

# R&S®SFU-K16

## DVB-T2 Coder

### (single PLP and multi PLP)

# Specifications

## Definitions

(see associated main data sheet)

DVB-T2	in line with EN 302 755 and TS 102 773	v1.1.1, v1.2.1 <sup>1</sup> and v1.3.1 <sup>2,3</sup> incl. annex I
	full support	with R&S®SFU-B15
	single PLP and multi PLP	v1.1.1, v1.2.1 <sup>2,3</sup>
	T2-Base single profile transmission	v1.3.1 <sup>2,3</sup>
	T2-Lite single profile transmission	v1.3.1 <sup>2,3</sup> in line with annex I
	limited support	with R&S®SFU-B1 and R&S®SFU-10
Input	single PLP	v1.1.1, v1.2.1 <sup>4,1</sup>
	transport stream	
	interface	ASI
	format	T2-MI (single PLP and multi PLP) or MPEG-2 TS (single PLP only)
	T2-MI	supported by R&S®SFU-B15 only
	interface	on/off
	PID filter	settable <sup>5</sup>
	SID filter	settable <sup>2,5</sup>
	analyzer	T2 specification check and logging
Modulation	modulation	COFDM
	PLP number	1 (single PLP) to 16 (multi PLP)
	single PLP	supported by R&S®SFU-B1/-B10/-B15
	T2-MI interface	off
	PLP number	1
	single PLP and multi PLP	supported by R&S®SFU-B15 only
	T2-MI interface	on
	PLP number	1 to 16

<sup>1</sup> Bias balancing cells and unoccupied cell filling between PLP cells not supported.

<sup>2</sup> Available with R&S®SFU firmware 2.70 or higher.

<sup>3</sup> New features according to T2 v1.3.1 including annex I (T2-Lite).

<sup>4</sup> With T2-MI interface switched off.

<sup>5</sup> With T2-MI interface switched on.

Coding	bandwidth	1.7/5/6/7/8 MHz (10 MHz overrange)
	MER	> 40 dB <sup>6</sup>
	modulation frequency response	< ±0.2 dB
	shoulder attenuation	> 45 dB
	PLP type	common, data type 1, data type 2 <sup>5</sup>
	baseband mode	normal (NM), high efficiency (HEM)
	ISSY	off, short, long <sup>5</sup>
	null packet deletion	on/off <sup>5</sup>
	FEC frame	normal (64k), short (16k)
	code rate	1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 1/3 <sup>3</sup> , 2/5 <sup>3</sup>
	constellation	QPSK, 16QAM, 64QAM, 256QAM
	rotation	on/off
	time interleaver	settable <sup>4</sup>
	frame interval ( $I_{\text{jump}}$ )	≥ 1 <sup>5</sup>
	FFT size	1k, 2k, 4k, 8k, 16k and 32k COFDM
	extended carrier mode	on/off
	pilot pattern	PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8
T2 system	FFT size	1k, 2k, 4k, 8k, 16k and 32k COFDM
	extended carrier mode	on/off
	pilot pattern	PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8
	guard interval	1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128
	T2 frames per super frame	settable <sup>4</sup>
	data symbols per T2 frame	settable <sup>4</sup>
	subsllices per T2 frame	≥ 1 <sup>5,7</sup>
	in-band signaling	in line with T2 version <sup>5,7</sup>
	network mode	SFN <sup>7,8</sup> , MFN
	transmission system	SISO, MISO <sup>7,8</sup> , T2-Lite SISO <sup>7,2</sup> , T2-Lite MISO <sup>7,8</sup>
	MISO Group	settable <sup>7,8</sup>
	PAPR reduction	off, tone reservation (TR) <sup>9</sup>
	future extension frames (FEF)	off, null, noise <sup>7,2,10</sup>
	T2 version	settable <sup>4</sup>
	L1 post modulation	BPSK, QPSK, 16QAM, 64QAM
	L1 repetition	on/off <sup>8</sup>
	L1 post scrambled	settable in line with T2 version <sup>2</sup>
	T2 Base Lite	on/off <sup>5,7,2</sup>
	cell ID	settable <sup>4</sup>
	network ID	settable <sup>4</sup>
T2 system ID	settable <sup>4</sup>	
Test signals		TS test packet with settable payload (PRBS, 0x00, 0xFF) (see "Internal test signals")

## Ordering information

Designation	Type	Order No.
DVB-T2 Coder (single PLP and multi PLP)	R&S <sup>®</sup> SFU-K16	2110.7847.02

<sup>6</sup> With internal test signals.

<sup>7</sup> With R&S<sup>®</sup>SFU-B15 hardware extension only.

<sup>8</sup> Available with R&S<sup>®</sup>SFU firmware 2.50 or higher.

<sup>9</sup> PAPR reduction in line with T2 version > v1.1.1 not supported yet. Reserved carriers are modulated with 0+j0 only.

<sup>10</sup> Special feature to add noise to the FEF payload (instead of adding FFT-based PRBS).

### Rohde & Schwarz GmbH & Co. KG

Europe, Africa, Middle East +49 89 4129 12345  
customersupport@rohde-schwarz.com  
North America 1 888 TEST RSA (1 888 837 87 72)  
customer.support@rsa.rohde-schwarz.com  
Latin America +1 410 910 79 88  
customersupport.la@rohde-schwarz.com  
Asia/Pacific +65 65 13 04 88  
customersupport.asia@rohde-schwarz.com  
China +86 800 810 8228/+86 400 650 5896  
customersupport.china@rohde-schwarz.com  
www.rohde-schwarz.com

Certified Quality System  
**ISO 9001**

Certified Environmental System  
**ISO 14001**

R&S<sup>®</sup> is a registered trademark of Rohde & Schwarz GmbH & Co. KG  
Trade names are trademarks of the owners | Printed in Germany (sk)  
PD 5214.2727.22 | Version 05.00 | April 2012 | R&S<sup>®</sup>SFU-K16  
Subject to change  
© 2009 - 2012 Rohde & Schwarz GmbH Co. KG | 81671 München,