Factsheet for Swiss DAB+ broadcast networks

DigiMig Planners Roundtable

Digital radio via DAB+ is becoming increasingly popular. FM frequencies in Switzerland will be switched off by the end of 2024 at the latest.

Better listening quality, wider range of radio stations, larger broadcast area: thanks to these advantages, DAB+ technology has now replaced analogue FM-broadcast as the standard for radio listening in Switzerland.

DAB+ is a technology which allows further improvements and additions to increase the benefit to the audience. This is done through further implementations of standardized applications and functions.

This document shows the current status in Switzerland, indicates future developments, and provides information on the next planned steps.

Manufacturers of DAB+ radio receivers can use the information provided in this factsheet to test their devices. Their customers are keen to benefit from new functions.

Rmo, 22.06.2022

Factsheet

world dab

DAB+ Broadcast SRG SSR

	SRG SSR
Broadcast	1 ensemble per language region (total 4) SFN network <table><tr><td>**Ensemble**</td><td>**Channel**</td><td>**EID**</td></tr><tr><td>D01</td><td>12C</td><td>4001</td></tr><tr><td>F01</td><td>12A</td><td>4041</td></tr><tr><td>I01</td><td>12A</td><td>4081</td></tr><tr><td>R01</td><td>12D</td><td>40C1</td></tr></table>
Radiostations	Composition of ensembles according: www.broadcast.ch
Network ID Service ID	According ID-concept of Swiss regulator OFCOM
Audio	Encoding exclusive DAB+ / AAC+ datarates from 48 to 96 kbit/s
Programm Type PTY	Yes
Station Name	According to DAB+ ensemble configuration
Song Title / Links	DLS, DLplus, per radiostation 1.2 kbit/s (configuration «short») over PAD / X-PAD
Artist / Composer	DLS, DLplus, per radiostation 1.2 kbit/s (configuration «short») over PAD / X-PAD
Station Logos	Yes, use of SPI in a Packet Mode Data Service in NPAD as service information, no program information on SPI
Traffic Information	TPEG, TEC and TFP without encryption
Announcement (TA)	Yes (Announcement Typ 1 "Road Traffic Flash) (FIG 0/19) with Cluster (FIG 0/18)
Other Ensemble Announcement (OE)	No
Service Information	• Yes, frequency information (FIG 0/21) • Yes, other ensemble (FIG 0/24) • F0/09 marking of country if original abroad
Service Following	Service Linking Hardlinks (switch between two data sets) FIG 0/6
Hardlinks	Yes
Softlinks	No
Service Configuration	Yes, FIG 0/7 changes of configurations No, FIG 0/20 stations list info for DAB+ receivers
Adaption of DAB+ standard EN300401 from 2006-06 V 1.4.1 to 2017 V 2.1.1 partially	

Factsheet

DAB+ Broadcast SwissMediaCast AG

	SwissMediaCast
Broadcast	1 language regional ensemble in Swiss German part
	4 regional ensembles in Swiss German part
	1 language regional ensemble in Ticino
	1 language regional ensemble in Swiss German part (planned)
	Total 6 SFN networks and 1 planned SFN network
Radiostations	Composition of ensembles according: www.swissmediacast.ch
Network ID Service ID	According ID-concept of Swiss regulator OFCOM
Programm Type PTY	Yes
Audio	Encoding DAB+ / AAC+ datarates of 48 - 96 kbit/s; actual datarates at 64 kbit/s and 32kbit/s
Station Name	According to DAB+ ensemble configuration
Song Title	DLS, DLplus planned, per radiostation between 1.2 kbit/s and 4kbit/s over PAD / X-PAD
Artist / Composer	DLS, DLplus planned, per radiostation 1.2 kbit/s and 4kbit/s (configuration «short») over PAD / X-PAD
DAB+ Slideshow	MOT Slideshow in X-PAD, trigger time = now (visual display ads and images with station logos are provided by DAB+ slideshow)
Station Logos via SPI in NPAD	No. No use of SPI in NPAD due to lack of capacity units.
Traffic Information	no
Announcement (TA)	Yes (announcement type 1 "road traffic flash") (FIG 0/19) clustered according (FIG 0/18)
Other Ensemble Announcement (OE)	Yes (planned) (FIG 0/25 und FIG 0/26)
Service Information	• Yes, frequency information (FIG 0/21) • Yes, other ensemble (FIG 0/24) • F0/09 marking of country if original abroad
Service Following	Service Linking Hardlinks (switch between two datasets) FIG 0/6
Hardlinks	Yes
Softlinks	No
Service Configuration	Yes, FIG 0/7 changes of configuration No, FIG 0/20 station list info for receiver
Adaption of DAB+ standard EN300401 from 2006-06 V 1.4.1 to 2017 V 2.1.1 partially	

Inner table within Broadcast row:

Ensemble	Channel	EID
SMC DCH 02	07D	4200
SMC DCH 03-N	07A	4201
SMC DCH 03-O	09B	4202
SMC DCH 03-BEFR	08B	4203
SMC DCH 03-VS	11C	4204
SMC ICH 03	08C	4284

Factsheet

DAB+ Broadcast Romandie Médias SA

	Romandie Médias SA
Broadcast	1 Language regional ensemble in French-speaking part of Switzerland
Radiostations	Composition of ensembles according: https://romandiemedias.ch/
Network ID Service ID	According ID-concept of Swiss regulator OFCOM
Programm Type PTY	Yes
Audio	Encoding DAB+ / AAC+ with data rates of 64 - 72 kbit/s; currently all at 64 kbit/s
Station Name	According to DAB+ ensemble configuration
Song Title	DLS over PAD / X-PAD, per radiostation 8 kbit/s
Artist / Composer	DLS over PAD / X-PAD, per radiostation 8 kbit/s
DAB+ Slideshow	MOT Slideshow in X-PAD, trigger time = now (visual display ads and images with station logos are provided by DAB+ slideshow)
Station Logos via SPI in NPAD	No. No use of SPI in NPAD due to lack of capacity units.
Traffic Information	Not used
Announcement (TA)	Yes, but not used
Other Ensemble Announcement (OE)	
Service Information	FIG 0/9
Service Following	FIG 0/6 (service linking)
Hardlinks	Yes
Softlinks	No
Service Configuration	FIG 0/17 Programme Type (PTy)
Adaption of DAB+ standard EN300401 from 2006-06 V 1.4.1 to 2017 V 2.1.1 partially	

Factsheet

DAB+ Broadcast Digris

<table>
<tr><td></td><td colspan="4">digris</td></tr>
<tr><td>Broadcast</td><td colspan="4">DAB+ „island" single transmitter or small SFN areas.</td></tr>
<tr><td></td><td>Area</td><td>Channel</td><td>EID</td><td>Ensemble Label</td></tr>
<tr><td></td><td>Genève</td><td>10D</td><td>4441</td><td>DIG F03 - GE</td></tr>
<tr><td></td><td>Lausanne</td><td>8C</td><td>4442</td><td>DIG F03 - LS</td></tr>
<tr><td></td><td>Bas Vallais</td><td>10D</td><td>4443</td><td>DIG F03 - BVS</td></tr>
<tr><td></td><td>Ober Wallis</td><td>9D</td><td>4404</td><td>DIG D04 - HVS</td></tr>
<tr><td></td><td>Neuchatel - Yverdon</td><td>10A</td><td>4444</td><td>DIG F03 - NY</td></tr>
<tr><td></td><td>Bienne -Solothurn</td><td>10D</td><td>4408</td><td>DIG D04 - BISO</td></tr>
<tr><td></td><td>Bern</td><td>10A</td><td>4409</td><td>DIG D04 - BE</td></tr>
<tr><td></td><td>Bern Oberland</td><td>6C</td><td>4407</td><td>DIG D04 - BO</td></tr>
<tr><td></td><td>Olten - Aarau</td><td>5D</td><td>4402</td><td>DIG D04 - AG</td></tr>
<tr><td></td><td>Luzern – Zug - Stans</td><td>5D</td><td>4406</td><td>DIG D04 - ZS</td></tr>
<tr><td></td><td>Sargans Land</td><td>8B</td><td>440A</td><td>DIG D04 - CS</td></tr>
<tr><td></td><td>Zurich</td><td>9D</td><td>4401</td><td>DIG D04 - ZH</td></tr>
<tr><td></td><td>St Gallen</td><td>9D</td><td>440B</td><td>DIG D04 - SG</td></tr>
<tr><td></td><td>Winterthur – Shaffausen</td><td>5D</td><td>4403</td><td>DIG D04 - WS</td></tr>
<tr><td></td><td>Basel</td><td>10A</td><td>4405</td><td>DIG D04 - BS</td></tr>
<tr><td></td><td>Tessin Sopraceneri</td><td>10C</td><td>4281</td><td>DIG I02 - SOPRA</td></tr>
<tr><td></td><td>Tessin Sottoceneri</td><td>10C</td><td>4282</td><td>DIG I02 - SOTTO</td></tr>
<tr><td>Programme</td><td colspan="4">https://www.digris.ch/verbreitung/programme/</td></tr>
<tr><td>Network ID
Service ID</td><td colspan="4">According ID-concept of Swiss regulator OFCOM (extraction from database possible)</td></tr>
<tr><td>Programm Type PTY</td><td colspan="4">Yes</td></tr>
<tr><td>Audio</td><td colspan="4">72kbit/s for stereo content, 48kbit/s for mono</td></tr>
<tr><td>Station Name</td><td colspan="4">According to DAB+ ensemble configuration</td></tr>
<tr><td>Song Title</td><td colspan="4">DLS, DLplus over PAD / X-PAD, dynamic allocation from 1.2 to 6kbit/s kbit/s</td></tr>
<tr><td>Artist / Composer</td><td colspan="4">DLS, DLplus over PAD / X-PAD, per radiostation from 1.2 to 6kbit/s kbit/s</td></tr>
<tr><td>DAB+ Slideshow</td><td colspan="4">MOT Slideshow in X-PAD, trigger time = now</td></tr>
<tr><td>PAD / X-PAD</td><td colspan="4">Yes, dynamic allocation from 1.2 to 6kbit/s
- DLS, DLplus
- SLS (MOT) live and endless carousel
- BWS, BIFS etc. no</td></tr>
<tr><td>Station Logos</td><td colspan="4">To be defined. No use of SPI in NPAD due to lack of capacity units</td></tr>
<tr><td>NPAD</td><td colspan="4">- Current 1-year test service provided for data receiver development but no commercial application.</td></tr>
<tr><td>Traffic Information</td><td colspan="4">no</td></tr>
<tr><td>Announcement (TA)</td><td colspan="4">Yes, but not used</td></tr>
<tr><td>Other Ensemble Announcement (OE)</td><td colspan="4">Yes</td></tr>
<tr><td>Service Information</td><td colspan="4">FIG 0/21, FIG 0/24 and FIG 0/9</td></tr>
<tr><td>Service Following</td><td colspan="4">Yes</td></tr>
<tr><td>Hardlinks</td><td colspan="4">Yes</td></tr>
<tr><td>Softlinks</td><td colspan="4">No</td></tr>
<tr><td>Service Configuration</td><td colspan="4">Yes, for FIG 0/7
No, for FIG 0/20</td></tr>
<tr><td colspan="5">Adaption of DAB+ standard EN300401 from 2006-06 V 1.4.1 to 2017 V 2.1.1 partially</td></tr>
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