

**3rd Generation Partnership Project
Technical Specification Group Radio Access Network
Typical examples of RABs and RBs supported by UTRAN
(Release 4)**



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Foreword

This Technical Report (TR) has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
 - 1 presented to TSG for information;
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 - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

1 Scope

The present document provides a list of examples of RABs and RAB combinations which are supported by UTRA with examples of radio interface mapping for these RABs onto Radio Bearers and Signalling Radio Bearers.

This list of examples describes typical parameters, and should only be understood as possible configurations i.e. any other configuration supported by the Core Specifications and consistent with a given UE capability shall also be supported by this UE.

The present document addresses the FDD mode as well as the TDD mode.

This report is a release independent report. This means that the latest release applicable to 3GPP is the reference that this TR is defined upon, and contains information on all previous releases. Actual release where a given example applies is indicated in the relevant section.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TS 34.108: "Common Test Environments for User Equipment (UE) Conformance Testing"

[2] [3GPP TS 23.107: "Quality of Service \(QoS\) concept and architecture"](#)

3 Abbreviations

For the purposes of the present document, the abbreviations contained in TR 21.905 apply, as well as the following:

- DL Downlink
- kbps kilo-bits per second.
- RAB Radio Access Bearer
- RT Real-time
- SRB Signalling Radio Bearer
- UL Uplink.

4.3 QoS Architecture and RAB attributes

From a user point-of-view services are considered end-to-end, this means from a Terminal Equipment (TE) to another TE. An End-to-End Service may have a certain Quality of Service (QoS) which is provided for the user through the different networks. In UMTS, it is the UMTS Bearer Service that provides the requested QoS through the use of different QoS classes as defined in TS-23.107[2].

The UMTS Bearer Service consists of two parts, the Radio Access Bearer (RAB) Service, ~~RAB~~, and the Core Network Bearer Service. The Radio Access Bearer Service is realised by a Radio Bearer (RB) Service and an Iu-Bearer Service. The relationship between the services is illustrated in figure 6.10.143.1.

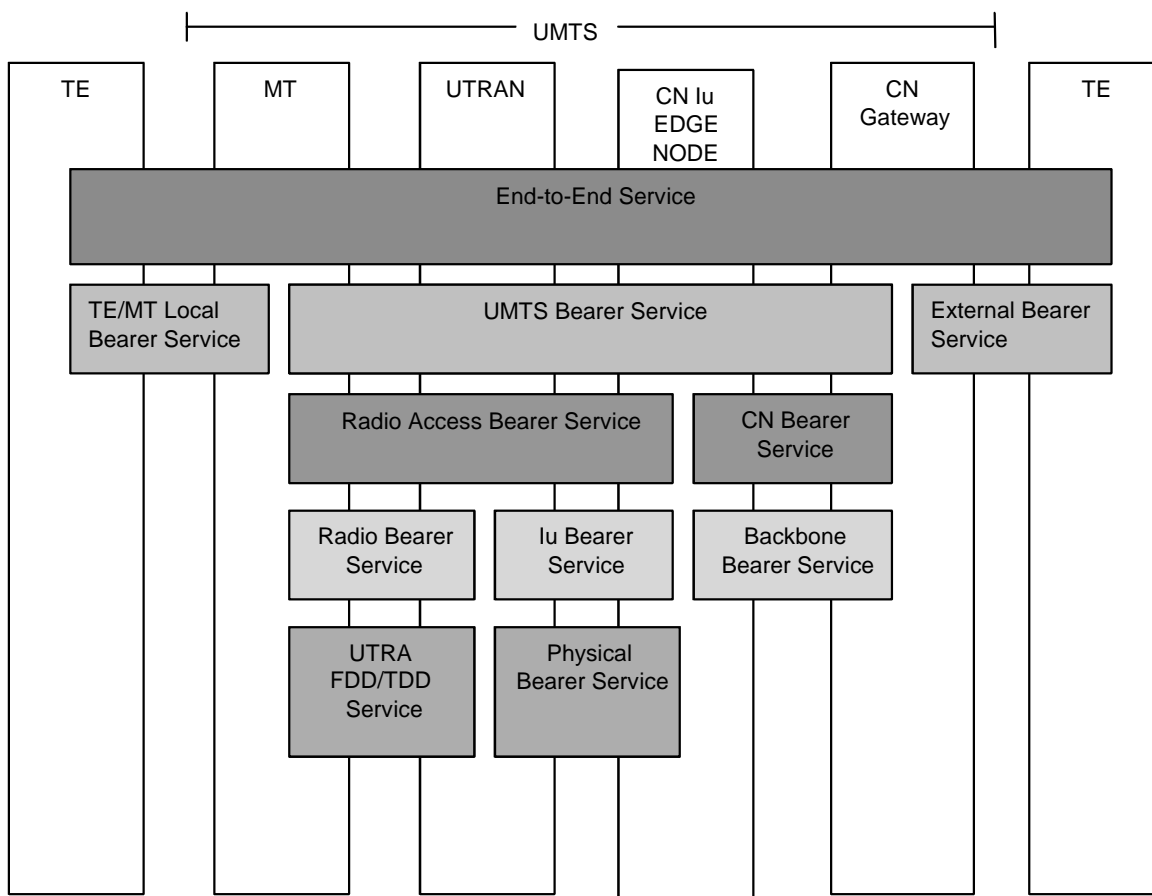


Figure 6.10.143.1: UMTS QoS Architecture

The Radio Access Bearer Service is characterised by a number of attributes such as Traffic class, Maximum bit rate, Guaranteed bit rate, SDU error ratio, Residual BER, Transfer Delay etc. As a first approach the four following attributes have been considered to come up with the parameter settings in clause [76.10.2.4](#) for FDD mode and [876.10.3.4](#) for TDD mode:

- Traffic class;
- SSD;
- Maximum bit rate;
- Residual BER.

The Traffic classes are explained in table [43.16.10.1.1](#). The Maximum bit rate has been considered at RLC layer and Physical Layer for the acknowledged and unacknowledged modes respectively. The Residual BER is understood as BER at RLC layer and Transport BLER for the acknowledged and unacknowledged modes respectively.

Table 6.10.143.1: Traffic classes

Traffic class	Conversational class conversational RT	Streaming class streaming RT	Interactive class Interactive best effort	Background Background best effort
Fundamental characteristics	- Preserve time relation (variation) between information entities of the stream Conversational pattern (stringent and low delay)	- Preserve time relation (variation) between information entities of the stream (i.e. some but constant delay)	Request response pattern Preserve payload content	Destination is not expecting the data within a certain time Preserve payload content
Example of the application	- speech, video, ...	- facsimile (NT) - streaming audio and video	- Web browsing	- background download of emails

54 List of RABs and SRBs

The following table provides examples of [Radio Access Bearers \(RABs\) which can be realized by Radio Bearers \(RBs\) as defined in Clauses \[chapter 7\]\(#\) and \[8\]\(#\) and Signalling \(SRBs\) which will be considered in the following clauses.](#) The data rate given for each RAB is the maximum data rate that can be supported by that RAB.

Table XX54.1: Examples of [Radio Access Bearers \(RABs\).](#)

#	Traffic class [245]	SSD [245]	Max. rate, kbps	CS/PS
1	Conversational	Speech	UL:12.2 DL:12.2	CS
2	Conversational	Speech	UL:10.2 DL:10.2	CS
3	Conversational	Speech	UL:7.95 DL:7.95	CS
4	Conversational	Speech	UL:7.4 DL:7.4	CS
5	Conversational	Speech	UL:6.7 DL:6.7	CS
6	Conversational	Speech	UL:5.9 DL:5.9	CS
7	Conversational	Speech	UL:5.15 DL:5.15	CS
8	Conversational	Speech	UL:4.75 DL:4.75	CS
9	Conversational	Unknown	UL:28.8 DL:28.8	CS
10	Conversational	Unknown	UL:64 DL:64	CS
11	Conversational	Unknown	UL:32 DL:32	CS
12 1241a	Conversational	Unknown	UL:8 DL:8	PS
13 1311b	Conversational	Unknown	UL:16 DL:16	PS
14 142	Streaming	Unknown	UL:14.4 DL:14.4	CS
15 153	Streaming	Unknown	UL:28.8 DL:28.8	CS
16 164	Streaming	Unknown	UL:57.6 DL:57.6	CS
17 175	Streaming	Unknown	UL:0 DL:64	CS
18 185a	Streaming	Unknown	UL:16 DL:64	PS
19 196	Streaming	Unknown	UL:64 DL:0	CS
20 2016a	Streaming	Unknown	UL:8 DL:16	PS
21 2116b	Streaming	Unknown	UL:8 DL:32	PS
22 2216c	Streaming	Unknown	UL:16 DL:64	PS
23 2316d	Streaming	Unknown	UL:32 DL:256	PS
24 2417	Void			
25 2517a	Streaming	Unknown	UL:16 DL:128	PS
26 2618	Void			
27 2719	Void			
28 280	Interactive or Background	N/A	UL:32 DL:8	PS
29 290a	Interactive or Background	N/A	UL:8 DL:8	PS
30 3020b	Interactive or Background	N/A	UL:16 DL:16	PS
31 3120c	Interactive or Background	N/A	UL:32 DL:32	PS
32 3224	Interactive or Background	N/A	UL:64 DL:8	PS
33 3322	Interactive or Background	N/A	UL:32 DL:64	PS
34 3423	Interactive or Background	N/A	UL:64 DL:64	PS
35 3524	Interactive or Background	N/A	UL:64 DL:128	PS
36 3625	Interactive or Background	N/A	UL:128 DL:128	PS
37 3726	Interactive or Background	N/A	UL:64 DL:384	PS
38 3827	Interactive or Background	N/A	UL:128 DL:384	PS
39 3928	Interactive or Background	N/A	UL:384 DL:384	PS
40 4029	Interactive or Background	N/A	UL:64 DL:2048	PS
41 4130	Interactive or Background	N/A	UL:128 DL:2048	PS
42 4231	Interactive or Background	N/A	UL:384 DL:2048	PS
43 4332	Interactive or Background	N/A	UL:64 DL:256	PS
44 4433	Interactive or Background	N/A	UL:0 DL:32	PS
45 4534	Interactive or Background	N/A	UL:32 DL: 0	PS
46 4634a	Interactive or Background	N/A	UL:0 DL:0	PS
47 4735	Interactive or Background	N/A	UL:64 DL:144	PS
48 4836	Interactive or Background	N/A	UL:144 DL:144	PS
49 4937	Interactive or background	N/A	UL:128 DL:32	PS

The following Table 5.2 provides examples of Signalling Radio Bearers (SRBs) which can use configurations as defined in clauses ~~chapter 7~~ 6 and 87.

Table ~~6.10.2.1.2xx~~54.2: Signalling Radio Bearers (SRBs)

#	Maximum rate, kbps	Logical channel	PhyCh onto which SRBs are mapped
1	UL:1.7 DL:1.7	DCCH	DPCH
2	UL:3.4 DL:3.4	DCCH	DPCH
3	UL:13.6 DL:13.6	DCCH	DPCH
4	DL:27.2 (alt. 40.8)	DCCH	SCCPCH
5	UL:16.6	CCCH	PRACH
6	DL:30.4 (alt. 45.6)	CCCH	SCCPCH
7	DL:33.2 (alt. 49.8)	BCCH:	SCCPCH
8	DL:24 (alt. 6.4)	PCCH	SCCPCH
<u>9</u>	<u>UL:16.8 (TDD)</u>	<u>SHCCH</u>	<u>PRACH</u>
<u>10</u>	<u>UL:16.8 (TDD)</u>	<u>SHCCH</u>	<u>PRACH or PUSCH</u>
<u>11</u>	<u>DL:16 (TDD)</u>	<u>SHCCH</u>	<u>SCCPCH</u>
<u>12</u>	<u>DL:16 (TDD)</u>	<u>SHCCH</u>	<u>SCCPCH or PUSCH</u>

56 Combinations of RABs

The present document contains examples of Radio configuration for following combinations of RABs.

NOTE: It is understood that for speech service the AMR mode may be operated asymmetrically for the uplink and downlink.

List of RAB combinations:

Combinations on DPCH

- 1) Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH.
- 2) Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 3) Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH.
- 4) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~54a~~ Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~65~~ Conversational / speech / UL:10.2 DL:10.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~75a~~ Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~86~~ Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~97~~ Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~107a~~ Conversational / speech / UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~118~~ Conversational / speech / UL:6.7 DL:6.7 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~12129~~) Conversational / speech / UL:5.9 DL:5.9 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~13103~~) Conversational / speech / UL:5.15 DL:5.15 kbps / CS RAB
+ UL:1.7 DL:1.7 kbps SRBs for DCCH.

~~14114~~) Conversational / speech / UL:4.75 DL:4.75 kbps / CS RAB
+ UL:1.7 DL:1.7 kbps SRBs for DCCH.

~~15125~~) Conversational / unknown / UL:28.8 DL:28.8 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~16136~~) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~17147~~) Conversational / unknown / UL:32 DL:32 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~18158~~) Streaming / unknown / UL:14.4/DL:14.4 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~19169~~) Streaming / unknown / UL:28.8/DL:28.8 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~202017~~) Streaming / unknown / UL:57.6/DL:57.6 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~212118~~) Streaming / unknown / UL:0 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~222219~~) Streaming / unknown / UL:64 DL:0 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~20) – Void~~

~~21) – Void~~

~~22) – Void~~

23) Interactive or background / UL:32 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~242423a~~) Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~252523b~~) Interactive or background / UL:16 DL:16 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~262623e~~) Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~272723d~~) Interactive or background / UL:32 DL:32 kbps / PS RAB (20 ms TTI)
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~28248~~) Interactive or background / UL:64 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~29259~~) Interactive or background / UL:32 DL: 64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~303026~~) Interactive or background / UL:64 DL: 64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~313127~~) Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~323228~~) Interactive or background / UL:128 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~333329~~) Interactive or background / UL:64 DL:144 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~34304~~) Interactive or background / UL:144 DL:144 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~35315~~) Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.

~~36326~~) Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.

~~37337~~) Interactive or background / UL:128 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~38348~~) Interactive or background / UL:384 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~39359~~) Interactive or background / UL:64 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~404036~~) Interactive or background / UL:128 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~414137~~) Interactive or background / UL:384 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~424238~~) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~434338a~~) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~444438b~~) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~454538e~~) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~464638d~~) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~474738e~~) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~484838f~~) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~494938g~~) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:16 DL:16 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~505038h~~) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~515138i~~) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
 + Interactive or background / UL:64 DL:64 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~525238i~~) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
 + Interactive or background / UL:64 DL:128 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~53539~~) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Interactive or background / UL:32 DL:64 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~54540~~) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Interactive or background / UL:64 DL:64 kbps / PS RAB
 + UL:3.4 DL: 3.4 kbps SRBs for DCCH.

~~555541~~) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Interactive or background / UL:64 DL:128 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~565642~~) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Interactive or background / UL:64 DL:256 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~575743~~) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Interactive or background / UL:64 DL:384 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~585844~~) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Interactive or background / UL:64 DL:2048 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~59459~~) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Interactive or background / UL:128 DL:2048 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~60460~~) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Streaming / unknown / UL:57.6 DL:57.6 kbps / CS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~614761~~) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Streaming / unknown / UL:0 DL:64 kbps / CS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~48) Void~~

~~624962~~) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Conversational / unknown / UL:64 DL:64 kbps / CS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~6349a63~~) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
 + Conversational / unknown / UL:64 DL:64 kbps / CS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~645064~~) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
 + Conversational / unknown / UL:64 DL:64 kbps / CS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~655165~~) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
 + Interactive or background / UL:64 DL:64 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~6651a66~~) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
 + Interactive or Background / UL:8 DL:8 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~6751b67~~) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
 + Interactive or Background / UL:16 DL:64 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~685268~~) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
 + Interactive or background / UL:64 DL:128 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~695369~~) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
 + Interactive or background / UL:128 DL:128 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~705470~~) Interactive or /background / UL:64 kbps DL:128 kbps / PS RAB
 + Streaming / unknown / UL:0 DL:64 kbps / CS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~55) – Void~~

~~715671~~) Interactive or background / UL:8 DL:8 kbps / PS RAB
 + Interactive or background / UL:8 DL:8 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~725772~~) Interactive or background / UL:64 DL:64 kbps / PS RAB
 + Interactive or background / UL:64 DL:64 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~735873~~) Streaming / unknown / UL:16 DL:64 kbps / PS RAB
 + Interactive or background / UL:8 DL:8 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

~~7459~~) Streaming / unknown / UL:16 DL:128 kbps / PS RAB
 + Interactive or background / UL:8 DL:8 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH.

~~7560~~) Conversational / unknown / UL:8 DL:8 kbps / PS RAB
 + Interactive or Background / UL:8 DL:8 kbps / PS RAB +
 + UL:3.4 DL:3.4 kbps SRBs for DCCH

NOTE: Conversational / unknown / UL:8 DL:8 kbps / PS RAB – TF0 contains zero Transport Blocks

~~7664~~) Conversational / unknown / UL:8 DL:8 kbps / PS RAB
+ Interactive or Background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

NOTE: Conversational / unknown / UL:8 DL:8 kbps / PS RAB – TF0 contains one Transport Block of zero size

~~7762~~) Conversational / unknown / UL:16 DL:16 kbps / PS RAB +
Interactive or Background / UL:8 DL:8 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH

NOTE: Conversational / unknown / UL:16 DL:16 kbps / PS RAB – TF0 contains zero Transport Blocks

~~7863~~) Conversational / unknown / UL:16 DL:16 kbps / PS RAB +
Interactive or Background / UL:8 DL:8 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH

NOTE: Conversational / unknown / UL:16 DL:16 kbps / PS RAB – TF0 contains one Transport Block of zero size

~~7964~~) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or Background / UL:0 DL:0 kbps / PS RAB
+ Interactive or Background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

~~8065~~) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or Background / UL:8 DL:8 kbps / PS RAB

+ Interactive or Background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

~~8166~~ Streaming / unknown / UL:8 DL:16 kbps / PS RAB
+ Interactive or Background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

~~8267~~ Streaming / unknown / UL:8 DL:32 kbps / PS RAB +
Interactive or Background / UL:8 DL:8 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH

~~8368~~ Streaming / unknown / UL:32 DL:256 kbps / PS RAB +
Interactive or Background / UL:8 DL:8 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH

~~8469~~ Interactive or background / UL:16 DL:16 kbps / PS RAB +
Interactive or Background / UL:16 DL:16 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH

~~8570~~ Interactive or background / UL:64 DL:8 kbps / PS RAB +
Interactive or Background / UL:64 DL:8 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH

~~8671~~ Interactive or Background / UL:64 DL:128 kbps / PS RAB
+ Interactive or Background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

~~8772~~ Interactive or Background / UL:64 DL:384 kbps / PS RAB
+ Interactive or Background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

~~8873~~ Interactive or background / UL:128 DL:128 kbps / PS RAB +
Interactive or Background / UL:128 DL:128 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH

~~8974~~ Interactive or background / UL:128 DL:32 kbps / PS RAB +
Interactive or Background / UL:128 DL:32 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH

Combinations on SCCPCH

- 1) Stand-alone 24 kbps SRB for PCCH.
- 2) Interactive or background / DL:32 kbps / PS RAB
 + SRB for CCCH
 + SRBs for DCCH
 + SRB for BCCH.
- 3) Interactive or background / DL:32 kbps / PS RAB
 + SRB for PCCH
 + SRB for CCCH
 + SRBs for DCCH
 + SRB for BCCH.
- 4) RB for CTCH ~~(FDD)~~
 + SRB for CCCH
 +SRB for BCCH

Combinations on PRACH

- 1) ~~4~~ Interactive or background / UL:32 kbps / PS RAB
 + SRB for CCCH
 + SRBs for DCCH.

Combinations on PDSCH, SCCPCH, PUSCH and PRACH (TDD)

- 1) Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:16.8 DL:33.6 kbps SRBs for DCCH, CCCH and BCCH
+ UL:16.8 DL:16 kbps for SHCCH.
- 2) Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:16.8 DL:33.6 kbps SRBs for DCCH, CCCH and BCCH
+ UL:16.8 DL:16 kbps for SHCCH.
- 3) Interactive or background / UL:64 DL:2048 kbps / PS RAB
+ UL:3.4 DL:33.6 kbps SRBs for DCCH, CCCH and BCCH
+ UL:16.8 DL:16 kbps for SHCCH.

Combinations on PDSCH, SCCPCH, DPCH, PUSCH and PRACH (TDD)

- 1) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
+ Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:16.8 kbps SRBs for CCCH and SHCCH
+ DL:33.6 kbps SRBs for CCCH, SHCCH and BCCH
 - 2) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
+ Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:16.8 kbps SRBs for CCCH and SHCCH
+ DL:33.6 kbps SRBs for CCCH, SHCCH and BCCH
- Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
+ Interactive or background / UL:64 DL:2048 kbps / PS RAB
+ UL:16.8 kbps SRBs for CCCH and SHCCH
+ DL:33.6 kbps SRBs for CCCH, SHCCH and BCCH

76 Examples of Radio Bearers and Signalling Radio Bearers for FDD

~~Note to the editor: Level of the headings should be changed.~~

76.1 Combinations on DPCH

76.1.1 Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH

See clause 6.10.2.4.1.2 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 32 kbps, DL: 32kbps with support of DL SF = 512.](#)

[This is supported in release 99.](#)

76.1.2 Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 32 kbps, DL: 32 kbps.](#)

[This is supported in release 99.](#)

76.1.3 Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH

See clause 6.10.2.4.1.3 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 32 kbps, DL: 32 kbps.](#)

[This is supported in release 99.](#)

76.1.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.4 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 32 kbps, DL: 32 kbps.](#)

[This is supported in release 99.](#)

76.1.54a5 Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.4a of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 32 kbps, DL: 32 kbps.](#)

[This is supported in release 99.](#)

76.1.656 Conversational / speech / UL:10.2 DL:10.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.5 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 32 kbps, DL: 32 kbps.](#)

[This is supported in release 99.](#)

76.1.75a7 Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.5a of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 32 kbps, DL: 32 kbps.](#)

[This is supported in release 99.](#)

76.1.868 Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.6 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 32 kbps, DL: 32 kbps.](#)

[This is supported in release 99.](#)

76.1.979 Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB+ UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.7 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 32 kbps, DL: 32 kbps.](#)

[This is supported in release 99.](#)

76.1.10407a Conversational / speech / UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75) kbps / CS RAB+ UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.7a of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 32 kbps, DL: 32 kbps.](#)

[This is supported in release 99.](#)

76.1.11448 Conversational / speech / UL:6.7 DL:6.7 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.8 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 32 kbps, DL: 32 kbps.](#)

[This is supported in release 99.](#)

76.1.12429 Conversational / speech / UL:5.9 DL:5.9 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.9 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 32 kbps, DL: 32 kbps.](#)

[This is supported in release 99.](#)

76.1.13~~03~~ Conversational / speech / UL:5.15 DL:5.15 kbps / CS RAB + UL:1.7 DL:1.7 kbps SRBs for DCCH

See clause 6.10.2.4.1.10 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 32 kbps, DL: 32 kbps.](#)

[This is supported in release 99.](#)

76.1.14~~14~~ Conversational / speech / UL:4.75 DL:4.75 kbps / CS RAB + UL:1.7 DL:1.7 kbps SRBs for DCCH

See clause 6.10.2.4.1.11 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 32 kbps, DL: 32 kbps.](#)

[This is supported in release 99.](#)

76.1.15~~25~~ Conversational / unknown / UL:28.8/DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.12 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 64 kbps, DL: 64 kbps.](#)

[This is supported in release 99.](#)

76.1.16~~36~~ Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.13 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 64 kbps, DL: 64 kbps.](#)

[This is supported in release 99.](#)

76.1.17~~47~~ Conversational / unknown / UL:32 DL:32 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.14 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 64 kbps, DL: 64 kbps.](#)

[This is supported in release 99.](#)

76.1.18~~58~~ Streaming / unknown / UL:14.4/DL:14.4 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.15 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 32 kbps, DL: 32 kbps with support of Turbo coding.](#)

[This is supported in release 99.](#)

76.1.19~~69~~ Streaming / unknown / UL:28.8/DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.16 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 64 kbps, DL: 64 kbps.](#)

[This is supported in release 99.](#)

~~76.1.20~~¹⁷²⁰ Streaming / unknown / UL:57.6/DL:57.6 kbps / CS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.17 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 64 kbps, DL: 64 kbps.](#)

[This is supported in release 99.](#)

~~76.1.21~~¹⁸²¹ Streaming / unknown / UL:0 DL:64 kbps / CS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.18 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 32 kbps, DL: 64 kbps plus support for 'Maximum total number of transport blocks received within TTIs that end at the same time' = 16.](#)

[This is supported in release 99.](#)

~~76.1.22~~¹⁹²² Streaming / unknown / UL:64 DL:0 kbps / CS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.19 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 64 kbps, DL: 32 kbps plus support for 'Maximum total number of transport blocks transmitted within TTIs that start at the same time' = 16.](#)

[This is supported in release 99.](#)

~~6.1.20~~ Void

~~6.1.21~~ Void

~~6.1.22~~ Void

~~76.1.23~~ Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.23 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 64 kbps, DL: 32 kbps with support of Turbo Coding. For the alternative combination, the minimum UE classes supporting this combination are UL: 32 kbps, DL: 32 kbps.](#)

[This is supported in release 99.](#)

~~76.1.24~~^{3a4} Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.23a of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 32 kbps, DL: 32 kbps.](#)

[This is supported in release 99.](#)

76.1.253b5 Interactive or background / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.23b of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 64 kbps, DL: 64 kbps.](#)

[This is supported in release 99.](#)

76.1.263e6 Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.23c of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 64 kbps, DL: 64 kbps.](#)

[This is supported in release 99.](#)

76.1.273d7 Interactive or background / UL:32 DL:32 kbps / PS RAB (20 ms TTI)+ UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.23d of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 64 kbps, DL: 64 kbps.](#)

[This is supported in release 99.](#)

76.1.2848 Interactive or background / UL:64 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.24 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 32kbps plus support for turbo coding.](#)

[This is supported in release 99.](#)

76.1.2959 Interactive or background / UL:32 DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.25 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 64kbps. The minimum UE class to support the alternative UL configuration \(10ms TTI\) is UL: 32kbps.](#)

[This is supported in release 99.](#)

76.1.302630 Interactive or background / UL:64 DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.26 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 64kbps.](#)

[This is supported in release 99.](#)

76.1.312731 Interactive or background / UL:64 DL:128 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.27 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 128kbps.](#)

[This is supported in release 99.](#)

76.1.322832 Interactive or background / UL:128 DL:128 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.28 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 128kbps plus support for 'Maximum total number of transport blocks transmitted within TTIs that start at the same time' = 16, DL: 128kbps.](#)

[This is supported in release 99.](#)

76.1.332933 Interactive or background / UL:64 DL:144 kbps / PS RAB +
UL:3.4 DL: 3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.29 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 128kbps.](#)

[This is supported in release 99.](#)

76.1.3404 Interactive or background / UL:144 DL:144 kbps / PS RAB +
UL:3.4 DL: 3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.30 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 128kbps plus support for 'Maximum total number of transport blocks transmitted within TTIs that start at the same time' = 16, DL: 128kbps.](#)

[This is supported in release 99.](#)

76.1.3515 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4
DL: 3.4 kbps SRBs for DCCH

76.1.3515.1 On DPCH

See clause 6.10.2.4.1.31 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 128kbps plus support for 'Maximum number of physical channel bits received in any 10ms interval' = 9600. The minimum UE class to support the alternative DL configuration \(20ms TTI\) is DL: 384kbps.](#)

[This is supported in release 99.](#)

76.1.3515.2 On PDSCH and DPCH

See clause 6.10.2.4.2.1 of [\[1\]TS34.108](#).

76.1.3626 Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

76.1.3625.1 On DPCH

See clause 6.10.2.4.1.32 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 384kbps plus support for PDSCH.](#)

[This is supported in release 99.](#)

76.1.3625.2 On PDSCH and DPCH

See clause 6.10.2.4.2.2 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 384kbps plus support for PDSCH. The minimum UE class to support the alternative DL configuration \(20ms TTI\) is DL: 768kbps:](#)

[This is supported in release 99.](#)

76.1.3737 Interactive or background / UL:128 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.33 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 128kbps plus support for 'Maximum total number of transport blocks transmitted within TTIs that start at the same time' = 16, DL: 384kbps. The minimum UE class to support the alternative DL configuration \(20ms TTI\) is DL: 768kbps.](#)

[This is supported in release 99.](#)

76.1.3848 Interactive or background / UL:384 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.34 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 384kbps, DL: 384kbps. The minimum UE class to support the alternative DL configuration \(20ms TTI\) is DL: 768kbps.](#)

[This is supported in release 99.](#)

76.1.3959 Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

76.1.395.1 On DPCH

See clause 6.10.2.4.1.35 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 2048kbps plus support for 'Maximum sum of number of bits of all transport blocks being received at an arbitrary time instant' = 40960 and 'Maximum sum of number of bits of all turbo coded transport blocks being received at an arbitrary time instant' = 40960.](#)

[This is supported in release 99.](#)

76.1.395.2 On PDSCH and DPCH

See clause 6.10.2.4.2.3 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 2048kbps plus support for 'Maximum sum of number of bits of all transport blocks being received at an arbitrary time instant' = 40960 and 'Maximum sum of number of bits of all turbo coded transport blocks being received at an arbitrary time instant' = 40960.](#)

[This is supported in release 99.](#)

76.1.403640 Interactive or background / UL:128 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.36 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are UL: 128 kbps plus support for 'Maximum total number of transport blocks transmitted within TTIs that start at the same time' = 16, DL: 2048 kbps.](#)

[This is supported in release 99.](#)

76.1.413741 Interactive or background / UL:384 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.37 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 384 kbps, DL: 2048 kbps.](#)

[This is supported in release 99.](#)

76.1.423842 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.38 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64 kbps, DL: ~~64 kbps~~ 32 kbps plus support of TC.](#)

[This is supported in release 99.](#)

76.1.438a Conversational / speech / UL: 12.2 DL: 12.2 kbps / CS RAB + Interactive or background / UL:0 DL:0 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.38a of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 32~~64~~kbps.](#)

[This is supported in release 99.](#)

76.1.444438b Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.38b of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: ~~64kbps~~ 32 kbps plus support of TC.](#)

[This is supported in release 99.](#)

76.1.454538e Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.38c of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64 kbps, DL: 64 kbps.](#)

[This is supported in release 99.](#)

76.1.464638d Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.38d of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 128kbps.](#)

[This is supported in release 99.](#)

76.1.474738e Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB + Interactive or background / UL:0 DL:0 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.38e of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 3264kbps.](#)

[This is supported in release 99.](#)

76.1.484838f Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.38f of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: ~~64kbps~~ 32 kbps plus support of TC.](#)

[This is supported in release 99.](#)

76.1.494938g Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB + Interactive or background / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.38g of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 64kbps.](#)

[This is supported in release 99.](#)

76.1.505038h Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB + Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.38h of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 64kbps.](#)

[This is supported in release 99.](#)

76.1.515138i Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB +
Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.38i of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 64kbps.](#)

[This is supported in release 99.](#)

76.1.525238j Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB +
Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.38j of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbp, DL: 128kbps.](#)

[This is supported in release 99.](#)

76.1.535339 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:32 DL:64 kbps / PS RAB+ UL:3.4 DL:
3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.39 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64 kbps, DL: 64 kbps.](#)

[This is supported in release 99.](#)

76.1.54540 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:64 kbps / PS RAB+ UL:3.4 DL:
3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.40 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64 kbps, DL: 64 kbps.](#)

[This is supported in release 99.](#)

76.1.555541 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.41 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64 kbps, DL: 128 kbps.](#)

[This is supported in release 99.](#)

[76.1.565642](#) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

[76.1.564235.1](#) On DPCH

See clause 6.10.2.4.1.42 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64 kbps, DL: 384 kbps.](#)

[This is supported in release 99.](#)

[76.1.564235.2](#) On PDSCH and DPCH

See clause 6.10.2.4.2.4 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64 kbps, DL: 384 kbps., support of PDSCH.](#)

[This is supported in release 99.](#)

[76.1.575743](#) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

[76.1.57435.1](#) On DPCH

See clause 6.10.2.4.1.43 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64 kbps, DL: 384 kbps with TTI=10ms and UL: 64 kbps, DL: 768 kbps with TTI=20ms.](#)

[This is supported in release 99.](#)

[76.1.57435.2](#) On PDSCH and DPCH

See clause 6.10.2.4.2.5 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64 kbps, DL: 384 kbps with TTI=10ms and UL 64 kbps, DL: 768 kbps with TTI=20ms, support of PDSCH.](#)

[This is supported in release 99.](#)

~~6.1.58 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.2.4.2.6 of TS34.108.~~

[7.1.58](#) Conversational / speech / UL: 12.2 DL: 12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.2.6 of [\[1\]](#).

~~76.1.595944~~ Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:128 DL:2048 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.44 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL:384 kbps, DL: 2048 kbps.](#)

[This is supported in release 99.](#)

~~76.1.606045~~ Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Streaming / unknown / UL:57.6 DL:57.6 kbps / CS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.45 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 64kbps.](#)

[This is supported in release 99.](#)

~~76.1.616146~~ Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Streaming / unknown / UL:0 DL:64 kbps / CS RAB + UL:3.4 DL:3.4
kbps SRBs for DCCH

See clause 6.10.2.4.1.46 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL 128kbps.](#)

[This is supported in release 99.](#)

~~6.1.47 Void~~

~~6.1.48 Void~~

~~76.1.626249~~ Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.49 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 128kbps.](#)

[This is supported in release 99.](#)

~~76.1.636349a~~ Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2
7.95 5.9 4.75) kbps / CS RAB + Conversational / unknown / UL:64
DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.49a of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 128kbps.](#)

[This is supported in release 99.](#)

76.1.646450 Conversational / unknown / UL:64 DL:64 kbps / CS RAB +
Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.50 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 128kbps, DL: 128kbps. The minimum UE classes to support the alternative combination \(40m TTI\) is, UL: 384kbps.](#)

[This is supported in release 99.](#)

76.1.656551 Conversational / unknown / UL:64 DL:64 kbps / CS RAB +
Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.51 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 128kbps, DL: 128kbps. The minimum UE classes to support the alternative combination \(40m TTI\) is, UL: 384kbps.](#)

[This is supported in release 99.](#)

76.1.666651a Conversational / unknown / UL:64 DL:64 kbps / CS RAB +
Interactive or Background / UL:8 DL:8 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.51a of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 64kbps.](#)

[This is supported in release 99.](#)

76.1.676751b Conversational / unknown / UL:64 DL:64 kbps / CS RAB +
Interactive or Background / UL:16 DL:64 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.51b of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 128kbps.](#)

[This is supported in release 99.](#)

76.1.686852 Conversational / unknown / UL:64 DL:64 kbps / CS RAB +
Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.52 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 128kbps, DL: 384kbps. The minimum UE classes to support the alternative combination \(40m TTI\) is, UL: 384kbps.](#)

[This is supported in release 99.](#)

~~76.1.696953~~ Conversational / unknown / UL:64 DL:64 kbps / CS RAB +
Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.53 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 384kbps, DL: 384kbps.](#)

[This is supported in release 99.](#)

~~76.1.707054~~ Interactive or background / UL:64 DL:128 kbps / PS RAB +
Streaming / unknown / UL:0 DL:64 kbps / CS RAB + UL:3.4 DL:3.4
kbps SRBs for DCCH

See clause 6.10.2.4.1.54 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 384kbps.](#)

[This is supported in release 99.](#)

~~6.1.55 — Void~~

~~76.1.717156~~ Interactive or background / UL:8 DL:8 kbps / PS RAB +
Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.56 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 32kbps, DL: 32kbps plus support for turbo coding.](#)

[This is supported in release 99.](#)

~~76.1.727257~~ Interactive or background / UL:64 DL:64 kbps / PS RAB +
Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.57 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 64kbps.](#)

[This is supported in release 99.](#)

~~76.1.737358~~ Streaming / unknown / UL:16 DL:64 kbps / PS RAB +
Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.58 of [\[1\]TS34.108](#).

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 64kbps. This is supported in release 99.](#)

[7.1.7459 Streaming / unknown / UL:16 DL:128 kbps / PS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH](#)

[The minimum UE classes supporting this combination are, UL: 32kbps plus support for turbo coding, DL: 128kbps. This is supported in release 99.](#)

[7.1.7459.1 Uplink](#)

[7.1.7459.1.1 Transport channel parameters](#)

[7.1.7459.1.1.1 Transport channel parameters for Streaming / unknown / UL:16 kbps / PS RAB](#)

[See clause 6.10.2.4.1.58.1.1.1 of \[1\]](#)

[7.1.7459.1.1.2 Transport channel parameters for Interactive or background / UL:8 kbps / PS RAB](#)

[See clause 6.10.2.4.1.38b.1.1.1 of \[1\].](#)

[7.1.7459.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH](#)

[See clause 6.10.2.4.1.2.1.1.1 of \[1\].](#)

[7.1.7459.1.1.4 TFCS](#)

[See clause 6.10.2.4.1.58.1.1.4 of \[1\].](#)

[7.1.7459.1.2 Physical channel parameters](#)

[See clause 6.10.2.4.1.58.1.2 of \[1\].](#)

[7.1.7459.2 Downlink](#)

[7.1.7459.2.1 Transport channel parameters](#)

[7.1.7459.2.1.1 Transport channel parameters for Streaming / unknown / DL:128 kbps / PS RAB](#)

Higher Layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	640	
	Max data rate, bps	128000	
	AM PDU header, bit	16	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	656	
	TFS	TF0, bits	0x656
		TF1, bits	1x656
		TF2, bits	2x656
		TF3, bits	4x656
	TTI, ms	20	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	8076	
RM attribute	125-165		

[7.1.7459.2.1.2 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB](#)

See clause 6.10.2.4.1.38b.2.1.1 of [1].

[7.1.7459.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH](#)

See clause 6.10.2.4.1.2.2.1.1 of [1].

[7.1.7459.2.1.4 TFCS](#)

TFCS size	16
TFCS	(128 kbps RAB, 8 kbps RAB, DCCH)= (TF0,TF0,TF0), (TF1,TF0,TF0), (TF2,TF0,TF0), (TF3,TF0,TF0) (TF0,TF1,TF0), (TF1,TF1,TF0), (TF2,TF1,TF0), (TF3,TF1,TF0) (TF0,TF0,TF1), (TF1,TF0,TF1), (TF2,TF0,TF1), (TF3,TF0,TF1) (TF0,TF1,TF1), (TF1,TF1,TF1), (TF2,TF1,TF1), (TF3,TF1,TF1)

[7.1.7459.2.2 Physical channel parameters](#)

DPCH Downlink	DTX position	Flexible	
	Spreading factor	16	
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	8
		Number of Pilot bits/slot	16
	DPDCH	Number of data bits/slot	288
		Number of data bits/frame	4320

7.1.7560 Conversational / unknown / UL:8 DL:8 kbps / PS RAB + Interactive or Background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

NOTE: Conversational / unknown / UL:8 kbps / PS RAB – TF0 contains zero Transport Blocks

NOTE: Conversational / unknown / DL:8 kbps / PS RAB – TF0 contains zero Transport Blocks

The minimum UE classes supporting this combination are, UL: 32kbps plus support for turbo coding, DL: 32kbps plus support for turbo coding. This is supported in release 99.

7.1.7560.1 Uplink

7.1.7560.1.1 Transport channel parameters

7.1.7560.1.1.1 Transport channel parameters for Conversational / unknown / UL:8 kbps / PS RAB

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	UM	
	Payload sizes, bit	320	
	Max data rate, bps	8000	
	UMD PDU header, bit	8	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	328	
	TFS	TF0, bits	0x328
		TF1, bits	1x328
	TTI, ms	40	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	1044	
	Uplink: Max number of bits/radio frame before rate matching	261	
	RM attribute	135-175	

7.1.7560.1.1.2 Transport channel parameters for Interactive or Background / UL:8 kbps / PS RAB

See clause 6.10.2.4.1.38b.1.1.2 of [1]

7.1.7560.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1 of [1]

7.1.7560.1.1.4 TFCS

TFCS size	8
TFCS	(8 kbps Conversational RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1)

7.1.7560.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	32
	Max number of DPDCH data bits/radio frame	1200
	Puncturing Limit	1.0

[7.1.7560.2 Downlink](#)

[7.1.7560.2.1 Transport channel parameters](#)

[7.1.7560.2.1.1 Transport channel parameters for Conversational / unknown / DL:8 kbps / PS RAB](#)

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	UM	
	Payload sizes, bit	320	
	Max data rate, bps	8000	
	AMD PDU header, bit	8	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	328	
	TFS	TF0, bits	0x328
		TF1, bits	1x328
	TTL, ms	40	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	1044	
RM attribute	135-175		

[7.1.7560.2.1.2 Transport channel parameters for Interactive or Background / DL:8 kbps / PS RAB](#)

See clause 6.10.2.4.1.38b.2.1.2 of [1].

[7.1.7560.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH](#)

See clause 6.10.2.4.1.2.2.1.1 of [1]

[7.1.7560.2.1.4 TFCS](#)

TFCS size	8
TFCS	(8 kbps Conversational RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1)

[7.1.7560.2.2 Physical channel parameters](#)

DPCH Downlink	DTX position	Flexible
	Spreading factor	64
DPCCH	Number of TFCI bits/slot	8
	Number of TPC bits/slot	4
	Number of Pilot bits/slot	8
DPDCH	Number of data bits/slot	60
	Number of data bits/frame	900

7.1.7664 Conversational / unknown / UL:8 DL:8 kbps / PS RAB + Interactive or Background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

NOTE: Conversational / unknown / UL:8 kbps / PS RAB – TF0 contains one Transport Block of zero size.

NOTE: Conversational / unknown / DL:8 kbps / PS RAB – TF0 contains one Transport Block of zero size.

The minimum UE classes supporting this combination are, UL: 32kbps plus support for turbo coding, DL: 32kbps plus support for turbo coding. This is supported in release 99.

7.1.7664.1 Uplink

7.1.7664.1.1 Transport channel parameters

7.1.7664.1.1.1 Transport channel parameters for Conversational / unknown / UL:8 kbps / PS RAB

NOTE: In case of using this alternative, CRC parity bits are to be attached every time since number of TrBlks are 1 even if there is no data on the RAB (see clause 4.2.1.1 in TS 25.212).

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	UM	
	Payload sizes, bit	320	
	Max data rate, bps	8000	
	UMD PDU header, bit	8	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	0, 328	
	TFS	TF0, bits	1x0
		TF1, bits	1x328
	TTI, ms	40	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	1044	
	Uplink: Max number of bits/radio frame before rate matching	261	
RM attribute	135-175		

7.1.7664.1.1.2 Transport channel parameters for Interactive or Background / UL:8 kbps / PS RAB

See clause 6.10.2.4.1.38b.1.1.2 of [1]

7.1.7664.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1 of [1]

7.1.7664.1.1.4 TFCS

TFCS size	8
TFCS	(8 kbps Conversational RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1)

7.1.7664.1.2 Physical channel parameters

<u>DPCCH Uplink</u>	<u>Min spreading factor</u>	<u>32</u>
	<u>Max number of DPDCH data bits/radio frame</u>	<u>1200</u>
	<u>Puncturing Limit</u>	<u>1.0</u>

7.1.7664.2 Downlink7.1.7664.2.1 Transport channel parameters7.1.7664.2.1.1 Transport channel parameters for Conversational / unknown / DL:8 kbps / PS RAB

NOTE: In case of using this alternative, CRC parity bits are to be attached every time since number of TrBlks are 1 even if there is no data on the RAB (see clause 4.2.1.1 in TS 25.212).

<u>Higher layer</u>	<u>RAB/Signalling RB</u>	<u>RAB</u>	
<u>RLC</u>	<u>Logical channel type</u>	<u>DTCH</u>	
	<u>RLC mode</u>	<u>UM</u>	
	<u>Payload sizes, bit</u>	<u>320</u>	
	<u>Max data rate, bps</u>	<u>8000</u>	
	<u>AMD PDU header, bit</u>	<u>8</u>	
<u>MAC</u>	<u>MAC header, bit</u>	<u>0</u>	
	<u>MAC multiplexing</u>	<u>N/A</u>	
<u>Layer 1</u>	<u>TrCH type</u>	<u>DCH</u>	
	<u>TB sizes, bit</u>	<u>0, 328</u>	
	<u>TFS</u>	<u>TF0, bits</u>	<u>1x0</u>
		<u>TF1, bits</u>	<u>1x328</u>
	<u>TTL, ms</u>	<u>40</u>	
	<u>Coding type</u>	<u>TC</u>	
	<u>CRC, bit</u>	<u>16</u>	
	<u>Max number of bits/TTL after channel coding</u>	<u>1044</u>	
	<u>RM attribute</u>	<u>135-175</u>	

76.1.7664.2.1.2 Transport channel parameters for Interactive or Background / DL:8 kbps / PS RAB

See clause 6.10.2.4.1.38b.2.1.2 of [1].

76.1.7664.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1 of [1].

7.1.7661.2.1.4 TFCS

TFCS size	8
TFCS	(8 kbps Conversational RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1)

7.1.7661.2.2 Physical channel parameters

DPCH Downlink	DTX position		Flexible
	Spreading factor		64
DPCCH	Number of TFCI bits/slot		8
	Number of TPC bits/slot		4
	Number of Pilot bits/slot		8
DPDCH	Number of data bits/slot		60
	Number of data bits/frame		900

7.1.7762 Conversational / unknown / UL:16 DL:16 kbps / PS RAB +
Interactive or Background / UL:8 DL:8 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

NOTE~~ete~~- Conversational / unknown / UL:16 kbps / PS RAB – TF0 contains zero Transport Blocks.

NOTE~~ete~~- Conversational / unknown / DL:16 kbps / PS RAB – TF0 contains zero Transport Blocks.

The minimum UE classes supporting this combination are, UL: 32kbps plus support for turbo coding, DL: 32kbps plus support for turbo coding. This is supported in release 99.

7.1.7762.1 Uplink

7.1.7762.1.1 Transport channel parameters

7.1.7762.1.1.1 Transport channel parameters for Conversational / unknown / UL:16 kbps / PS RAB

Higher layer	RAB/Signalling RB	<u>RAB</u>	
RLC	Logical channel type	<u>DTCH</u>	
	RLC mode	<u>UM</u>	
	Payload sizes, bit	<u>320</u>	
	Max data rate, bps	<u>16000</u>	
	UMD PDU header, bit	<u>8</u>	
MAC	MAC header, bit	<u>0</u>	
	MAC multiplexing	<u>N/A</u>	
Layer 1	TrCH type	<u>DCH</u>	
	TB sizes, bit	<u>328</u>	
	TFS	TF0, bits	<u>0x328</u>
		TF1, bits	<u>1x328</u>
		TF2, bits	<u>2x328</u>
	TTI, ms	<u>40</u>	
	Coding type	<u>TC</u>	
	CRC, bit	<u>16</u>	
	Max number of bits/TTI after channel coding	<u>2076</u>	
	Uplink: Max number of bits/radio frame before rate matching	<u>519</u>	
	RM attribute	<u>135-175</u>	

7.1.7762.1.1.2 Transport channel parameters for Interactive or Background / UL:8 kbps / PS RAB

See clause 6.10.2.4.1.38b.1.1.2 of [1]

7.1.7762.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1 of [1]

7.1.7762.1.1.4 TFCS

TFCS size	<u>12</u>
TFCS	<u>(16 kbps Conversational RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF2, TF0, TF0), (TF2, TF1, TF0), (TF2, TF0, TF1), (TF2, TF1, TF1)</u>

7.1.7762.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	<u>32</u>
	Max number of DPDCH data bits/radio frame	<u>1200</u>
	Puncturing Limit	<u>1.0</u>

7.1.7762.2 Downlink

7.1.7762.2.1 Transport channel parameters

7.1.7762.2.1.1 Transport channel parameters for Conversational / unknown / DL:16 kbps / PS RAB

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	UM	
	Payload sizes, bit	320	
	Max data rate, bps	16000	
	AMD PDU header, bit	8	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	328	
	TFS	TF0, bits	0x328
		TF1, bits	1x328
		TF2, bits	2x328
	TTI, ms	40	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	2076	
	RM attribute	135-175	

7.1.7762.2.1.2 Transport channel parameters for Interactive or Background / DL:8 kbps / PS RAB

See clause 6.10.2.4.1, 38b.2.1.2 of [1]

7.1.7762.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1 of [1]

7.1.7762.2.1.4 TFCS

TFCS size	12
TFCS	(16 kbps Conversational RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF2, TF0, TF0), (TF2, TF1, TF0), (TF2, TF0, TF1), (TF2, TF1, TF1)

7.1.7762.2.2 Physical channel parameters

DPCH Downlink	DTX position	Flexible	
	Spreading factor	64	
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	4
		Number of Pilot bits/slot	8
	DPDCH	Number of data bits/slot	60
		Number of data bits/frame	900

7.1.7863 Conversational / unknown / UL:16 DL:16 kbps / PS RAB + Interactive or Background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

NOTE: Conversational / unknown / UL:16 kbps / PS RAB – TF0 contains one Transport Block of zero size.

NOTE: Conversational / unknown / DL:16 kbps / PS RAB – TF0 contains one Transport Block of zero size.

The minimum UE classes supporting this combination are, UL: 32kbps plus support for turbo coding, DL: 32kbps plus support for turbo coding. This is supported in release 99.

7.1.7863.1 Uplink

7.1.7863.1.1 Transport channel parameters

7.1.7863.1.1.1 Transport channel parameters for Conversational / unknown / UL:16 kbps / PS RAB

NOTE: In case of using this alternative, CRC parity bits are to be attached every time since number of TrBlks are 1 even if there is no data on the RAB (see clause 4.2.1.1 in TS 25.212).

Higher layer	RAB/Signalling RB	<u>RAB</u>	
RLC	Logical channel type	<u>DTCH</u>	
	RLC mode	<u>UM</u>	
	Payload sizes, bit	<u>320</u>	
	Max data rate, bps	<u>16000</u>	
	UMD PDU header, bit	<u>8</u>	
MAC	MAC header, bit	<u>0</u>	
	MAC multiplexing	<u>N/A</u>	
Layer 1	TrCH type	<u>DCH</u>	
	TB sizes, bit	<u>0, 328</u>	
	TFS	TF0, bits	<u>1x0</u>
		TF1, bits	<u>1x328</u>
		TF2, bits	<u>2x328</u>
	TTI, ms	<u>40</u>	
	Coding type	<u>TC</u>	
	CRC, bit	<u>16</u>	
	Max number of bits/TTI after channel coding	<u>2076</u>	
	Uplink: Max number of bits/radio frame before rate matching	<u>519</u>	
RM attribute	<u>135-175</u>		

7.1.7863.1.1.2 Transport channel parameters for Interactive or Background / UL:8 kbps / PS RAB

See clause 6.10.2.4.1.38b.1.1.2 of [1]

7.1.7863.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1 of [1]

7.1.7863.1.1.4 TFCS

TFCS size	<u>12</u>
TFCS	<u>(16 kbps Conversational RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF2, TF0, TF0), (TF2, TF1, TF0), (TF2, TF0, TF1), (TF2, TF1, TF1)</u>

7.1.7863.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	32
	Max number of DPDCH data bits/radio frame	1200
	Puncturing Limit	1.0

7.1.7863.2 Downlink

7.1.7863.2.1 Transport channel parameters

7.1.7863.2.1.1 Transport channel parameters for Conversational / unknown / DL:16 kbps / PS RAB

NOTE: In case of using this alternative, CRC parity bits are to be attached every time since number of TrBlks are 1 even if there is no data on the RAB (see clause 4.2.1.1 in TS 25.212).

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	UM	
	Payload sizes, bit	320	
	Max data rate, bps	16000	
	AMD PDU header, bit	8	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	0, 328	
	TFS	TF0, bits	1x0
		TF1, bits	1x328
		TF2, bits	2x328
	TTI, ms	40	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	2076	
	RM attribute	135-175	

7.1.7863.2.1.2 Transport channel parameters for Interactive or Background / DL:8 kbps / PS RAB

See clause 6.10.2.4.1, 38b.2.1.2 of [1]

7.1.7863.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1 of [1]

7.1.7863.2.1.4 TFCS

TFCS size	12
TFCS	(16 kbps Conversational RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF2, TF0, TF0), (TF2, TF1, TF0), (TF2, TF0, TF1), (TF2, TF1, TF1)

7.1.7863.2.2 Physical channel parameters

DPCH Downlink	DTX position		Flexible
	Spreading factor		64
DPCCH	Number of TFCI bits/slot		8
	Number of TPC bits/slot		4
	Number of Pilot bits/slot		8
DPDCH	Number of data bits/slot		60
	Number of data bits/frame		900

7.1.7964 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or Background / UL:0 DL:0 kbps / PS RAB + Interactive or Background / UL:0 DL:0 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

The minimum UE classes supporting this combination are, UL: 64kbps, DL: 128kbps. This is supported in release 99.

7.1.7964.1 Uplink

7.1.7964.1.1 Transport channel parameters

7.1.7964.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.1.1.1 of [1].

7.1.7964.1.1.2 Transport channel parameters for Interactive or Background / UL:0 + UL:0 kbps / PS RAB

Higher layer	RAB/Signalling RB	RAB	RAB
RLC	Logical channel type	DTCH	DTCH
	RLC mode	AM	AM
	Payload sizes, bit	320	320
	Max data rate, bps	0	0
	AMD PDU header, bit	16	16
MAC	MAC header, bit	4	4
	MAC multiplexing	2 logical channel multiplexing	
Layer 1	TrCH type	DCH	
	TB sizes, bit	340	
	TFS	TF0, bits	
	TTI, ms	20	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	0	
	Uplink: Max number of bits/radio frame before rate matching	0	
	RM attribute	130-170	

7.1.7964.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1 of [1].

7.1.7964.1.1.4 TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 0+0kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF1,TF0,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF1,TF0,TF1)

7.1.7964.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	64
	Max number of DPDCH data bits/radio frame	600
	Puncturing Limit	0.84

7.1.7964.2 Downlink

7.1.7964.2.1 Transport channel parameters

7.1.7964.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1 of [1].

7.1.7964.2.1.2 Transport channel parameters for Interactive or Background / DL:0 + DL:0 kbps / PS RAB

Higher layer	RAB/Signalling RB	RAB	RAB
RLC	Logical channel type	DTCH	DTCH
	RLC mode	AM	AM
	Payload sizes, bit	320	320
	Max data rate, bps	0	0
	AMD PDU header, bit	16	16
MAC	MAC header, bit	4	4
	MAC multiplexing	2 logical channel multiplexing	
Layer 1	TrCH type	DCH	
	TB sizes, bit	340	
	TFS	TF0, bits	0x340
	TTI, ms	20	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	0	
	RM attribute	130-170	

7.1.7964.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1 of [1].

7.1.7964.2.1.4 TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 0+0kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF1,TF0,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF1,TF0,TF1)

7.1.7964.2.2 Physical channel parameters

DPCH Downlink	<u>DTX position</u>		<u>Flexible</u>
	<u>Spreading factor</u>		<u>128</u>
	DPCCH	<u>Number of TFCI bits/slot</u>	<u>0</u>
		<u>Number of TPC bits/slot</u>	<u>2</u>
		<u>Number of Pilot bits/slot</u>	<u>4</u>
	DPDCH	<u>Number of data bits/slot</u>	<u>34</u>
		<u>Number of data bits/frame</u>	<u>510</u>

7.1.8065 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or Background / UL:8 DL:8 kbps / PS RAB + Interactive or Background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

The minimum UE classes supporting this combination are, UL: 64kbps, DL: 128kbps. This is supported in release 99.

7.1.8065.1 Uplink

7.1.8065.1.1 Transport channel parameters

7.1.8065.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.2.4.1.13.1.1.1 of [1].

7.1.8065.1.1.2 Transport channel parameters for Interactive or Background / UL:8 + UL:8 kbps / PS RAB

See clause 6.10.2.4.1.56.1.1.1 of [1]

7.1.8065.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1 of [1].

7.1.8065.1.1.4 TFCS

<u>TFCS size</u>	<u>8</u>
<u>TFCS</u>	<u>(64 kbps Conversational RAB, 8+8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1)</u>

7.1.8065.1.2 Physical channel parameters

DPCH Uplink	<u>Min spreading factor</u>	<u>16</u>
	<u>Max number of DPDCH data bits/radio frame</u>	<u>2400</u>
	<u>Puncturing Limit</u>	<u>0.72</u>

[7.1.8065.2 Downlink](#)[7.1.8065.2.1 Transport channel parameters](#)[7.1.8065.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB](#)

[See clause 6.10.2.4.1.13.2.1.1 of \[1\].](#)

[7.1.8065.2.1.2 Transport channel parameters for Interactive or Background / DL:8 + DL:8 kbps / PS RAB](#)

[See clause 6.10.2.4.1.56.2.1.1 of \[1\].](#)

[7.1.8065.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH](#)

[See clause 6.10.2.4.1.2.2.1.1 of \[1\].](#)

[7.1.8065.2.1.4 TFCS](#)

<u>TFCS size</u>	<u>8</u>
<u>TFCS</u>	<u>(64 kbps Conversational RAB, 8+8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1)</u>

[7.1.8065.2.2 Physical channel parameters](#)

<u>DPCH Downlink</u>	<u>DTX position</u>	<u>Flexible</u>
	<u>Spreading factor</u>	<u>32</u>
<u>DPCCH</u>	<u>Number of TFCI bits/slot</u>	<u>8</u>
	<u>Number of TPC bits/slot</u>	<u>4</u>
	<u>Number of Pilot bits/slot</u>	<u>8</u>
<u>DPDCH</u>	<u>Number of data bits/slot</u>	<u>140</u>
	<u>Number of data bits/frame</u>	<u>2100</u>

[7.1.8166 Streaming / unknown / UL:8 DL:16 kbps / PS RAB + Interactive or Background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH](#)

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 128kbps. This is supported in release 99.](#)

[7.1.8166.1 Uplink](#)

[7.1.8166.1.1 Transport channel parameters](#)

[7.1.8166.1.1.1 Transport channel parameters for Streaming / unknown / UL:8 kbps / PS RAB](#)

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	320	
	Max data rate, bps	8000	
	AMD PDU header, bit	16	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	336	
	TFS	TF0, bits	0x336
		TF1, bits	1x336
	TTI, ms	40	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	1068	
	Uplink: Max number of bits/radio frame before rate matching	267	
	RM attribute	135-175	

[7.1.8166.1.1.2 Transport channel parameters for Interactive or Background / UL:8 kbps / PS RAB](#)

See clause 6.10.2.4.1.38b.1.1.2 of [1]

[7.1.8166.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH](#)

See clause 6.10.2.4.1.2.1.1.1 of [1]

[7.1.8166.1.1.4 TFCS](#)

TFCS size	8
TFCS	(8 kbps Streaming RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1)

[7.1.8166.1.2 Physical channel parameters](#)

DPCH Uplink	Min spreading factor	32
	Max number of DPDCH data bits/radio frame	1200
	Puncturing Limit	1.0

[7.1.8166.2 Downlink](#)

[7.1.8166.2.1 Transport channel parameters](#)

[7.1.8166.2.1.1 Transport channel parameters for Streaming / unknown / DL:16 kbps / PS RAB](#)

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	640	
	Max data rate, bps	16000	
	AMD PDU header, bit	16	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	656	
	TFS	TF0, bits	0x656
		TF1, bits	1x656
	TTI, ms	40	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	2028	
	RM attribute	125-165	

[7.1.8166.2.1.2 Transport channel parameters for Interactive or Background / DL:8 kbps / PS RAB](#)

See clause 6.10.2.4.1.38b.2.1.2 of [1]

[7.1.8166.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH](#)

See clause 6.10.2.4.1.2.2.1.1 of [1]

[7.1.8166.2.1.4 TFCS](#)

TFCS size	8
TFCS	(16 kbps Streaming RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1)

[7.1.8166.2.2 Physical channel parameters](#)

DPCH Downlink	DTX position		Flexible
	Spreading factor		64
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	4
		Number of Pilot bits/slot	8
	DPDCH	Number of data bits/slot	60
		Number of data bits/frame	900

[7.1.8267 Streaming / unknown / UL:8 DL:32 kbps / PS RAB + Interactive or Background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH](#)

The minimum UE classes supporting this combination are, UL: 64kbps, DL: 128kbps. This is supported in release 99.

7.1.8267.1 Uplink7.1.8267.1.1 Transport channel parameters7.1.8267.1.1.1 Transport channel parameters for Streaming / unknown / UL:8 kbps / PS RAB

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	320	
	Max data rate, bps	8000	
	AMD PDU header, bit	16	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	336	
	TFS	TF0, bits	0x336
		TF1, bits	1x336
	TTI, ms	40	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	1068	
	Uplink: Max number of bits/radio frame before rate matching	267	
	RM attribute	135-175	

7.1.8267.1.1.2 Transport channel parameters for Interactive or Background / UL:8 kbps / PS RAB

See clause 6.10.2.4.1.38b.1.1.2 of [1]

7.1.8267.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1 of [1]

7.1.8267.1.1.4 TFCS

TFCS size	8
TFCS	(8 kbps Streaming RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1)

7.1.8267.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	32
	Max number of DPDCH data bits/radio frame	1200
	Puncturing Limit	1.0

7.1.8267.2 Downlink

7.1.8267.2.1 Transport channel parameters

7.1.8267.2.1.1 Transport channel parameters for Streaming / unknown / DL:32 kbps / PS RAB

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	640	
	Max data rate, bps	32000	
	AMD PDU header, bit	16	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	656	
	TFS	TF0, bits	0x656
		TF1, bits	1x656
		TF2, bits	2x656
	TTI, ms	40	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	4044	
	RM attribute	125-165	

7.1.8267.2.1.2 Transport channel parameters for Interactive or Background / DL:8 kbps / PS RAB

See clause 6.10.2.4.1, 38b.2.1.2 of [1]

7.1.8267.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1 of [1]

7.1.8267.2.1.4 TFCS

TFCS size	12
TFCS	(32 kbps Streaming RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF2, TF0, TF0), (TF2, TF1, TF0), (TF2, TF0, TF1), (TF2, TF1, TF1)

7.1.8267.2.2 Physical channel parameters

DPCH Downlink	DTX position	Flexible	
	Spreading factor	32	
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	4
		Number of Pilot bits/slot	8
	DPDCH	Number of data bits/slot	140
		Number of data bits/frame	2100

7.1.8368 Streaming / unknown / UL:32 DL:256 kbps / PS RAB + Interactive or Background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

The minimum UE classes supporting this combination are, UL: 64kbps, DL: 384kbps. This is supported in release 99.

7.1.8368.1 Uplink

7.1.8368.1.1 Transport channel parameters

7.1.8368.1.1.1 Transport channel parameters for Streaming / unknown / UL:32 kbps / PS RAB

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	320	
	Max data rate, bps	32000	
	AMD PDU header, bit	16	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	336	
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336
	TTI, ms	20	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	2124	
	Uplink: Max number of bits/radio frame before rate matching	1062	
RM attribute	135-175		

7.1.8368.1.1.2 Transport channel parameters for Interactive or Background / UL:8 kbps / PS RAB

See clause 6.10.2.4.1.38b.1.1.2 of [1]

7.1.8368.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1 of [1]

7.1.8368.1.1.4 TFCS

TFCS size	12
TFCS	(32 kbps Streaming RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF2, TF0, TF0), (TF2, TF1, TF0), (TF2, TF0, TF1), (TF2, TF1, TF1)

7.1.8368.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	16
	Max number of DPDCH data bits/radio frame	2400
	Puncturing Limit	1.0

7.1.8368.2 Downlink7.1.8368.2.1 Transport channel parameters7.1.8368.2.1.1 Transport channel parameters for Streaming / unknown / DL:256 kbps / PS RAB

<u>Higher layer</u>	<u>RAB/Signalling RB</u>	<u>RAB</u>	
<u>RLC</u>	<u>Logical channel type</u>	<u>DTCH</u>	
	<u>RLC mode</u>	<u>AM</u>	
	<u>Payload sizes, bit</u>	<u>640</u>	
	<u>Max data rate, bps</u>	<u>256000</u>	
	<u>AMD PDU header, bit</u>	<u>16</u>	
<u>MAC</u>	<u>MAC header, bit</u>	<u>0</u>	
	<u>MAC multiplexing</u>	<u>N/A</u>	
<u>Layer 1</u>	<u>TrCH type</u>	<u>DCH</u>	
	<u>TB sizes, bit</u>	<u>656</u>	
	<u>TFS</u>	<u>TF0, bits</u>	<u>0x656</u>
		<u>TF1, bits</u>	<u>1x656</u>
		<u>TF2, bits</u>	<u>2x656</u>
		<u>TF3, bits</u>	<u>4x656</u>
	<u>TTI, ms</u>	<u>10</u>	
	<u>Coding type</u>	<u>TC</u>	
	<u>CRC, bit</u>	<u>16</u>	
	<u>Max number of bits/TTI after channel coding</u>	<u>8076</u>	
	<u>RM attribute</u>	<u>125-165</u>	

7.1.8368.2.1.2 Transport channel parameters for Interactive or Background / DL:8 kbps / PS RAB

See clause 6.10.2.4.1. 38b.2.1.2 of [1]

7.1.8368.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1 of [1]

7.1.8368.2.1.4 TFCS

<u>TFCS size</u>	<u>16</u>
<u>TFCS</u>	<u>(256 kbps Streaming RAB, 8 kbps I/B RAB, DCCH) = (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF2, TF0, TF0), (TF2, TF1, TF0), (TF2, TF0, TF1), (TF2, TF1, TF1), (TF3, TF0, TF0), (TF3, TF1, TF0), (TF3, TF0, TF1), (TF3, TF1, TF1)</u>

7.1.8368.2.2 Physical channel parameters

DPCH Downlink	DTX position		Flexible
	Spreading factor		8
DPCCH	Number of TFCI bits/slot		8
	Number of TPC bits/slot		8
	Number of Pilot bits/slot		16
DPDCH	Number of data bits/slot		608
	Number of data bits/frame		9120

7.1.8469 Interactive or background / UL:16 DL:16 kbps / PS RAB + Interactive or Background / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

The minimum UE classes supporting this combination are, UL: 64kbps, DL: 128kbps. This is supported in release 99.

7.1.8469.1 Uplink

7.1.8469.1.1 Transport channel parameters

7.1.8469.1.1.1 Transport channel parameters for Interactive or Background / UL:16 + UL:16 kbps / PS RAB

Higher layer	RAB/Signalling RB	RAB	RAB	
RLC	Logical channel type	DTCH	DTCH	
	RLC mode	AM	AM	
	Payload sizes, bit	320	320	
	Max data rate, bps	16000	16000	
	AMD PDU header, bit	16	16	
MAC	MAC header, bit	4	4	
	MAC multiplexing	2 logical channel multiplexing		
Layer 1	TrCH type	DCH		
	TB sizes, bit	340		
	TFS	TF0, bits	0x340	
		TF1, bits	1x340	
		TF2, bits	2x340	
	TTI, ms	40		
	Coding type	TC		
	CRC, bit	16		
	Max number of bits/TTI after channel coding	2148		
	Uplink: Max number of bits/radio frame before rate matching	537		
RM attribute	135-175			

7.1.8469.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1 of [1]

7.1.8469.1.1.3 TFCS

TFCS size	6
TFCS	(16 kbps RAB + 16 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1)

7.1.8469.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	32
	Max number of DPDCH data bits/radio frame	1200
	Puncturing Limit	1.0

7.1.8469.2 Downlink

7.1.8469.2.1 Transport channel parameters

7.1.8469.2.1.1 Transport channel parameters for Interactive or background / DL:16 + DL:16 kbps / PS RAB

Higher layer	RAB/Signalling RB	RAB	RAB	
RLC	Logical channel type	DTCH	DTCH	
	RLC mode	AM	AM	
	Payload sizes, bit	320	320	
	Max data rate, bps	16000	16000	
	AMD PDU header, bit	16	16	
MAC	MAC header, bit	4	4	
	MAC multiplexing	2 logical channel multiplexing		
Layer 1	TrCH type	DCH		
	TB sizes, bit	340		
	TFS	TF0, bits	0x340	
		TF1, bits	1x340	
		TF2, bits	2x340	
	TTI, ms	40		
	Coding type	TC		
	CRC, bit	16		
	Max number of bits/TTI after channel coding	2148		
RM attribute	135-175			

7.1.8469.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1 of [1]

7.1.8469.2.1.3 TFCS

TFCS size	6
TFCS	(16 kbps RAB + 16 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1)

7.1.8469.2.2 Physical channel parameters

DPCH Downlink	DTX position	Flexible	
	Spreading factor	128	
	DPCCH	Number of TFCI bits/slot	2
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	32
		Number of data bits/frame	480

[7.1.8570 Interactive or background / UL:64 DL:8 kbps / PS RAB + Interactive or Background / UL:64 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH](#)

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 128kbps. This is supported in release 99.](#)

[7.1.8570.1 Uplink](#)

[See clause 6.10.2.4.1.57.1 of \[1\]](#)

[7.1.8570.2 Downlink](#)

[See clause 6.10.2.4.1.56.2 of \[1\]](#)

[7.1.8674 Interactive or Background / UL:64 DL:128 kbps / PS RAB + Interactive or Background / UL:64 DL:128 kbps / PS RAB+ UL:3.4 DL:3.4 kbps SRBs for DCCH](#)

[The minimum UE classes supporting this combination are, UL: 64kbps, DL: 128kbps. This is supported in release 99.](#)

[7.1.8674.1 Uplink](#)

[See clause 6.10.2.4.1.57.1 of \[1\]](#)

[7.1.8674.2 Downlink](#)

[7.1.8674.2.1 Transport channel parameters](#)

[7.1.8674.2.1.1 Transport channel parameters for Interactive or background / DL:128 + DL:128 kbps / PS RAB](#)

Higher layer	RAB/Signalling RB	RAB	RAB	
RLC	Logical channel type	DTCH	DTCH	
	RLC mode	AM	AM	
	Payload sizes, bit	320	320	
	Max data rate, bps	128000	128000	
	AMD PDU header, bit	16	16	
MAC	MAC header, bit	4	4	
	MAC multiplexing	2 logical channel multiplexing		
Layer 1	TrCH type	DCH		
	TB sizes, bit	340		
	TFS	TF0, bits	0x340	
		TF1, bits	1x340	
		TF2, bits	2x340	
		TF3, bits	4x340	
		TF4, bits	8x340	
	TTL, ms	20		
	Coding type	TC		
	CRC, bit	16		
Max number of bits/TTI after channel coding	8556			
RM attribute	120-160			

[7.1.8674.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH](#)

[See clause 6.10.2.4.1.2.2.1.1 of \[1\].](#)

7.1.8674.2.1.3 TFCS

<u>TFCS size</u>	10
<u>TFCS</u>	(128 kbps RAB + 128 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF3,TF0), (TF4,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1), (TF3,TF1), (TF4,TF1)

7.1.8674.2.2 Physical channel parameters

<u>DPCH</u>	<u>DTX position</u>	<u>Flexible</u>
<u>Downlink</u>	<u>Spreading factor</u>	<u>16</u>
	<u>DPCCH</u>	
	<u>Number of TFCI bits/slot</u>	<u>8</u>
	<u>Number of TPC bits/slot</u>	<u>8</u>
	<u>Number of Pilot bits/slot</u>	<u>16</u>
	<u>DPDCH</u>	
	<u>Number of data bits/slot</u>	<u>288</u>
	<u>Number of data bits/frame</u>	<u>4320</u>

7.1.8772 Interactive or Background / UL:64 DL:384 kbps / PS RAB +
Interactive or Background / UL:64 DL:384 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

The minimum UE classes supporting this combination are, UL: 64kbps, DL: 384kbps. This is supported in release 99.

7.1.8772.1 Uplink

See clause 6.10.2.4.1.57.1 of [1].

7.1.8772.2 Downlink

7.1.8772.2.1 Transport channel parameters

7.1.8772.2.1.1 Transport channel parameters for Interactive or background / DL:384 + DL:384 kbps / PS RAB

Higher layer	RAB/Signalling RB	RAB	RAB	
RLC	Logical channel type	DTCH	DTCH	
	RLC mode	AM	AM	
	Payload sizes, bit	320	320	
	Max data rate, bps	384000	384000	
	AMD PDU header, bit	16	16	
MAC	MAC header, bit	4	4	
	MAC multiplexing	2 logical channel multiplexing		
Layer 1	TrCH type	DCH		
	TB sizes, bit	340		
	TFS	TF0, bits	0x340	
		TF1, bits	1x340	
		TF2, bits	2x340	
		TF3, bits	4x340	
		TF4, bits	8x340	
		TF5, bits	12x340	
	TTI, ms	10		
	Coding type	TC		
	CRC, bit	16		
Max number of bits/TTI after channel coding	12828			
RM attribute	110-150			

7.1.8772.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1 of [1].

7.1.8772.2.1.3 TFCS

TFCS size	12
TFCS	(384 kbps RAB + 384 kbps RAB, DCCH) = (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1)

7.1.8772.2.2 Physical channel parameters

DPCH Downlink	DTX position	Flexible
	Spreading factor	8
DPCCH	Number of TFCI bits/slot	8
	Number of TPC bits/slot	8
	Number of Pilot bits/slot	16
DPDCH	Number of data bits/slot	608
	Number of data bits/frame	9120

7.1.8873 Interactive or background / UL:128 DL:128 kbps / PS RAB + Interactive or Background / UL:128 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

The minimum UE classes supporting this combination are, UL: 128kbps, DL: 128kbps. This is supported in release 99.

7.1.8873.1 Uplink7.1.8873.1.1 Transport channel parameters7.1.8873.1.1.1 Transport channel parameters for Interactive or Background / UL:128 + UL:128 kbps / PS RAB

Higher layer	RAB/Signalling RB	RAB	RAB	
RLC	Logical channel type	DTCH	DTCH	
	RLC mode	AM	AM	
	Payload sizes, bit	320	320	
	Max data rate, bps	128000	128000	
	AMD PDU header, bit	16	16	
MAC	MAC header, bit	4	4	
	MAC multiplexing	2 logical channel multiplexing		
Layer 1	TrCH type	DCH		
	TB sizes, bit	340		
	TFS	TF0, bits	0x340	
		TF1, bits	1x340	
		TF2, bits	2x340	
		TF3, bits	4x340	
		TF4, bits	8x340	
	TTL, ms	20		
	Coding type	TC		
	CRC, bit	16		
	Max number of bits/TTL after channel coding	8556		
	Uplink: Max number of bits/radio frame before rate matching	4278		
RM attribute	120-160			

7.1.8873.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1 of [1]

7.1.8873.1.1.3 TFCS

TFCS size	10
TFCS	(128 kbps RAB + 128 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1)

7.1.8873.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	8
	Max number of DPDCH data bits/radio frame	4800
	Puncturing Limit	0.96

7.1.8873.2 Downlink

7.1.8873.2.1 Transport channel parameters

7.1.8873.2.1.1 Transport channel parameters for Interactive or background / DL:128 + DL:128 kbps / PS RAB

Higher layer	RAB/Signalling RB	RAB	RAB	
RLC	Logical channel type	DTCH	DTCH	
	RLC mode	AM	AM	
	Payload sizes, bit	320	320	
	Max data rate, bps	128000	128000	
	AMD PDU header, bit	16	16	
MAC	MAC header, bit	4	4	
	MAC multiplexing	2 logical channel multiplexing		
Layer 1	TrCH type	DCH		
	TB sizes, bit	340		
	TFS	TF0, bits	0x340	
		TF1, bits	1x340	
		TF2, bits	2x340	
		TF3, bits	4x340	
		TF4, bits	8x340	
	TTI, ms	20		
	Coding type	TC		
	CRC, bit	16		
	Max number of bits/TTI after channel coding	8556		
RM attribute	120-160			

7.1.8873.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1 of [1].

7.1.8873.2.1.3 TFCS

TFCS size	10
TFCS	(128 kbps RAB + 128 kbps RAB, DCCH) = (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF3,TF0), (TF4,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1), (TF3,TF1), (TF4,TF1)

7.1.8873.2.2 Physical channel parameters

DPCH Downlink	DTX position	Flexible	
	Spreading factor	16	
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	8
		Number of Pilot bits/slot	16
	DPDCH	Number of data bits/slot	288
		Number of data bits/frame	4320

7.1.8974 Interactive or background / UL:128 DL:32 kbps / PS RAB + Interactive or Background / UL:128 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

The minimum UE classes supporting this combination are, UL: 128kbps, DL: 32kbps plus support for turbo coding. This is supported in release 99.

7.1.8974.1 Uplink

See clause 7.1.8873.1

7.1.8974.2 Downlink

7.1.8974.2.1 Transport channel parameters

7.1.8974.2.1.1 Transport channel parameters for Interactive or background / DL:32 + DL:32 kbps / PS RAB

Higher layer	RAB/Signalling RB	<u>RAB</u>	<u>RAB</u>	
<u>RLC</u>	<u>Logical channel type</u>	<u>DTCH</u>	<u>DTCH</u>	
	<u>RLC mode</u>	<u>AM</u>	<u>AM</u>	
	<u>Payload sizes, bit</u>	<u>320</u>	<u>320</u>	
	<u>Max data rate, bps</u>	<u>32000</u>	<u>32000</u>	
	<u>AMD PDU header, bit</u>	<u>16</u>	<u>16</u>	
<u>MAC</u>	<u>MAC header, bit</u>	<u>4</u>	<u>4</u>	
	<u>MAC multiplexing</u>	<u>2 logical channel multiplexing</u>		
<u>Layer 1</u>	<u>TrCH type</u>	<u>DCH</u>		
	<u>TB sizes, bit</u>	<u>340</u>		
	<u>TFS</u>	<u>TF0, bits</u>	<u>0x340</u>	
		<u>TF1, bits</u>	<u>1x340</u>	
		<u>TF2, bits</u>	<u>2x340</u>	
		<u>TF3, bits</u>	<u>3x340</u>	
		<u>TF4, bits</u>	<u>4x340</u>	
	<u>TTI, ms</u>	<u>40</u>		
	<u>Coding type</u>	<u>TC</u>		
	<u>CRC, bit</u>	<u>16</u>		
<u>Max number of bits/TTI after channel coding</u>	<u>4284</u>			
<u>RM attribute</u>	<u>135-175</u>			

7.1.8974.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1 of [1]

7.1.8974.2.1.3 TFCS

<u>TFCS size</u>	<u>10</u>
<u>TFCS</u>	<u>(32 kbps RAB + 32 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1)</u>

7.1.8974.2.2 Physical channel parameters

<u>DPCH Downlink</u>	<u>DTX position</u>	<u>Flexible</u>		
	<u>Spreading factor</u>	<u>64</u>		
	<u>DPCCH</u>	<u>Number of TFCI bits/slot</u>	<u>8</u>	
		<u>Number of TPC bits/slot</u>	<u>4</u>	
		<u>Number of Pilot bits/slot</u>	<u>8</u>	
	<u>DPDCH</u>	<u>Number of data bits/slot</u>	<u>60</u>	
		<u>Number of data bits/frame</u>	<u>900</u>	

7.6.2—Combinations on S-CCPCH

7.6.2.1 Stand-alone signalling RB for PCCH

See clause 6.10.2.4.3.1 of [\[1\]TS34.108](#).

[The minimum UE class supporting this combination is DL: 32 kbps.](#)

[This is supported in release 99.](#)

7.6.2.2 Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

See clause 6.10.2.4.3.2 of [\[1\]TS34.108](#).

[The minimum UE class supporting this combination is DL: 64 kbps.](#)

[This is supported in release 99.](#)

7.6.2.3 Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

See clause 6.10.2.4.3.2a of [\[1\]TS34.108](#).

[The minimum UE class supporting this combination is DL: 64 kbps.](#)

[This is supported in release 99.](#)

7.6.2.4 Interactive/Background 32 kbps RAB + SRB for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH

See clause 6.10.2.4.3.3 of [\[1\]TS34.108](#).

[The minimum UE class supporting this combination is DL: 64 kbps.](#)

[This is supported in release 99.](#)

7.6.2.5 RB for CTCH + SRB for CCCH + SRB for BCCH

See clause 6.10.2.4.3.4 of [\[1\]TS34.108](#).

[The minimum UE class supporting this combination is DL: 32 kbps.](#)

[This is supported in release 99.](#)

7.6.3—Combinations on PRACH

7.6.3.1 Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH

See clause 6.10.2.4.4.1 of [\[1\]TS34.108](#).

[The minimum UE class supporting this combination is UL: 32 kbps.](#)

[This is supported in release 99.](#)

7.6.3.2 Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH

See clause 6.10.2.4.4.2 of [\[1\]TS34.108](#).

[The minimum UE class supporting this combination is UL: 32 kbps.](#)

[This is supported in release 99.](#)

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Note to the editor: Level of the headings should be changed.

8.16.17.1 Combinations on DPCH

87.1.1 Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH

See clause 6.10.3.4.1.1 of ~~TS 34.108~~[1]

The minimum UE classes supporting this combination are, UL: 32kbps, DL: 32kbps.

This is supported in release 99.

87.1.2 Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2 of ~~TS 34.108~~[1] See clause 6.10.3.4.1.2 of [1] for 3.84Mcps TDD, and clause 6.11.5.4.1.2 of [1] for 1.28Mcps TDD.

The minimum UE classes supporting this combination are, UL: 32kbps, DL: 32kbps.

This is supported in release 99.

87.1.3 Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH

See clause 6.10.3.4.1.3 of ~~TS 34.108~~[1] See clause 6.10.3.4.1.3 of [1] for 3.84Mcps TDD, and clause 6.11.5.4.1.3 of [1] for 1.28Mcps TDD.

The minimum UE classes supporting this combination are, UL: 32kbps, DL: 32kbps.

This is supported in release 99.

87.1.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.4 of ~~TS 34.108~~[1] See clause 6.10.3.4.1.4 of [1] for 3.84Mcps TDD, and clause 6.11.5.4.1.4 of [1] for 1.28Mcps TDD.

The minimum UE classes supporting this combination are, UL: 32kbps, DL: 32kbps.

This is supported in release 99.

87.1.5 Conversational / speech / UL:10.2 DL:10.2 kbps / CS RAB + UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.5 of ~~TS 34.108~~[1] See clause 6.10.3.4.1.5 of [1] for 3.84Mcps TDD, and clause 6.11.5.4.1.5 of [1] for 1.28Mcps TDD.

The minimum UE classes supporting this combination are, UL: 32kbps, DL: 32kbps.

[This is supported in release 99.](#)

87.1.6 Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

[See clause 6.10.3.4.1.6 of TS 34.108 \[1\] \[1\]](#) See clause 6.10.3.4.1.6 of [1] for 3.84Mcps TDD, and clause 6.11.5.4.1.6 of [1] for 1.28Mcps TDD.

[The minimum UE classes supporting this combination are, UL: 32kbps, DL: 32kbps.](#)

[This is supported in release 99.](#)

87.1.7 Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

[See clause 6.10.3.4.1.7 of TS 34.108 \[1\] \[1\]](#) See clause 6.10.3.4.1.7 of [1] for 3.84Mcps TDD, and clause 6.11.5.4.1.7 of [1] for 1.28Mcps TDD.

[The minimum UE classes supporting this combination are, UL: 32kbps, DL: 32kbps.](#)

[This is supported in release 99.](#)

87.1.8 Conversational / speech / UL:6.7 DL: 6.7 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

[See clause 6.10.3.4.1.8 of TS 34.108 \[1\] \[1\]](#) See clause 6.10.3.4.1.8 of [1] for 3.84Mcps TDD, and clause 6.11.5.4.1.8 of [1] for 1.28Mcps TDD.

[The minimum UE classes supporting this combination are, UL: 32kbps, DL: 32kbps.](#)

[This is supported in release 99.](#)

87.1.9 Conversational / speech / UL:5.9 DL:5.9 kbps / CS rab + UL:3.4 DL:3.4 kbps SRBs for DCCH

[See clause 6.10.3.4.1.9 of TS 34.108 \[1\] \[1\]](#) See clause 6.10.3.4.1.9 of [1] for 3.84Mcps TDD, and clause 6.11.5.4.1.9 of [1] for 1.28Mcps TDD.

[The minimum UE classes supporting this combination are, UL: 32kbps, DL: 32kbps.](#)

[This is supported in release 99.](#)

87.1.10 Conversational / speech / UL:5.15 DL:5.15 kbps / CS RAB + UL:1.7 DL:1.7 kbps SRBs for DCCH

[See clause 6.10.3.4.1.10 of TS 34.108 \[1\] \[1\]](#) See clause 6.10.3.4.1.10 of [1] for 3.84Mcps TDD, and clause 6.11.5.4.1.10 of [1] for 1.28Mcps TDD.

[The minimum UE classes supporting this combination are, UL: 32kbps, DL: 32kbps.](#)

[This is supported in release 99.](#)

87.1.11 Conversational / speech / UL:4.75 DL:4.75 kbps / CS RAB + UL:1.7 DL:1.7 kbps SRBs for DCCH

[See clause 6.10.3.4.1.11 of TS 34.108 \[1\] \[1\]](#) See clause 6.10.3.4.1.11 of [1] for 3.84Mcps TDD, and clause 6.11.5.4.1.11 of [1] for 1.28Mcps TDD.

The minimum UE classes supporting this combination are, UL: 32kbps, DL: 32kbps.

This is supported in release 99.

87.1.12 Conversational / unknown / UL:28.8 DL:28.8kbps / CS RAB + UL:3.4 DL:3.4kbps SRBs for DCCH

See clause 6.10.3.4.1.12 of TS 34.108[1] See clause 6.10.3.4.1.12 of [1] for 3.84Mcps TDD, and clause 6.11.5.4.1.12 of [1] for 1.28Mcps TDD.

The minimum UE classes supporting this combination are, UL: 32kbps plus support for turbo coding, maximum TB bits 2560 and TB TC bits 1280, DL: 32kbps plus support for turbo coding, maximum TB bits 2560 and TB TC bits 1280.

This is supported in release 99.

87.1.13 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.13 of TS 34.108[1] See clause 6.10.3.4.1.13 of [1] for 3.84Mcps TDD, and clause 6.11.5.4.1.13 of [1] for 1.28Mcps TDD.

The minimum UE classes supporting this combination are, UL: 64kbps, DL: 32kbps plus support for turbo coding, maximum TB bits 2560 (Alt. 3840) and TB TC bits 1280 (Alt. 2560).

This is supported in release 99.

87.1.14 Conversational / unknown / UL:32 DL: 32 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.14 of TS 34.108[1] See clause 6.10.3.4.1.14 of [1] for 3.84Mcps TDD, and clause 6.11.5.4.1.14 of [1] for 1.28Mcps TDD.

For 3.84Mcps TDD the minimum UE classes supporting this combination are, UL: 32kbps plus support for minimum SF 4, turbo coding, maximum TB bits 1280 (Alt. 2560) and TB TC bits 640 (Alt. 1280), DL: 32kbps plus support for turbo coding, maximum TB bits 1280(Alt. 2560) and TB TC bits 640 (Alt. 1280).

This is supported in release 99.

For 1.28Mcps TDD the minimum UE classes supporting this combination are, UL: 32kbps plus support for turbo coding, maximum TB bits 1280 (Alt. 2560) and TB TC bits 640 (Alt. 1280), DL: 32kbps plus support for turbo coding and maximum TB bits 1280(Alt. 2560) and TB TC bits 640 (Alt. 1280).

This is supported in release 99.

87.1.15 Streaming / unknown / UL:14.4 DL:14.4 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.15 of TS 34.108[1] See clause 6.10.3.4.1.15 of [1] for 3.84Mcps TDD, and clause 6.11.5.4.1.15 of [1] for 1.28Mcps TDD.

The minimum UE classes supporting this combination are, UL: 32kbps plus support for turbo coding, maximum TB bits 1280 and TB TC bits 640, DL: 32kbps plus support for turbo coding, maximum TB bits 1280 and TB TC bits 640.

This is supported in release 99.

87.1.16 Streaming / unknown / UL:28.8 DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

~~See clause 6.10.3.4.1.16 of TS 34.108~~[1] See clause 6.10.3.4.1.16 of [1] for 3.84Mcps TDD, and clause 6.11.5.4.1.16 of [1] for 1.28Mcps TDD.

The minimum UE classes supporting this combination are, UL: 32kbps plus support for turbo coding, maximum TB bits 2560 and TB TC bits 1280, DL: 32kbps plus support for turbo coding, maximum TB bits 2560 and TB TC bits 1280.

This is supported in release 99.

87.1.17 Streaming / unknown / UL:57.6 DL:57.6 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.17 of ~~TS 34.108~~[1]

The minimum UE classes supporting this combination are, UL: 64kbps, DL: 64kbps.

This is supported in release 99.

87.1.18 Streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.18 of ~~TS 34.108~~[1]

The minimum UE classes supporting this combination are, UL: 32kbps support for turbo codes not required, DL: 128kbps.

This is supported in release 99.

87.1.19 Streaming / unknown / UL:64 DL:0 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.19 of ~~TS 34.108~~[1]

The minimum UE classes supporting this combination are, UL: 64kbps plus support for transmission of 16 transport blocks in a TTI, and 2 physical channels per TS, DL: 32kbps support for turbo codes not required.

This is supported in release 99.

87.1.20~~30~~ Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.23 of [1]~~TS 35.108~~

The minimum UE classes supporting this combination are, UL: 64kbps, DL: 32kbps plus support for turbo coding.

This is supported in release 99.

87.1.21~~41~~ Interactive or background / UL:64 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.24 of ~~TS 34.108~~[1]

The minimum UE classes supporting this combination are, UL: 64kbps plus support for transmission of 16 transport blocks in a TTI, and 2 physical channels per TS, DL: 32kbps plus support for turbo coding.

This is supported in release 99.

[87.1.2252](#) Interactive or background / UL:32 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.25 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are, UL: 64kbps, DL: 64kbps. This is supported in release 99.

[87.1.2363](#) Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.26 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are UL: 64kbps plus support for transmission of 16 transport blocks in a TTI, and 2 physical channels per TS, DL: 64kbps.

This is supported in release 99.

[87.1.2474](#) Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.27 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are, UL: 64kbps plus support for transmission of 16 transport blocks in a TTI, and 2 physical channels per TS, DL: 128kbps.

This is supported in release 99.

[87.1.2585](#) Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.28 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are, UL: 128kbps plus support for transmission of 16 transport blocks in a TTI, DL: 128kbps.

This is supported in release 99.

[87.1.2696](#) Interactive or background / UL:64 DL:144 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.29 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are, UL: 64kbps plus support for transmission of 16 transport blocks in a TTI, and 2 physical channels per TS, DL: 128kbps.

This is supported in release 99.

[87.1.273027](#) Interactive or background / UL:144 DL:144 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.30 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are, UL: 64kbps plus support for transmission of 16 transport blocks in a TTI, and 2 physical channels per TS, DL: 128kbps.

This is supported in release 99.

[87.1.283128](#) Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.31 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are, UL: 64kbps plus support for transmission of 16 transport blocks in a TTI, and 2 physical channels per TS, DL: 384kbps.

This is supported in release 99.

[87.1.293229](#) Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.32 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are, UL: 64kbps plus support for transmission of 16 transport blocks in a TTI, and 2 physical channels per TS, DL: 384kbps. This is supported in release 99.

[87.1.3030](#) Interactive or background / UL:128 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.33 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are, UL: 128kbps plus support for transmission of 16 transport blocks in a TTI, DL: 384kbps.

This is supported in release 99.

[87.1.3141](#) Interactive or background / UL:384 DL:384 kbps / PS RAB +UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.34 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are, UL: 768kbps, DL: 384kbps.

This is supported in release 99.

[87.1.3252](#) Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.35 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are, UL: 64kbps plus support for transmission of 16 transport blocks in a TTI, and 2 physical channels per TS, DL: 2048kbps plus support for maximum TB bits 40960 and maximum TB TC bits 40960 .

This is supported in release 99.

[87.1.3363](#) Interactive or background / UL:128 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.36 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are, UL: 128kbps plus support for transmission of 16 transport blocks in a TTI, DL: 2048kbps plus support for maximum TB bits 40960 and maximum TB TC bits 40960. This is supported in release 99.

~~78.1.34~~⁷⁴ [Interactive or background / UL :384 DL:2048 kbps / PS RAB+UL:3.4 DL:3.4 kbps SRBs for DCCH](#)

See clause 6.10.3.4.1.37 of [TS 34.108](#)[1].

The minimum UE classes supporting this combination are UL: 768 kbps plus support for turbo coding, DL: 2048 kbps plus support for turbo coding.

This is supported by release 99.

~~87.1.35~~⁸⁵ [Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH](#)

See clause 6.10.3.4.1.38 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are UL: 64 kbps plus support for turbo coding, DL:64 kbps plus support for Turbo coding .

This is supported by release 99.

~~87.1.36~~⁹⁶ [Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH](#)

See clause 6.10.3.4.1.39 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are UL:64 kbps plus support for turbo coding, DL:64 kbps plus support for turbo coding.

This is supported by release 99.

~~78.1.37~~⁴⁰³⁷ [Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH](#)

See clause 6.10.3.4.1.40 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are UL:64 kbps plus support for turbo coding (plus support of SF1 for 1.28 Mcps TDD), DL:64 kbps plus support for turbo coding (plus support of SF1 for 1.28 Mcps TDD).

This is supported by release 99.

~~87.1.38~~⁴¹³⁸ [Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH](#)

See clause 6.10.3.4.1.41 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are UL:64 kbps plus support for turbo coding (plus support of SF1 for 1.28 Mcps TDD), DL: 128 kbps plus support for turbo coding.

This is supported by release 99.

87.1.394239 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.42 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are UL: 64 kbps plus support for turbo coding (plus support of SF1 for 1.28 Mcps TDD), DL: 384 kbps plus support for turbo coding.

This is supported by release 99.

87.1.40430 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.43 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are UL:64 kbps plus support of turbo coding (plus support of SF1 for 1.28 Mcps TDD), DL: 768 kbps plus support of turbo coding.

This is supported by release 99.

87.1.41441 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:128 DL:2048 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.44 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are UL: 64 kbps plus support for turbo coding (plus support of SF1 and 8PSK for 1.28 Mcps TDD), DL:2048 kbps plus support for turbo coding .

This is supported by release 99.

87.1.4252 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Streaming / unknown / UL:57.6 DL:57.6 kbps / CS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.45 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are UL: 64 kbps plus support of turbo coding , DL:64 kbps plus support of turbo coding.

This is supported by release 99.

87.1.43463 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.46 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are UL: 64 kbps plus support for turbo coding, DL: 64 kbps plus support for turbo coding.

This is supported by release 99.

[78.1.44494](#) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.49 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are UL:64 kbps plus support for turbo coding (plus support of SF1 for 1.28 Mcps TDD), DL: 64 kbps plus support for turbo coding.

This is supported by release 99.

[87.1.455045](#) Conversational / unknown / UL:64 DL:64 kbps / CS RAB +
Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.50 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are UL: 64 kbps plus support for turbo coding (plus support of SF1 for 1.28 Mcps TDD), DL: 128 kbps plus support for turbo coding.

This is supported by release 99

[87.1.465146](#) Conversational / unknown / UL:64 DL:64 kbps / CS RAB +
Interactive or background / UL:64 DL:64 kbps / CS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.51 of [TS 34.108](#)[1]

The minimum UE classes for this combinations are UL: 64 kbps plus support for turbo coding (plus support of SF1 for 1.28 Mcps TDD), DL: 128 kbps plus support for turbo coding (plus support of SF1 for 1.28 Mcps TDD).

This is supported by release 99.

[87.1.475247](#) Conversational / unknown / UL:64 DL:64 kbps / CS RAB +
Interactive or background / UL:64 DL:128 kbps / CS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.52 of [TS 34.108](#)[1]

The minimum UE classes for this combination are UL: 64 kbps plus support of turbo coding (plus support of SF1 for 1.28 Mcps TDD), DL: 384 kbps plus support of turbo coding.

This is supported by release 99.

[87.1.485348](#) Conversational / unknown / UL:64 DL:64 kbps / CS RAB +
Interactive or background / UL:128 DL:128 kbps / CS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.53 of [TS 34.108](#)[1]

The minimum UE classes for this combination are UL: 128 kbps plus support for turbo coding (plus support of SF1 for 1.28 Mcps TDD), DL: 384 kbps plus support for turbo coding.

This is supported by release 99.

87.1.495449 Interactive or background / UL:64 DL:128 kbps / PS RAB + streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB + UL:3.4 DL:3.4kbps SRBs for DCCH

See clause 6.10.3.4.1.54 of [TS 34.108](#)[1]

The minimum UE classes for this combination are UL: 64 kbps plus support for turbo coding, DL: 128 kbps plus support for turbo coding.

This is supported by release 99.

78.2 Combinations on PDSCH, SCCH, PUSCH and PRACH

8.2.1 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:16.8 DL:33.6 kbps SRBs for DCCH, CCCH and BCCH + UL:16.8 DL:16 kbps SRBs for SHCCH

See clause 6.10.3.4.2.1 of [TS 34.108](#)[1]

See clause 6.10.3.4.2.1 of [1] for 3.84Mcps TDD, and clause 6.11.5.4.2.1 of [1] for 1.28Mcps TDD.

For 3.84Mcps TDD the minimum UE classes supporting this combination are, UL: 128kbps (See Note), DL: 128kbps plus support for 21 physical channels per frame, maximum TB bits (Alt. 7680), TB CC bits 1280, TB TC bits (Alt. 6400) and (Alt. TTI TB 32).

This is supported in release 99.

For 1.28Mcps TDD the minimum UE classes supporting this combination are, UL: 128kbs plus support for SF 1, DL: 384kbs plus support for (Alt. 8PSK), maximum TB bits (Alt. 7680), TB CC bits 1280, TB TC bits (Alt. 6400) and (Alt. TTI TB 32).

This is supported in release 99.

8.2.2 Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:16.8 DL:33.6 kbps SRBs for DCCH, CCCH and BCCH + UL:16.8 DL:16 kbps SRBs for SHCCH

See clause 6.10.3.4.2.2 of [TS 34.108](#)[1]

For 3.84Mcps TDD the minimum UE classes supporting this combination are, UL: 128kbps (See Note), DL: 384kbps plus support for 29 physical channels per frame, maximum TB bits (Alt. 10240), TB CC bits 1280, and TB TC bits (Alt. 8960).

This is supported in release 99.

For 1.28Mcps TDD the minimum UE classes supporting this combination are, UL: 128kbs plus support for SF 1, DL: 384kbs (with SF 1 option) plus support for maximum TB bits (Alt. 10240), TB CC bits 1280, and TB TC bits (Alt. 8960).

This is supported in release 99.

8.2.3 Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:16.8 DL:33.6 kbps SRBs for DCCH, CCCH and BCCH + UL:16.8 DL:16 kbps SRBs for SHCCH

See clause 6.10.3.4.2.3 of [TS 34.108](#)[1]

See clause 6.10.3.4.2.3 of [1] for 3.84Mcps TDD, and clause 6.11.5.4.2.3 of [1] for 1.28Mcps TDD.

For 3.84Mcps TDD the minimum UE classes supporting this combination are, UL: 128kbps (See Note), DL: 2Mbps plus support for 137 physical channels per frame, maximum TB bits 40960 (Alt. 81920), TB CC bits 1280, and TB TC bits 40960 (Alt. 81920).

This is supported in release 99.

For 1.28Mcps TDD the minimum UE classes supporting this combination are, UL: 128kbs plus support for SF 1, DL: 2Mbps plus support for maximum TB bits 40960 (Alt. 81920) and TB CC bits 1280.

This is supported in release 99.

8.3 Combinations on PDSCH, SCCPCH, DPCH, PUSCH and PRACH

8.3.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH + interactive or background / UL:64 DL:256 kbps / PS RAB + UL:16.8 kbps SRBs for CCCH and SHCCH + DL:33.6 kbps SRBs for CCCH, SHCCH and BCCH

See clause 6.10.3.4.3.1 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are, UL: 64kbps plus support for maximum TB CC bits 1280, and 2 physical channels per TS, DL: 384kbps plus support for maximum TB CC bits 1280.

This is supported in release 99.

8.3.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH + Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:16.8 kbps SRBs for CCCH and SHCCH + DL:33.6 kbps SRBs for CCCH, SHCCH and BCCH

See clause 6.10.3.4.3.2 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are, UL: 64kbps plus support for maximum TB CC bits 1280, and 2 physical channels per TS, DL: 384kbps plus support for maximum TB CC bits 1280.

This is supported in release 99.

8.3.3 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH + Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:16.8 kbps SRBs for CCCH and SHCCH + DL:33.6 kbps SRBs for CCCH, SHCCH and BCCH

See clause 6.10.3.4.3.3 of [TS 34.108](#)[1]

The minimum UE classes supporting this combination are UL: 64kbps plus support for maximum TB CC bits 1280, and 2 physical channels per TS, DL: 384kbps plus support for maximum TB CC bits 1280, DL: 2048kbps plus support for maximum TB CC bits 1280. This is supported in release 99.

8.4.7.2 Combinations on SCCPCH

8.4.17.2.1 Stand – alone signalling RB for PCCH

See clause 6.10.3.4.4.1 of [TS 34.108](#)[1]

The minimum UE class supporting this combination is DL: 32 kbps. This is supported by release 99

8.4.27.2.1 Interactive / Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

See clause 6.10.3.4.4.2 of ~~TS 34.108~~[1].

The minimum UE class supporting this combination is DL:64 kbps. This is supported by release 99.

8.4.37.2.1 Interactive / Background 32 kbps RAB + SRB for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH

See clause 6.10.3.4.4.3 of ~~TS 34.108~~[1].

The minimum UE class supporting this combination is DL: 64 kbps. This is supported by release 99.

8.57.2 Combinations on PRACH

8.5.17.2.1 SRB for CCCH + SRB for DCCH

See clause 6.10.3.4.5.1 of ~~TS 34.108~~[1].

The minimum UE class supporting this combination is UL: 32 kbps. This is supported by release 99.

~~6.1.1.37.1.1.3. UE capability~~

~~The UE capability needed in support of the radio configuration is XXX~~

~~87 — Examples of Radio Bearers and signalling Radio Bearers for TDD UE capability~~

~~The UE capability needed in support of the radio configuration is XXX...~~

Annex 1~~X~~: Change history

Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
09/2002	RP-17	RP-02XXX	-		eCreation.	-	
12/2002	RP-18	RP-020890			Merge of RP-020877 with RP-020814. Numbering changed. Presented to RAN#18 for approval.	2.0.0	6.0.0