
DVBT2_VV013_SF12.wv	V&V ref. no. 013	242
DVBT2_VV013_SF26.wv		524
DVBT2_VV013_SF52.wv		1048
DVBT2_VV014_SF12.wv	V&V ref. no. 014	242
DVBT2_VV014_SF26.wv		524
DVBT2_VV014_SF52.wv		1048
DVBT2_VV015_SF12.wv	V&V ref. no. 015	238
DVBT2_VV015_SF26.wv		515
DVBT2_VV015_SF52.wv		1031
DVBT2_VV016_SF12.wv	V&V ref. no. 016	232
DVBT2_VV016_SF26.wv		504
DVBT2_VV016_SF52.wv		1007
DVBT2_VV018_MISO_TX1andTX2_SF76.wv	V&V ref. no. 018	518
DVBT2_VV018_MISO_TX1andTX2_SF152.wv		1037

DVBT2_VV018_MISO_TX1only_SF76.wv	V&V ref. no. 018	518
DVBT2_VV018_MISO_TX1only_SF152.wv		1037
DVBT2_VV018_MISO_TX2only_SF76.wv	V&V ref. no. 018	518
DVBT2_VV018_MISO_TX2only_SF152.wv		1037
DVBT2_VV019_SF12.wv	V&V ref. no. 019	232
DVBT2_VV019_SF26.wv		504
DVBT2_VV019_SF52.wv		1007
DVBT2_VV021_MPLP_SF26.wv	V&V ref. no. 021	504
DVBT2_VV021_MPLP_SF52.wv		1007
DVBT2_VV022_MPLP_SF26.wv	V&V ref. no. 022	504
DVBT2_VV022_MPLP_SF52.wv		1007
DVBT2_VV023_MPLP_SF26.wv	V&V ref. no. 023	504
DVBT2_VV023_MPLP_SF52.wv		1007
DVBT2_VV025_MPLP_SF48.wv	V&V ref. no. 025	499
DVBT2_VV025_MPLP_SF96.wv		998
DVBT2_VV026_MPLP_SF26.wv	V&V ref. no. 026	504
DVBT2_VV026_MPLP_SF52.wv		1007
DVBT2_VV400_SF52.wv	V&V ref. no. 400	471
DVBT2_VV400_SF104.wv		941

2.2 Waveform Files List, Ordered by Disk Number

Waveform file	Description	Size/Mbyte
DVBT2_VV001_A_SF12.wv	V&V ref. no. 001	232
DVBT2_VV001_A_SF26.wv		504
DVBT2_VV001_A_SF52.wv		1007
DVBT2_VV001_B_SF12.wv	V&V ref. no. 001	232
DVBT2_VV001_B_SF26.wv		504
DVBT2_VV001_B_SF52.wv		1007
DVBT2_VV018_MISO_TX1andTX2_SF76.wv	V&V ref. no. 018	518
DVBT2_VV003_A_SF12.wv	V&V ref. no. 003	232
DVBT2_VV003_A_SF26.wv		504
DVBT2_VV003_A_SF52.wv		1007
DVBT2_VV003_B_SF12.wv	V&V ref. no. 003	232
DVBT2_VV003_B_SF26.wv		504
DVBT2_VV003_B_SF52.wv		1007
DVBT2_VV012_SF12.wv	V&V ref. no. 012	242
DVBT2_VV012_SF26.wv		524
DVBT2_VV012_SF52.wv		1048

DVBT2_VV013_SF12.wv	V&V ref. no. 013	242
DVBT2_VV013_SF26.wv		524
DVBT2_VV013_SF52.wv		1048
DVBT2_VV014_SF12.wv	V&V ref. no. 014	242
DVBT2_VV014_SF26.wv		524
DVBT2_VV014_SF52.wv		1048
DVBT2_VV015_SF12.wv	V&V ref. no. 015	238
DVBT2_VV015_SF26.wv		515
DVBT2_VV015_SF52.wv		1031
DVBT2_VV016_SF12.wv	V&V ref. no. 016	232
DVBT2_VV016_SF26.wv		504
DVBT2_VV016_SF52.wv		1007
DVBT2_VV019_SF12.wv	V&V ref. no. 019	232
DVBT2_VV019_SF26.wv		504
DVBT2_VV019_SF52.wv		1007
DVBT2_VV018_MISO_TX1andTX2_SF152.wv	V&V ref. no. 018	1037
DVBT2_VV018_MISO_TX1only_SF76.wv	V&V ref. no. 018	518
DVBT2_VV018_MISO_TX1only_SF152.wv		1037
DVBT2_VV018_MISO_TX2only_SF76.wv	V&V ref. no. 018	518
DVBT2_VV018_MISO_TX2only_SF152.wv		1037
DVBT2_VV021_MPLP_SF26.wv	V&V ref. no. 021	504
DVBT2_VV021_MPLP_SF52.wv		1007
DVBT2_VV022_MPLP_SF26.wv	V&V ref. no. 022	504
DVBT2_VV022_MPLP_SF52.wv		1007
DVBT2_VV023_MPLP_SF26.wv	V&V ref. no. 023	504
DVBT2_VV023_MPLP_SF52.wv		1007
DVBT2_VV025_MPLP_SF48.wv	V&V ref. no. 025	499
DVBT2_VV025_MPLP_SF96.wv		998
DVBT2_VV026_MPLP_SF26.wv	V&V ref. no. 026	504
DVBT2_VV026_MPLP_SF52.wv		1007
DVBT2_VV400_SF52.wv	V&V ref. no. 400	471
DVBT2_VV400_SF104.wv		941

2.3 Description of the Waveform Files

When playing one of the waveform files, the following applies:

- Playing this ARB file should get a DVB-T2 receiver locked.
- Video and audio transmission should be successful during ARB play time.
- Framing will be continuous due to a whole number of super frames.

- An interruption in audio and video will occur at the wrap around of the ARB file.

2.3.1 DVBT2_VV001_A_SFxx.wv

ARB file name	DVBT2_VV001_A_SF12.wv
	DVBT2_VV001_A_SF26.wv
	DVBT2_VV001_A_SF52.wv
ARB file version	01.00
Date of generation	2009-01-16
ARB file size	256 Mbyte / 512 Mbyte / 1 Gbyte
ARB file play time (8 MHz CH BW)	5.2 s / 11.2 s / 22.5 s
ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	12 / 26 / 52

2.3.1.1 T2 Transmission Parameter

Table 2-1: Input mode

Parameter		**Possible values**
Input mode	A (single PLP)	[A (single PLP), B (multi PLP)]
Number of PLP	1	[1 to 255]
Mode adapt. type	CCM	[CCM, ACM]

Table 2-2: Mode adapt., stream adapt.

Parameter		**Possible values**
PLP 0		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 1	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	Off	[On, Off]
Input data rate	36.1407594 Mbit/s	

Table 2-3: BICM

Parameter		**Possible values**
PLP 0		

FEC frame	Normal	[Normal, Short]
Code rate	3/5	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	3	[0 to 255]

Table 2-4: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	2	[2 to 255]
OFDM symbols per T2 frame (LF)	60	[4 to max.], max. -> EN302755
Data symbols per T2 frame (LData)	59	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	1	[1 to 6480]

Table 2-5: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	32K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	On	[On, Off]
Guard interval	1/128	[1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128]
Pilot pattern	PP7	[PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8]

Table 2-6: T2 system

Parameter		Possible values
Transmission system	SISO	[SISO, MISO]
MISO group	---	[1, 2]
PAPR	Off	[On, Off]
PAPR function tag	---	
PAPR function length	---	
PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	
FEF	Off	[On, Off]

FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]
L1 post modulation	64QAM	[BPSK, QPSK, 16QAM, 64QAM]
L1 repetition	Off	[On, Off]
L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]
Cell ID	0x0000	[0x0000 to 0xffff]
Network ID	0x3085	[0x0000 to 0xffff]
T2 system ID	0x8001	[0x0000 to 0xffff]
TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.1.2 PLP Content

PLP 0:

Flowers_36Mbps_MPEG1L2.trp

2.3.2 DVBT2_VV001_B_SFxx.wv

ARB file name	DVBT2_VV001_B_SF12.wv
	DVBT2_VV001_B_SF26.wv
	DVBT2_VV001_B_SF52.wv
ARB file version	01.00
Date of generation	2009-01-16
ARB file size	256 Mbyte / 512 Mbyte / 1 Gbyte
ARB file play time (8 MHz CH BW)	5.2 s / 11.2 s / 22.5 s
ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	12 / 26 / 52

2.3.2.1 T2 Transmission Parameter

Table 2-7: Input mode

Parameter		Possible values
Input mode	A (single PLP)	[A (single PLP), B (multi PLP)]
Number of PLP	1	[1 to 255]
Mode adapt. type	CCM	[CCM, ACM]

Table 2-8: Mode adapt., stream adapt.

Parameter		Possible values
PLP 0		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 1	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	Off	[On, Off]
Input data rate	36.1407594 Mbit/s	

Table 2-9: BICM

Parameter		Possible values
PLP 0		
FEC frame	Normal	[Normal, Short]
Code rate	3/5	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	3	[0 to 255]

Table 2-10: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	2	[2 to 255]
OFDM symbols per T2 frame (LF)	60	[4 to max.], max. -> EN302755
Data symbols per T2 frame (LData)	59	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	1	[1 to 6480]

Table 2-11: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	32K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	On	[On, Off]
Guard interval	1/128	[1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128]
Pilot pattern	PP7	[PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8]

Table 2-12: T2 system

Parameter		Possible values
Transmission system	SISO	[SISO, MISO]
MISO group	---	[1, 2]
PAPR	Off	[On, Off]
PAPR function tag	---	
PAPR function length	---	
PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	
FEF	Off	[On, Off]
FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]
L1 post modulation	64QAM	[BPSK, QPSK, 16QAM, 64QAM]
L1 repetition	Off	[On, Off]
L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]
Cell ID	0x0000	[0x0000 to 0xffff]
Network ID	0x3085	[0x0000 to 0xffff]
T2 system ID	0x8001	[0x0000 to 0xffff]

TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.2.2 PLP Content

PLP 0:

Pattern

2.3.3 DVBT2_VV003_A_SFxx.wv

ARB file name	DVBT2_VV003_A_SF12.wv
	DVBT2_VV003_A_SF26.wv
	DVBT2_VV003_A_SF52.wv
ARB file version	01.00
Date of generation	2009-01-16
ARB file size	256 Mbyte / 512 Mbyte / 1 Gbyte
ARB file play time (8 MHz CH BW)	5.2 s / 11.2 s / 22.5 s
ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	12 / 26 / 52

2.3.3.1 T2 Transmission Parameter

Table 2-13: Input mode

Parameter		Possible values
Input mode	A (single PLP)	[A (single PLP), B (multi PLP)]
Number of PLP	1	[1 to 255]
Mode adapt. type	CCM	[CCM, ACM]

Table 2-14: Mode adapt., stream adapt.

Parameter		Possible values
PLP 0		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 1	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]

In-band signaling	Off	[On, Off]
Input data rate	40.2146452 Mbit/s	

Table 2-15: BICM

Parameter		Possible values
PLP 0		
FEC frame	Normal	[Normal, Short]
Code rate	2/3	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	3	[0 to 255]

Table 2-16: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	2	[2 to 255]
OFDM symbols per T2 frame (LF)	60	[4 to max.], max. -> EN302755
Data symbols per T2 frame (LData)	59	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	1	[1 to 6480]

Table 2-17: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	32K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	On	[On, Off]
Guard interval	1/128	[1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128]
Pilot pattern	PP7	[PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8]

Table 2-18: T2 system

Parameter		Possible values
Transmission system	SISO	[SISO, MISO]
MISO group	---	[1, 2]
PAPR	Off	[On, Off]
PAPR function tag	---	

PAPR function length	---	
PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	
FEF	Off	[On, Off]
FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]
L1 post modulation	64QAM	[BPSK, QPSK, 16QAM, 64QAM]
L1 repetition	Off	[On, Off]
L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]
Cell ID	0x0000	[0x0000 to 0xffff]
Network ID	0x3085	[0x0000 to 0xffff]
T2 system ID	0x8001	[0x0000 to 0xffff]
TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.3.2 PLP Content

PLP 0:

Flowers

2.3.4 DVBT2_VV003_B_SFxx.wv

ARB file name	DVBT2_VV003_B_SF12.wv
	DVBT2_VV003_B_SF26.wv
	DVBT2_VV003_B_SF52.wv
ARB file version	01.00
Date of generation	2009-01-16
ARB file size	256 Mbyte / 512 Mbyte / 1 Gbyte

ARB file play time (8 MHz CH BW)	5.2 s / 11.2 s / 22.5 s
ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	12 / 26 / 52

2.3.4.1 T2 Transmission parameter

Table 2-19: Input mode

Parameter		**Possible values**
Input mode	A (single PLP)	[A (single PLP), B (multi PLP)]
Number of PLP	1	[1 to 255]
Mode adapt. type	CCM	[CCM, ACM]

Table 2-20: Mode adapt., stream adapt.

Parameter		**Possible values**
PLP 0		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 1	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	Off	[On, Off]
Input data rate	40.2146452 Mbit/s	

Table 2-21: BICM

Parameter		**Possible values**
PLP 0		
FEC frame	Normal	[Normal, Short]
Code rate	2/3	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	3	[0 to 255]

Table 2-22: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	2	[2 to 255]
OFDM symbols per T2 frame (LF)	60	[4 to max.], max. -> EN302755
Data symbols per T2 frame (LData)	59	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	1	[1 to 6480]

Table 2-23: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	32K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	On	[On, Off]
Guard interval	1/128	[1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128]
Pilot pattern	PP7	[PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8]

Table 2-24: T2 system

Parameter		Possible values
Transmission system	SISO	[SISO, MISO]
MISO group	---	[1, 2]
PAPR	Off	[On, Off]
PAPR function tag	---	
PAPR function length	---	
PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	
FEF	Off	[On, Off]
FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]
L1 post modulation	64QAM	[BPSK, QPSK, 16QAM, 64QAM]

L1 repetition	Off	[On, Off]
L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]
Cell ID	0x0000	[0x0000 to 0xffff]
Network ID	0x3085	[0x0000 to 0xffff]
T2 system ID	0x8001	[0x0000 to 0xffff]
TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.4.2 PLP Content

PLP 0:

Pattern

2.3.5 DVBT2_VV012_SFxx.wv

ARB file name	DVBT2_VV012_SF12.wv
	DVBT2_VV012_SF26.wv
	DVBT2_VV012_SF52.wv
ARB file version	01.00
Date of generation	2009-01-28
ARB file size	256 Mbyte / 512 Mbyte / 1 Gbyte
ARB file play time (8 MHz CH BW)	5.4 / 11.7 / 23.4 seconds
ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	12 / 26 / 52

2.3.5.1 T2 Transmission Parameter

Table 2-25: Input mode

Parameter		Possible values
Input mode	A	[A (single PLP), B (multi PLP)]
Number of PLP	1	[1 to 255]
Mode adapt. type	CCM	[CCM, ACM]

Table 2-26: Mode adapt., stream adapt.

Parameter		Possible values
PLP 0		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 1	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	Off	[On, Off]
Input data rate	34.688091 Mbit/s	

Table 2-27: BICM

Parameter		Possible values
PLP 0		
FEC frame	Normal	[Normal, Short]
Code rate	4/5	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	64QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	3	[0 to 255]

Table 2-28: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	2	[2 to 255]
OFDM symbols per T2 frame (LF)	244	[4 to max.], max. -> EN302755
Data symbols per T2 frame (LData)	242	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	1	[1 to 6480]

Table 2-29: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	8K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	On	[On, Off]

Guard interval	1/32	[1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128]
Pilot pattern	PP7	[PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8]

Table 2-30: T2 system

Parameter		Possible values
Transmission system	SISO	[SISO, MISO]
MISO group	---	[1, 2]
PAPR	On (currently the reserved tones are modulated with complex 0 Symbols)	[On, Off]
PAPR function tag	---	
PAPR function length	---	
PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	
FEF	Off	[On, Off]
FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]
L1 post modulation	64QAM	[BPSK, QPSK, 16QAM, 64QAM]
L1 repetition	Off	[On, Off]
L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]
Cell ID	0	[0x0000 to 0xffff]
Network ID	12421	[0x0000 to 0xffff]
T2 system ID	32769	[0x0000 to 0xffff]
TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.5.2 PLP Content

PLP 0:

Video + Audio: VV012_34688091Bps.trp

2.3.6 DVBT2_VV013_SFxx.wv

ARB file name	DVBT2_VV013_SF12.wv
	DVBT2_VV013_SF26.wv
	DVBT2_VV013_SF52.wv
ARB file version	01.00
Date of generation	2009-01-28
ARB file size	256 Mbyte / 512 Mbyte / 1 Gbyte
ARB file play time (8 MHz CH BW)	5.4 s / 11.7 s / 23.4 s
ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	12 / 26 / 52

2.3.6.1 T2 Transmission Parameter

Table 2-31: Input mode

Parameter		Possible values
Input mode	A	[A (single PLP), B (multi PLP)]
Number of PLP	1	[1 to 255]
Mode adapt. type	CCM	[CCM, ACM]

Table 2-32: Mode adapt., stream adapt.

Parameter		Possible values
PLP 0		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 1	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	Off	[On, Off]
Input data rate	36.162577 Mbit/s	

Table 2-33: BICM

Parameter		Possible values
PLP 0		
FEC frame	Normal	[Normal, Short]
Code rate	5/6	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	64QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	3	[0 to 255]

Table 2-34: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	2	[2 to 255]
OFDM symbols per T2 frame (LF)	244	[4 to max.], max. -> EN302755
Data symbols per T2 frame (LData)	242	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	1	[1 to 6480]

Table 2-35: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	8K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	On	[On, Off]
Guard interval	1/32	[1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128]
Pilot pattern	PP7	[PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8]

Table 2-36: T2 system

Parameter		Possible values
Transmission system	SISO	[SISO, MISO]
MISO group	---	[1, 2]
PAPR	On (currently the reserved tones are modulated with complex 0 Symbols)	[On, Off]
PAPR function tag	---	
PAPR function length	---	

PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	
FEF	Off	[On, Off]
FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]
L1 post modulation	64QAM	[BPSK, QPSK, 16QAM, 64QAM]
L1 repetition	Off	[On, Off]
L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]
Cell ID	0	[0x0000 to 0xffff]
Network ID	12421	[0x0000 to 0xffff]
T2 system ID	32769	[0x0000 to 0xffff]
TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.6.2 PLP Content

PLP 0:

Video + Audio: VV013_36162577Bps.trp

2.3.7 DVBT2_VV014_SFxx.wv

ARB file name	DVBT2_VV014_SF12.wv
	DVBT2_VV014_SF26.wv
	DVBT2_VV014_SF52.wv
ARB file version	01.00
Date of generation	2009-01-28
ARB file size	256 Mbyte / 512 Mbyte / 1 Gbyte
ARB file play time (8 MHz CH BW)	5.4 s / 11.7 s / 23.4 s

ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	12 / 26 / 52

2.3.7.1 T2 Transmission Parameter

Table 2-37: Input mode

Parameter		Possible values
Input mode	A	[A (single PLP), B (multi PLP)]
Number of PLP	1	[1 to 255]
Mode adapt. type	CCM	[CCM, ACM]

Table 2-38: Mode adapt., stream adapt.

Parameter		Possible values
PLP 0		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 1	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	Off	[On, Off]
Input data rate	32.508650 Mbit/s	

Table 2-39: BICM

Parameter		Possible values
PLP 0		
FEC frame	Normal	[Normal, Short]
Code rate	3/4	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	64QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	3	[0 to 255]

Table 2-40: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	2	[2 to 255]

OFDM symbols per T2 frame (LF)	244	[4 to max.], max. -> EN302755
Data symbols per T2 frame (LData)	242	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	1	[1 to 6480]

Table 2-41: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	8K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	On	[On, Off]
Guard interval	1/32	[1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128]
Pilot pattern	PP7	[PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8]

Table 2-42: T2 system

Parameter		Possible values
Transmission system	SISO	[SISO, MISO]
MISO group	---	[1, 2]
PAPR	On (currently the reserved tones are modulated with complex 0 Symbols)	[On, Off]
PAPR function tag	---	
PAPR function length	---	
PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	
FEF	Off	[On, Off]
FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]
L1 post modulation	64QAM	[BPSK, QPSK, 16QAM, 64QAM]
L1 repetition	Off	[On, Off]

L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]
Cell ID	0	[0x0000 to 0xffff]
Network ID	12421	[0x0000 to 0xffff]
T2 system ID	32769	[0x0000 to 0xffff]
TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.7.2 PLP Content

PLP 0:

Video + Audio: VV014_32508650Bps.trp

2.3.8 DVBT2_VV015_SFxx.wv

ARB file name	DVBT2_VV015_SF12.wv
	DVBT2_VV015_SF26.wv
	DVBT2_VV015_SF52.wv
ARB file version	01.00
Date of generation	2009-01-28
ARB file size	256 Mbyte / 512 Mbyte / 1 Gbyte
ARB file play time (8 MHz CH BW)	5.3 s / 11.5 s / 23.1 s
ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	12 / 26 / 52

2.3.8.1 T2 Transmission Parameter

Table 2-43: Input mode

Parameter		Possible values
Input mode	A	[A (single PLP), B (multi PLP)]
Number of PLP	1	[1 to 255]
Mode adapt. type	CCM	[CCM, ACM]

Table 2-44: Mode adapt., stream adapt.

Parameter		Possible values
PLP 0		

Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 1	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	Off	[On, Off]
Input data rate	34.970502 Mbit/s	

Table 2-45: BICM

Parameter		Possible values
PLP 0		
FEC frame	Normal	[Normal, Short]
Code rate	3/5	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	3	[0 to 255]

Table 2-46: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	2	[2 to 255]
OFDM symbols per T2 frame (LF)	240	[4 to max.], max. -> EN302755
Data symbols per T2 frame (LData)	238	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	1	[1 to 6480]

Table 2-47: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	8K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	On	[On, Off]
Guard interval	1/32	[1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128]
Pilot pattern	PP7	[PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8]

Table 2-48: T2 system

Parameter		Possible values
Transmission system	SISO	[SISO, MISO]
MISO group	---	[1, 2]
PAPR	Off	[On, Off]
PAPR function tag	---	
PAPR function length	---	
PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	
FEF	Off	[On, Off]
FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]
L1 post modulation	64QAM	[BPSK, QPSK, 16QAM, 64QAM]
L1 repetition	Off	[On, Off]
L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]
Cell ID	0	[0x0000 to 0xffff]
Network ID	12421	[0x0000 to 0xffff]
T2 system ID	32769	[0x0000 to 0xffff]
TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.8.2 PLP Content

PLP 0:

Video + Audio: VV015_34970502Bps.trp

2.3.9 DVBT2_VV016_SFxx.wv

ARB file name	DVBT2_VV016_SF12.wv
	DVBT2_VV016_SF26.wv
	DVBT2_VV016_SF52.wv
ARB file version	01.00
Date of generation	2009-01-28
ARB file size	256 Mbyte / 512 Mbyte / 1 Gbyte
ARB file play time (8 MHz CH BW)	5.21 s / 11.28 s / 22.56 s
ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	12 / 26 / 52

2.3.9.1 T2 Transmission Parameter

Table 2-49: Input mode

Parameter		Possible values
Input mode	A	[A (single PLP), B (multi PLP)]
Number of PLP	1	[1 to 255]
Mode adapt. type	CCM	[CCM, ACM]

Table 2-50: Mode adapt., stream adapt.

Parameter		Possible values
PLP 0		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 1	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	Off	[On, Off]
Input data rate	44.791686 Mbit/s	

Table 2-51: BICM

Parameter		Possible values
PLP 0		
FEC frame	Normal	[Normal, Short]
Code rate	3/4	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]

Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	3	[0 to 255]

Table 2-52: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	2	[2 to 255]
OFDM symbols per T2 frame (LF)	59	[4 to max.], max. -> EN302755
Data symbols per T2 frame (LData)	60	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	1	[1 to 6480]

Table 2-53: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	32K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	On	[On, Off]
Guard interval	1/128	[1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128]
Pilot pattern	PP7	[PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8]

Table 2-54: T2 system

Parameter		Possible values
Transmission system	SISO	[SISO, MISO]
MISO group	---	[1, 2]
PAPR	On (currently the reserved tones are modulated with complex 0 Symbols)	[On, Off]
PAPR function tag	---	
PAPR function length	---	
PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	

FEF	Off	[On, Off]
FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]
L1 post modulation	64QAM	[BPSK, QPSK, 16QAM, 64QAM]
L1 repetition	Off	[On, Off]
L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]
Cell ID	0	[0x0000 to 0xffff]
Network ID	12421	[0x0000 to 0xffff]
T2 system ID	32769	[0x0000 to 0xffff]
TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.9.2 PLP Content

PLP 0:

Video + Audio: VV016_44791686Bps.trp

2.3.10 DVBT2_VV018_MISO_TX1andTX2_SFxx.wv

ARB file name	DVBT2_VV018_MISO_TX1andTX2_SF76.wv DVBT2_VV018_MISO_TX1andTX2_SF152.wv
ARB file version	01.00
Date of generation	2009-04-14
ARB file size	854.802432 Mbyte
ARB file play time (8 MHz CH BW)	11.6 s / 23.2 s
ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	76 / 152

2.3.10.1 T2 Transmission Parameter

Table 2-55: Input mode

Parameter		Possible values
Input mode	A	[A (single PLP), B (multi PLP)]
Number of PLP	1	[1 to 255]
Mode adapt. type	CCM	[CCM, ACM]

Table 2-56: Mode adapt., stream adapt.

Parameter		Possible values
PLP 0		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 1	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	Off	[On, Off]
Input data rate	43.162136 Mbit/s	

Table 2-57: BICM

Parameter		Possible values
PLP 0		
FEC frame	Normal	[Normal, Short]
Code rate	5/6	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	1	[0 to 255]
FEC blocks per interleaving frame	61	

Table 2-58: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	2	[2 to 255]
OFDM symbols per T2 frame (LF)	20	[4 to max.], max. -> EN302755

Data symbols per T2 frame (LData)	19	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	1	[1 to 6480]

Table 2-59: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	32K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	On	[On, Off]
Guard interval	1/16	[1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128]
Pilot pattern	PP2	[PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8]

Table 2-60: T2 system

Parameter		Possible values
Transmission system	MISO	[SISO, MISO]
MISO group	1+2	[1, 2]
PAPR	Off	[On, Off]
PAPR function tag	---	
PAPR function length	---	
PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	
FEF	Off	[On, Off]
FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]
L1 post modulation	64QAM	[BPSK, QPSK, 16QAM, 64QAM]
L1 repetition	Off	[On, Off]
L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]

Cell ID	0	[0x0000 to 0xffff]
Network ID	12421	[0x0000 to 0xffff]
T2 system ID	32769	[0x0000 to 0xffff]
TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.10.2 PLP Content

PLP 0:

Video + Audio: Stream_1.trp

2.3.11 DVBT2_VV018_MISO_TX1only_SFxx.wv

ARB file name	DVBT2_VV018_MISO_TX1only_SF76.wv
	DVBT2_VV018_MISO_TX1only_SF152.wv
ARB file version	01.00
Date of generation	2009-04-14
ARB file size	854.802432 Mbyte
ARB file play time (8 MHz CH BW)	11.6 s / 23.2 s
ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	76 / 152

2.3.11.1 T2 Transmission Parameter

Table 2-61: Input mode

Parameter		Possible values
Input mode	A	[A (single PLP), B (multi PLP)]
Number of PLP	1	[1 to 255]
Mode adapt. type	CCM	[CCM, ACM]

Table 2-62: Mode adapt., stream adapt.

Parameter		Possible values
PLP 0		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 1	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]

ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	Off	[On, Off]
Input data rate	43.162136 Mbit/s	

Table 2-63: BICM

Parameter		Possible values
PLP 0		
FEC frame	Normal	[Normal, Short]
Code rate	5/6	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	1	[0 to 255]
FEC blocks per interleaving frame	61	

Table 2-64: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	2	[2 to 255]
OFDM symbols per T2 frame (LF)	20	[4 to max.], max. -> EN302755
Data symbols per T2 frame (LData)	19	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	1	[1 to 6480]

Table 2-65: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	32K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	On	[On, Off]
Guard interval	1/16	[1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128]
Pilot pattern	PP2	[PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8]

Table 2-66: T2 system

Parameter		Possible values
Transmission system	MISO	[SISO, MISO]
MISO group	1	[1, 2]

PAPR	Off	[On, Off]
PAPR function tag	---	
PAPR function length	---	
PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	
FEF	Off	[On, Off]
FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]
L1 post modulation	64QAM	[BPSK, QPSK, 16QAM, 64QAM]
L1 repetition	Off	[On, Off]
L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]
Cell ID	0	[0x0000 to 0xffff]
Network ID	12421	[0x0000 to 0xffff]
T2 system ID	32769	[0x0000 to 0xffff]
TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.11.2 PLP Content

PLP 0:

Video + Audio: Stream_1.trp

2.3.12 DVBT2_VV018_MISO_TX2only_SFxx.wv

ARB file name	DVBT2_VV018_MISO_TX2only_SF76.wv
	DVBT2_VV018_MISO_TX2only_SF152.wv
ARB file version	01.00

Date of generation	2009-04-14
ARB file size	854.802432 Mbyte
ARB file play time (8 MHz CH BW)	11.6 s / 23.2 s
ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	76 / 152

2.3.12.1   T2 Transmission Parameter

Table 2-67: Input mode

Parameter		Possible values
Input mode	A	[A (single PLP), B (multi PLP)]
Number of PLP	1	[1 to 255]
Mode adapt. type	CCM	[CCM, ACM]

Table 2-68: Mode adapt., stream adapt.

Parameter		Possible values
PLP 0		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 1	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	Off	[On, Off]
Input data rate	43.162136 Mbit/s	

Table 2-69: BICM

Parameter		Possible values
PLP 0		
FEC frame	Normal	[Normal, Short]
Code rate	5/6	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]

Time interleaver length	1	[0 to 255]
FEC blocks per interleaving frame	61	

Table 2-70: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	2	[2 to 255]
OFDM symbols per T2 frame (LF)	20	[4 to max.], max. -> EN302755
Data symbols per T2 frame (LData)	19	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	1	[1 to 6480]

Table 2-71: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	32K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	On	[On, Off]
Guard interval	1/16	[1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128]
Pilot pattern	PP2	[PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8]

Table 2-72: T2 system

Parameter		Possible values
Transmission system	MISO	[SISO, MISO]
MISO group	2	[1, 2]
PAPR	Off	[On, Off]
PAPR function tag	---	
PAPR function length	---	
PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	
FEF	Off	[On, Off]
FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]

L1 post modulation	64QAM	[BPSK, QPSK, 16QAM, 64QAM]
L1 repetition	Off	[On, Off]
L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]
Cell ID	0	[0x0000 to 0xffff]
Network ID	12421	[0x0000 to 0xffff]
T2 system ID	32769	[0x0000 to 0xffff]
TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.12.2 PLP Content

PLP 0:

Video + Audio: Stream_1.trp

2.3.13 DVBT2_VV019_SFxx.wv

ARB file name	DVBT2_VV019_SF12.wv DVBT2_VV019_SF26.wv DVBT2_VV019_SF52.wv
ARB file version	01.00
Date of generation	2009-01-25
ARB file size	256 Mbyte / 512 Mbyte / 1 Gbyte
ARB file play time (8 MHz CH BW)	5.2 s / 11.2 s / 22.5 s
ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	12 / 26 / 52

2.3.13.1 T2 Transmission Parameter

Table 2-73: Input mode

Parameter		Possible values
Input mode	A (single PLP)	[A (single PLP), B (multi PLP)]
Number of PLP	1	[1 to 255]
Mode adapt. type	CCM	[CCM, ACM]

Table 2-74: Mode adapt., stream adapt.

Parameter		Possible values
PLP 0		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 1	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	Off	[On, Off]
Input data rate	36.1407594 Mbit/s	

Table 2-75: BICM

Parameter		Possible values
PLP 0		
FEC frame	Normal	[Normal, Short]
Code rate	3/5	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	Off	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	3	[0 to 255]

Table 2-76: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	2	[2 to 255]
OFDM symbols per T2 frame (LF)	60	[4 to max.], max. -> EN302755
Data symbols per T2 frame (LData)	59	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	1	[1 to 6480]

Table 2-77: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	32K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	On	[On, Off]

| Guard interval | 1/128 | [1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128] |
| Pilot pattern | PP7 | [PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8] |

Table 2-78: T2 system

Parameter		Possible values
Transmission system	SISO	[SISO, MISO]
MISO group	---	[1, 2]
PAPR	Off	[On, Off]
PAPR function tag	---	
PAPR function length	---	
PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	
FEF	Off	[On, Off]
FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]
L1 post modulation	64QAM	[BPSK, QPSK, 16QAM, 64QAM]
L1 repetition	Off	[On, Off]
L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]
Cell ID	0x0000	[0x0000 to 0xffff]
Network ID	0x3085	[0x0000 to 0xffff]
T2 system ID	0x8001	[0x0000 to 0xffff]
TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.13.2 PLP Content

PLP 0:

Video + Audio: Flowers_36Mbps_MPEG1L2.trp

2.3.14 DVBT2_VV021_MPLP_SFxx.wv

ARB file name	DVBT2_VV021_MPLP_SF26.wv
	DVBT2_VV021_MPLP_SF52.wv
ARB file version	01.00
Date of generation	2009-03-17
ARB file size	512 Mbyte / 1 Gbyte
ARB file play time (8 MHz CH BW)	11.2 s / 22.5 s
ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	26 / 52

2.3.14.1 T2 Transmission Parameter

Table 2-79: Input mode

Parameter		Possible values
Input mode	B (multi PLP)	[A (single PLP), B (multi PLP)]
Number of PLP	2	[1 to 255]
Mode adapt. type	CCM	[CCM, ACM]

Table 2-80: Mode adapt., stream adapt.

Parameter		Possible values
PLP 0		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 2	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	On	[On, Off]
Number other in-band PLP	0	[0x00 to 0xfe]
Input data rate	11.986758 Mbit/s	
PLP 1		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x01	[0x00 to 0xff]

PLP type	Data Type 2	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	On	[On, Off]
Number other in-band PLP	0	[0x00 to 0xfe]
Input data rate	24.152954 Mbit/s	

Table 2-81: BICM

Parameter		Possible values
PLP 0		
FEC frame	Normal	[Normal, Short]
Code rate	3/5	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	3	[0 to 255]
FEC blocks per interleaving frame	67	
PLP 1		
FEC frame	Normal	[Normal, Short]
Code rate	3/5	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	3	[0 to 255]
FEC blocks per interleaving frame	135	

Table 2-82: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	2	[2 to 255]
OFDM symbols per T2 frame (LF)	60	[4 to max.], max. -> EN302755
Data symbols per T2 frame (LData)	59	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	3	[1 to 6480]

Table 2-83: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	32K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	On	[On, Off]
Guard interval	1/128	[1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128]
Pilot pattern	PP7	[PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8]

Table 2-84: T2 system

Parameter		Possible values
Transmission system	SISO	[SISO, MISO]
MISO group	---	[1, 2]
PAPR	Off	[On, Off]
PAPR function tag	---	
PAPR function length	---	
PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	
FEF	Off	[On, Off]
FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]
L1 post modulation	64QAM	[BPSK, QPSK, 16QAM, 64QAM]
L1 repetition	Off	[On, Off]
L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]
Cell ID	0	[0x0000 to 0xffff]
Network ID	12421	[0x0000 to 0xffff]
T2 system ID	32769	[0x0000 to 0xffff]

TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.14.2 PLP Content

PLP 0:

Video + Audio: VV021_TS1_11986758Bps.trp (DVTS 9 Mbit/s)

PLP 1:

Video + Audio: VV021_TS2_24152954Bps.trp (Grouper 4 Mbit/s, Flowergarden 6 Mbit/s)

2.3.15 DVBT2_VV022_MPLP_SFxx.wv

ARB file name	DVBT2_VV022_MPLP_SF26.wv
	DVBT2_VV022_MPLP_SF52.wv
ARB file version	01.00
Date of generation	2009-04-23
ARB file size	512 Mbyte / 1 Gbyte
ARB file play time (8 MHz CH BW)	11.2 s / 22.5 s
ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	26 / 52

2.3.15.1 T2 Transmission Parameter

Table 2-85: Input mode

Parameter		Possible values
Input mode	B	[A (single PLP), B (multi PLP)]
Number of PLP	2	[1 to 255]
Mode adapt. type	CCM	[CCM, ACM]

Table 2-86: Mode adapt., stream adapt.

Parameter		Possible values
PLP 0		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 1	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]

ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	On	[On, Off]
Number other in-band PLP	1	[0x00 to 0xfe]
Input data rate	14.670255 Mbit/s	
PLP 1		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x01	[0x00 to 0xff]
PLP type	Data Type 1	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	On	[On, Off]
Number other in-band PLP	1	[0x00 to 0xfe]
Input data rate	21.469012Mbit/s	

Table 2-87: BICM

Parameter		Possible values
PLP 0		
FEC frame	Normal	[Normal, Short]
Code rate	3/5	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	2	[0 to 255]
FEC blocks per interleaving frame	82	
PLP 1		
FEC frame	Normal	[Normal, Short]
Code rate	3/5	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]

Time interleaver length	2	[0 to 255]
FEC blocks per interleaving frame	120	

Table 2-88: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	2	[2 to 255]
OFDM symbols per T2 frame (LF)	60	[4 to max.], max. -> EN302755
Data symbols per T2 frame (LData)	59	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	1	[1 to 6480]

Table 2-89: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	32K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	On	[On, Off]
Guard interval	1/128	[1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128]
Pilot pattern	PP7	[PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8]

Table 2-90: T2 system

Parameter		Possible values
Transmission system	SISO	[SISO, MISO]
MISO group	---	[1, 2]
PAPR	Off	[On, Off]
PAPR function tag	---	
PAPR function length	---	
PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	
FEF	Off	[On, Off]
FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]

L1 post modulation	QPSK	[BPSK, QPSK, 16QAM, 64QAM]
L1 repetition	Off	[On, Off]
L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]
Cell ID	0	[0x0000 to 0xffff]
Network ID	12421	[0x0000 to 0xffff]
T2 system ID	32769	[0x0000 to 0xffff]
TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.15.2 PLP Content

PLP 0:

Video + Audio: VV022_TS1_14670255Bps.trp

(Squirrel, Grouper)

PLP 1:

Video + Audio: VV022_TS2_21469012Bps.trp

(Flowergarden, Flowers - HDTV)

2.3.16 DVBT2_VV023_MPLP_SFxx.wv

ARB file name	DVBT2_VV023_MPLP_SF26.wv DVBT2_VV023_MPLP_SF52.wv
ARB file version	01.00
Date of generation	2009-04-23
ARB file play time (8 MHz CH BW)	11.2 s / 22.5 s
ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	26 / 52

2.3.16.1 T2 Transmission Parameter

Table 2-91: Input mode

Parameter		Possible values
Input mode	B	[A (single PLP), B (multi PLP)]

Number of PLP	3	[1 to 255]
Mode adapt. type	CCM	[CCM, ACM]

Table 2-92: Mode adapt., stream adapt.

Parameter		Possible values
PLP 0		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 2	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	On	[On, Off]
Number other in-band PLP	2	[0x00 to 0xfe]
Input data rate	8.050191 Mbit/s	
PLP 1		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x01	[0x00 to 0xff]
PLP type	Data Type 2	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	On	[On, Off]
Number other in-band PLP	2	[0x00 to 0xfe]
Input data rate	18.427240 Mbit/s	
PLP 2		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x02	[0x00 to 0xff]
PLP type	Data Type 1	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	On	[On, Off]
Number other in-band PLP	2	[0x00 to 0xfe]
Input data rate	9.660422 Mbit/s	

Table 2-93: BICM

Parameter		Possible values
PLP 0		
FEC frame	Normal	[Normal, Short]
Code rate	3/5	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	3	[0 to 255]
FEC blocks per interleaving frame	45	
PLP 1		
FEC frame	Normal	[Normal, Short]
Code rate	3/5	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	3	[0 to 255]
FEC blocks per interleaving frame	103	
PLP 2		
FEC frame	Normal	[Normal, Short]
Code rate	3/5	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	1	[0 to 255]
FEC blocks per interleaving frame	54	

Table 2-94: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	2	[2 to 255]
OFDM symbols per T2 frame (LF)	60	[4 to max.], max. -> EN302755

Data symbols per T2 frame (LData)	59	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	5	[1 to 6480]

Table 2-95: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	32K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	On	[On, Off]
Guard interval	1/128	[1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128]
Pilot pattern	PP7	[PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8]

Table 2-96: T2 system

Parameter		Possible values
Transmission system	SISO	[SISO, MISO]
MISO group	---	[1, 2]
PAPR	Off	[On, Off]
PAPR function tag	---	
PAPR function length	---	
PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	
FEF	Off	[On, Off]
FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]
L1 post modulation	16 QAM	[BPSK, QPSK, 16QAM, 64QAM]
L1 repetition	Off	[On, Off]
L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]

Cell ID	0	[0x0000 to 0xffff]
Network ID	12421	[0x0000 to 0xffff]
T2 system ID	32769	[0x0000 to 0xffff]
TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.16.2 PLP Content

PLP 0:

Video + Audio: VV023_TS1_8050191Bps.trp

PLP 1:

Video + Audio: VV023_TS2_18427240Bps.trp

PLP 2:

Video + Audio: VV023_TS3_9660422Bps.trp

2.3.17 DVBT2_VV025_MPLP_SFxx.wv

ARB file name	DVBT2_VV025_MPLP_SF48.wv
	DVBT2_VV025_MPLP_SF96.wv
ARB file version	01.00
Date of generation	2009-04-24
ARB file play time (8 MHz CH BW)	11.2 / 22.4 seconds
ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	48 / 96

2.3.17.1 T2 Transmission Parameter

Table 2-97: Input mode

Parameter		Possible values
Input mode	B	[A (single PLP), B (multi PLP)]
Number of PLP	4	[1 to 255]
Mode adapt. type	CCM	[CCM, ACM]

Table 2-98: Mode adapt., stream adapt.

Parameter		Possible values
PLP 0		
Input format	TS	[TS, GSE, GCS, GFPS]

PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 2	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	On	[On, Off]
Number other in-band PLP	3	[0x00 to 0xfe]
Input data rate	9.974674 Mbit/s	
PLP 1		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x01	[0x00 to 0xff]
PLP type	Data Type 2	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	Off	[On, Off]
Number other in-band PLP	0	[0x00 to 0xfe]
Input data rate	2.499214 Mbit/s	
PLP 2		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x02	[0x00 to 0xff]
PLP type	Data Type 2	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	Off	[On, Off]
Number other in-band PLP	0	[0x00 to 0xfe]
Input data rate	0.333228 Mbit/s	
PLP 3		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x03	[0x00 to 0xff]
PLP type	Data Type 1	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]

Null packet deletion	Off	[On, Off]
In-band signaling	On	[On, Off]
Number other in-band PLP	3	[0x00 to 0xfe]
Input data rate	9.974674 Mbit/s	

Table 2-99: BICM

Parameter		Possible values
PLP 0		
FEC frame	Normal	[Normal, Short]
Code rate	3/5	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	1	[0 to 255]
FEC blocks per interleaving frame	3	
PLP 1		
FEC frame	Normal	[Normal, Short]
Code rate	3/5	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 1	[Type 0, Type 1]
Frame interval (IJump)	2	[1 to 255]
Time interleaver length	2	[0 to 255]
FEC blocks per interleaving frame	3	
PLP 2		
FEC frame	Normal	[Normal, Short]
Code rate	3/5	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 1	[Type 0, Type 1]
Frame interval (IJump)	5	[1 to 255]
Time interleaver length	4	[0 to 255]
FEC blocks per interleaving frame	2	
PLP 3		

FEC frame	Normal	[Normal, Short]
Code rate	3/5	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	3	[0 to 255]
FEC blocks per interleaving frame	3	

Table 2-100: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	20	[2 to 255]
OFDM symbols per T2 frame (LF)	96	[4 to max.], max. -> EN302755
Data symbols per T2 frame (LData)	80	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	3	[1 to 6480]

Table 2-101: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	1K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	Off	[On, Off]
Guard interval	1/16	[1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128]
Pilot pattern	PP4	[PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8]

Table 2-102: T2 system

Parameter		Possible values
Transmission system	SISO	[SISO, MISO]
MISO group	---	[1, 2]
PAPR	Off	[On, Off]
PAPR function tag	---	
PAPR function length	---	
PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	

FEF	Off	[On, Off]
FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]
L1 post modulation	64 QAM	[BPSK, QPSK, 16QAM, 64QAM]
L1 repetition	Off	[On, Off]
L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]
Cell ID	0	[0x0000 to 0xffff]
Network ID	12421	[0x0000 to 0xffff]
T2 system ID	32769	[0x0000 to 0xffff]
TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.17.2 PLP Content

PLP 0:

Video + Audio: VV025_TS1_9974674Bps.trp

PLP 1:

Video + Audio: VV025_TS2_2499214Bps.trp

PLP 2:

Video + Audio: VV025_TS3_333228Bps.trp

PLP 3:

Video + Audio: VV025_TS4_9974674Bps.trp

2.3.18 DVBT2_VV026_MPLP_SFxx.wv

ARB file name	DVBT2_VV026_MPLP_SF26.wv
	DVBT2_VV026_MPLP_SF52.wv
ARB file version	01.00
Date of generation	2009-04-23

ARB file play time (8 MHz CH BW)	11.2 s / 22.5 s
ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	26 / 52

2.3.18.1 T2 Transmission Parameter

Table 2-103: Input mode

Parameter		Possible values
Input mode	B	[A (single PLP), B (multi PLP)]
Number of PLP	2	[1 to 255]
Mode adapt. type	CCM	[CCM, ACM]

Table 2-104: Mode adapt., stream adapt.

Parameter		Possible values
PLP 0		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 2	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	On	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	On	[On, Off]
Number other in-band PLP	1	[0x00 to 0xfe]
Input data rate	11.986535 Mbit/s	
PLP 1		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x01	[0x00 to 0xff]
PLP type	Data Type 2	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	Off	[On, Off]
Null packet deletion	Off	[On, Off]
In-band signaling	On	[On, Off]
Number other in-band PLP	1	[0x00 to 0xfe]
Input data rate	23.973817 Mbit/s	

Table 2-105: BICM

Parameter		Possible values
PLP 0		
FEC frame	Normal	[Normal, Short]
Code rate	3/5	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	3	[0 to 255]
FEC blocks per interleaving frame	67	
PLP 1		
FEC frame	Normal	[Normal, Short]
Code rate	3/5	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	3	[0 to 255]
FEC blocks per interleaving frame	134	

Table 2-106: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	2	[2 to 255]
OFDM symbols per T2 frame (LF)	60	[4 to max.], max. -> EN302755
Data symbols per T2 frame (LData)	59	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	10	[1 to 6480]

Table 2-107: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	32K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	On	[On, Off]
Guard interval	1/128	[1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128]
Pilot pattern	PP7	[PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8]

Table 2-108: T2 system

Parameter		Possible values
Transmission system	SISO	[SISO, MISO]
MISO group	---	[1, 2]
PAPR	Off	[On, Off]
PAPR function tag	---	
PAPR function length	---	
PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	
FEF	Off	[On, Off]
FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]
L1 post modulation	BPSK	[BPSK, QPSK, 16QAM, 64QAM]
L1 repetition	Off	[On, Off]
L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]
Cell ID	0	[0x0000 to 0xffff]
Network ID	12421	[0x0000 to 0xffff]
T2 system ID	32769	[0x0000 to 0xffff]
TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.18.2 PLP Content

PLP 0

Video + Audio: VV026_TS1_11986535Bps.trp

(DVTS 9 Mbit/s)

PLP 1:

Video + Audio: VV026_TS2_23973817Bps.trp

(Grouper, Flowergarden)

2.3.19 DVBT2_VV400_SFxx.wv

ARB file name	DVBT2_VV400_SF52.wv
	DVBT2_VV400_SF52.wv
ARB file version	01.00
Date of generation	2009-06-03
ARB file size	512 Mbyte / 1 Gbyte
ARB file play time (8 MHz CH BW)	11.5 / 23 seconds
ARB clock (8 MHz CH BW)	11.428570 MHz
Number of super frames	52 / 104

2.3.19.1 T2 Transmission Parameter

Table 2-109: Input mode

Parameter		Possible values
Input mode	B	[A (single PLP), B (multi PLP)]
Number of PLP	5	[1 to 255]
Mode adapt. type	ACM	[CCM, ACM]

Table 2-110: Mode adapt., stream adapt.

Parameter		Possible values
PLP 0		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x00	[0x00 to 0xff]
PLP type	Data Type 2	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	On	[On, Off]
Null packet deletion	On	[On, Off]
In-band signaling	On	[On, Off]
Number other in-band PLP	0	[0x00 to 0xfe]
PLP 1		
Input format	TS	[TS, GSE, GCS, GFPS]

PLP ID	0x01	[0x00 to 0xff]
PLP type	Data Type 2	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	On	[On, Off]
Null packet deletion	On	[On, Off]
In-band signaling	On	[On, Off]
Number other in-band PLP	0	[0x00 to 0xfe]
PLP 2		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x02	[0x00 to 0xff]
PLP type	Data Type 2	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	On	[On, Off]
Null packet deletion	On	[On, Off]
In-band signaling	On	[On, Off]
Number other in-band PLP	0	[0x00 to 0xfe]
PLP 3		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x03	[0x00 to 0xff]
PLP type	Data Type 2	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	On	[On, Off]
Null packet deletion	On	[On, Off]
In-band signaling	On	[On, Off]
Number other in-band PLP	0	[0x00 to 0xfe]
PLP 4		
Input format	TS	[TS, GSE, GCS, GFPS]
PLP ID	0x04	[0x00 to 0xff]
PLP type	Common	[Data Type 1, Data Type 2, Common]
Mode	HEM	[HEM, NM]
ISSY	On	[On, Off]
Null packet deletion	On	[On, Off]
In-band signaling	On	[On, Off]
Number other in-band PLP	0	[0x00 to 0xfe]

Table 2-111: BICM

Parameter		Possible values
PLP 0		
FEC frame	Normal	[Normal, Short]
Code rate	2/3	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	1	[0 to 255]
PLP 1		
FEC frame	Normal	[Normal, Short]
Code rate	2/3	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	3	[0 to 255]
PLP 2		
FEC frame	Normal	[Normal, Short]
Code rate	2/3	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	1	[0 to 255]
PLP 3		
FEC frame	Normal	[Normal, Short]
Code rate	2/3	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	256QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	1	[0 to 255]
PLP 4		

FEC frame	Short	[Normal, Short]
Code rate	2/3	[1/2, 3/5, 2/3, 3/4, 4/5, 5/6]
Constellation	64QAM	[QPSK, 16QAM, 64QAM, 256QAM]
Constellation rotation	On	[On, Off]
Time interleaver type	Type 0	[Type 0, Type 1]
Frame interval (IJump)	1	[1 to 255]
Time interleaver length	1	[0 to 255]

Table 2-112: Framing

Parameter		Possible values
T2 frames per super frame (NT2)	2	[2 to 255]
OFDM symbols per T2 frame (LF)	28	[4 to max.], max. -> EN302755
Data symbols per T2 frame (LData)	27	[3 to max.], max. -> EN302755
Subslices per T2 frame (NSub)	108	[1 to 6480]

Table 2-113: OFDM

Parameter		Possible values
Channel bandwidth	8 MHz	[1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz]
FFT size	32K	[1K, 2K, 4K, 8K, 16K, 32K]
Extended carrier mode	On	[On, Off]
Guard interval	1/128	[1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128]
Pilot pattern	PP7	[PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8]

Table 2-114: T2 system

Parameter		Possible values
Transmission system	SISO	[SISO, MISO]
MISO group	---	[1, 2]
PAPR	Off	[On, Off]
PAPR function tag	---	
PAPR function length	---	
PAPR gain	---	
PAPR extension limit	---	
PAPR clipping threshold	---	
FEF	Off	[On, Off]

FEF type	---	
FEF length	---	
FEF interval	---	
TFS	Off	[On, Off]
L1 post modulation	16QAM	[BPSK, QPSK, 16QAM, 64QAM]
L1 repetition	Off	[On, Off]
L1 post extension	Off	[On, Off]
Num. aux. streams	0	[0 to 15]
Cell ID	0	[0x0000 to 0xffff]
Network ID	12421	[0x0000 to 0xffff]
T2 system ID	32769	[0x0000 to 0xffff]
TX ID state	Off	[On, Off]
TX ID	---	[0x0000 to 0xffff]

2.3.19.2 PLP Content

PLP 0:

Video + Audio: RS_Logo

PLP 1:

Video + Audio: Codec169

PLP 2:

Video + Audio: RS_Logo

PLP 3:

Video + Audio: Codec169

PLP 4:

Common PLP

Index