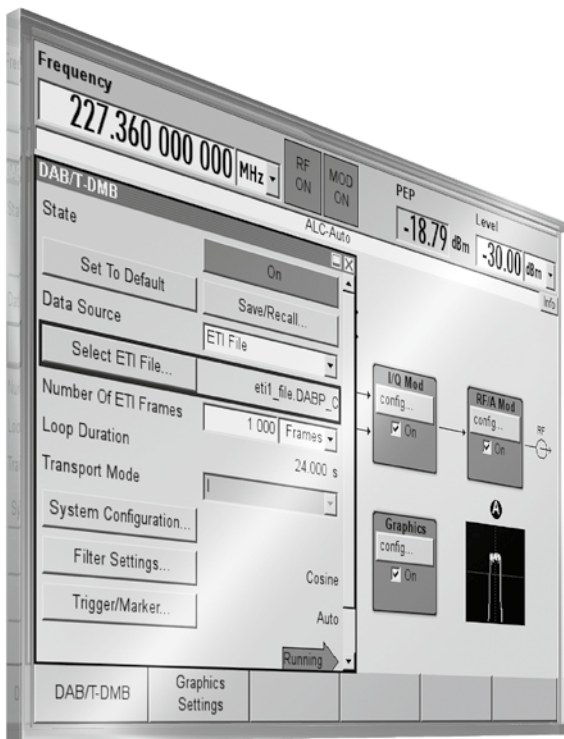


R&S[®] SMx-K353 DAB+ Streams Specifications



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Specifications

The DAB+ streams are ETI compliant test data for use with the R&S[®]SMx-K53 option.

DAB+ streams	sequences in line with ETS 300 799 R&S [®] SMx-K53 (DAB/T-DMB)	see description of option for details required for playout
Transmission	transmission mode	depending on loaded stream
	stream format	ETI NI G.703
Signal set overview	streams	DAB+ and DAB/DAB+
	number of streams	4 DAB+ streams and 1 DAB+/DAB streams
	playback	endless
	audio, data	not seamless
	general ensemble information	depending on loaded stream
	labels	DAB+ audio variety, DAB/DAB+ audio mix, DAB+ audio changes, DAB+ CISPR13/14, data services
	identifier	0xdab1, 0xdab2, 0xdab3, 0xdab4, 0xd06c
	transmission mode	1
	country	Germany (d) (ECC and country code: e0d)
	program type (PTY) codes	all countries except those in North America
	time zone	Europe/Berlin
time format	long form	
Signal set		depending on loaded stream
DAB+ audio variety	file name	eti1_file.dabp_c
General ensemble information	ensemble label	'DAB+·Variety' (abbreviated label: 'DAB+·Var'; flag field: 0xff00; character set: EBU basic core)
	ensemble identifier	0xdab1
	transmission mode	1
	ensemble country	Germany (D) (ECC and country code: e0d)
	international table for PTY codes	all countries except those in North America
	ensemble time zone	Europe/Berlin
	DAB time format (FIG0/10)	long form
Service information	service 1	
	service label	'192kbps-PL1·Surr' (abbreviated label: '192PL1·S'; flag field: 0xe0f8; character set: EBU basic core)
	service identifier	0xd07b (audio service)
	program type (PTY)	information (PTY code 3; code for all countries except those in North America)
	program language	German (language code 8)
	primary service component	speech (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 1
	SCIdS	0 (automatically assigned)
	service 2	
	service label	'192kbps-PL3·Ster' (abbreviated label: '192PL3'; flag field: 0xe0e0; character set: EBU basic core)
	service identifier	0xd07c (audio service)
	program type (PTY)	leisure (PTY code 23; code for all countries except those in North America)
	program language	German (language code 8)
	primary service component	park scene (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 2
	SCIdS	0 (automatically assigned)

Service information (cont.)	service 3	
	service label	'160kbps·PL3·Ster' (abbreviated label: '160PL3'; flag field: 0xe0e0; character set: EBU basic core)
	service identifier	0xd07d (audio service)
	program type (PTY)	serious classical (PTY code 14; code for all countries except those in North America)
	program language	German (language code 8)
	primary service component	Bach (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 3
	SCIdS	0 (automatically assigned)
	service 4	
	service label	'128kbps·PL3·Surr' (abbreviated label: '128PL3·S'; flag field: 0xe0f8; character set: EBU basic core)
	service identifier	0xd07e (audio service)
	program type (PTY)	education (PTY code 5; code for all countries except those in North America)
	program language	German (language code 8)
	primary service component	frequency sweep (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 4
	SCIdS	0 (automatically assigned)
	service 5	
	service label	'96kbps·PL4·Surr' (abbreviated label: '96PL4·S'; flag field: 0xe0f8; character set: EBU basic core)
	service identifier	0xd07f (audio service)
	program type (PTY)	education (PTY code 5; code for all countries except those in North America)
	program language	German (language code 8)
	primary service component	different sines on each channel (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 5
	SCIdS	0 (automatically assigned)
	service 6	
	service label	'96kbps·PL3·Mono' (abbreviated label: '96PL3·M'; flag field: 0xe0f8; character set: EBU basic core)
	service identifier	0xd080 (audio service)
	program type (PTY)	education (PTY code 5; code for all countries except those in North America)
	program language	German (language code 8)
	primary service component	16 tone (mono) (audio: live source or playlist)
	service component carried in	stream 6
	SCIdS	0 (automatically assigned)
	PAD data	SLS PAD1 (application: MOT slideshow) DLS PAD1 (application: dynamic labels) Journaline PAD1 (application: Journaline®)
service 7		
service label	'48kbps·PL4·Ster' (abbreviated label: '48PL4'; flag field: 0xe0e0; character set: EBU basic core)	
service identifier	0xd081 (audio service)	
program type (PTY)	education (PTY code 5; code for all countries except those in North America)	
program language	German (language code 8)	
primary service component	10 kHz sine (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))	
service component carried in	stream 7	
SCIdS	0 (automatically assigned)	

Service information (cont.)	service 8	
	service label	'Secondary·SCs' (abbreviated label: 'Secondar'; flag field: 0xff00; character set: EBU basic core)
	service identifier	0xd082 (audio service)
	program type (PTY)	education (PTY code 5; code for all countries except those in North America)
	program language	German (language code 8)
	primary service component	speech (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 1
	SCIdS	0 (automatically assigned)
	service component label	'192kbps·PL1·Surr' (abbreviated label: '192PL1·S'; flag field: 0xe0f8; character set: EBU basic core)
	secondary service component 1	park scene (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 2
	SCIdS	1 (automatically assigned)
	service component label	'192kbps·PL3·Ster' (abbreviated label: '192PL3'; flag field: 0xe0e0; character set: EBU basic core)
	secondary service component 2	Bach (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 3
	SCIdS	2 (automatically assigned)
	service component label	'160kbps·PL3·Ster' (abbreviated label: '160PL3'; flag field: 0xe0e0; character set: EBU basic core)
	secondary service component 3	frequency sweep (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 4
	SCIdS	3 (automatically assigned)
	service component label	'128kbps·PL3·Surr' (abbreviated label: '128PL3·S'; flag field: 0xe0f8; character set: EBU basic core)
	secondary service component 4	different sines on each channel (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 5
	SCIdS	4 (automatically assigned)
	service component label	'96kbps·PL4·Surr' (abbreviated label: '96PL4·S'; flag field: 0xe0f8; character set: EBU basic core)
	secondary service component 5	16 tone (mono) (audio: live source or playlist)
	service component carried in	stream 6
	SCIdS	5 (automatically assigned)
	PAD data	SLS PAD1 (application: MOT slideshow) DLS PAD1 (application: dynamic labels) Journaline PAD1 (application: Journaline®)
	service component label	'96kbps·PL3·Mono' (abbreviated label: '96PL3·M'; flag field: 0xe0f8; character set: EBU basic core)
	secondary service component 6	10 kHz sine (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 7
	SCIdS	6 (automatically assigned)
service component label	'48kbps·PL4·Ster' (abbreviated label: '48PL4'; flag field: 0xe0e0; character set: EBU basic core)	

Stream information	stream 1	
	subchannel mode	audio
	bit rate	192 kbps (288 CUs)
	protection level	EEP 1-A
	subchannel identifier	2 (automatically assigned)
	service component	speech (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component used by	audio (program) service '192kbps-PL1-Surr' (primary service component) audio (program) service 'Secondary SCs' (primary service component '192kbps-PL1-Surr')
	stream 2	
	subchannel mode	audio
	bit rate	192 kbps (144 CUs)
	protection level	EEP 3-A
	subchannel identifier	1 (automatically assigned)
	service component	park scene (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component used by	audio (program) service '192kbps-PL3-Ster' (primary service component) audio (program) service 'Secondary SCs' (secondary service component '192kbps-PL3-Ster')
	stream 3	
	subchannel mode	audio
	bit rate	160 kbps (120 CUs)
	protection level	EEP 3-A
	subchannel identifier	0 (automatically assigned)
	service component	Bach (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component used by	audio (program) service '160kbps-PL3-Ster' (primary service component) audio (program) service 'Secondary SCs' (secondary service component '160kbps-PL3-Ster')
	stream 4	
	subchannel mode	audio
	bit rate	128 kbps (96 CUs)
	protection level	EEP 3-A
	subchannel identifier	3 (automatically assigned)
	service component	frequency sweep (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
service component used by	audio (program) service '128kbps-PL3-Surr' (primary service component) audio (program) service 'Secondary SCs' (secondary service component '128kbps-PL3-Surr')	
stream 5		
subchannel mode	audio	
bit rate	96 kbps (48 CUs)	
protection level	EEP 4-A	
subchannel identifier	4 (automatically assigned)	
service component	different sines on each channel (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))	
service component used by	audio (program) service '96kbps-PL4-Surr' (primary service component) audio (program) service 'Secondary SCs' (secondary service component '96kbps-PL4-Surr')	

Stream information (cont.)	stream 6	
	subchannel mode	audio
	bit rate	96 kbps (72 CUs)
	protection level	EEP 3-A
	subchannel identifier	5 (automatically assigned)
	service component	16 tone (mono) (audio: live source or playlist)
	service component used by	audio (program) service '96kbps PL3 Mono' (primary service component) audio (program) service 'Secondary SCs' (secondary service component '96kbps PL3 Mono')
	X-PAD service component	SLS PAD1 (application: MOT slideshow)
	bit rate	8000 bps
	X-PAD application type	12 (automatically assigned)
	X-PAD service component	DLS PAD1 (application: dynamic labels)
	bit rate	200 bps
	X-PAD application type	2 (automatically assigned)
	X-PAD service component	Journaline PAD1 (application: Journaline®)
	bit rate	6000 bps
	content providers	Fraunhofer Research News PAD1: 6000 bps
	X-PAD application type	4 (automatically assigned)
	stream 7	
	subchannel mode	audio
	bit rate	48 kbps (24 CUs)
	protection level	EEP 4-A
	subchannel identifier	13 (automatically assigned)
	service component	10 kHz sine (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
service component used by	audio (program) service '48kbps PL4 Ster' (primary service component) audio (program) service 'Secondary SCs' (secondary service component '48kbps PL4 Ster')	
DAB DAB+ audio mix	file name	eti2_file.dabp_c
General ensemble information	ensemble label	'DAB/DAB+·Mix' (abbreviated label: 'DAB/DAB+'; flag field: 0xff00; character set: EBU basic core)
	ensemble identifier	0xdab2
	transmission mode	1
	ensemble country	Germany (D) (ECC and country code: e0d)
	international table for PTY codes	all countries except those in North America
	ensemble time zone	Europe/Berlin
	DAB time format (FIG0/10)	long form
Service information	service 1	
	service label	'192kbps L II' (abbreviated label: '192·L·II'; flag field: 0xe1f0; character set: EBU basic core)
	service identifier	0xd07b (audio service)
	program type (PTY)	education (PTY code 5; code for all countries except those in North America)
	program language	German (language code 8)
	primary service component	synthetic audio 1 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 1
SCIdS	0 (automatically assigned)	

Service information (cont.)	service 2	
	service label	'160kbps·L·II' (abbreviated label: '160·L·II'; flag field: 0xe1f0; character set: EBU basic core)
	service identifier	0xd07c (audio service)
	program type (PTY)	education (PTY code 5; code for all countries except those in North America)
	program language	German (language code 8)
	primary service component	synthetic audio 2 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 2
	SCIdS	0 (automatically assigned)
	service 3	
	service label	'128kbps·L·II' (abbreviated label: '128·L·II'; flag field: 0xe1f0; character set: EBU basic core)
	service identifier	0xd07d (audio service)
	program type (PTY)	education (PTY code 5; code for all countries except those in North America)
	program language	German (language code 8)
	primary service component	synthetic audio 3 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 3
	SCIdS	0 (automatically assigned)
	service 4	
	service label	'192kbps·DAB+' (abbreviated label: '192·DAB+'; flag field: 0xe1f0; character set: EBU basic core)
	service identifier	0xd07e (audio service)
	program type (PTY)	education (PTY code 5; code for all countries except those in North America)
	program language	German (language code 8)
	primary service component	frequency sweep stereo (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 4
	SCIdS	0 (automatically assigned)
	service 5	
	service label	'96kbps·DAB+' (abbreviated label: '96·DAB+'; flag field: 0xe1f0; character set: EBU basic core)
	service identifier	0xd07f (audio service)
	program type (PTY)	education (PTY code 5; code for all countries except those in North America)
	program language	German (language code 8)
	primary service component	sines (stereo) (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
service component carried in	stream 5	
SCIdS	0 (automatically assigned)	
service 6		
service label	'64kbps·DAB+' (abbreviated label: '64·DAB+'; flag field: 0xe1f0; character set: EBU basic core)	
service identifier	0xd080 (audio service)	
program type (PTY)	education (PTY code 5; code for all countries except those in North America)	
program language	German (language code 8)	
primary service component	100 Hz sine (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))	
service component carried in	stream 6	
SCIdS	0 (automatically assigned)	

Service information (cont.)	service 7		
	service label	'40kbps·DAB+' (abbreviated label: '40·DAB+'; flag field: 0xe1f0; character set: EBU basic core)	
	service identifier	0xd081 (audio service)	
	program type (PTY)	education (PTY code 5; code for all countries except those in North America)	
	program language	German (language code 8)	
	primary service component	10 kHz sine (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))	
	service component carried in SCIdS	stream 7 0 (automatically assigned)	
	service 8		
	service label	'24kbps·DAB+' (abbreviated label: '24·DAB+'; flag field: 0xe1f0; character set: EBU basic core)	
	service identifier	0xd082 (audio service)	
	program type (PTY)	education (PTY code 5; code for all countries except those in North America)	
	program language	German (language code 8)	
	primary service component	1 kHz/–6 dB sine (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))	
	service component carried in SCIdS	stream 8 0 (automatically assigned)	
	Stream information	stream 1	
		subchannel mode	audio
bit rate		192 kbps (140 CUs)	
protection level		UEP 3	
subchannel identifier		7 (automatically assigned)	
service component		synthetic audio 1 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))	
service component used by		audio (program) service '192kbps·L-II' (primary service component)	
stream 2			
subchannel mode		audio	
bit rate		160 kbps (116 CUs)	
protection level		UEP 3	
subchannel identifier		8 (automatically assigned)	
service component		synthetic audio 2 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))	
service component used by		audio (program) service '160kbps·L-II' (primary service component)	
stream 3			
subchannel mode		audio	
bit rate		128 kbps (96 CUs)	
protection level		UEP 3	
subchannel identifier		9 (automatically assigned)	
service component		synthetic audio 3 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))	
service component used by	audio (program) service '128kbps·L-II' (primary service component)		
stream 4			
subchannel mode	audio		
bit rate	192 kbps (144 CUs)		
protection level	EEP 3-A		
subchannel identifier	10 (automatically assigned)		
service component	frequency sweep stereo (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))		
service component used by	audio (program) service '192kbps·DAB+' (primary service component)		

Stream information (cont.)	stream 5	
	subchannel mode	audio
	bit rate	96 kbps (72 CUs)
	protection level	EEP 3-A
	subchannel identifier	11 (automatically assigned)
	service component	sines (stereo) (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component used by	audio (program) service '96kbps-DAB+' (primary service component)
	stream 6	
	subchannel mode	audio
	bit rate	64 kbps (48 CUs)
	protection level	EEP 3-A
	subchannel identifier	12 (automatically assigned)
	service component	100 Hz sine (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component used by	audio (program) service '64kbps-DAB+' (primary service component)
	stream 7	
	subchannel mode	audio
	bit rate	40 kbps (30 CUs)
	protection level	EEP 3-A
	subchannel identifier	13 (automatically assigned)
	service component	10 kHz sine (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component used by	audio (program) service '40kbps-DAB+' (primary service component)
	stream 8	
	subchannel mode	audio
bit rate	24 kbps (18 CUs)	
protection level	EEP 3-A	
subchannel identifier	14 (automatically assigned)	
service component	1 kHz/-6 dB sine (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))	
service component used by	audio (program) service '24kbps-DAB+' (primary service component)	
DAB+ audio changes	file name	eti3_file.dabp_c
General ensemble information	ensemble label	'DAB+·Audiochange' (abbreviated label: 'DAB+·Chn'; flag field: 0xf034; character set: EBU basic core)
	ensemble identifier	0xdab3
	transmission mode	1
	ensemble country	Germany (D) (ECC and country code: e0d)
	international table for PTY codes	all countries except those in North America
	ensemble time zone	Europe/Berlin
	DAB time format (FIG0/10)	long form
Service information	service 1	
	service label	'64kbps·Stereo·1' (abbreviated label: '64·Str1'; flag field: 0x61d1; character set: EBU basic core)
	service identifier	0xd07b (audio service)
	program type (PTY)	education (PTY code 5; code for all countries except those in North America)
	program language	German (language code 8)
	primary service component	audio reconfigs stereo1 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 1
SCIdS	0 (automatically assigned)	

Service information (cont.)	service 2	
	service label	'64kbps·Stereo·2' (abbreviated label: '64·Str2'; flag field: 0x61d1; character set: EBU basic core)
	service identifier	0xd07c (audio service)
	program type (PTY)	education (PTY code 5; code for all countries except North America)
	program language	German (language code 8)
	primary service component	audio reconfigs stereo2 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 2
	SCIdS	0 (automatically assigned)
	service 3	
	service label	'128kbps·Surround' (abbreviated label: '128·Surr'; flag field: 0xe0f0; character set: EBU basic core)
	service identifier	0xd07d (audio service)
	program type (PTY)	education (PTY code 5; code for all countries except North America)
	program language	German (language code 8)
	primary service component	audio reconfigs surround1 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 3
	SCIdS	0 (automatically assigned)
	service 4	
	service label	'64kbps·Surround' (abbreviated label: '64·Surr'; flag field: 0xe0f0; character set: EBU basic core)
	service identifier	0xd07e (audio service)
	program type (PTY)	education (PTY code 5; code for all countries except North America)
	program language	German (language code 8)
	primary service component	audio reconfigs surround2 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 4
	SCIdS	0 (automatically assigned)
	service 5	
	service label	'128kbps·Mix' (abbreviated label: '128·Mix'; flag field: 0xe0f0; character set: EBU basic core)
	service identifier	0xd07f (audio service)
	program type (PTY)	education (PTY code 5; code for all countries except North America)
	program language	German (language code 8)
primary service component	audio reconfigs mix1 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))	
service component carried in	stream 5	
SCIdS	0 (automatically assigned)	
service 6		
service label	'64kbps·Mix' (abbreviated label: '64·Mix'; flag field: 0xe0f0; character set: EBU basic core)	
service identifier	0xd080 (audio service)	
program type (PTY)	education (PTY code 5; code for all countries except North America)	
program language	German (language code 8)	
primary service component	audio reconfig mix 2 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))	
service component carried in	stream 6	
SCIdS	0 (automatically assigned)	

Stream information	stream 1	
	subchannel mode	audio
	bit rate	64 kbps (48 CUs)
	protection level	EEP 3-A
	subchannel identifier	6 (automatically assigned)
	service component	audio reconfigs stereo1 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component used by	audio (program) service '64kbps stereo 1' (primary service component)
	stream 2	
	subchannel mode	audio
	bit rate	64 kbps (48 CUs)
	protection level	EEP 3-A
	subchannel identifier	15 (automatically assigned)
	service component	audio reconfigs stereo2 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component used by	audio (program) service '64kbps stereo 2' (primary service component)
	stream 3	
	subchannel mode	audio
	bit rate	128 kbps (96 CUs)
	protection level	EEP 3-A
	subchannel identifier	16 (automatically assigned)
	service component	audio reconfigs surround1 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component used by	audio (program) service '128kbps surround' (primary service component)
	stream 4	
	subchannel mode	audio
	bit rate	64 kbps (48 CUs)
	protection level	EEP 3-A
	subchannel identifier	26 (automatically assigned)
	service component	audio reconfigs surround2 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component used by	audio (program) service '64kbps surround' (primary service component)
	stream 5	
	subchannel mode	audio
bit rate	128 kbps (96 CUs)	
protection level	EEP 3-A	
subchannel identifier	27 (automatically assigned)	
service component	audio reconfigs mix1 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))	
service component used by	audio (program) service '128kbps-mix' (primary service component)	
stream 6		
subchannel mode	audio	
bit rate	64 kbps (48 CUs)	
protection level	EEP 3-A	
subchannel identifier	28 (automatically assigned)	
service component	audio reconfigs mix2 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))	
service component used by	audio (program) service '64kbps-mix' (primary service component)	

DAB+ CISPR13/14	file name	eti4_file.dabp_c
General ensemble information	ensemble label	'DAB+·CISPR13/14' (abbreviated label: 'DAB+·CIS'; flag field: 0xff00; character set: EBU basic core)
	ensemble identifier	0xdab4
	transmission mode	1
	ensemble country	Germany (D) (ECC and country code: e0d)
	international table for PTY codes	all countries except North America
	ensemble time zone	Europe/Berlin
	DAB time format (FIG0/10)	long form
Service information	service 1	
	service label	'1k-fullscale' (abbreviated label: '1k-full'; flag field: 0xfe00; character set: EBU basic core)
	service identifier	0xd07b (audio service)
	program type (PTY)	education (PTY code 5; code for all countries except North America)
	program language	German (language code 8)
	primary service component	1 kHz sine, full-scale CISPR13 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 1
	SCIdS	0 (automatically assigned)
	service 2	
	service label	'1k-6dB·CISPR13' (abbreviated label: '1k-6dB'; flag field: 0xfe00; character set: EBU basic core)
	service identifier	0xd07c (audio service)
	program type (PTY)	education (PTY code 5; code for all countries except North America)
	program language	German (language code 8)
	primary service component	1 kHz sine, -6 dB CISPR13 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 2
	SCIdS	0 (automatically assigned)
	service 3	
	service label	'1k-10dB·CISPR13' (abbreviated label: '110-surr'; flag field: 0xff00; character set: EBU basic core)
	service identifier	0xd07d (audio service)
	program type (PTY)	education (PTY code 5; code for all countries except North America)
	program language	German (language code 8)
	primary service component	1 kHz sine, -10 dB CISPR13 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 3
	SCIdS	0 (automatically assigned)
	service 4	
	service label	'1k-60dB·CISPR14' (abbreviated label: '110-surr'; flag field: 0xff00; character set: EBU basic core)
	service identifier	0xd07e (audio service)
	program type (PTY)	education (PTY code 5; code for all countries except North America)
	program language	German (language code 8)
	primary service component	1 kHz sine, -60 dB CISPR14 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	service component carried in	stream 4
SCIdS	0 (automatically assigned)	

Stream information	stream 1	
	subchannel mode	audio
	bit rate	192 kbps (144 CUs)
	protection level	EEP 3-A
	subchannel identifier	17 (automatically assigned)
	service component	1 kHz sine, full-scale CISPR13 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	audio configuration	MPEG audio layer II
	service component used by	audio (program) service '1k-fullscale' (primary service component)
	stream 2	
	subchannel mode	audio
	bit rate	192 kbps (144 CUs)
	protection level	EEP 3-A
	subchannel identifier	18 (automatically assigned)
	service component	1 kHz sine, -6 dB CISPR13 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	audio configuration	MPEG audio layer II
	service component used by	audio (program) service '1k -6dB CISPR13' (primary service component)
	stream 3	
	subchannel mode	audio
	bit rate	192 kbps (144 CUs)
	protection level	EEP 3-A
	subchannel identifier	19 (automatically assigned)
	service component	1 kHz sine, -10 dB CISPR13 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))
	audio configuration	MPEG audio layer II
	service component used by	audio (program) service '1k -10dB CISPR13' (primary service component)
	stream 4	
	subchannel mode	audio
	bit rate	192 kbps (144 CUs)
	protection level	EEP 3-A
subchannel identifier	20 (automatically assigned)	
service component	1 kHz sine, -60 dB CISPR14 (protocol: audio subchannel insertion (layer 2 or HE-AAC v2))	
audio configuration	MPEG audio layer II	
service component used by	audio (program) service '1k -60dB CISPR14' (primary service component)	
Data services	file name	eti5_file.dabp_c
General ensemble information	ensemble label	'Data Services' (abbreviated label: 'Data'; flag field: 0xf000; character set: EBU basic core)
	ensemble identifier	0xd06c
	transmission mode	1
	ensemble country	Germany (D) (ECC and country code: e0d)
	international table for PTY codes	all countries except North America
	ensemble time zone	Europe/Berlin
	DAB time format (FIG0/10)	long form

Service information	service 1	
	service label	'192kbps·LII·A' (abbreviated label: '192LII·A'; flag field: 0xe0f8; character set: EBU basic core)
	service identifier	0xd220 (audio service)
	program type (PTY)	serious classical (PTY code 14; code for all countries except North America)
	program language	German (language code 8)
	primary service component	Bach (live coded) (audio: live source or playlist)
	service component carried in	stream 1
	SCIdS	0 (automatically assigned)
	PAD data	SLS PAD1 (application: MOT slideshow) DLS PAD1 (application: dynamic labels) Journaline PAD1 (application: Journaline®)
	service 2	
	service label	'96kbps·DAB+·A' (abbreviated label: '96DAB+A'; flag field: 0xe0f4; character set: EBU basic core)
	service identifier	0xd210 (audio service)
	program type (PTY)	pop music (PTY code 10; code for all countries except North America)
	program language	German (language code 8)
	primary service component	Herre (audio: live source or playlist)
	service component carried in	stream 2
	SCIdS	0 (automatically assigned)
	PAD data	SLS PAD2 (application: MOT slideshow) DLS PAD2 (application: dynamic labels) Journaline PAD2 (application: Journaline®)
	service component label	'Audio' (abbreviated label: 'Audio'; flag field: 0xfc00; character set: EBU basic core)
	service 3	
	service label	'192kbps·LII' (abbreviated label: '192·LII'; flag field: 0xe1f0; character set: EBU basic core)
	service identifier	0xd07b (audio service)
	program type (PTY)	serious classical (PTY code 14; code for all countries except North America)
	program language	German (language code 8)
	primary service component	Bach (live coded) (audio: live source or playlist)
	service component carried in	stream 1
	SCIdS	0 (automatically assigned)
	PAD data	SLS PAD1 (application: MOT slideshow) DLS PAD1 (application: dynamic labels) Journaline PAD1 (application: Journaline®)
	service component label	'Audio1' (abbreviated label: 'Audio1'; flag field: 0xfc00; character set: EBU basic core)
	secondary service component 1	BWS simple (application: MOT broadcast website)
	service component carried in	stream 4
	SCIdS	1 (automatically assigned)
	service component label	'BWS·Simple' (abbreviated label: 'BWS·Simp'; flag field: 0xff00; character set: EBU basic core)

Service information (cont.)	service 4	
	service label	'96kbps·DAB+' (abbreviated label: '96·DAB+'; flag field: 0xe1f0; character set: EBU basic core)
	service identifier	0xd07c (audio service)
	program type (PTY)	pop music (PTY code 10; code for all countries except North America)
	program language	German (language code 8)
	primary service component	Herre (audio: live source or playlist)
	service component carried in	stream 2
	SCIdS	0 (automatically assigned)
	PAD data	SLS PAD2 (application: MOT slideshow) DLS PAD2 (application: dynamic labels) Journaline PAD2 (application: Journaline®)
	service component label	'Audio2' (abbreviated label: 'Audio2'; flag field: 0xfc00; character set: EBU basic core)
	secondary service component 1	BWS full (application: MOT broadcast website)
	service component carried in	stream 4
	SCIdS	1 (automatically assigned)
	service component label	'BWS·Full' (abbreviated label: 'BWS·Full'; flag field: 0xff00; character set: EBU basic core)
	service 5	
	service label	'SLS·Slide·NOW' (abbreviated label: 'SL·NOW'; flag field: 0xd038; character set: EBU basic core)
	service identifier	0xe0dcafe1 (data service)
	primary service component	SLS SL NOW (application: MOT slideshow)
	service component carried in	stream 3
	SCIdS	0 (automatically assigned)
	service 6	
	service label	'SLS·Slide·Abs' (abbreviated label: 'SL·Abs'; flag field: 0xd038; character set: EBU basic core)
	service identifier	0xe0dcafe2 (data service)
	primary service component	SLS SL ABS (application: MOT slideshow)
	service component carried in	stream 3
	SCIdS	0 (automatically assigned)
	service 7	
	service label	'SLS·HdrUpd·NOW' (abbreviated label: 'HU·NOW'; flag field: 0x093c; character set: EBU basic core)
	service identifier	0xe0dcafe3 (data service)
	primary service component	SLS HU NOW (application: MOT slideshow)
	service component carried in	stream 3
	SCIdS	0 (automatically assigned)
	service 8	
	service label	'SLS·HdrUpd·Abs' (abbreviated label: 'HU·Abs'; flag field: 0x093c; character set: EBU basic core)
	service identifier	0xe0dcafe4 (data service)
	primary service component	SLS HU ABS (application: MOT slideshow)
	service component carried in	stream 3
	SCIdS	0 (automatically assigned)

Service information (cont.)	service 9	
	service label	'BWS-Simple' (abbreviated label: 'BWS-Simp'; flag field: 0xff00; character set: EBU basic core)
	service identifier	0xe0dcafe5 (data service)
	primary service component	BWS simple (application: MOT broadcast website)
	service component carried in	stream 4
	SCIdS	0 (automatically assigned)
	service component label	'BWS' (abbreviated label: 'BWS'; flag field: 0xe000; character set: EBU basic core)
	secondary service component 1	Bach (live coded) (audio: live source or playlist)
	service component carried in	stream 1
	SCIdS	1 (automatically assigned)
	PAD data	SLS PAD1 (application: MOT slideshow) DLS PAD1 (application: dynamic labels) Journaline PAD1 (application: Journaline®)
	service component label	'192kbps-LII' (abbreviated label: '192-LII'; flag field: 0xe1f0; character set: EBU basic core)
	service 10	
	service label	'BWS-Full' (abbreviated label: 'BWS-Full'; flag field: 0xff00; character set: EBU basic core)
	service identifier	0xe0dcafe6 (data service)
	primary service component	BWS full (application: MOT broadcast website)
	service component carried in	stream 4
	SCIdS	0 (automatically assigned)
	service component label	'BWS' (abbreviated label: 'BWS'; flag field: 0xe000; character set: EBU basic core)
	secondary service component 1	Herre (audio: live source or playlist)
	service component carried in	stream 2
	SCIdS	1 (automatically assigned)
	PAD data	SLS PAD2 (application: MOT slideshow) DLS PAD2 (application: dynamic labels) Journaline PAD2 (application: Journaline®)
	service component label	'96kbps-DAB+' (abbreviated label: '96-DAB+'; flag field: 0xe1f0; character set: EBU basic core)
	service 11	
	service label	'EPG' (abbreviated label: 'EPG'; flag field: 0xe000; character set: EBU basic core)
	service identifier	0xe0dcafe7 (data service)
	primary service component	EPG (application: electronic program guide (EPG))
	service component carried in	stream 5
	SCIdS	0 (automatically assigned)
	service 12	
	service label	'Journaline' (abbreviated label: 'Journal'; flag field: 0xfe00; character set: EBU basic core)
	service identifier	0xe0dcafe9 (data service)
	primary service component	Journaline full (application: Journaline®)
	service component carried in	stream 4
	SCIdS	0 (automatically assigned)

Service information (cont.)	service 13		
	service label	'TPEG-Mobile.Info' (abbreviated label: 'TPEG-M.I'; flag field: 0xf418; character set: EBU basic core)	
	service identifier	0xe0dcafea (data service)	
	primary service component	TPEG (application: TPEG (traffic and travel information))	
	service component carried in	stream 5	
	SCIdS	0 (automatically assigned)	
	service 14		
	service label	'TPEG-Encr/Journey' (abbreviated label: 'TPEG-E/J'; flag field: 0xf460; character set: EBU basic core)	
	service identifier	0xe0dcafeb (data service)	
	primary service component	TPEG encrypted/Journaline (application: TPEG (traffic and travel information))	
	service component carried in	stream 5	
	SCIdS	0 (automatically assigned)	
	Stream information	stream 1	
		subchannel mode	audio
bit rate		192 kbps (140 CUs)	
protection level		UEP 3	
subchannel identifier		25 (automatically assigned)	
service component		Bach (live coded) (audio: live source or playlist)	
audio configuration		MPEG audio layer II (stereo, 48 kHz, no MPEG surround)	
service component used by		audio (program) service '192kbps LII A' (primary service component) audio (program) service '192kbps LII' (primary service component 'Audio1') data service 'BWS Simple' (secondary service component '192kbps LII')	
X-PAD service component		SLS PAD1 (application: MOT slideshow)	
bit rate		8000 bps	
X-PAD application type		12 (automatically assigned)	
X-PAD service component		DLS PAD1 (application: dynamic labels)	
bit rate		200 bps	
X-PAD application type		2 (automatically assigned)	
X-PAD service component		Journaline PAD1 (application: Journaline®)	
bit rate		6000 bps	
content providers		Fraunhofer Research News PAD1: 6000 bps	
X-PAD application type		4 (automatically assigned)	

Stream information (cont.)	stream 2	
	subchannel mode	audio
	bit rate	96 kbps (72 CUs)
	protection level	EEP 3-A
	subchannel identifier	26 (automatically assigned)
	service component	Herre (audio: live source or playlist)
	audio configuration	DAB+ (stereo, 48 kHz, SBR off, no MPEG surround)
	service component used by	audio (program) service '96kbps DAB+ A' (primary service component 'Audio') audio (program) service '96kbps DAB+' (primary service component 'Audio2') data service 'BWS Full' (secondary service component '96kbps DAB+')
	X-PAD service component	SLS PAD2 (application: MOT slideshow)
	bit rate	8000 bps
	X-PAD application type	12 (automatically assigned)
	X-PAD service component	DLS PAD2 (application: dynamic labels)
	bit rate	200 bps
	X-PAD application type	2 (automatically assigned)
	X-PAD service component	Journaline PAD2 (application: Journaline®)
	bit rate	6000 bps
	content providers	Fraunhofer Research News PAD2: 6000 bps
	X-PAD application type	4 (automatically assigned)
	stream 3	
	subchannel mode	packet mode
	bit rate	64 kbps (48 CUs)
	protection level	EEP 3-A
	enhanced packet mode	no
	assigned bit rate	64000 bps
	subchannel identifier	27 (automatically assigned)
	service component	SLS SL NOW (application: MOT slideshow)
	service component used by	data service 'SLS Slide NOW' (primary service component)
	bit rate	16000 bps
	packet address	1 (automatically assigned)
	SCID	0 (automatically assigned)
	service component	SLS SL ABS (application: MOT slideshow)
	service component used by	data service 'SLS Slide Abs' (primary service component)
	bit rate	16000 bps
	packet address	2 (automatically assigned)
	SCID	1 (automatically assigned)
	service component	SLS HU NOW (application: MOT slideshow)
	service component used by	data service 'SLS HdrUpd NOW' (primary service component)
	bit rate	16000 bps
packet address	3 (automatically assigned)	
SCID	2 (automatically assigned)	
service component	SLS HU ABS (application: MOT slideshow)	
service component used by	data service 'SLS HdrUpd Abs' (primary service component)	
bit rate	16000 bps	
packet address	4 (automatically assigned)	
SCID	3 (automatically assigned)	

Stream information (cont.)	stream 4	
	subchannel mode	packet mode
	bit rate	96 kbps (72 CUs)
	protection level	EEP 3-A
	enhanced packet mode	no
	assigned bit rate	87100 bps
	subchannel identifier	28 (automatically assigned)
	service component	BWS simple (application: MOT broadcast website)
	service component used by	audio (program) service '192kbps LII' (secondary service component 'BWS Simple') data service 'BWS Simple' (primary service component 'BWS')
	bit rate	64000 bps
	content providers	BWS simple (Journaline): 32000 bps BWS simple (surround): 32000 bps
	packet address	5 (automatically assigned)
	SCID	4 (automatically assigned)
	service component	BWS full (application: MOT broadcast website)
	service component used by	audio (program) service '96kbps DAB+' (secondary service component 'BWS Full') data service 'BWS Full' (primary service component 'BWS')
	bit rate	16000 bps
	content providers	BWS full: 16000 bps
	packet address	6 (automatically assigned)
	SCID	5 (automatically assigned)
	service component	Journaline full (application: Journaline®)
	service component used by	data service 'Journaline' (primary service component)
	bit rate	7100 bps
	content providers	Deutsche Welle Nachrichten: 1000 bps Deutsche Welle News: 1000 bps Deutsche Welle News (Hindi): 1000 bps Fraunhofer Research News: 4000 bps Journaline ticker: 100 bps
	packet address	7 (automatically assigned)
	SCID	6 (automatically assigned)

Stream information (cont.)	stream 5	
	subchannel mode	packet mode
	bit rate	24 kbps (18 CUs)
	protection level	EEP 3-A
	enhanced packet mode	no
	assigned bit rate	24000 bps
	subchannel identifier	29 (automatically assigned)
	service component	EPG (application: electronic program guide (EPG))
	service component used by	data service 'EPG' (primary service component)
	bit rate	21000 bps
	content providers	EPG: 17000 bps EPG test files: 4000 bps
	packet address	8 (automatically assigned)
	SCID	7 (automatically assigned)
	service component	TPEG (application: TPEG (traffic and travel information))
	service component used by	data service 'TPEG Mobile.Info' (primary service component)
	bit rate	2000 bps
	packet address	9 (automatically assigned)
	SCID	8 (automatically assigned)
	service component	TPEG encrypted/Journaline (application: TPEG (traffic and travel information))
	service component used by	data service 'TPEG Encr/Journy' (primary service component)
bit rate	1000 bps	
packet address	10 (automatically assigned)	
SCID	9 (automatically assigned)	

Ordering information

Designation	Type	Order No.
DAB+ Streams	R&S®SMBV-K353	1415.8702.02
DAB+ Streams	R&S®SMU-K353	1408.8652.02
DAB+ Streams	R&S®SMJ-K353	1409.3525.02

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