



5G-MAG MBMS Reference Tools
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DATA FLOW & CODE OVERVIEW

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HF

SDR Hardware
BladeRF / LimeSDR mini

I/Q

USB3

SoapySDR
system library

File
raw I/Q

I/Q

↓

srslte_filesource
lib/src/phy/io/filesource.c

I/Q

↓

SdrReader
src/SdrReader.cpp

⊙

Buffer

(CB)

↑

Phy
src/Phy.cpp

(CB)

↑

srslte_ue_sync
lib/src/phy/ue/ue_sync.c

↑

↑

srslte_ue_dl
lib/src/phy/ue/ue_dl.c

↑

↑

srslte_ofdm_rx
lib/src/phy/dft/ofdm.c

↑

↑

srslte_chest_dl
lib/src/phy/ch_estimation/chest_dl.c

↑

↑

sync: CFO/PSS/SSS/etc
lib/src/phy/sync/*

↑

↑

srslte channel decoders
lib/src/phy/phch/pdsch.c, pmch.c, sch.c ...

↑

↑

ASN.1 unmarshalling
lib/src/asn1/rrc_asn1.cc

↑

RLC
lib/src/upper/rlc.cc

↑

PDCP
lib/src/upper/pdcp.cc

↑

CAS / MBSFN Frame Processors
src/CasFrameProcessor.cpp, src/MbsfnFrameProcessor.cpp

↑

↑

RRC
src/Rrc.cpp

↑

Gateway
src/Gw.cpp

↑

tun Interface

IP packets

Colour legend:

new	changed	unchanged
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rt-mbms-mw - <https://github.com/5G-MAG/rt-mbms-mw>

LibFlute - submodule at /lib/libflute

ALC Packet
src/AlcPacket.cpp

↑

Encoding Symbol
src/EncodiungSymbol.cpp

↑

File(s)
src/File.cpp

↑

FLUTE Receiver
src/Receiver.cpp

↑

Service
src/Service.cpp

↑

RESTful API
src/RestHandler.cpp

↑

FLUTE Receiver
src/Receiver.cpp

↑

ALC Packet
src/AlcPacket.cpp

↑

Encoding Symbol
src/EncodiungSymbol.cpp

↑

File(s)
src/File.cpp

↑

FLUTE Receiver
src/Receiver.cpp

↑

http(s)
manifests, playlists, video segments



Thank you for your attention –
and hopefully numerous contributions!

Repos:
<https://github.com/5G-MAG>

FeMBMS-specific changes in srsLTE:
<https://github.com/Austrian-Broadcasting-Services/srsLTE/compare/45486b...6a0dba>