

# Callisto RF Block Diagram – Superset

SKU	LTE Bands	WCDMA Bands	CDMA Bands	GSM Bands	TD-SCDMA Bands	HW paths	Simultaneous Modes
1. NorthAm:	B2, 4, 5, 7, 12/17	B2d, 4d, 5d	-	850,900,1800,1900	-	2,4,5,7,12	-
2. LatAm:	B4, 7, 28	B1, 2, 4d, 5, 8	-	850,900,1800,1900	-	1,2,4,5,7,8,28	-
3. LatAm2:DS	B4, 7, 28	B1, 2, 4d, 5, 8	-	850,900,1800,1900	-	1,2,4,5,7,8,28	-
4. LatAm3:DS DTV	B4, 7, 28	B1, 2, 4d, 5, 8	-	850,900,1800,1900	-	1,2,4,5,7,8,28	-
5. EU:	B1, 3, 7, 20	B1d, 5, 8	-	850,900,1800,1900	-	1,3,5,7,8,20	-
6. APAC DS	B1, 3, 7, 28, 40	B1d, 5, 8, 19	-	850,900,1800,1900	-	1,3,5,7,8,28	-
7. SPR USC:	B25/2, 4, 26/5, 12/17, 41	B2d, 4d, 5d	BC0d, 1d, 10d	850,900,1800,1900	-	2(25),4,5(26),12,41	SRLTE

### Main2: LTE SKUs:

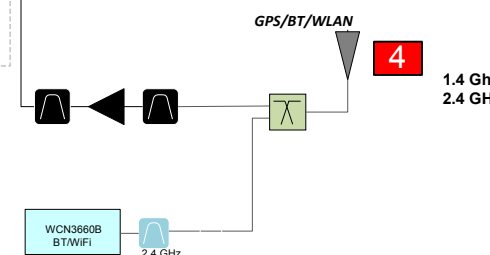
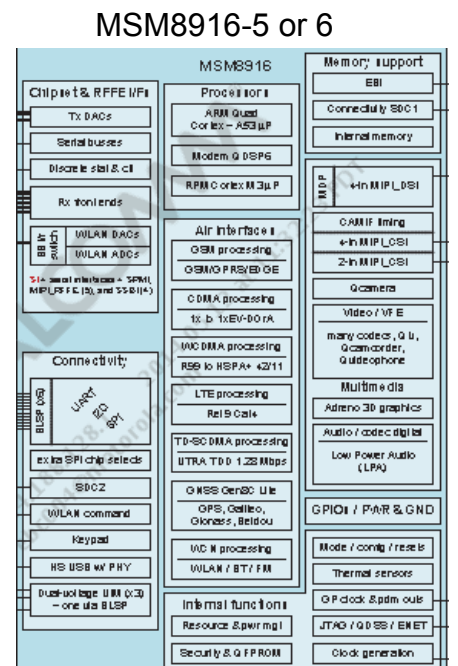
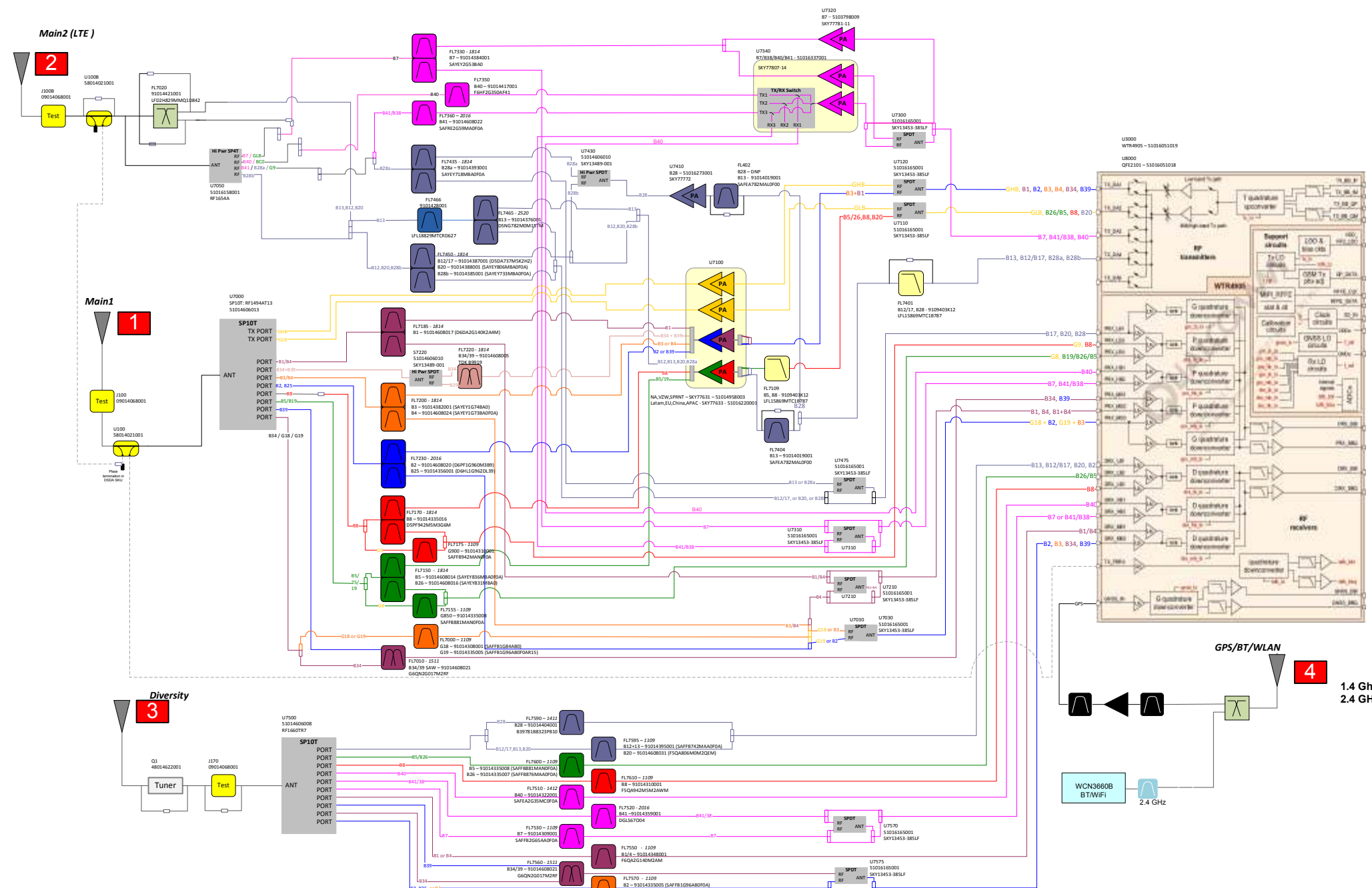
- B12: DL 729-746, UL 699-716
- B17: DL 734-746, UL 704-716
- B13: DL 746-756, UL 777-787
- B28: DL 758-803, UL 703-748
- B20: DL 791-821, UL 832-862
- B40: TDD 2300-2400
- B41: TDD 2496-2690
- B7: DL 2620-2690, UL 2500-2570

### Main1: LTE

- B5, B26, BC0/B10, G850: DL 862-894, UL 817-849
- B8, G900: DL 925-960, UL 880-915
- B3, G1800: DL 1805-1880, UL 1710-1785
- B2, BC1, G1900: DL 1930-1990, UL 1850-1910
- B4: DL 2110-2155, UL 1710-1755
- B1: DL 2110-2170, UL 1920-1980

### DRx

- B12: DL 729-746
- B17: DL 734-746
- B13: DL 746-756
- B28: DL 758-803
- B20: DL 791-821
- B5, B26, BC0/BC10: DL 862-894
- B8: DL 925-960
- B3: DL 1805-1880
- B39: TDD 1880-1920
- B2, BC1: DL 1930-1990
- B34: TDD 2010-2025
- B4: DL 2110-2155
- B1: DL 2110-2170
- B40: TDD 2300-2400
- B41: TDD 2496-2690
- B38: TDD 2570-2620
- B7: DL 2620-2690



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# Callisto RF Block Diagram – SKU1 (North America)

SKU	LTE Bands	WCDMA Bands	CDMA Bands	GSM Bands	TD-SCDMA Bands	HW paths	Simultaneous Modes
1. NorthAm:	B2, 4, 5, 7, 12/17	B1d, 2d, 4d, 5d	-	850,900,1800,1900	-	2,4,5,7,12	-

**Main2:**  
**B12:** DL 729-746, UL 699-716  
**B17:** DL 734-746, UL 704-716

**B7:** DL 2620-2690, UL 2500-2570

**Main1:**  
**B5, G850:** DL 869-894, UL 824-849  
**G900:** DL 1805-1880, UL 1710-1785  
**B2, G1900:** DL 1930-1990, UL 1850-1910  
**B4:** DL 2110-2155, UL 1710-1755

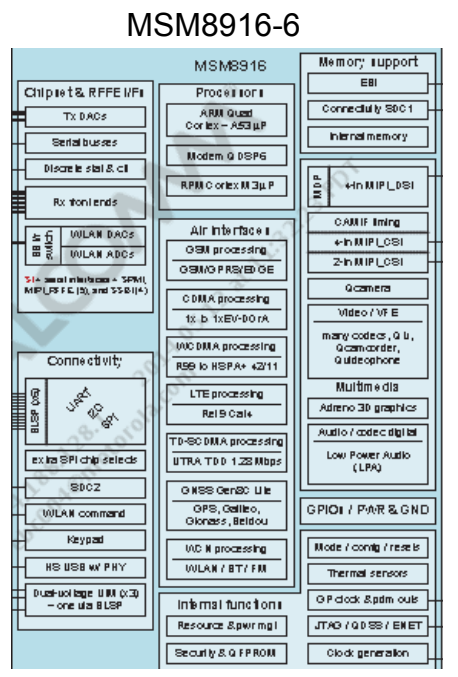
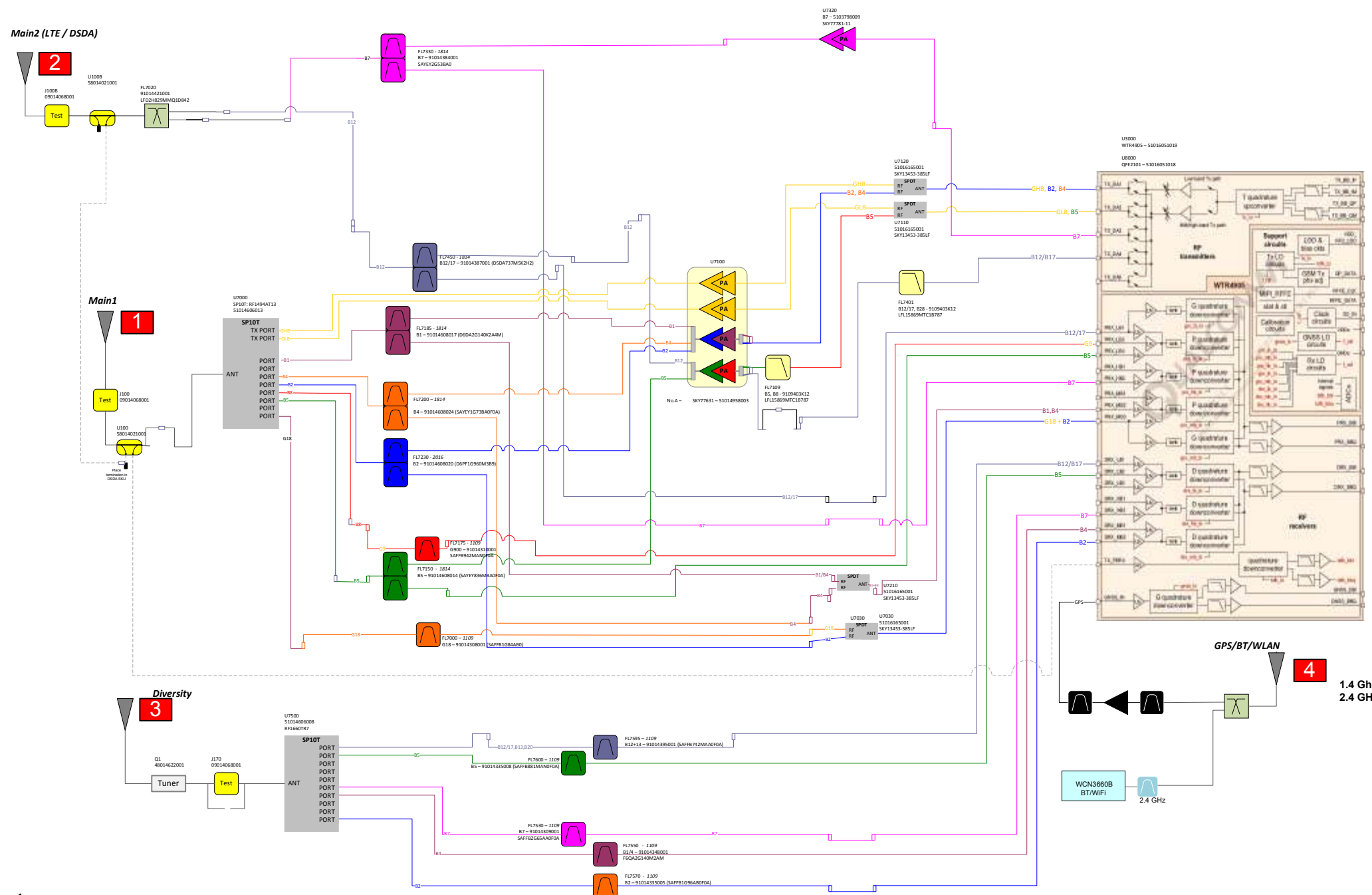
**DRx:**  
**B12:** DL 729-746  
**B17:** DL 734-746

**B5:** DL 869-894

**B2:** DL 1930-1990

**B1/B4:** DL 2110-2155

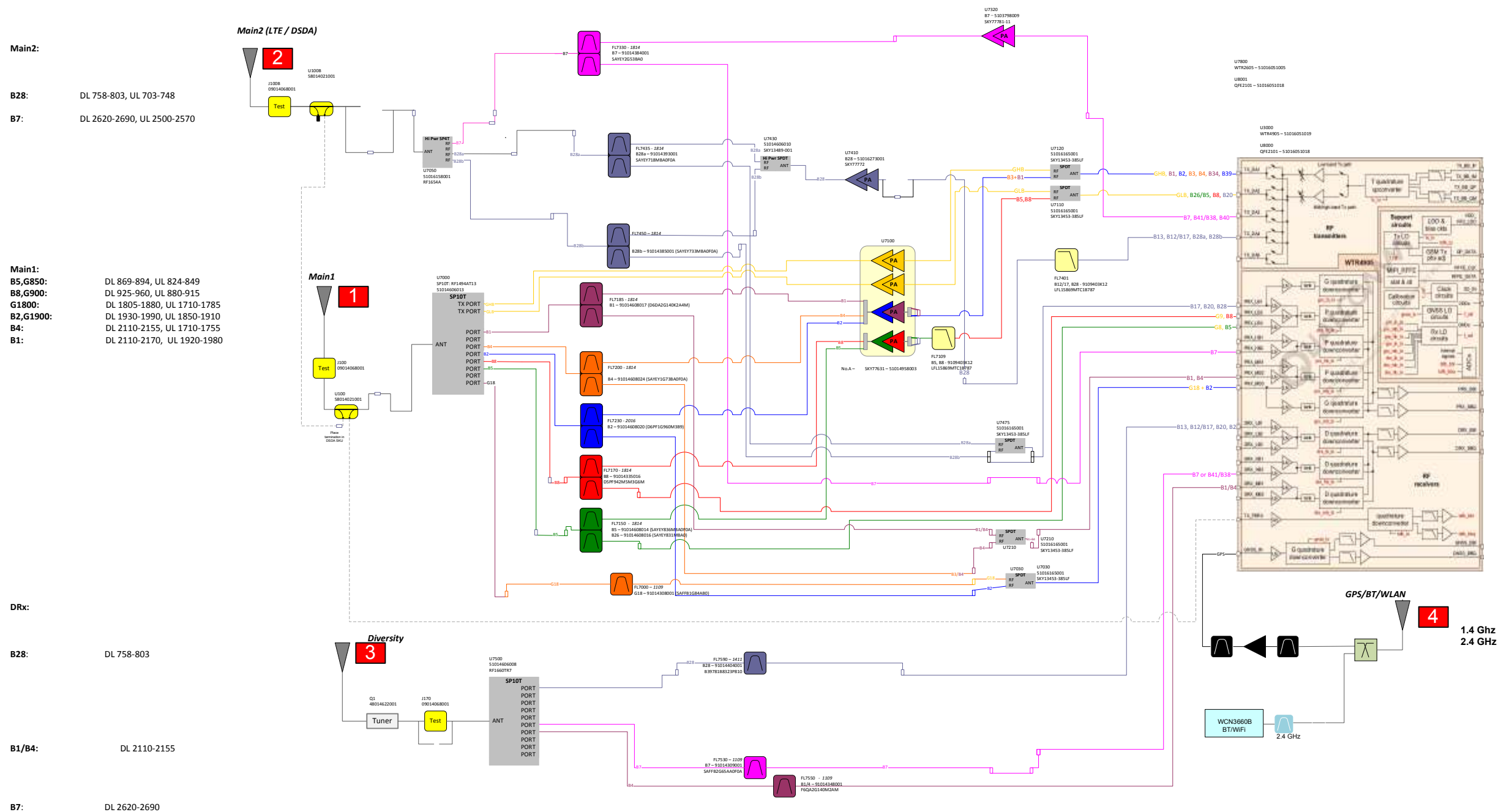
**B7:** DL 2620-2690



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# Callisto RF Block Diagram – SKU2,3,4(LatAm, LatAm DSDS, LatAm DTV)

SKU	LTE Bands	WCDMA Bands	CDMA Bands	GSM Bands	TD-SCDMA Bands	HW paths	Simultaneous Modes
2. LatAm:	B4, 7, 28	B1d, 2, 4d, 5, 8	-	850,900,1800,1900	-	1,2,4,5,7,8,28	-
3. LatAm2: DS	B4, 7, 28	B1d, 2, 4d, 5, 8	-	850,900,1800,1900	-	1,2,4,5,7,8,28	-
4. LatAm3: DS DTV	B4, 7, 28	B1d, 2, 4d, 5, 8	-	850,900,1800,1900	-	1,2,4,5,7,8,28	-



- Main2:**
- B28:** DL 758-803, UL 703-748
  - B7:** DL 2620-2690, UL 2500-2570
- Main1:**
- B5, G850:** DL 869-894, UL 824-849
  - B8, G900:** DL 925-960, UL 880-915
  - G1800:** DL 1805-1880, UL 1710-1785
  - B2, G1900:** DL 1930-1990, UL 1850-1910
  - B4:** DL 2110-2155, UL 1710-1755
  - B1:** DL 2110-2170, UL 1920-1980
- DRx:**
- B28:** DL 758-803
- B1/B4:** DL 2110-2155
- B7:** DL 2620-2690

### MSM8916-6

<b>Chipset &amp; RF/FE I/Fs</b>	<b>MSM8916</b>	<b>Memory support</b>
Tx DACs	ARM Quad Core EX - A53/A53P	EBI
Serial buses	Modem Q-DSPs	Connectivity EBI
Discrete I/Os	RPM Core M3/P	Internal memory
Rx frontends	WLAN ADPs	4-in MIP_L0S1
WLAN ADPs	Air Interface	CAMIF timing
WLAN ADPs	QMI processing	4-in MIP_L0S1
WLAN ADPs	QMI PRO/SE/DOE	2-in MIP_L0S1
WLAN ADPs	CDMA processing	Camera
WLAN ADPs	USB to HSPA+ e2/11	Video / VFE
WLAN ADPs	LTE processing	many codecs, Q, U, Qcam/corder, Qdiscophone
WLAN ADPs	Rel 9 Coex	Multimedia
WLAN ADPs	TD-SCDMA processing	Adreno 3D graphics
WLAN ADPs	ULTRA TDD 1.28 Mbps	Audio / codec/dsp/ke
WLAN ADPs	GPS	Low Power Audio (LPA)
WLAN ADPs	GPS, Galileo, Glonass, Beidou	GPIOs / PA/R & GND
WLAN ADPs	WLAN / BT / FM	Mode / config / resets
WLAN ADPs	Internal functions	Thermal sensors
WLAN ADPs	Resource mgmt	GPIO clock & pdm out
WLAN ADPs	Security & QFPROM	JTAG / Q-DSP / EMB
WLAN ADPs		Clock generation

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# Callisto RF Block Diagram – SKU5 (Europe)

SKU	LTE Bands	WCDMA Bands	CDMA Bands	GSM Bands	TD-SCDMA Bands	HW paths	Simultaneous Modes
5. EU:	B1, 3, 7, 8, 20	B1d, 8	-	850, 900, 1800, 1900	-	1, 3, 5, 7, 8, 20	-

Main2:

B20: DL 791-821, UL 832-862  
B7: DL 2620-2690, UL 2500-2570

Main1:  
G850: DL 869-894, UL 824-849  
B8, G900: DL 1805-1880, UL 1710-1785  
B3, G1800: DL 1930-1990, UL 1850-1910

B1: DL 2110-2170, UL 1920-1980

DRx:

B20: DL 791-821

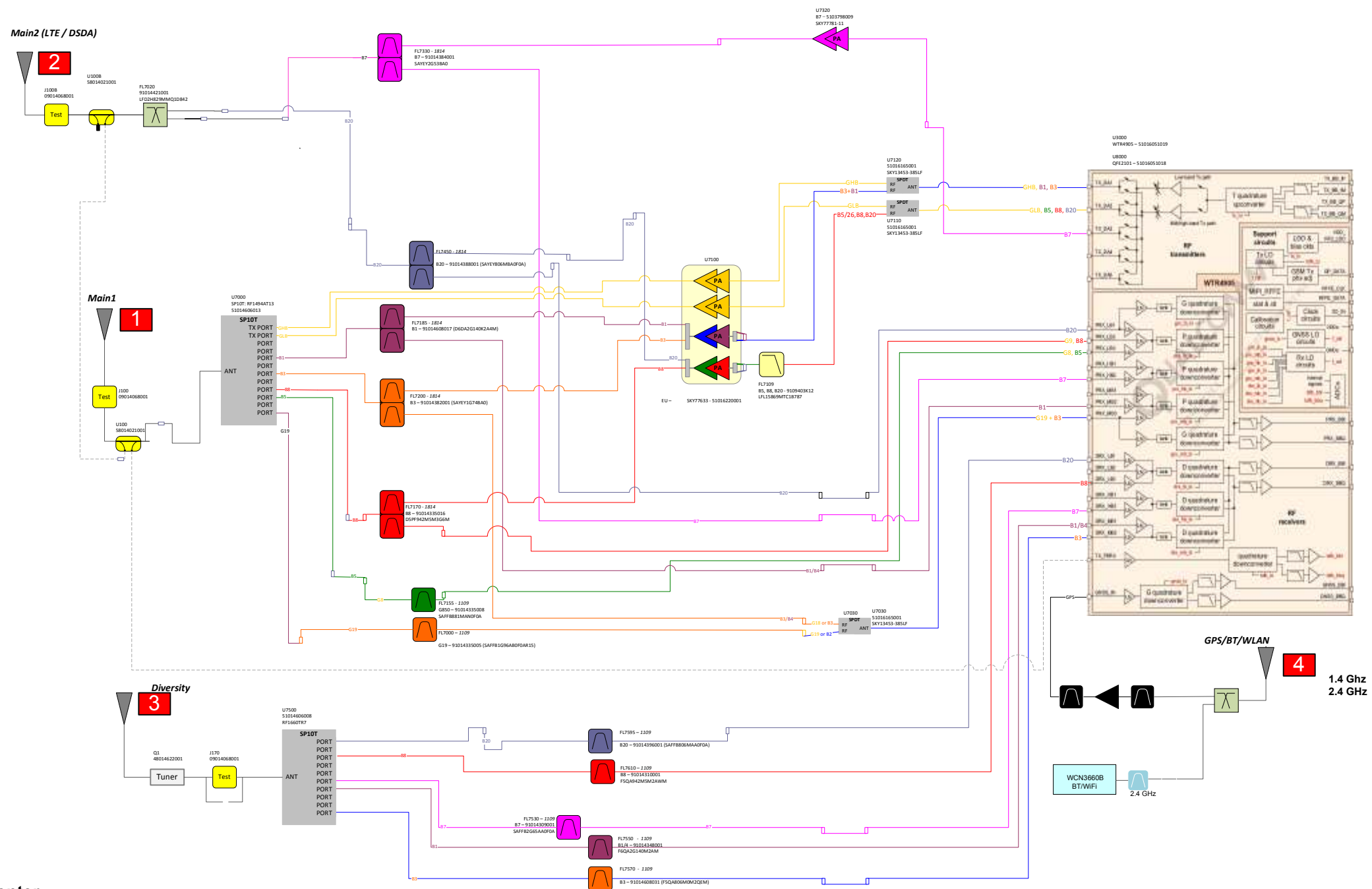
B3: DL 1805-1880

B8: DL 925-960

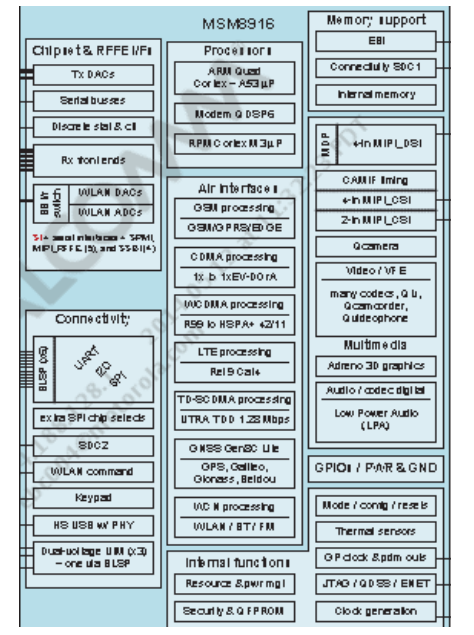
B1: DL 2110-2170

B7: DL 2620-2690

Callisto RF block diagram v6\_060815 ServiceCenter



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# Callisto RF Block Diagram – SKU6 (APAC)

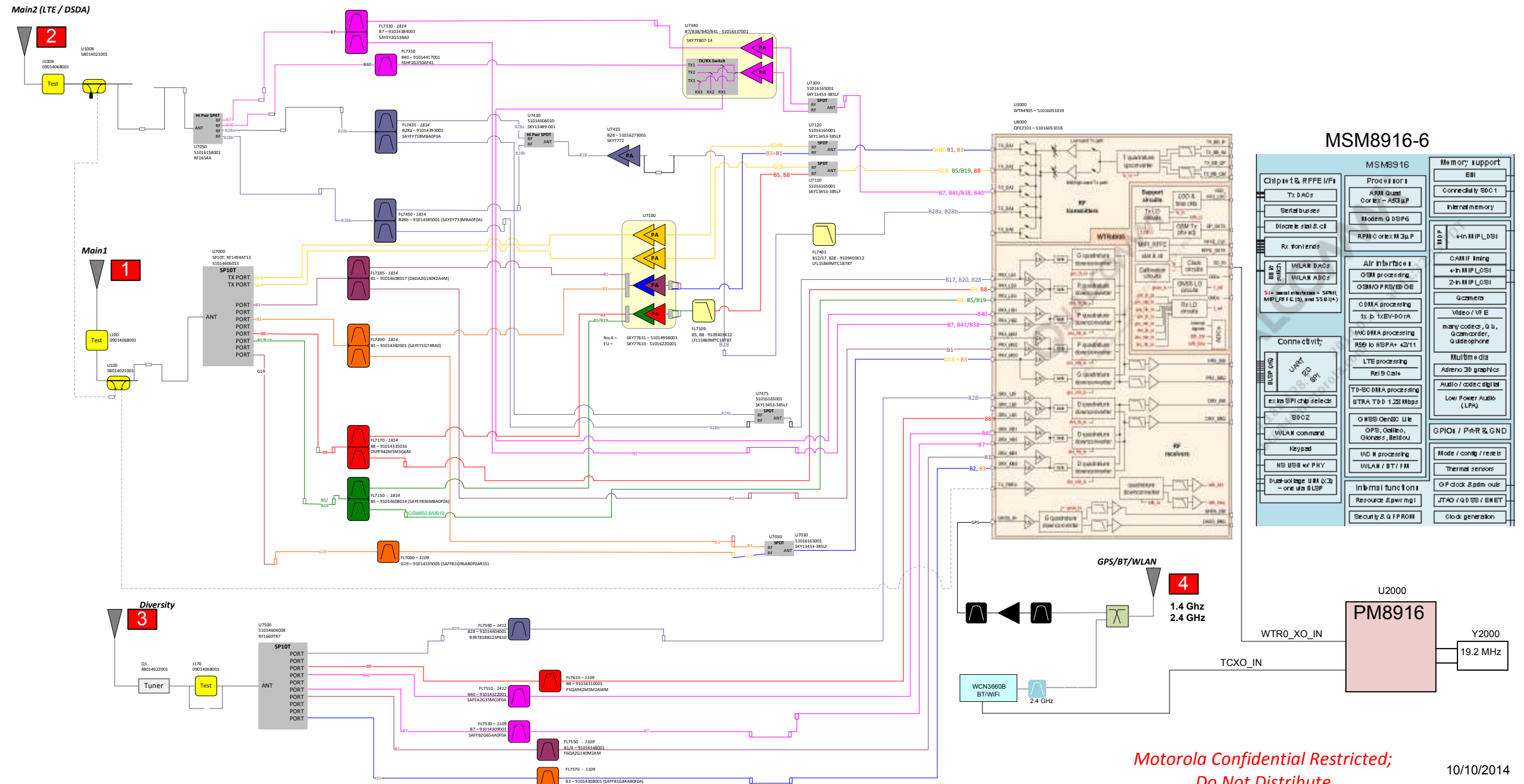
SKU	LTE Bands	WCDMA Bands	CDMA Bands	GSM Bands	TD-SCDMA Bands	HW paths	Simultaneous Modes
6. APAC DS	B1, 3, 7, 8, 28, 40	B1d, 5/19, 8	-	850,900,1800,1900	-	1,3,5,7,8,28	-

Main2:

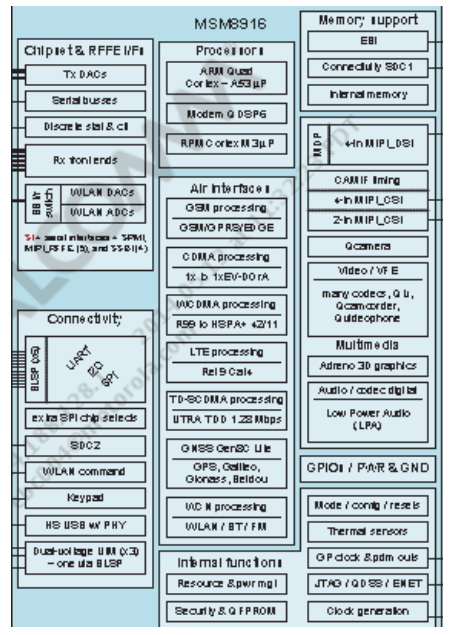
- B28: DL 758-803, UL 703-748
- B40: TDD 2300-2400
- B7: DL 2620-2690, UL 2500-2570

- Main1: B5,G850: DL 862-894, UL 817-849
- B19: DL 875-890, UL 830-845
- B8,G900: DL 925-960, UL 880-915
- B3,G1800: DL 1805-1880, UL 1710-1785
- G1900: DL 1930-1990, UL 1850-1910
- B1: DL 2110-2170, UL 1920-1980

- DRx: B28: DL 758-803, UL 703-748
- B3: DL 1805-1880
- B8: DL 925-960
- B1: DL 2110-2170
- B40: TDD 2300-2400
- B7: DL 2620-2690



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# Callisto RF Block Diagram – SKU8(Sprint/USC)

SKU	LTE Bands	WCDMA Bands	CDMA Bands	GSM Bands	TD-SCDMA Bands	HW paths	Simultaneous Modes
	8. SPRUSC:B25/2, 4, 26/5, 12/17, 41	B2d, 4d, 5d	BC0d, 1d, 10d	850,900,1800,1900	-	2(25),4,5(26),12,41	SRLTE

Main2:  
B12: DL 729-746, UL 699-716  
B17: DL 734-746, UL 704-716

B41: TDD 2496-2690

Main1:  
B5, B26, BC0/B10, G850: DL 862-894, UL 817-849  
G900: DL 925-960, UL 880-915  
G1800: DL 1805-1880, UL 1710-1785  
B2, B25, BC1, G1900: DL 1930-1995, UL 1850-1915  
B4: DL 2110-2155, UL 1710-1755

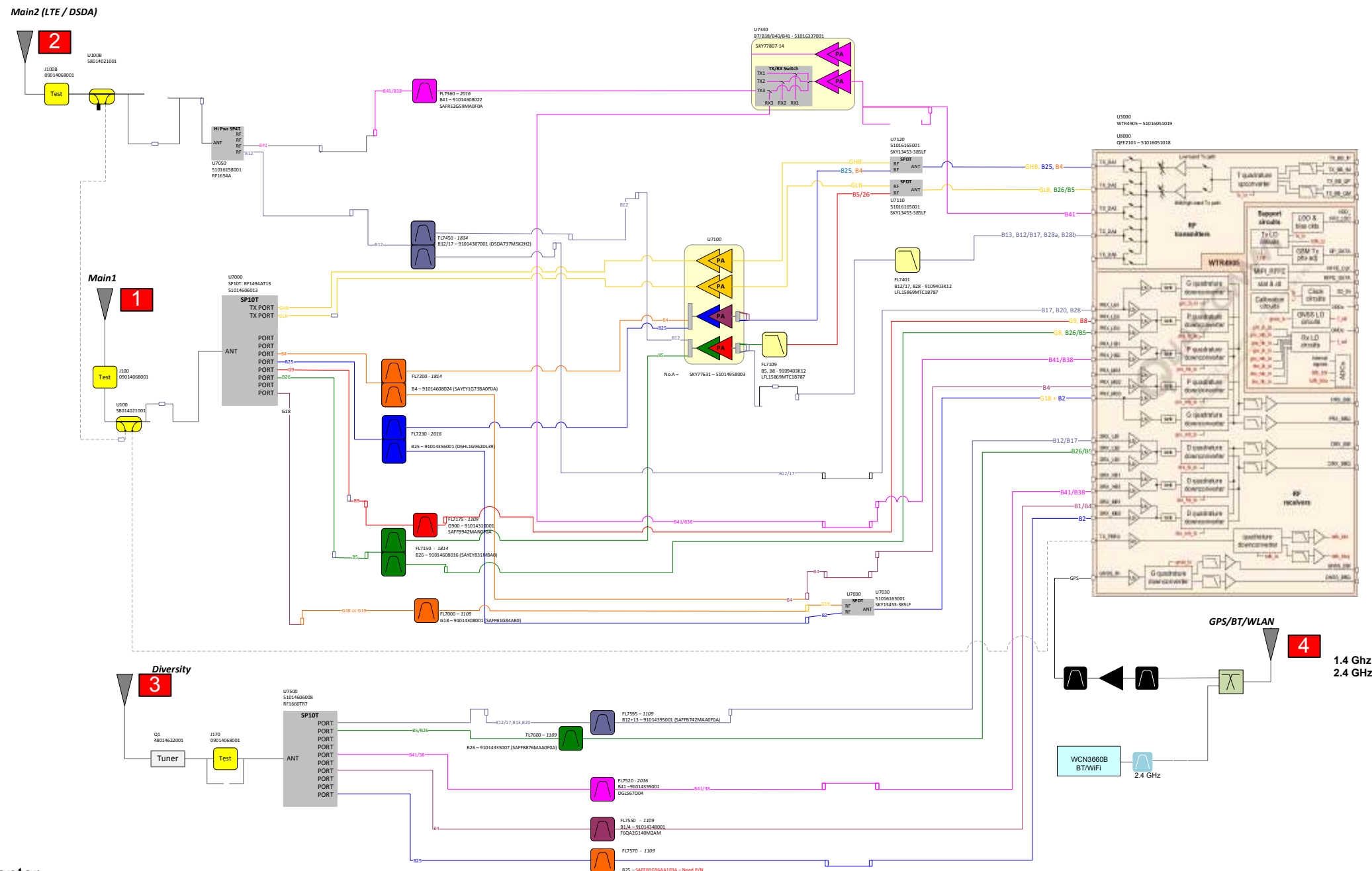
DRx:  
B12: DL 729-746  
B17: DL 734-746

B5, B26, BC0/B10, G850: DL 862-894

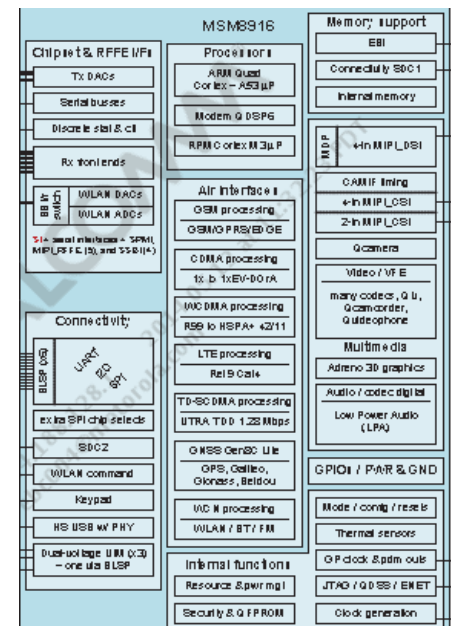
B2, BC1, G1900: DL 1930-1995

B4: DL 2110-2155

B41: TDD 2496-2690



## MSM8916-6



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## Revision History

- 9/25/2014 - Added Callisto 2Bot-B block diagram, based on 2Bot-B+C diagram.  
- On Callisto 2Bot-B removed coupler from Main2 path and added indication that diplexer and SP4T are not placed for DSDA
- SKU**
- 9/25/2014 - RELEASED (v1.0)
- 9/30/2014 - Corrected Ant1 Diplexer part number to Murata D842  
- updated reference designators per Bill Ceres' latest block diagram,  
- added part number for B3 rejection LPF on BC0 Rx path  
- added coupler termination on Main1 coupler for non-DSDA SKUs
- 10/1/2014 - Updated all reference designators, Motorola part numbers, and vendor part numbers  
- Corrected China DCS Rx filter part number
- 10/2/2014 - Minor cleanup
- 10/2/2014 - RELEASED (v1.1)
- 10/3/2014 - Added B40 to APAC SKU in bands list  
- Added B40 connection to U7050 to support APAC requirement  
- Removed B13 jumper option to support discrete B13 PA  
- Added B5 WCDMA to EU SKU  
- Removed Ant5, diplexed GPS and WiFi on Ant4
- 10/8/2014 - Corrected several part numbers  
- Generated SKU-specific block diagrams
- 10/10/2014 - Changed DSDA connection to 2Bot-G' architecture (on MAIN2 uses diplexer but without additional LPF and HPF in 2Bot-G)  
- Removed HPF between MAIN1 SP12T and HB port of diplexer  
- Changed Antenna Coverage by SKU  
- Added link to Costed BOM analysis  
- Added Variant Summary from Bill Ceres' "Callisto LTE RF Blockdiagram ver2.3.vsd"
- 10/10/2014 - RELEASED (v1.2)
- 10/21/2014 - Added B5 DRx filter to China DSDA (SKU8)
- 10/23/2014 - Corrected B1 and B20 DRx filter and B28 PA part numbers
- Callisto Version 2.5**
- 11/3/14 - added W1d to Latam, Added LTE B8 to EU, added W19 to APAC, Remove B5 from EU, update p/n for FL7020 7021 to 91014420001.
- V2.6**
- 11/5/14 - added B1 to NA and LTE B8 including DRX to APAC
- 11/6/2014 - Replaced U7750 Murata SP8T (DSDA high band switch) with Skyworks SP6T (51016356001)  
- Replaced FL7761 (B39 notch) with Tx SAW (Murata) SAFEA1G73MB0F0A  
- Removed FL7760 (B1 LPF), moved FL7762 (LPF) to G1800/G1900 side of S7760
- 11/6/2014 - RELEASED (v2.7)
- 11/13/14 - Remove U7300 from sprint and adder jumper to main page around it
- 11/15/14 **V2.8**  
- Updated part number on FL7020 and FL7021 to 91014421001
- 12/8/14 **V2.9**  
- removed DSDA  
- change SP12T to SP10  
- add FL7466 B13  
-add china non cdma sku

**Continue Next Tab**

The costed BOM list per SKU is located on the Google Drive at: <https://docs.google.com/a/motorola.com/spreadsheets/d/1SJAqdLf8TpBzpz3bQU2hoMyLhplf8GnfBzo2Jl3tTv4/edit?usp=sharing>

**Revision History2**

**041415 Rev 4: Removed GSM from Tracfone Variant.  
Removed 5Ghz WLAN from all Variants  
Updated Variant Summary page 1**

**052615 Rev 5: Added 19.2 to APAC block diagram for Japan cetification**

The costed BOM list per SKU is located on the Google Drive at: <https://docs.google.com/a/motorola.com/spreadsheets/d/1SJAqdLf8TpBzpz3bQU2hoMyLhplf8GnfBzo2JI3tTv4/edit?usp=sharing>