

# ***ASTRO SMATV Evolution***



## **Old Astro :** ***Single Cable UBB SMATV (SMATV)***

Jan 1996 : 22 Channels  
4 Transponders Over Measat 1

Feb 2008 : >100 Channels  
10 Transponders over Measat 3

All Channels : Standard Definition (640x480)  
Digital (MPEG 2, QPSK, DVBS)  
Dual Channel Stereo Sound  
4x3 Display Format



## Old Astro :

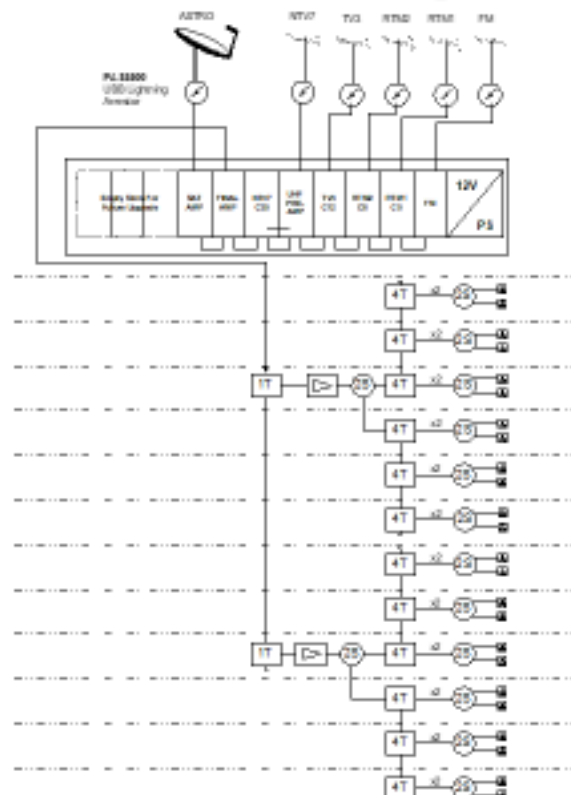
### Single Cable UBB SMATV (SMATV)

1. 1 RF + 1 IF
2. 47–862Mhz + 950-2150MHz
3. UBB Amplifier (47-2150MHz)
4. Passive Taps & Splitters

satcomnet

### Single Cable UBB SMATV (SMATV)

## Old Astro :



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## **New Astro :**

Dec 2009 : Astro B.yond (5HD Channels)  
10 Transponders over Measat-3  
1 Transponders over Measat-3A

May 2010 : 12 World Cup HD Channels & 8 HD Channels  
10 Transponders over Measat-3  
3 Transponders over Measat-3A

Sep 2016 : 136 SD & 62 HD Channels & 20 Radio  
12 Transponders over Measat-3  
6 Transponders over Measat-3A  
6 Transponders over Measat-3B



## **New Astro :**

Astro B.Yond : High Definition (720p & 1080i)  
Digital (MPEG 4, 8PSK, DVBS2)  
Full Dolby 5.1 Channel Surround Sound  
16 x 9 Display Format

Increase from 10 Transponders to 48  
Increase from 1 polarity to 4

SAT-1 : IF-1 : Vertical Low (VL)  
SAT-2 : IF-2 : Vertical High (VH)  
SAT-3 : IF-3 : Horizontal Low (HL)  
SAT-4 : IF-4 : Horizontal High (HH)



## **New Astro :**

### **What Are The Solutions ?**

1. IPTV
2. Multiswitch (MSW)
3. MSW Single Cable Router (SCR)
4. Fiber-To-The-Home (FTTH SMATV)
5. Digital Channel Stacking Switch (DCSS)



## **New Astro :**

### **IPTV**

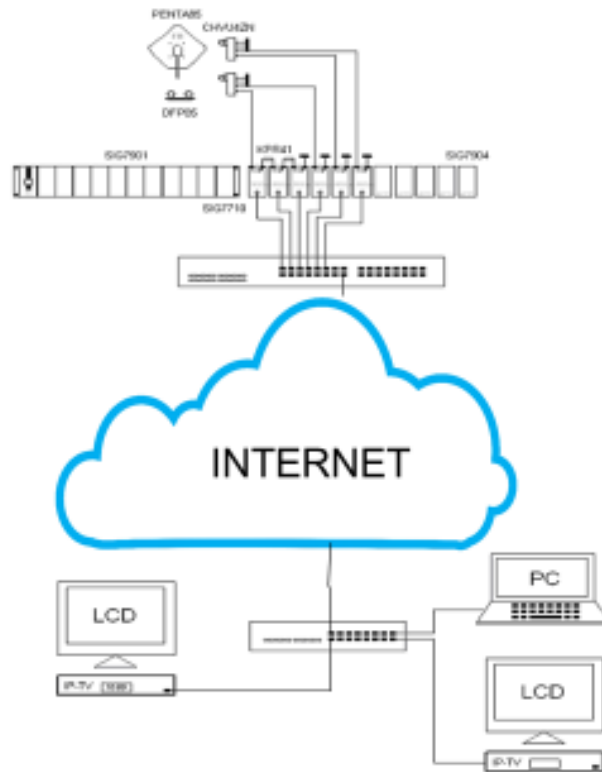
- Encapsulate Astro QPSK/8PSK Signal into IP & Distribute by Times & MaxisNet FTTH. Receive & Decode by Astro DMT Inside Condo/Apartment Unit
- Receive & Decode Astro QPSK/8PSK Signal by Astro DMT at Headend. Convert to IP for Distribution & Receive by IP STB or Hospitality TV, Inside Hotel Room



## New Astro :

### IPTV

MaxisNet / TimesDotCom



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## New Astro :

### Multiswitches

- Switch multiple IF using voltage on multiple cables
- Switch multiple satellites using DiSEqC

IF-1 : Vertical Low (VL) : 14V

IF-2 : Horizontal Low (HL) : 18V

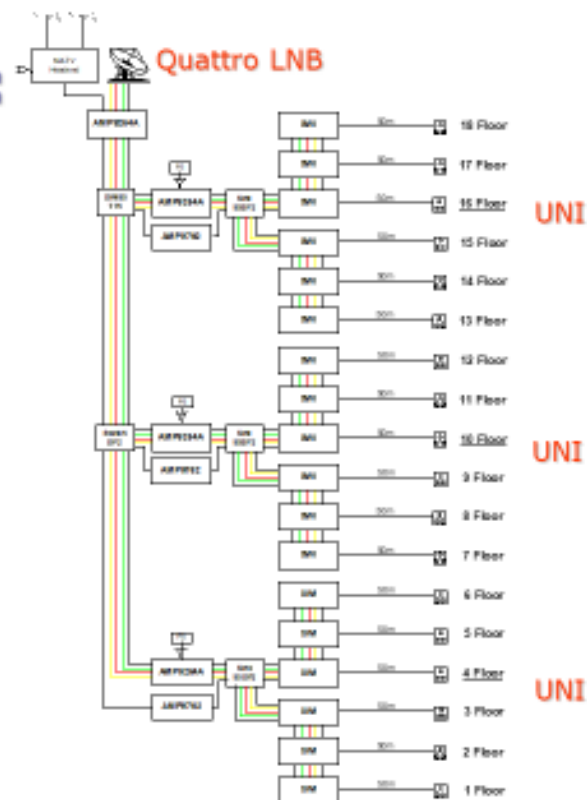
IF-3 : Vertical High (VH) : 14V + 22KHz

IF-4 : Horizontal High (HH) : 18V + 22KHz

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## New Astro :

### Multiswitches



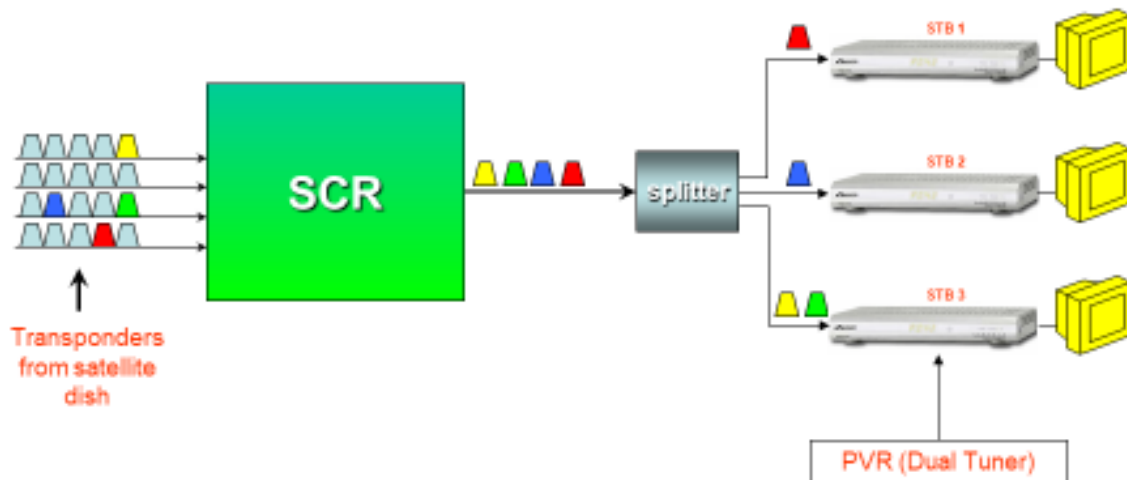
## New Astro :

### MSW Single Cable Router (SCR)

- Allow 4x STB or 2x PVR to be connected by a single cable
- Output 16 user band frequency
- Support 4 Astro User band frequency (1210MHz, 1420MHz, 1680MHz & 2040MHz)
- Adjustable SAT (12-6dB) & TV (12dB) gain
- Very low insertion loss of 1dB
- Standard colour coding for easy installation

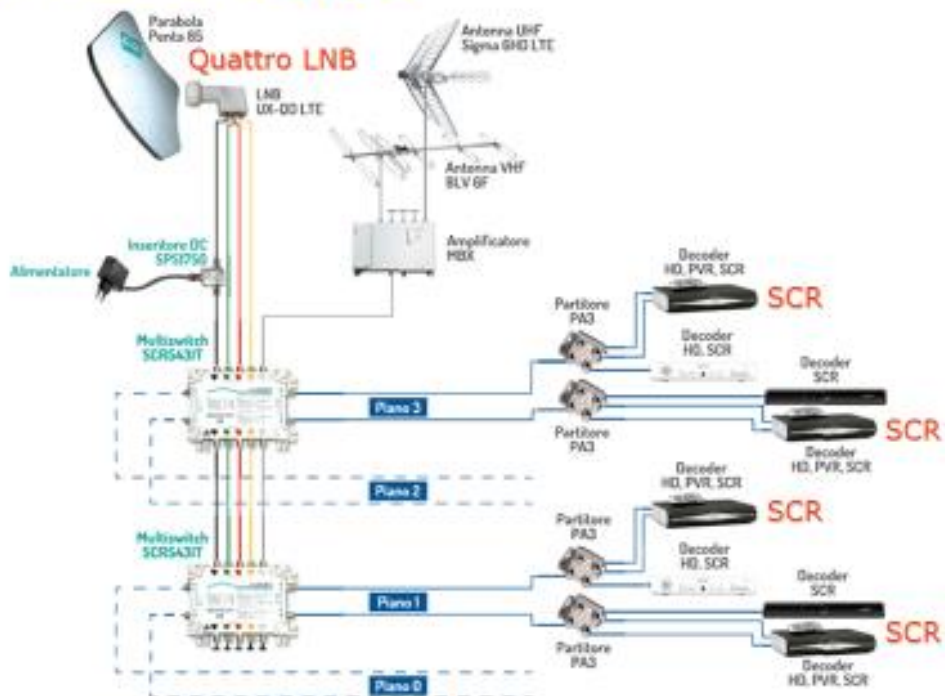


# New Astro : MSW Single Cable Router (SCR)



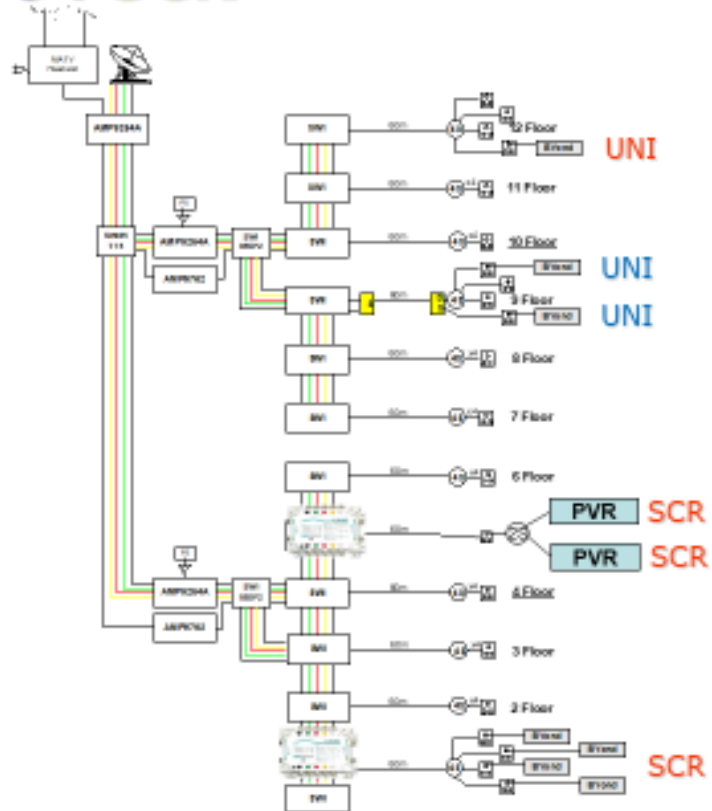
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# New Astro : SCR

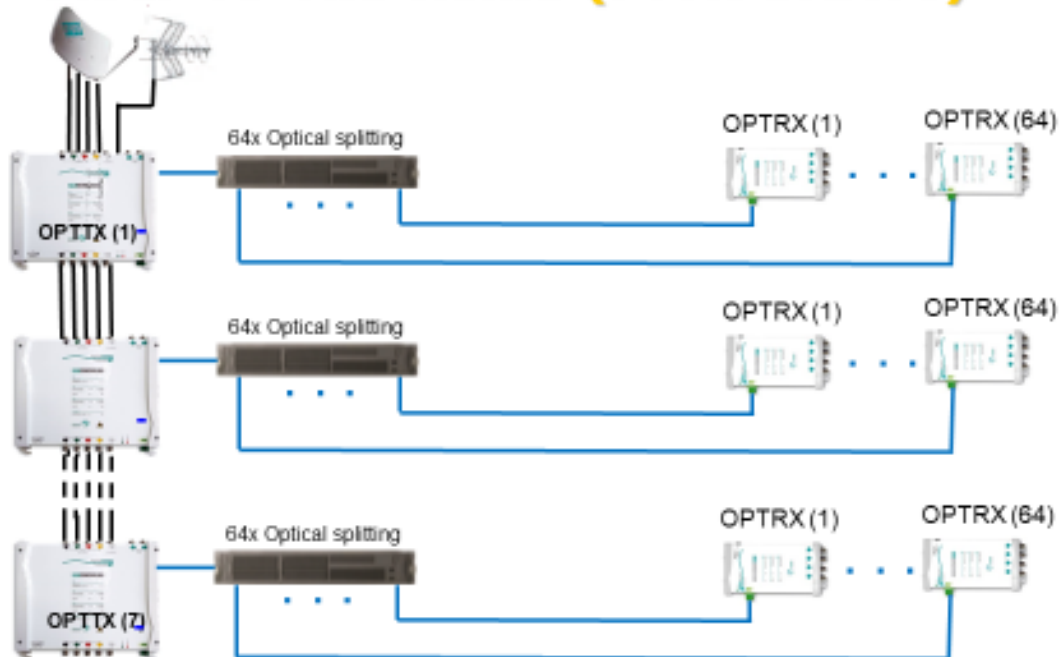


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# New Astro : SCR

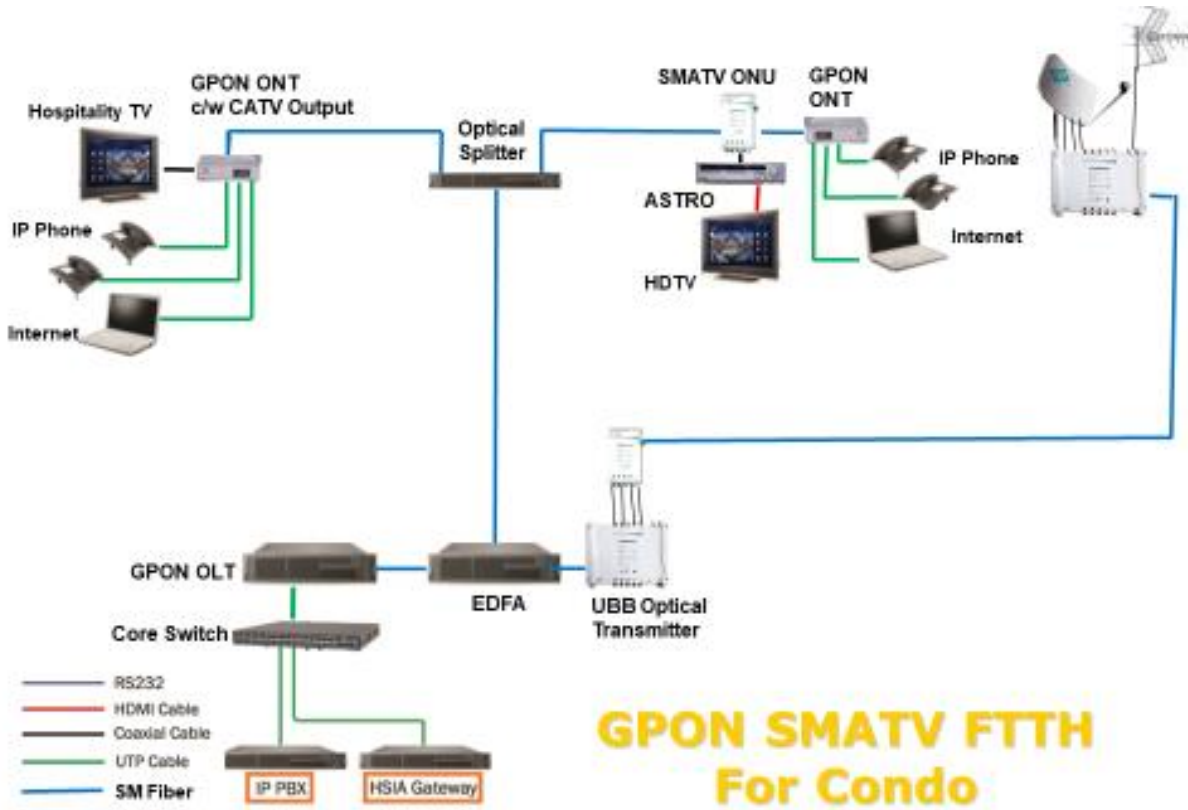


# New Astro : Fiber-To-The-Home (FTTH SMATV)

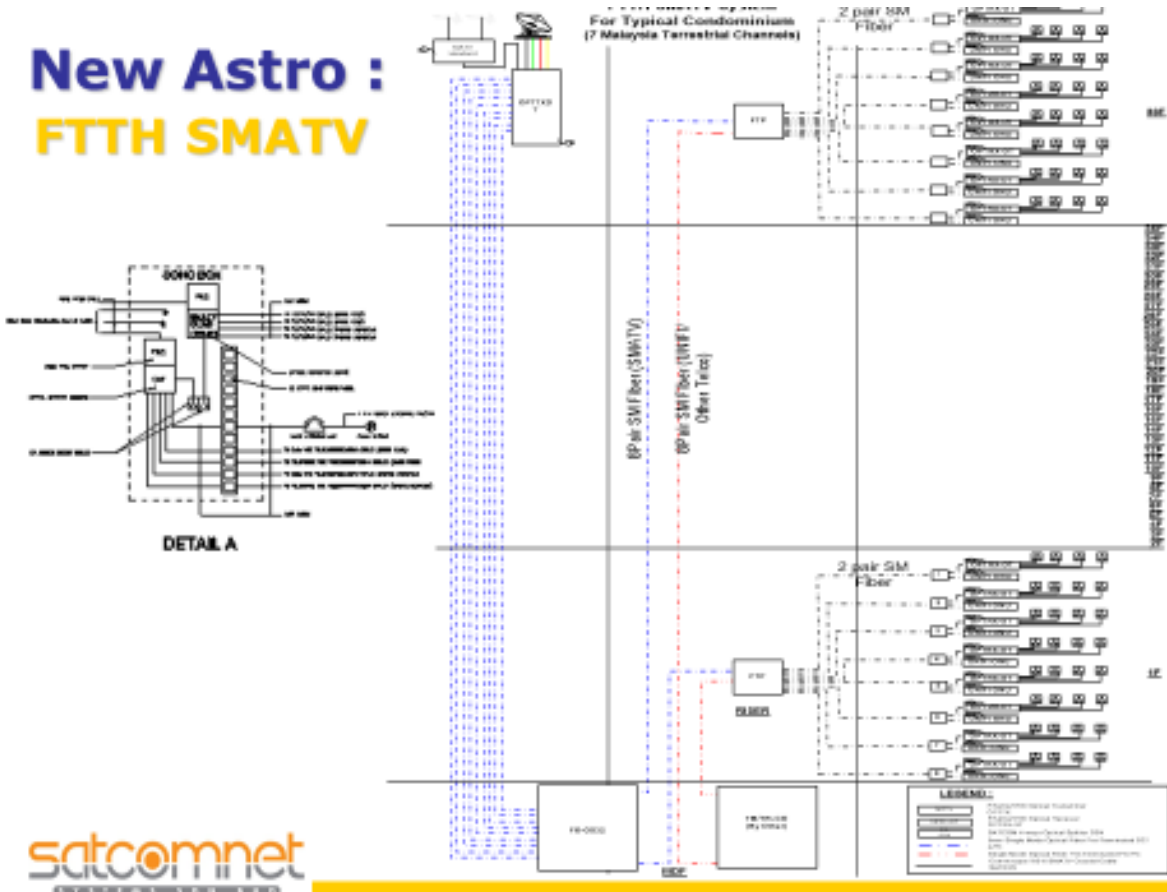


7TX x 64RX x 4 = 1792 Outlets





## New Astro : FTTH SMATV



## New Astro :

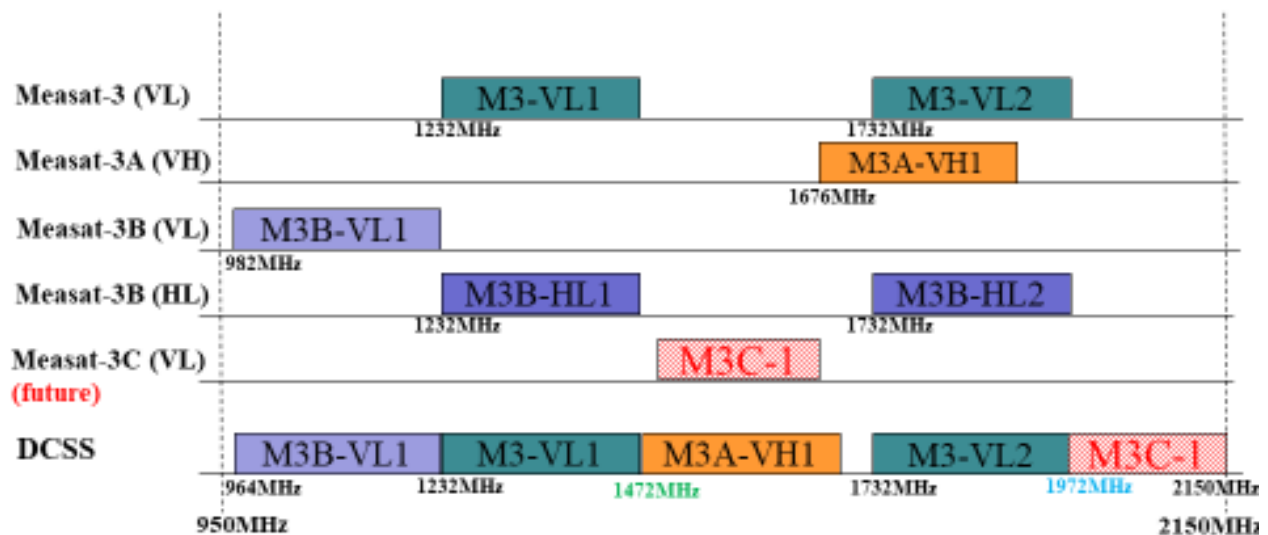
### Digital Channel Stacking Switch (DCSS)

- Converts multiple IF channels to single IF for distribution over one cable
- Max 30 channels (40MHz bandwidth)
- Change of any frequency will affect the service in the affected frequency



## New Astro :

### Digital Channel Stacking Switch (DCSS)

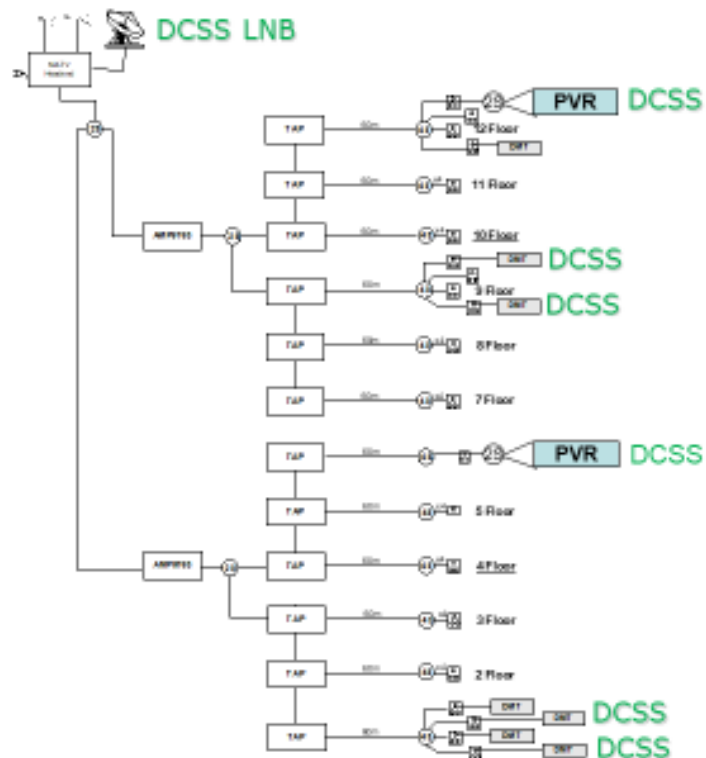


# New Astro : DCSS (update 1/12/16)

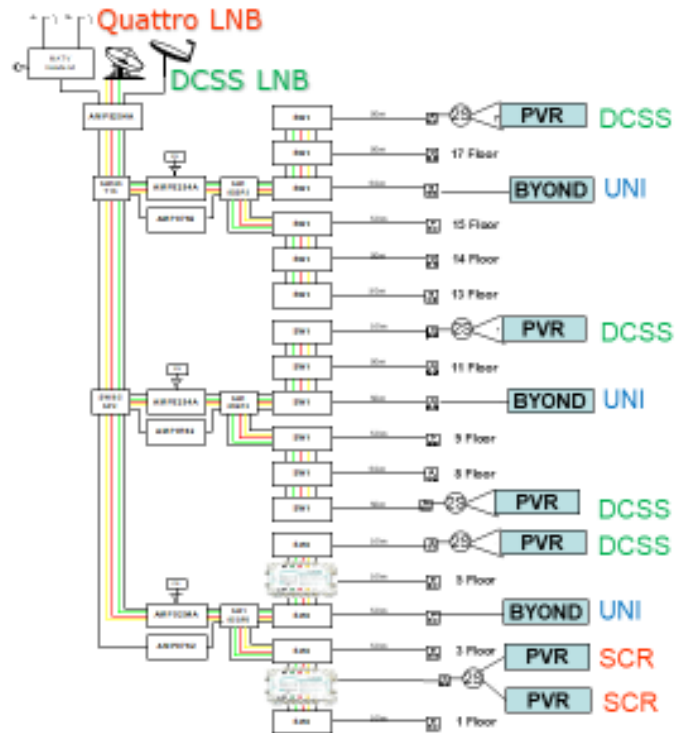
No	Satellite	Universal RF Frequency	Polarity	LO	Modulation	FEC	L-Band	DCSS IF Freq
1	M3B	10732	VL	9750	DVB-S2	3/5	982	982
2	M3B	10772	VL	9750	DVB-S	7/8	1022	1022
3	M3B	10812	VL	9750	DVB-S2	3/5	1062	1062
4	M3B	10852	VL	9750	DVB-S2	3/5	1102	1102
5	M3B	10892	VL	9750	DVB-S	7/8	1142	1142
6	M3B	10932	VL	9750	DVB-S2	3/5	1182	1182
7	M3	10982	VL	9750	DVB-S	3/4	1232	1232
8	M3	11022	VL	9750	DVB-S	7/8	1272	1272
9	M3	11062	VL	9750	DVB-S	7/8	1312	1312
10	M3	11102	VL	9750	DVB-S	7/8	1352	1352
11	M3	11142	VL	9750	DVB-S	7/8	1392	1392
12	M3	11182	VL	9750	DVB-S	7/8	1432	1432
13	M3A	12276	VH	10600	DVB-S2	3/5	1676	1472
14	M3A	12316	VH	10600	DVB-S2	3/5	1716	1512
15	M3A	12356	VH	10600	DVB-S2	3/5	1756	1552
16	M3A	12396	VH	10600	DVB-S2	3/5	1796	1592
17	M3A	12436	VH	10600	DVB-S2	3/5	1836	1632
18	M3A	12476	VH	10600	DVB-S2	3/5	1876	1672
19	M3	11482	VL	9750	DVB-S	7/8	1732	1732
20	M3	11522	VL	9750	DVB-S	7/8	1772	1772
21	M3	11562	VL	9750	DVB-S	7/8	1812	1812
22	M3	11602	VL	9750	DVB-S	7/8	1852	1852
23	M3	11642	VL	9750	DVB-S	7/8	1892	1892
24	M3	11682	VL	9750	DVB-S	7/8	1932	1932



# New Astro : DCSS



# New Astro : DCSS



# New Astro : DCSS

