Ericsson Beacon 3 New Build SCD

Required Configurations

Defined Configs	GSM 900	UMTS 900	LTE 900 2x2 5MHz	LTE 800 2x2 10MHz	LTE 2100 4x4 10MHz	LTE 2100 2x2 5MHz	2100 UMTS	LTE 1800 4x4 5MHz	Tef LTE baseband consumption Cells / ABW	VF LTE baseband consumption / Cells/ABW	2600 FDD VF 4x4 20MHz	2300 TDD TEF 4x4 40MHz*)	3400 NR 8x8/M-MIMO AIR 40MHz	NR700 2x2
Small L18 B3	X	X	X	X	X			X	9 / 210MHz	9 / 210MHz	Optional	Optional	Optional	Optional
Small B3	X	X	X	X	X				9 / 210MHz	9 / 210MHz	Optional	Optional	Optional	Optional
Network Rail B3	X			X		X	X		6 / 90MHz	6 / 90MHz	Optional	Optional	Optional	Optional
Small SF B3	X	X	X	X	X				9 / 120MHz	9 / 120MHz	Optional	Optional	Optional	Optional
Small L18 SF B3	X	X	X	X	X			X	12 /150MHz	9 / 120MHz	Optional	Optional	Optional	Optional
Low B3	X	X	X	X					6 / 90MHz	6 / 90MHz				Optional

*) Configurations with shared Radio 8808 for 2 sectors will support only 20MHz
ABW – Antenna Bandwidth

Note: Orion pole needs to be deployed to accommodate L900 on Small SF sites

Assumption

- Support from ENM19.3 (2G, 3G,4G,5G), RAN SW G19Q3 ,W19.Q2, LTE 20.Q1 IP3 , NR/L 21.Q1 IP3
- GSM based on Baseband 6630.
- RF output power 20W per TRX, 3G or LTE or NR 8T8R per branch, for M-MIMO 200W, LTE TDD 2300 8x8 (2 carriers 10W per carrier).
- For cases where RRU needs to be installed within cabinets, the Enclosure 6147 can be ordered (optionally, Telefonica provides a York cabinet, which will have completed thermal testing for the maximum configuration that can be deployed).
- Where site design dictates, RRU units will be connected to external AC PSUs, generally the Power 6302, but could be a Telefonica approved alternative.
- It is assumed that Baseband units on sites will be installed in Indoor or Outdoor Eltek cabinets, which have completed thermal testing for the maximum configuration, provided by Telefonica.
- It is assumed that all RRU on sites will be supplied from external DC system provided by Telefonica.
- For VF 5G T3400 8T8R, BW limited to 40MHz where Radios are not capable of providing whole 50MHz spectrum.
- VF L21 15MHz will only be deployed where demand is requested by VF
- Where transmission network is not capable to provide Time/Phase reference, GPS is added at first TDD install/upgrade, whether T23, T26, T34 and NR.
- GSM and WCDMA will be in a multi standard mixed mode baseband 6630.
- In mixed mode 4G/5G the number of available CPRI ports in BB6630 is reduced to 9 ports and cell capacity to:
  - 12x4G cells + 12x5G cells. 12x4G cells are supported from SW 20.Q1.
  - 3x5G cells are supported from SW 20.Q1.
  - Support for 6x5G cells is candidate for SW 20.Q2 and for > 9x5G cells is candidate for SW 20.Q4 and more in future releases.
  - 1 ESS cell = 1 LTE cell + 1 NR cell.
- ESS to support 4x4 configuration is planned for SW 20.Q1 IP1 (LTE 4x4 + NR 2x2) and SW 20.Q2 (LTE 4x4 + NR 4x4).
- 5G 3400 MHz MORAN supported from SW 20.Q1
  - 8T8R 40 + 40 MHz
  - M-MIMO 40 + 50 MHz
- NB-IOT available by remote activation dependent on available Baseband capacity.
- NR 700 HW capable for Telefonica only in the current configurations.

SW/OSS/ENM dependencies

- Radio 8808 2300 B40Y, 4415 2600 B7A, 2100 B1, 2212 900 B8, 2217 2100 B1, 800 B20 – already in the network and supported with SW/OSS/ENM in Telefonica network.
- Radio 2238 B8/B20 – supported by current LTE SW/ENM in Telefonica network.
- Baseband 6630 LTE – supported by current SW/ENM in Telefonica network.
- Baseband 6630 WCDMA – supported by current SW/ENM in Telefonica network.
- Baseband 6630 GSM – will be supported by current SW/ENM19.3* in Telefonica network.

* GSM support by ENM19.3, implementation in progress

BASEBAND 6630 CAPACITY IN SINGLE MODE

Baseband 6630 ***

L18.Q4

- 7500 RRC Conn.
- 2000/1000 VoIP *)
- 2000 Mbps DL
- 500 Mbps UL
- ≤ 1440/1560 MHz **
- ≤1920 MHz CPRI AAS
- 30 LTE+NB-IoT cells
  or
  24 LTE FDD/TDD cells

W18.Q4

- 1152 CE DL
- 1152 CE UL
- 4096 CE EUL
- 18 cc
- 270 HS codes
- 768 HS Users
- 768 EUL Users

G18.Q4

- 48 TRX

*) FDD/TDD VoIP
**) Configuration dependent/Selected configurations only, Total Bandwidth
***) It is not guaranteed that multiple requirements can be met simultaneously.
****) Not supported together with E-RAN and/or when NB-IoT is configured

BASEBAND 6630 CAPACITY LTE & NB-IOT-SINGLE STANDARD

Additional information on cell capacity with 2Rx, 4Rx, and various cell ranges
Notation: "X+Y": Up to X LTE cells and up to Y NB-IoT cells. Applicable for NB-IoT in-band and guard band modes.

2Rx	18.Q4
≤ 15 km	24+0, 18+12, 15+15
15-39 km	24+0, 18+12, 15+15
40-59 km	24+0, 18+9
60-100 km	24+0, 18+9

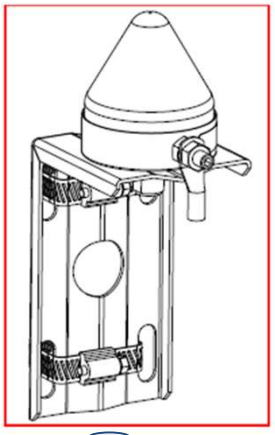
4Rx	18.Q4
≤ 15 km	24+0, 15+6, 8+8
15-39 km	24+0, 15+3, 8+8
40-59 km	24+0, 15+3
60-100 km	12+3

Bandwidth and Carrier counts

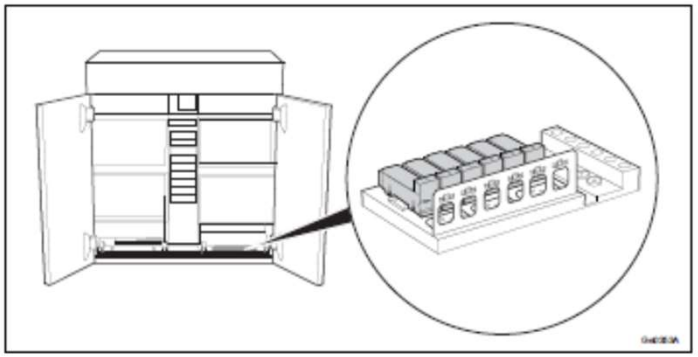
Band	BW		# Carrier	
	TEF	VFE	TEF	VFE
B1 Total	**10**	**15**		
B1 (3G)	0	5	0	1
B1 (LTE)	10	5/10/15	1	1
B3 (LTE)	**5**	**5 Not Used**	**1**	**0**
B8	**17.5**	**17.5**		
B8 (2G)			2	2
B8 (3G)			1	1
B8 (LTE)	5 or 10	0 or 5 or 10	1	1
B20 (LTE)	**10**	**10**	**1**	**1**
B40Y (LTE TDD)	**20+20**	**0**	**2**	**0**
B7A (LTE FDD)	**0**	**20**	**0**	**1**
B42G (5G TDD)	**40**	**40/50***	**1**	**1**

* - 40MHz where equipment does not accommodate bandwidth.

GENERIC SATELLITE SYNC OUTDOOR PARTS



GPS antenna incl
Wall/Pole mounting
support



Refer to NDBS Build documentation for installation position of GPS 03 within cabinets

Grounding Cable G/Y

Surge Arrester Device included in GPS03

¼" or ½" Coaxial Cable

GPS03 receiver

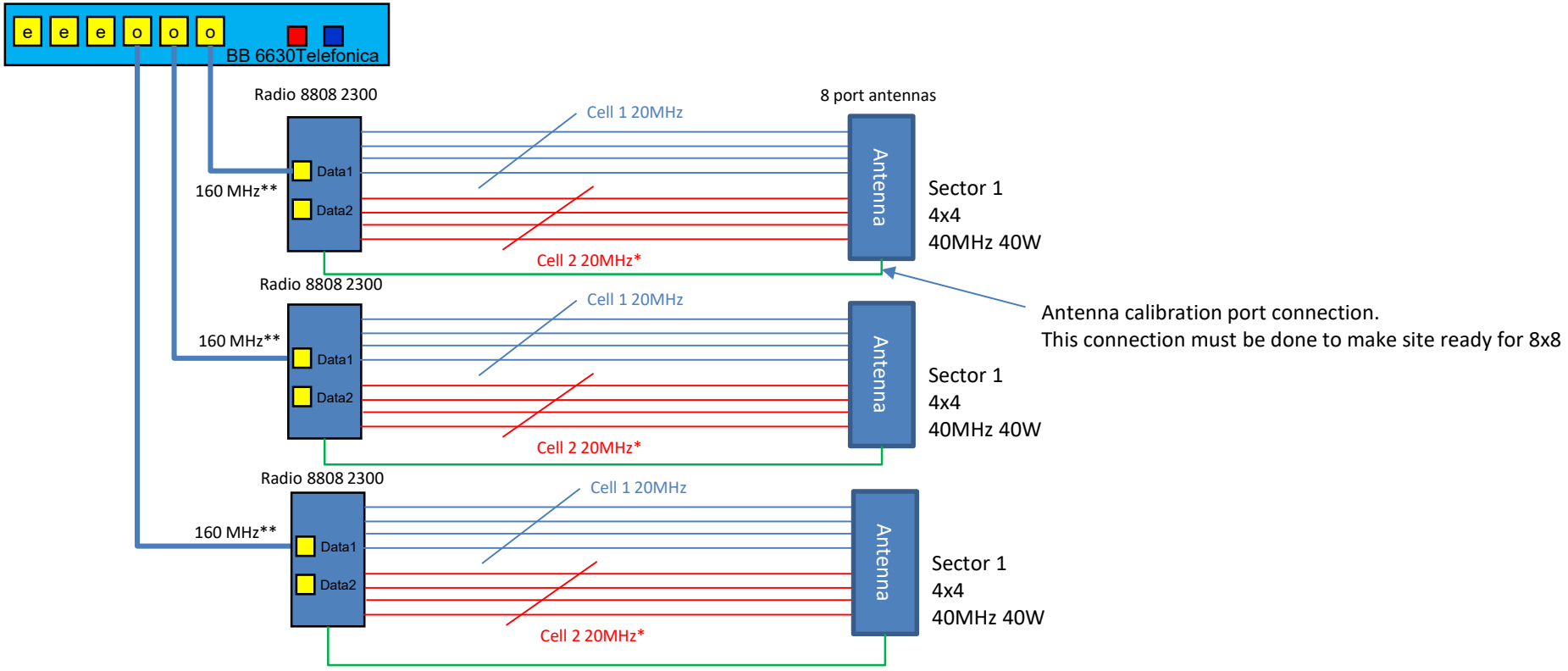
TEF Baseband

Pole/Tube

Grounding Cable G/Y

Antenna connection for TDD2300

4x4 40MHz 20W per 20MHz carrier
8x8 40MHz 10W per 20MHz carrier



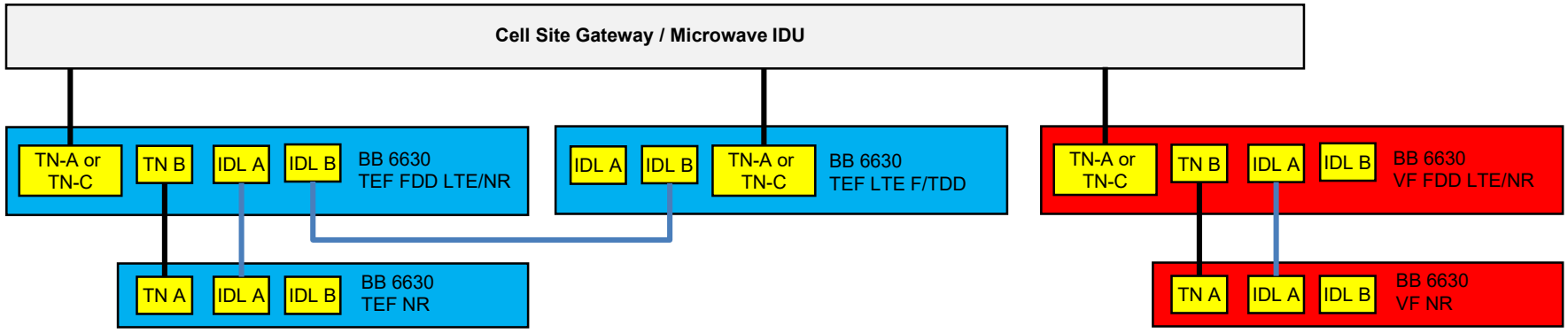
*) branches 5-8 are used in 4x4 to radiate 2nd carrier. After upgrade to 8x8 will be reconfigured to standard branches 5-8 of 8x8
**) after switching to 8x8 40MHz the CPRI capacity will increase to 320MHz.
40MHz support for 8x8 is only possible if all radios connected to baseband are ERS.

IDLe Cabling

- IDLe cabling between BBs facilitates the use of Elastic RAN for co-ordination features like Carrier Aggregation (CA)
- Since IDLe cabling is Ethernet based it may also be used for other functions such as PTP synchronization distribution between BBs when PTP is not available via the Tx network
- Within the Beacon 3 configurations IDLe cabling will be used for two reasons:
  - To facilitate use of CA between BBs in the future
  - For PTP synchronization distribution between the BBs when PTP is not available via the Tx network

- When PTP time/phase synchronization is not available via the Tx network GPS is used instead
- The TEF FDD LTE/NR BB is synced via GPS and configured as a PTP Grandmaster
- The TEF FDD LTE/NR BB then distributes a time/phase synchronization reference to the TEF LTE F/TDD BB via PTP over the IDLe link between the BBs

- The diagram below illustrates the IDLe and Tn cabling between the BBs



Key

TF

VF

Shared

Configuration	Ordering Code
B3 Indoor ERS L18 Small 3 sectors	5E3L18SCIDERS
B3 Outdoor ERS L18 Small 3 sectors	5E3L18SCOAERS

4/4/4 G900

2/2/2 U900

2/2/2 L800

2/2/2 L2100

1/1/1 L1800

2/2/2 L900

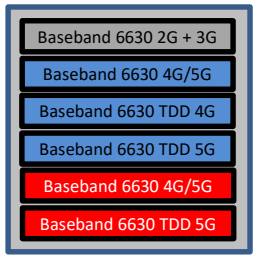
2/2/2 NR3400 (option)**

1/1/1 L2300 (option)

1/1/1 L2600 (option)

1/1/1 NR700 (option)

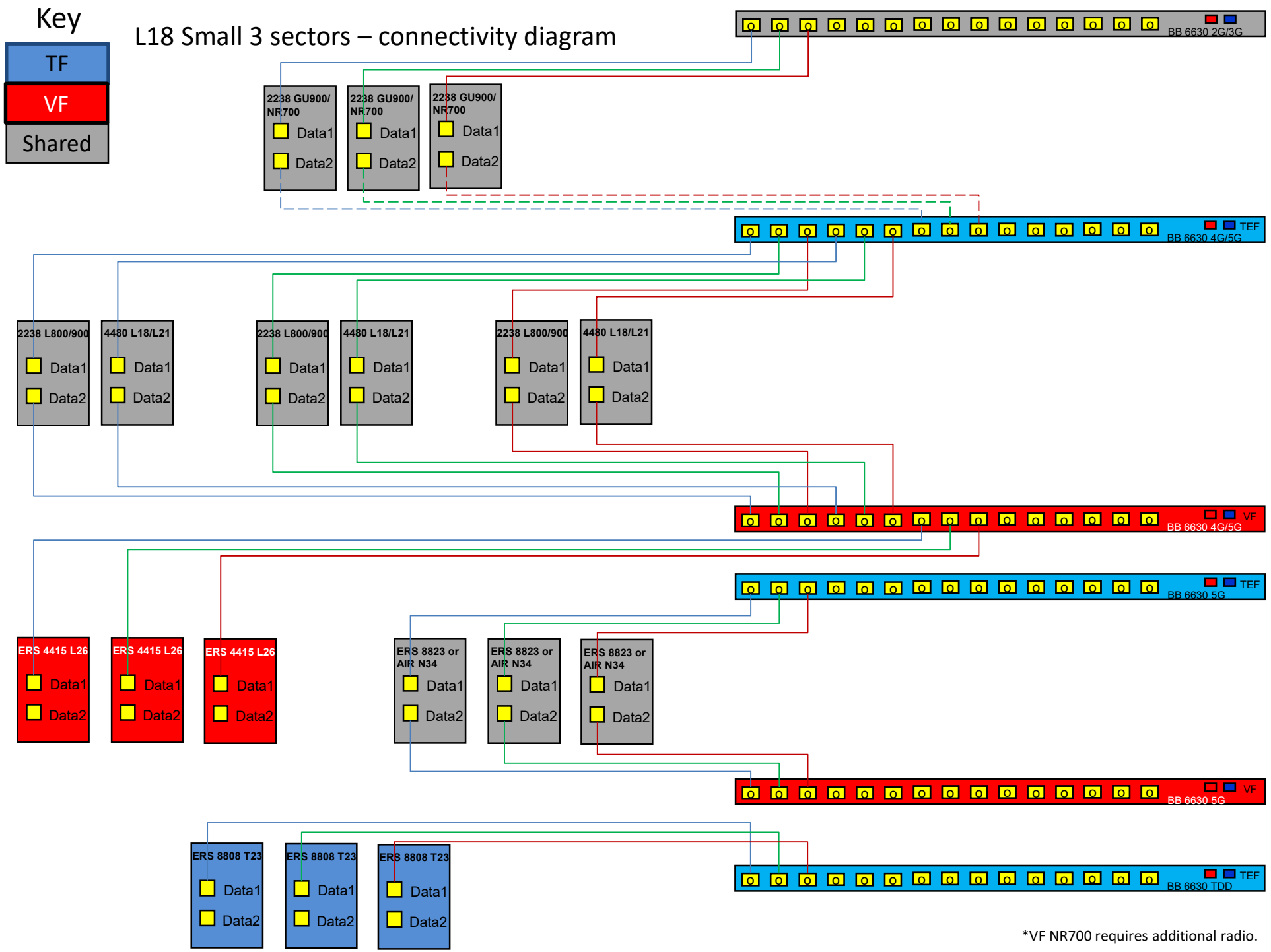
1/1/1 NR2100 (ESS)



Technology		
G900	12 TRX (2 TRX /Operator/Sector)	20W
U900	6cc	20W
NR700	-	20W
L900	TEF 3x5-10MHz 2x2 MIMO VF 3x5-10MHz 2x2 MIMO or N/A	20W
L800	TEF 3x10MHz 2x2 MIMO VF 3x10MHz 2x2 MIMO	20W
L2100	TEF 3x10 MHz 4x4 MIMO VF 3x10 MHz 4x4 MIMO	20W
L1800	TEF 3x5 MHz 4x4 MIMO	20W
L2300 TDD	TEF 3x20+20MHz 4x4 MIMO	20W
L2600	VF 3x20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 3x40MHz 8x8 MIMO VF 3x50MHz*** 8x8 MIMO or TEF 3x40MHz M-MIMO VF 3x50MHz M-MIMO	20W
NR2100	Initially, 3x10MHz 2x2 MIMO (ESS) 3x10MHz 4x4 MIMO (ESS)	20W

**NR3400 TDD will be 1/1/1, if VF do not have NR3400 TDD.

*** 40MHz where equipment does not accommodate bandwidth.


Key
TF
VF
Shared
L18 Small 3 sectors – connectivity diagram
BB 6630 2G/3G
2238 GU900/ NR700
Data1
Data2
2238 GU900/ NR700
Data1
Data2
2238 GU900/ NR700
Data1
Data2
TEF
BB 6630 4G/5G
2238 L800/900
Data1
Data2
4480 L18/L21
Data1
Data2
2238 L800/900
Data1
Data2
4480 L18/L21
Data1
Data2
2238 L800/900
Data1
Data2
4480 L18/L21
Data1
Data2
VF
BB 6630 4G/5G
TEF
BB 6630 5G
ERS 4415 L26
Data1
Data2
ERS 4415 L26
Data1
Data2
ERS 4415 L26
Data1
Data2
ERS 8823 or AIR N34
Data1
Data2
ERS 8823 or AIR N34
Data1
Data2
ERS 8823 or AIR N34
Data1
Data2
VF
BB 6630 5G
ERS 8808 T23
Data1
Data2
ERS 8808 T23
Data1
Data2
ERS 8808 T23
Data1
Data2
TEF
BB 6630 TDD
*VF NR700 requires additional radio.

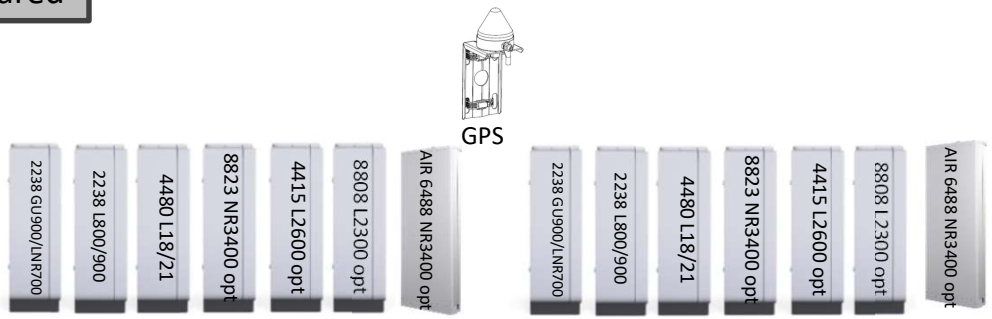
Key

TF

VF

Shared

Configuration	Ordering Code
B3 Indoor ERS L18 Small 2 sectors	5E2L18SCIDERS
B3 Outdoor ERS L18 Small 2 sectors	5E2L18SCOAERS



0/4/4 G900

0/2/2 U900

0/2/2 L800

0/2/2 L2100

0/1/1 L1800

0/2/2 L900

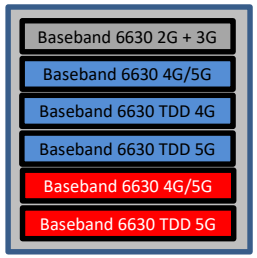
0/2/2 NR3400 (option)**

0/1/1 L2300 (option)

0/1/1 L2600 (option)

0/1/1 NR700 (option)

0/1/1 NR2100 (ESS)



Technology		
G900	8 TRX (2 TRX /Operator/Sector)	20W
U900	4cc	20W
NR700	-	20W
L900	TEF 2x5-10MHz 2x2 MIMO VF 2x5-10MHz 2x2 MIMO or N/A	20W
L800	TEF 2x10MHz 2x2 MIMO VF 2x10MHz 2x2 MIMO	20W
L2100	TEF 2x10 MHz 4x4 MIMO VF 2x10 MHz 4x4 MIMO	20W
L1800	TEF 2x5 MHz 4x4 MIMO	20W
L2300 TDD	TEF 2x20+20MHz 4x4 MIMO	20W
L2600	VF 2x20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 2x40MHz 8x8 MIMO VF 2x50MHz*** 8x8 MIMO or TEF 2x40MHz M-MIMO VF 2x50MHz M-MIMO	20W
NR2100	Initially, 2x10MHz 2x2 MIMO (ESS) 2x10MHz 4x4 MIMO (ESS)	20W

**NR3400 TDD will be 0/1/1, if VF do not have NR3400 TDD.

*** 40MHz where equipment does not accommodate bandwidth.

Key

TF

VF

Shared

Configuration	Ordering Code
B3 Indoor ERS Small 3 sectors	5E3SCIDERS
B3 Outdoor ERS Small 3 sectors	5E3SCOAERS

4/4/4 G900

2/2/2 U900

2/2/2 L800

2/2/2 L2100

2/2/2 L900

2/2/2 NR3400 (option)**

1/1/1 L2300 (option)

1/1/1 L2600 (option)

1/1/1 NR700 (option)

1/1/1 NR2100 (ESS)

Baseband 6630 2G + 3G

Baseband 6630 4G/5G

Baseband 6630 TDD 4G

Baseband 6630 TDD 5G

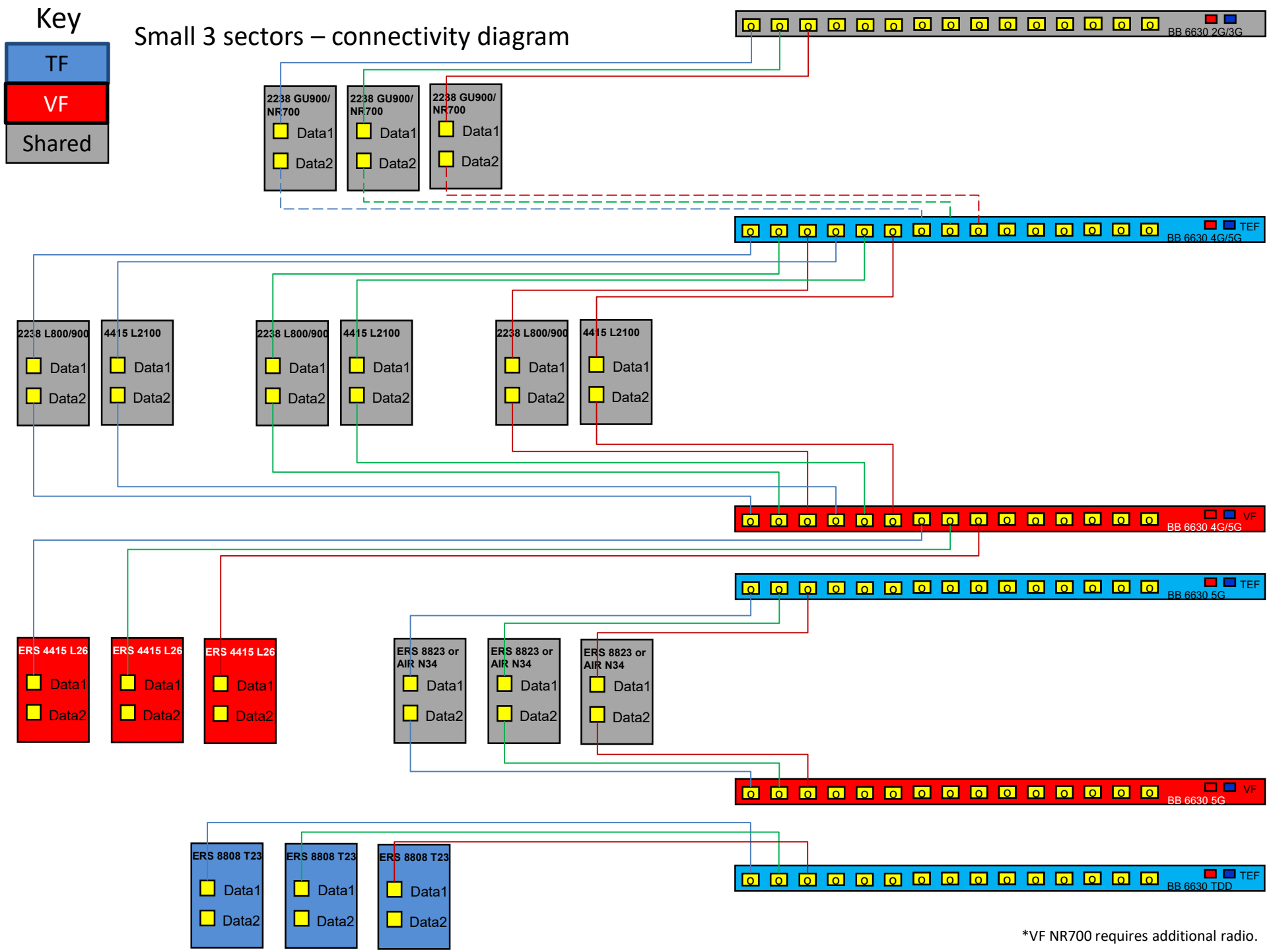
Baseband 6630 4G/5G

Baseband 6630 TDD 5G

Technology		
G900	12 TRX (2 TRX /Operator/Sector)	20W
U900	6cc	20W
NR700	-	20W
L900	TEF 3x5-10MHz 2x2 MIMO VF 3x5-10MHz 2x2 MIMO or N/A	20W
L800	TEF 3x10MHz 2x2 MIMO VF 3x10MHz 2x2 MIMO	20W
L2100	TEF 3x10 MHz 4x4 MIMO VF 3x10 MHz 4x4 MIMO	20W
L2300 TDD	TEF 3x20+20MHz 4x4 MIMO	20W
L2600	VF 3x20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 3x40MHz 8x8 MIMO VF 3x50MHz*** 8x8 MIMO or TEF 3x40MHz M-MIMO VF 3x50MHz M-MIMO	20W
NR2100	Initially, 3x10MHz 2x2 MIMO (ESS) 3x10MHz 4x4 MIMO (ESS)	20W

**NR3400 TDD will be 1/1/1, if VF do not have NR3400 TDD.

*** 40MHz where equipment does not accommodate bandwidth.


Key
TF
VF
Shared
Small 3 sectors – connectivity diagram
BB 6630 2G/3G
2238 GU900/ NR700
Data1
Data2
2238 GU900/ NR700
Data1
Data2
2238 GU900/ NR700
Data1
Data2
TEF
BB 6630 4G/5G
2238 L800/900
Data1
Data2
4415 L2100
Data1
Data2
2238 L800/900
Data1
Data2
4415 L2100
Data1
Data2
2238 L800/900
Data1
Data2
4415 L2100
Data1
Data2
VF
BB 6630 4G/5G
TEF
BB 6630 5G
ERS 4415 L26
Data1
Data2
ERS 4415 L26
Data1
Data2
ERS 4415 L26
Data1
Data2
ERS 8823 or AIR N34
Data1
Data2
ERS 8823 or AIR N34
Data1
Data2
ERS 8823 or AIR N34
Data1
Data2
VF
BB 6630 5G
ERS 8808 T23
Data1
Data2
ERS 8808 T23
Data1
Data2
ERS 8808 T23
Data1
Data2
TEF
BB 6630 TDD
*VF NR700 requires additional radio.

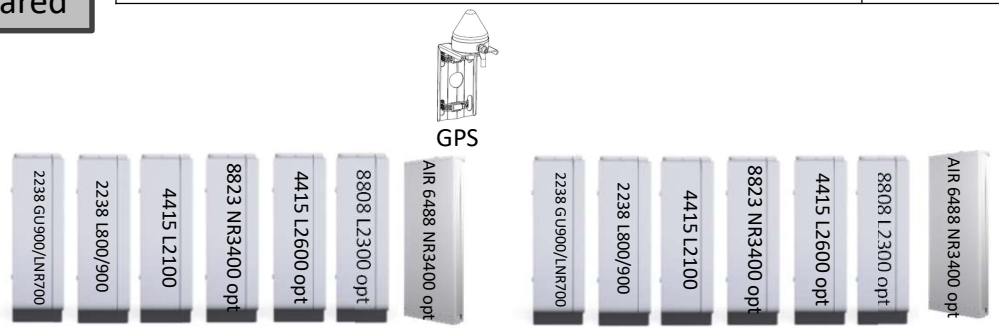
Key

TF

VF

Shared

Configuration	Ordering Code
B3 Indoor ERS Small 2 sectors	5E2SCIDERS
B3 Outdoor ERS Small 2 sectors	5E2SCOAERS



0/4/4 G900

0/2/2 U900

0/2/2 L800

0/2/2 L2100

0/2/2 L900

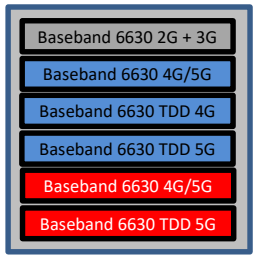
0/2/2 NR3400 (option)**

0/1/1 L2300 (option)

0/1/1 L2600 (option)

0/1/1 NR700 (option)

0/1/1 NR2100 (ESS)



Technology		
G900	8 TRX (2 TRX /Operator/Sector)	20W
U900	4cc	20W
NR700	-	20W
L900	TEF 2x5-10MHz 2x2 MIMO VF 2x5-10MHz 2x2 MIMO or N/A	20W
L800	TEF 2x10MHz 2x2 MIMO VF 2x10MHz 2x2 MIMO	20W
L2100	TEF 2x10 MHz 4x4 MIMO VF 2x10 MHz 4x4 MIMO	20W
L2300 TDD	TEF 2x20+20MHz 4x4 MIMO	20W
L2600	VF 2x20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 2x40MHz 8x8 MIMO VF 2x50MHz*** 8x8 MIMO or TEF 2x40MHz M-MIMO VF 2x50MHz M-MIMO	20W
NR2100	Initially, 2x10MHz 2x2 MIMO (ESS) 2x10MHz 4x4 MIMO (ESS)	20W

**NR3400 TDD will be 0/1/1, if VF do not have NR3400 TDD.

*** 40MHz where equipment does not accommodate bandwidth.

Key

TF

VF

Shared

Configuration	Ordering Code
B3 Outdoor ERS Small SF 3 sectors	5E3SCSFERS

4/4/4 G900

2/2/2 U900

2/2/2 L800

2/2/2 L2100

2/2/2 L900

2/2/2 NR3400 (option)

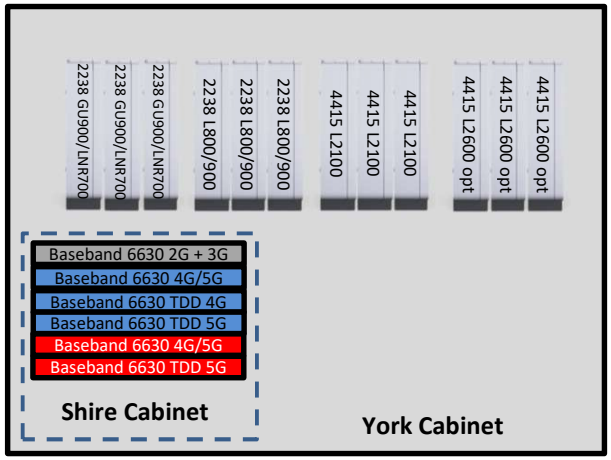
1/1/1 L2300 (option)

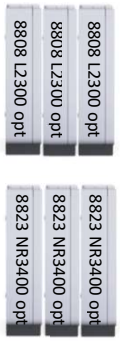
1/1/1 L2600 (option)

1/1/1 NR700 (option)

1/1/1 NR2100 (ESS)

GPS

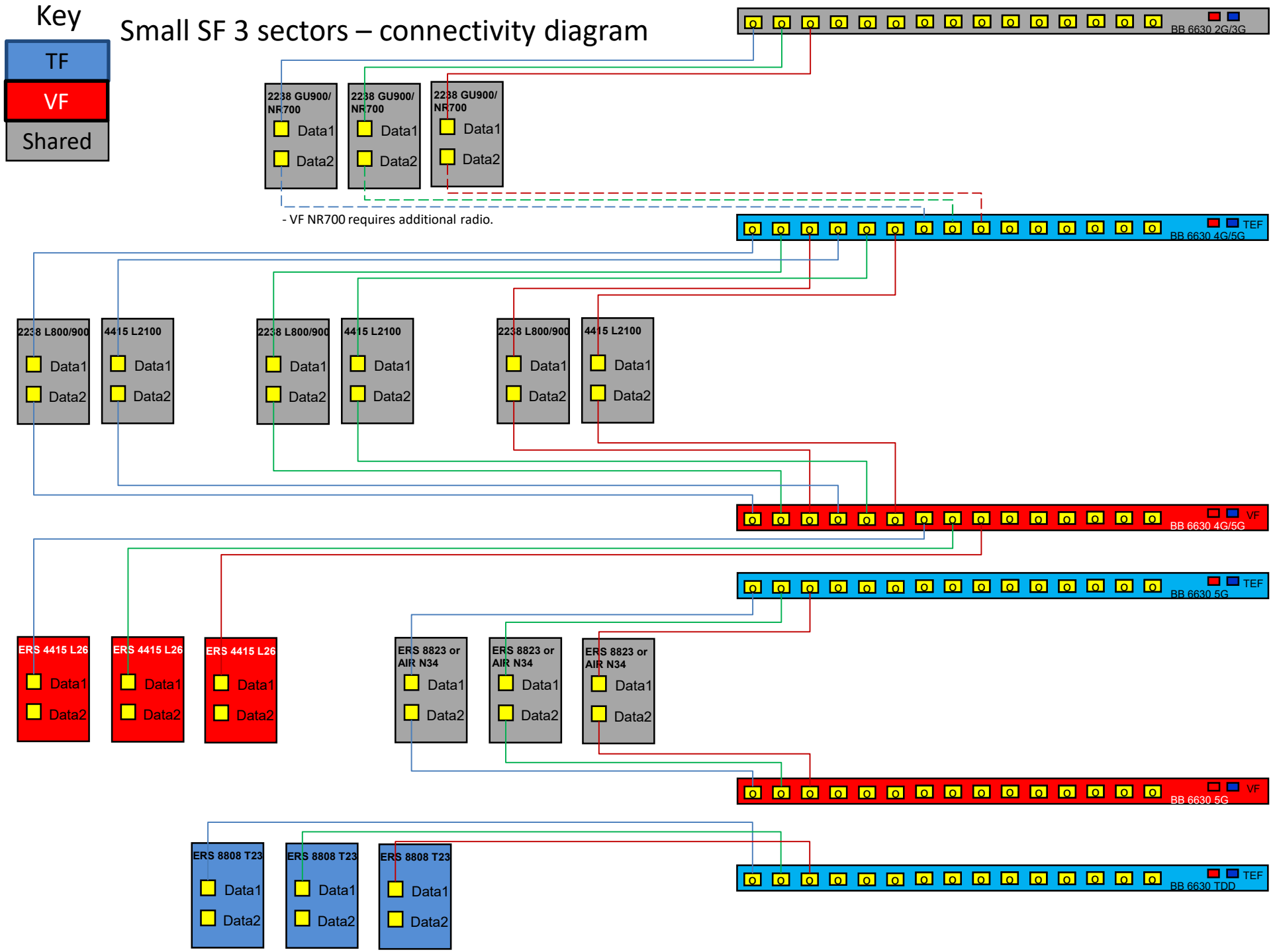




Technology		
G900	12 TRX (2 TRX /Operator/Sector)	20W
U900	6cc	20W
NR700	-	20W
L900	TEF 3x5-10MHz 2x2 MIMO VF 3x5-10MHz 2x2 MIMO or N/A	20W
L800	TEF 3x10MHz 2x2 MIMO VF 3x10MHz 2x2 MIMO	20W
L2100	TEF 3x10 MHz 4x4 MIMO VF 3x10 MHz 4x4 MIMO	20W
L2300 TDD	TEF 3x20+20MHz 4x4 MIMO	20W
L2600	VF 3x20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 3x40MHz 8x8 MIMO VF 3x50MHz*** 8x8 MIMO or TEF 3x40MHz M-MIMO VF 3x50MHz M-MIMO	20W
NR2100	Initially, 3x10MHz 2x2 MIMO (ESS) 3x10MHz 4x4 MIMO (ESS)	20W

Note:

- NR3400 TDD can be deployed, if Apollo pole is deployed
- If Apollo pole is deployed, 2 x Radio 8808 are installed in York cabinet, if L26 Demand, then Radio 4415 B7s will need to be installed in additional cabinet.
- *** 40MHz where equipment does not accommodate bandwidth.


Key
TF
VF
Shared
Small SF 3 sectors – connectivity diagram
BB 6630 2G/3G
2238 GU900/ NR700
Data1
Data2
2238 GU900/ NR700
Data1
Data2
2238 GU900/ NR700
Data1
Data2
- VF NR700 requires additional radio.
TEF
BB 6630 4G/5G
2238 L800/900
Data1
Data2
4415 L2100
Data1
Data2
2238 L800/900
Data1
Data2
4415 L2100
Data1
Data2
2238 L800/900
Data1
Data2
4415 L2100
Data1
Data2
VF
BB 6630 4G/5G
TEF
BB 6630 5G
ERS 4415 L26
Data1
Data2
ERS 4415 L26
Data1
Data2
ERS 4415 L26
Data1
Data2
ERS 8823 or AIR N34
Data1
Data2
ERS 8823 or AIR N34
Data1
Data2
ERS 8823 or AIR N34
Data1
Data2
VF
BB 6630 5G
ERS 8808 T23
Data1
Data2
ERS 8808 T23
Data1
Data2
ERS 8808 T23
Data1
Data2
TEF
BB 6630 TDD

Key

TF

VF

Shared

Configuration	Ordering Code
B3 Outdoor ERS Small SF 2 sectors	5E2SCSFERS

0/4/4 G900

0/2/2 U900

0/2/2 L800

0/2/2 L2100

0/2/2 L900

0/2/2 NR3400 (option)

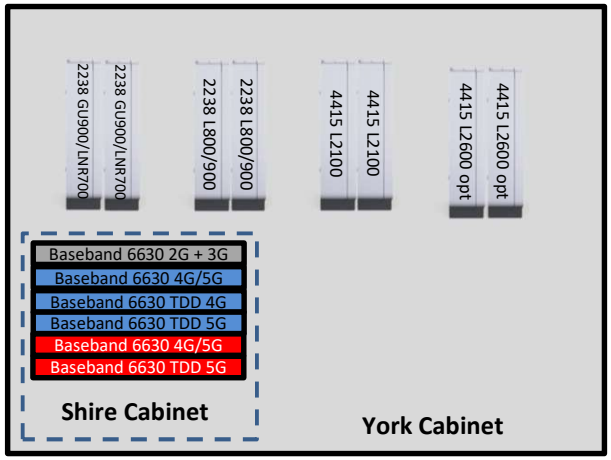
0/1/1 L2300 (option)

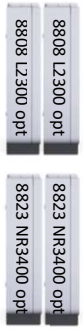
0/1/1 L2600 (option)

0/1/1 NR700 (option)

0/1/1 NR2100 (ESS)

GPS





Technology		
G900	8 TRX (2 TRX /Operator/Sector)	20W
U900	4cc	20W
NR700	-	20W
L900	TEF 2x5-10MHz 2x2 MIMO VF 2x5-10MHz 2x2 MIMO or N/A	20W
L800	TEF 2x10MHz 2x2 MIMO VF 2x10MHz 2x2 MIMO	20W
L2100	TEF 2x10 MHz 4x4 MIMO VF 2x10 MHz 4x4 MIMO	20W
L2300 TDD	TEF 2x20+20MHz 4x4 MIMO	20W
L2600	VF 2x20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 2x40MHz 8x8 MIMO VF 2x50MHz*** 8x8 MIMO or TEF 2x40MHz M-MIMO VF 2x50MHz M-MIMO	20W
NR2100	Initially, 2x10MHz 2x2 MIMO (ESS) 2x10MHz 4x4 MIMO (ESS)	20W

Note:

- NR3400 TDD can be deployed, if Apollo pole is deployed
- If Apollo pole is deployed, 1 x Radio 8808 is installed in York cabinet.
- *** 40MHz where equipment does not accommodate bandwidth.

Key

TF

VF

Shared

Configuration	Ordering Code
B3 Outdoor ERS L18 Small SF 3 sectors	5E3L18SCSFERS

4/4/4 G900

2/2/2 U900

2/2/2 L800

2/2/2 L2100

0/1/1 L1800

2/2/2 L900

2/2/2 NR3400 (option)

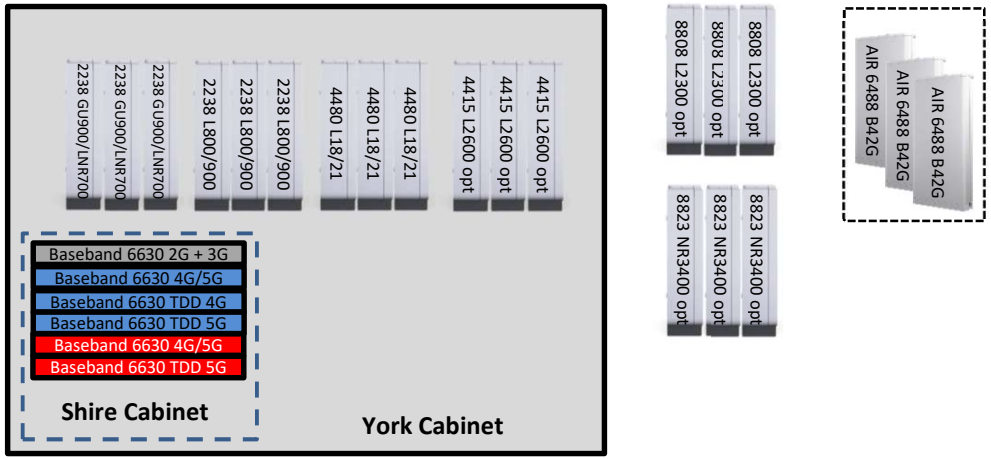
1/1/1 L2300 (option)

1/1/1 L2600 (option)

1/1/1 NR700 (option)

1/1/1 NR2100 (ESS)

GPS

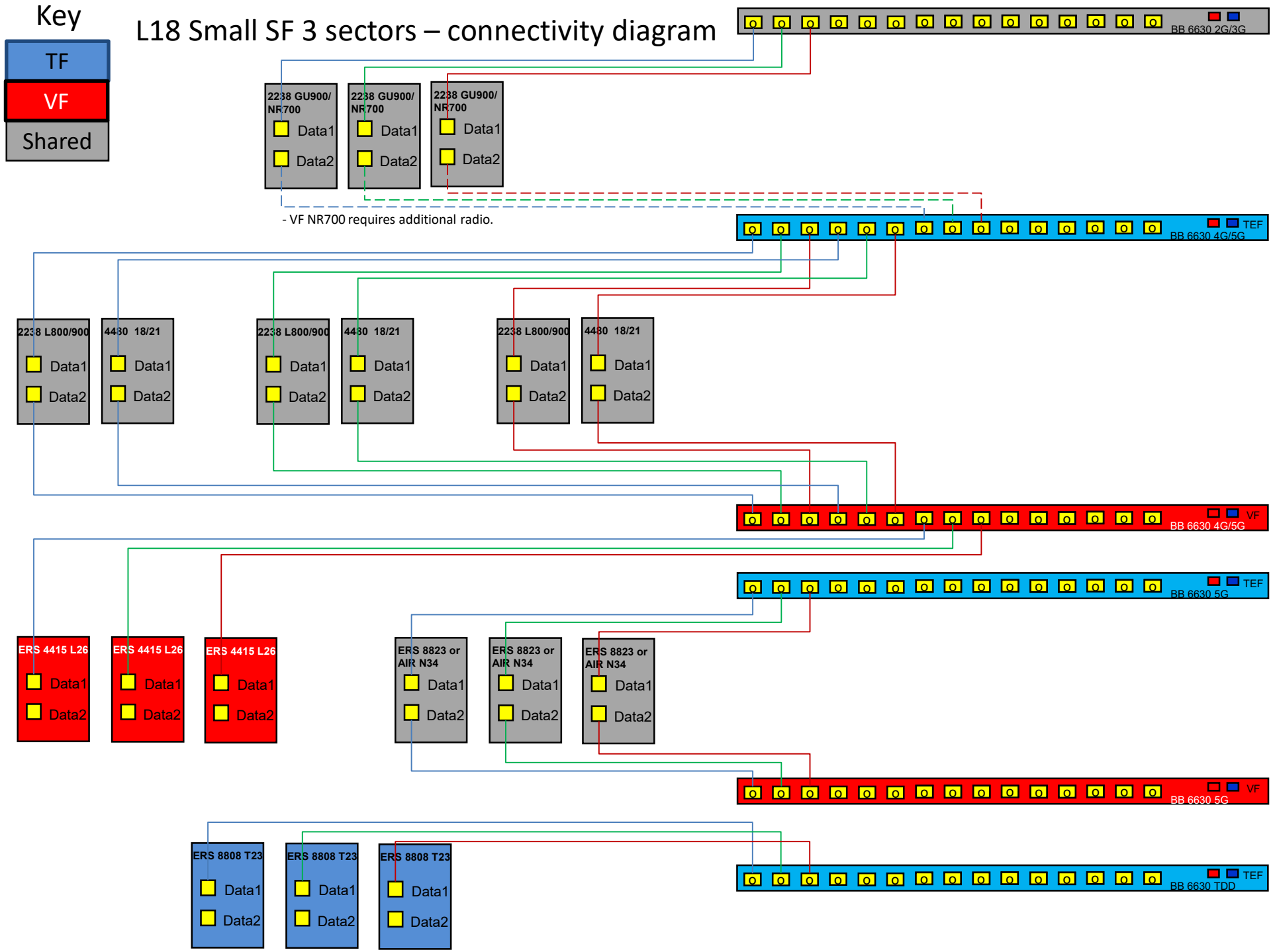


Technology		
G900	12 TRX (2 TRX /Operator/Sector)	20W
U900	6cc	20W
NR700	-	20W
L900	TEF 3x5-10MHz 2x2 MIMO VF 3x5-10MHz 2x2 MIMO or N/A	20W
L800	TEF 3x10MHz 2x2 MIMO VF 3x10MHz 2x2 MIMO	20W
L2100	TEF 3x10 MHz 4x4 MIMO VF 3x10 MHz 4x4 MIMO	20W
L1800	TEF 3x5 MHz 4x4 MIMO	20W
L2300 TDD	TEF 3x20+20MHz 4x4 MIMO	20W
L2600	VF 3x20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 3x40MHz 8x8 MIMO VF 3x50MHz*** 8x8 MIMO or TEF 3x40MHz M-MIMO VF 3x50MHz M-MIMO	20W
NR2100	Initially, 3x10MHz 2x2 MIMO (ESS) 3x10MHz 4x4 MIMO (ESS)	20W

Note:

- NR3400 TDD can be deployed, if Apollo pole is deployed
- If Apollo pole is deployed, 2 x Radio 8808 are installed in York cabinet, if L26 Demand, then Radio 4415 B7s will need to be installed in additional cabinet.
- *** 40MHz where equipment does not accommodate bandwidth.

L18 Small SF 3 sectors – connectivity diagram



Key

TF

VF

Shared

Configuration	Ordering Code
B3 Outdoor ERS L18 Small SF 2 sectors	5E2L18SCSFERS

0/4/4 G900

0/2/2 U900

0/2/2 L800

0/2/2 L2100

0/1/1 L1800

0/2/2 L900

0/2/2 NR3400 (option)

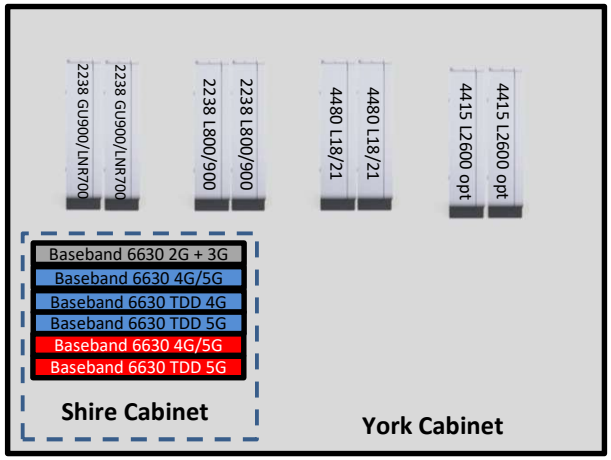
0/1/1 L2300 (option)

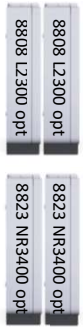
0/1/1 L2600 (option)

0/1/1 NR700 (option)

0/1/1 NR2100 (ESS)

GPS





Technology		
G900	8 TRX (2 TRX /Operator/Sector)	20W
U900	4cc	20W
NR700	-	20W
L900	TEF 2x5-10MHz 2x2 MIMO VF 2x5-10MHz 2x2 MIMO or N/A	20W
L800	TEF 2x10MHz 2x2 MIMO VF 2x10MHz 2x2 MIMO	20W
L2100	TEF 2x10 MHz 4x4 MIMO VF 2x10 MHz 4x4 MIMO	20W
L1800	TEF 3x5 MHz 4x4 MIMO	20W
L2300 TDD	TEF 2x20+20MHz 4x4 MIMO	20W
L2600	VF 2x20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 2x40MHz 8x8 MIMO VF 2x50MHz*** 8x8 MIMO or TEF 2x40MHz M-MIMO VF 2x50MHz M-MIMO	20W
NR2100	Initially, 2x10MHz 2x2 MIMO (ESS) 2x10MHz 4x4 MIMO (ESS)	20W

Note:

- NR3400 TDD can be deployed, if Apollo pole is deployed
- If Apollo pole is deployed, 1 x Radio 8808 is installed in York cabinet.
- *** 40MHz where equipment does not accommodate bandwidth.

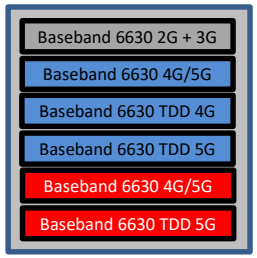
Key

TF

VF

Shared

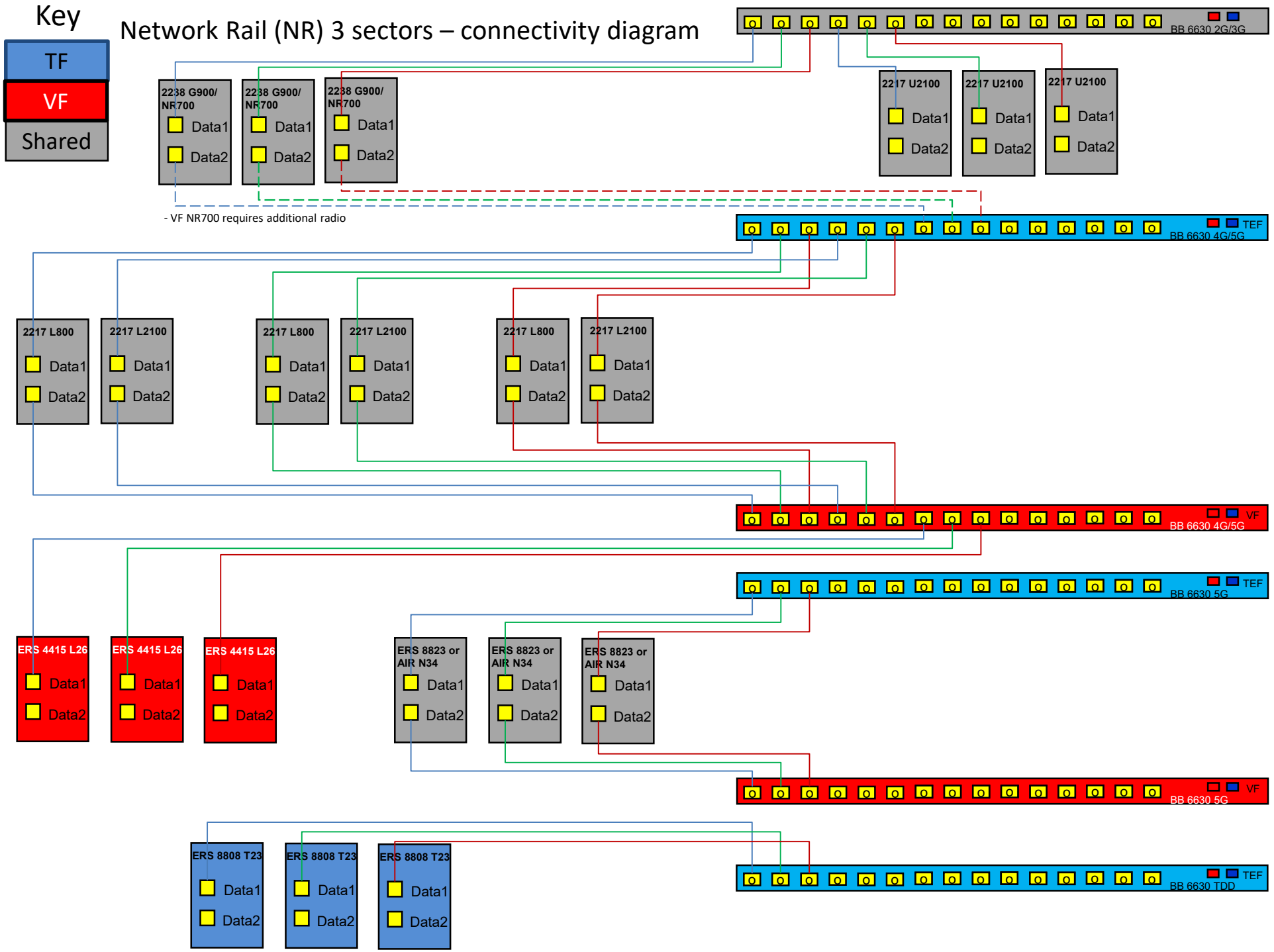
Configuration	Ordering Code
B3 Indoor ERS Network Rail (NR) 3 sectors	5E3NRIDERS
B3 Outdoor ERS Network Rail (NR) 3 sectors	5E3NROAERS



Technology		
G900	12 TRX (2 TRX /Operator/Sector)	20W
NR700	-	20W
U2100	VF 3cc; Tef 3cc	20W
L900	-	20W
L800	TEF 3x10MHz 2x2 MIMO VF 3x10MHz 2x2 MIMO	20W
L2100	TEF 3x5 MHz 2x2 MIMO VF 3x5 MHz 2x2 MIMO	20W
L2300 TDD	TEF 3x20+20MHz 4x4 MIMO	20W
L2600	VF 3x20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 3x40MHz 8x8 MIMO VF 3x50MHz*** 8x8 MIMO or TEF 3x40MHz M-MIMO VF 3x50MHz M-MIMO	20W
NR2100	Initially, 3x10MHz 2x2 MIMO (ESS) 3x10MHz 4x4 MIMO (ESS)	20W

Note:

- NR3400 TDD will be 1/1/1, if VF do not have NR3400 TDD.
- *** 40MHz where equipment does not accommodate bandwidth.


Key
TF
VF
Shared
Network Rail (NR) 3 sectors – connectivity diagram
BB 6630 2G/3G
2238 G900/ NR700
Data1
Data2
2238 G900/ NR700
Data1
Data2
2238 G900/ NR700
Data1
Data2
2217 U2100
Data1
Data2
2217 U2100
Data1
Data2
2217 U2100
Data1
Data2
- VF NR700 requires additional radio
TEF
BB 6630 4G/5G
2217 L800
Data1
Data2
2217 L2100
Data1
Data2
2217 L800
Data1
Data2
2217 L2100
Data1
Data2
2217 L800
Data1
Data2
2217 L2100
Data1
Data2
VF
BB 6630 4G/5G
TEF
BB 6630 5G
ERS 4415 L26
Data1
Data2
ERS 4415 L26
Data1
Data2
ERS 4415 L26
Data1
Data2
ERS 8823 or AIR N34
Data1
Data2
ERS 8823 or AIR N34
Data1
Data2
ERS 8823 or AIR N34
Data1
Data2
VF
BB 6630 5G
ERS 8808 T23
Data1
Data2
ERS 8808 T23
Data1
Data2
ERS 8808 T23
Data1
Data2
TEF
BB 6630 TDD

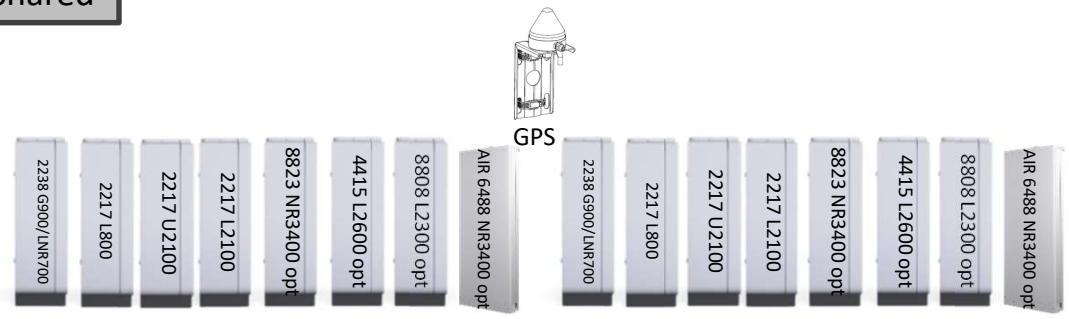
Key

TF

VF

Shared

Configuration	Ordering Code
B3 Indoor ERS Network Rail (NR) 2 sectors	5E2NRIDERS
B3 Outdoor ERS Network Rail (NR) 2 sectors	5E2NROAERS



0/4/4 G900

0/2/2 U2100

0/2/2 L800

0/2/2 L2100

0/2/2 NR3400 (option)

0/1/1 L2300 (option)

0/1/1 L2600 (option)

0/1/1 NR700 (option)

0/1/1 NR2100 (ESS)

Baseband 6630 2G + 3G

Baseband 6630 4G/5G

Baseband 6630 TDD 4G

Baseband 6630 TDD 5G

Baseband 6630 4G/5G

Baseband 6630 TDD 5G

Technology		
G900	8TRX (2 TRX /Operator/Sector)	20W
NR700	-	20W
U2100	VF 2cc; Tef 2cc	20W
L900	-	20W
L800	TEF 2x10MHz 2x2 MIMO VF 2x10MHz 2x2 MIMO	20W
L2100	TEF 2x5 MHz 2x2 MIMO VF 2x5 MHz 2x2 MIMO	20W
L2300 TDD	TEF 2x20+20MHz 4x4 MIMO	20W
L2600	VF 2x20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 2x40MHz 8x8 MIMO VF 2x50MHz*** 8x8 MIMO or TEF 2x40MHz M-MIMO VF 2x50MHz M-MIMO	20W
NR2100	Initially, 2x10MHz 2x2 MIMO (ESS) 2x10MHz 4x4 MIMO (ESS)	20W

Note:

- NR3400 TDD will be 0/1/1, if VF do not have NR3400 TDD.
- *** 40MHz where equipment does not accommodate bandwidth.

Key

TF

VF

Shared

Configuration	Ordering Code
B3 Indoor ERS Low 3 sectors	5E3LCIDERS
B3 Outdoor ERS Low 3 sectors	5E3LCOAERS

GPS

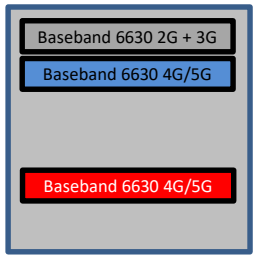
4/4/4 G900

2/2/2 U900

2/2/2 L800

2/2/2 L900

1/1/1 NR700 (option)



Technology		
G900	12 TRX (2 TRX /Operator/Sector)	20W
U900	6cc	20W
L900	TEF 3x5-10MHz 2x2 MIMO VF 3x5-10MHz 2x2 MIMO or N/A	20W
L800	TEF 3x10MHz 2x2 MIMO VF 3x10MHz 2x2 MIMO	20W
NR700	-	

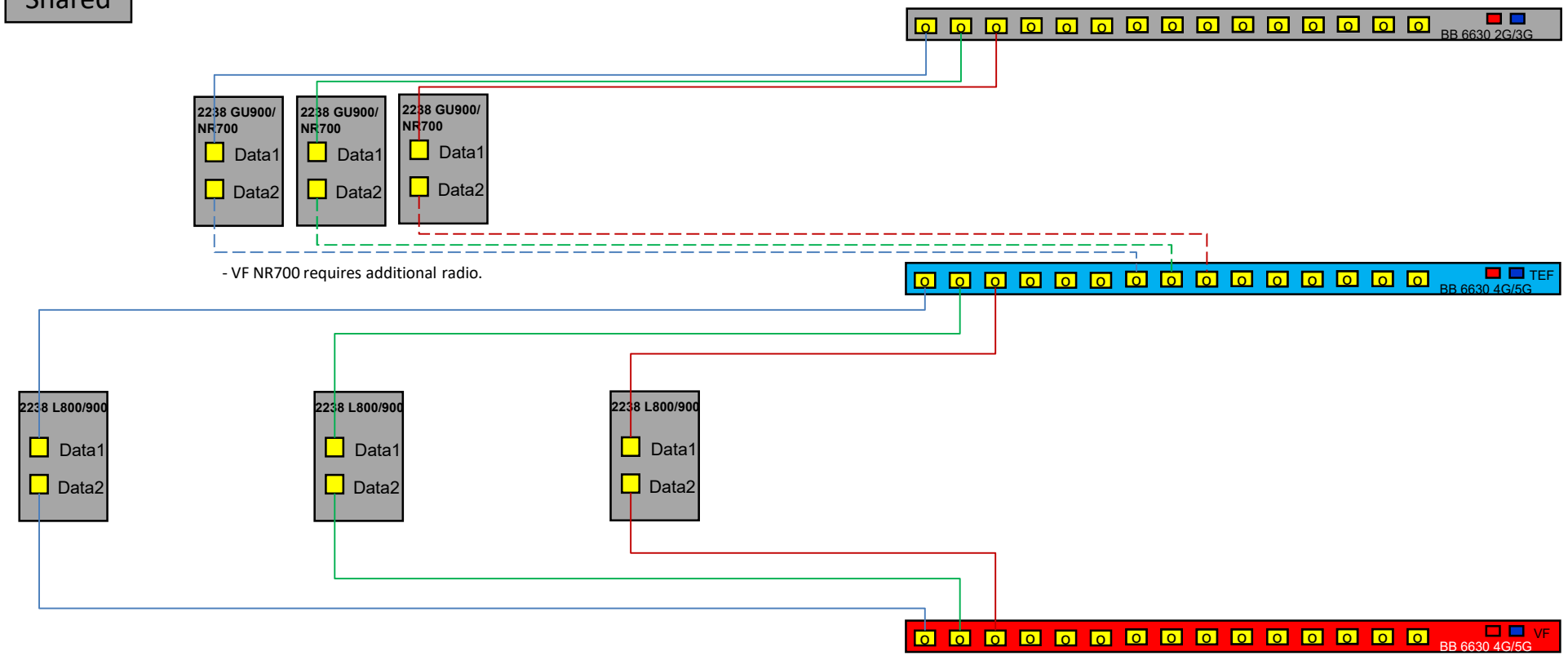
Key

TF

VF

Shared

Low – 3 sectors– connectivity diagram



Key

TF

VF

Shared

Configuration	Ordering Code
B3 Indoor ERS Low 2 sectors	5E2LCIDERS
B3 Outdoor ERS Low 2 sectors	5E2LCOAERS

GPS

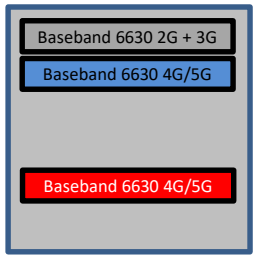
0/4/4 G900

0/2/2 U900

0/2/2 L800

0/2/2 L900

0/1/1 NR700 (option)



Technology		
G900	8 TRX (2 TRX /Operator/Sector)	20W
U900	4cc	20W
L900	TEF 2x5-10MHz 2x2 MIMO VF 2x5-10MHz 2x2 MIMO or N/A	20W
L800	TEF 2x10MHz 2x2 MIMO VF 2x10MHz 2x2 MIMO	20W
NR700	-	

West and East Unwind.

Key

TF

Configuration	Ordering Code
B3 Indoor ERS TEF L18 Small 3 sectors	6E3L18SCIDERS
B3 Outdoor ERS TEF L18 Small 3 sectors	6E3L18SCOAERS

2/2/2 G900
1/1/1 U900
1/1/1 L800
1/1/1 L2100
1/1/1 L1800
1/1/1 L900
1/1/1 NR3400 (option)
1/1/1 L2300 (option)
1/1/1 NR700 (option)
1/1/1 NR2100 (ESS)

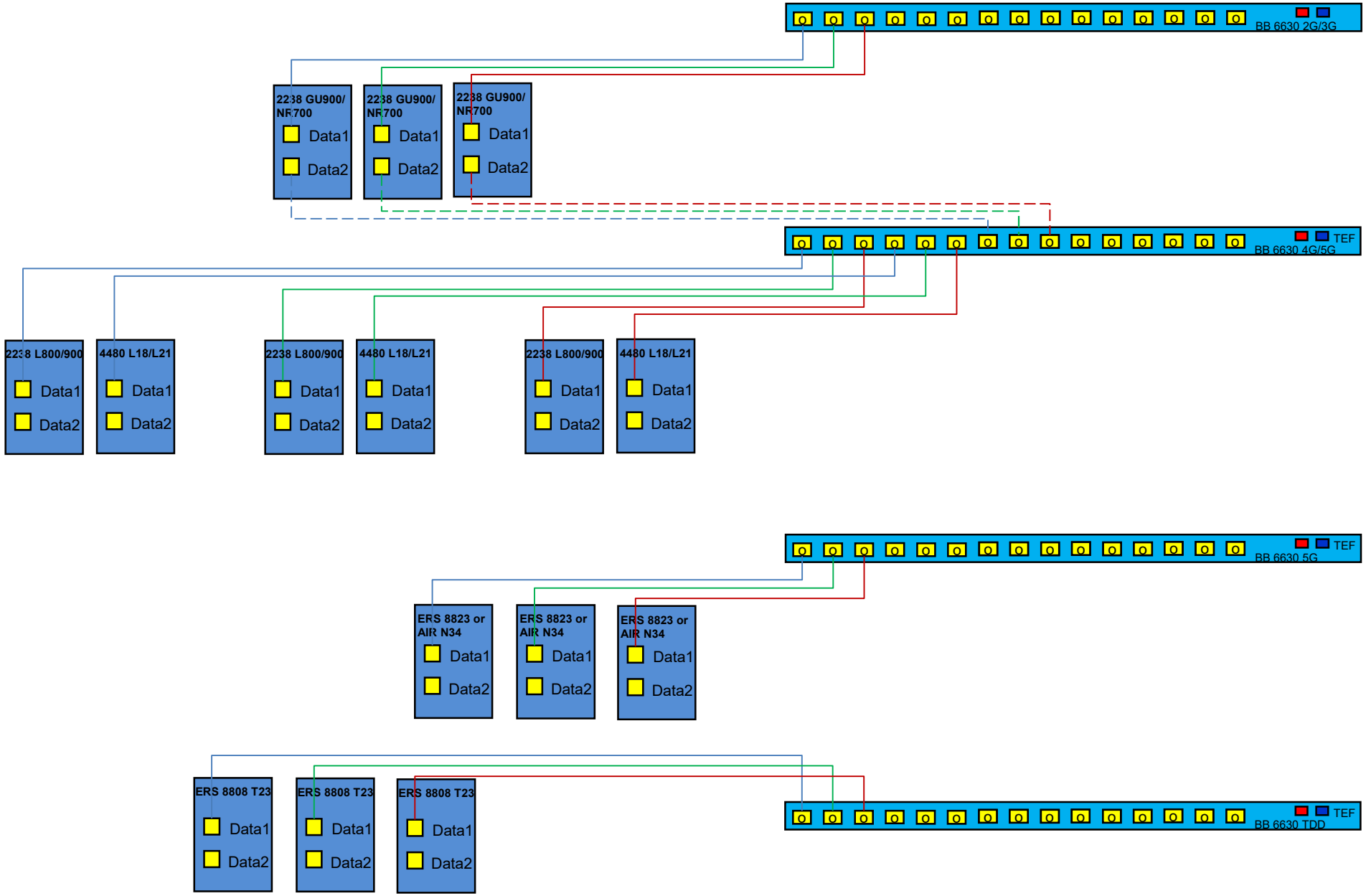
Baseband 6630 2G + 3G
Baseband 6630 4G/5G
Baseband 6630 TDD 4G
Baseband 6630 TDD 5G

Technology		
G900	6 TRX (2 TRX /Sector)	20W
U900	3cc	20W
NR700	-	20W
L900	TEF 3x5-10MHz 2x2 MIMO	20W
L800	TEF 3x10MHz 2x2 MIMO	20W
L2100	TEF 3x10 MHz 4x4 MIMO	20W
L1800	TEF 3x5 MHz 4x4 MIMO	20W
L2300 TDD	TEF 3x20+20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 3x40MHz 8x8 MIMO or TEF 3x40MHz M-MIMO	20W
NR2100	Initially, 3x10MHz 2x2 MIMO (ESS) 3x10MHz 4x4 MIMO (ESS)	20W

Key

TF

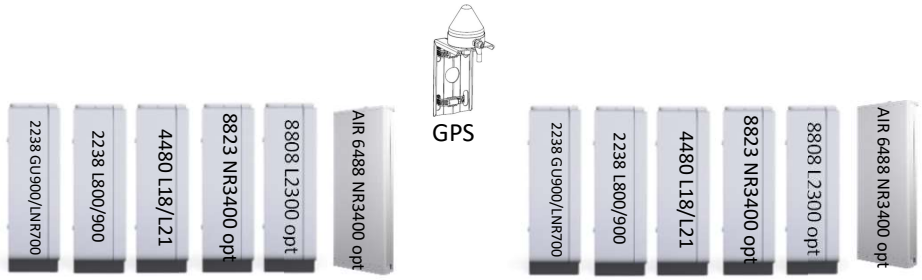
L18 Small 3 sectors – connectivity diagram



Key

TF

Configuration	Ordering Code
B3 Indoor ERS TEF L18 Small 2 sectors	6E2L18SCIDERS
B3 Outdoor ERS TEF L18 Small 2 sectors	6E2L18SCOAERS



- 0/2/2 G900
- 0/1/1 U900
- 0/1/1 L800
- 0/1/1 L2100
- 0/1/1 L1800
- 0/1/1 L900
- 0/1/1 NR3400 (option)
- 0/1/1 L2300 (option)
- 0/1/1 NR700 (option)
- 0/1/1 NR2100 (ESS)

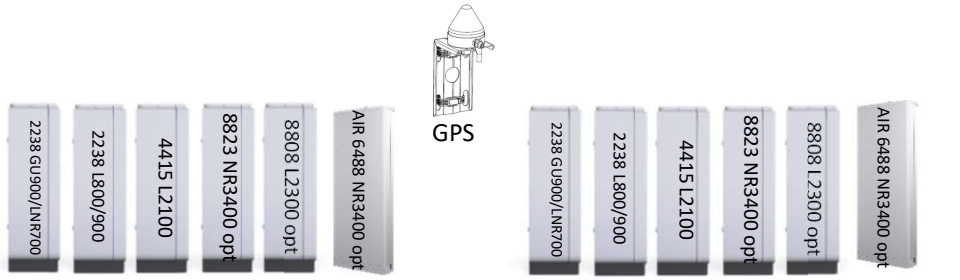
- Baseband 6630 2G + 3G
- Baseband 6630 4G/5G
- Baseband 6630 TDD 4G
- Baseband 6630 TDD 5G

Technology		
G900	4 TRX (2 TRX /Sector)	20W
U900	2cc	20W
NR700	-	20W
L900	TEF 2x5-10MHz 2x2 MIMO	20W
L800	TEF 2x10MHz 2x2 MIMO	20W
L2100	TEF 2x10 MHz 4x4 MIMO	20W
L1800	TEF 2x5 MHz 4x4 MIMO	20W
L2300 TDD	TEF 2x20+20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 2x40MHz 8x8 MIMO or TEF 2x40MHz M-MIMO	20W
NR2100	Initially, 2x10MHz 2x2 MIMO (ESS) 2x10MHz 4x4 MIMO (ESS)	20W

Key

TF

Configuration	Ordering Code
B3 Indoor ERS TEF Small 3 sectors	6E3SCIDERS
B3 Outdoor ERS TEF Small 3 sectors	6E3SCOAERS



2/2/2 G900
1/1/1 U900
1/1/1 L800
1/1/1 L2100
1/1/1 L900
1/1/1 NR3400 (option)
1/1/1 L2300 (option)
1/1/1 NR700 (option)
1/1/1 NR2100 (ESS)

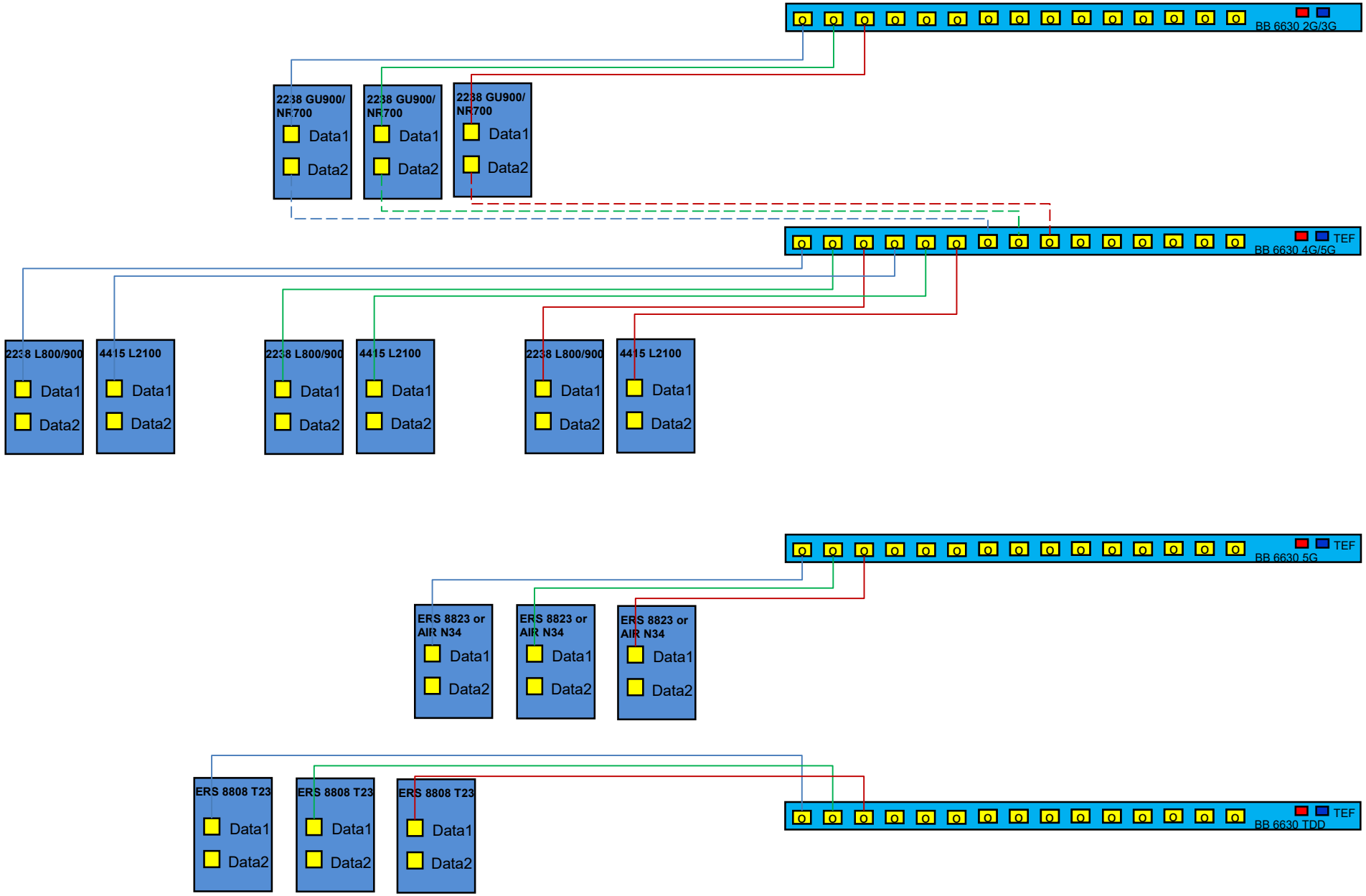
Baseband 6630 2G + 3G
Baseband 6630 4G/5G
Baseband 6630 TDD 4G
Baseband 6630 TDD 5G

Technology		
G900	6 TRX (2 TRX /Sector)	20W
U900	3cc	20W
NR700	-	20W
L900	TEF 3x5-10MHz 2x2 MIMO	20W
L800	TEF 3x10MHz 2x2 MIMO	20W
L2100	TEF 3x10 MHz 4x4 MIMO	20W
L2300 TDD	TEF 3x20+20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 3x40MHz 8x8 MIMO or TEF 3x40MHz M-MIMO	20W
NR2100	Initially, 3x10MHz 2x2 MIMO (ESS) 3x10MHz 4x4 MIMO (ESS)	20W

Key

TF

Small 3 sectors – connectivity diagram



Key

TF

Configuration	Ordering Code
B3 Indoor ERS TEF Small 2 sectors	6E2SCIDERS
B3 Outdoor ERS TEF Small 2 sectors	6E2SCOAERS

0/2/2 G900

0/1/1 U900

0/1/1 L800

0/1/1 L2100

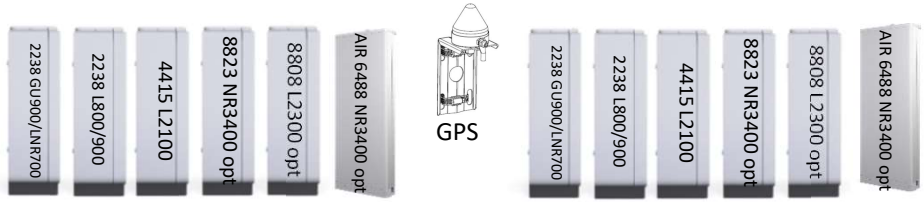
0/1/1 L900

0/1/1 NR3400 (option)

0/1/1 L2300 (option)

0/1/1 NR700 (option)

0/1/1 NR2100 (ESS)



Baseband 6630 2G + 3G

Baseband 6630 4G/5G

Baseband 6630 TDD 4G

Baseband 6630 TDD 5G

Technology		
G900	4 TRX (2 TRX /Sector)	20W
U900	2cc	20W
NR700	-	20W
L900	TEF 2x5-10MHz 2x2 MIMO	20W
L800	TEF 2x10MHz 2x2 MIMO	20W
L2100	TEF 2x10 MHz 4x4 MIMO	20W
L2300 TDD	TEF 2x20+20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 2x40MHz 8x8 MIMO or TEF 2x40MHz M-MIMO	20W
NR2100	Initially, 2x10MHz 2x2 MIMO (ESS) 2x10MHz 4x4 MIMO (ESS)	20W

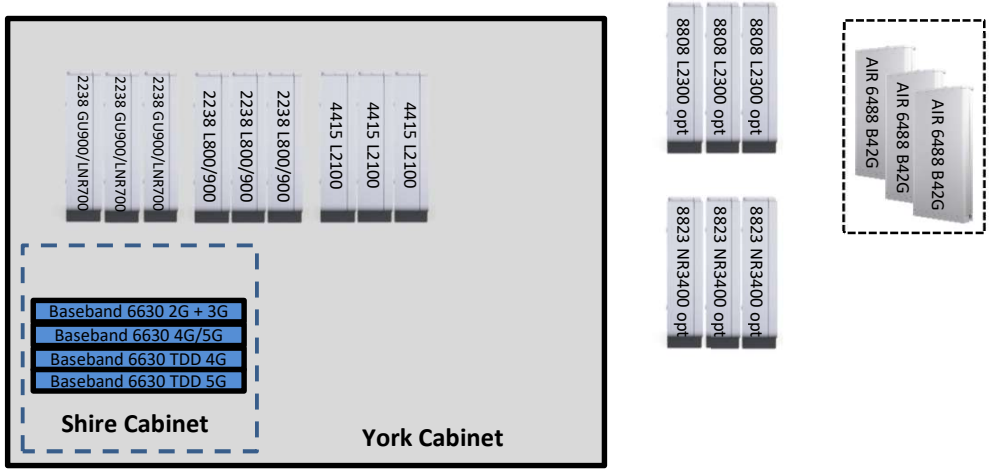
Key

TF

Configuration	Ordering Code
B3 Outdoor ERS TEF Small SF 3 sectors	6E3SCSFERS

2/2/2 G900
1/1/1 U900
1/1/1 L800
1/1/1 L2100
1/1/1 L900
1/1/1 NR3400 (option)
1/1/1 L2300 (option)
1/1/1 NR700 (option)
1/1/1 NR2100 (ESS)

GPS



Technology		
G900	6 TRX (2 TRX /Sector)	20W
U900	3cc	20W
NR700	-	20W
L900	TEF 3x5-10MHz 2x2 MIMO	20W
L800	TEF 3x10MHz 2x2 MIMO	20W
L2100	TEF 3x10 MHz 4x4 MIMO	20W
L2300 TDD	TEF 3x20+20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 3x40MHz 8x8 MIMO or TEF 3x40MHz M-MIMO	20W
NR2100	Initially, 3x10MHz 2x2 MIMO (ESS) 3x10MHz 4x4 MIMO (ESS)	20W

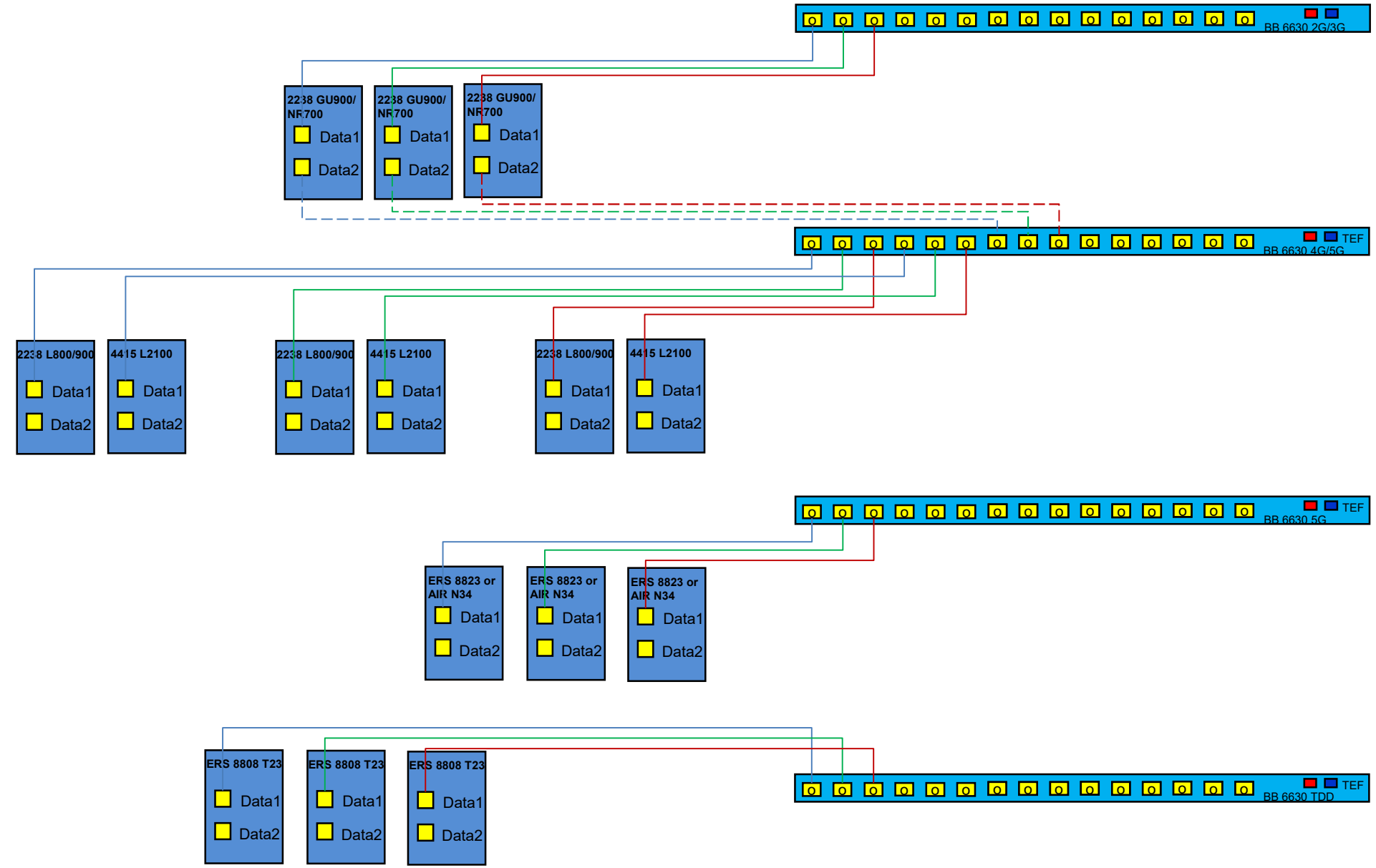
Note:

- NR3400 TDD can be deployed, if Apollo pole is deployed.
- If Apollo pole is deployed, 2 x Radio 8808 are installed in York cabinet

Key

TF

Small SF 3 sectors – connectivity diagram



Key

TF

Configuration	Ordering Code
B3 Outdoor ERS TEF Small SF 2 sectors	6E2SCSFERS

0/2/2 G900

0/1/1 U900

0/1/1 L800

0/1/1 L2100

0/1/1 L900

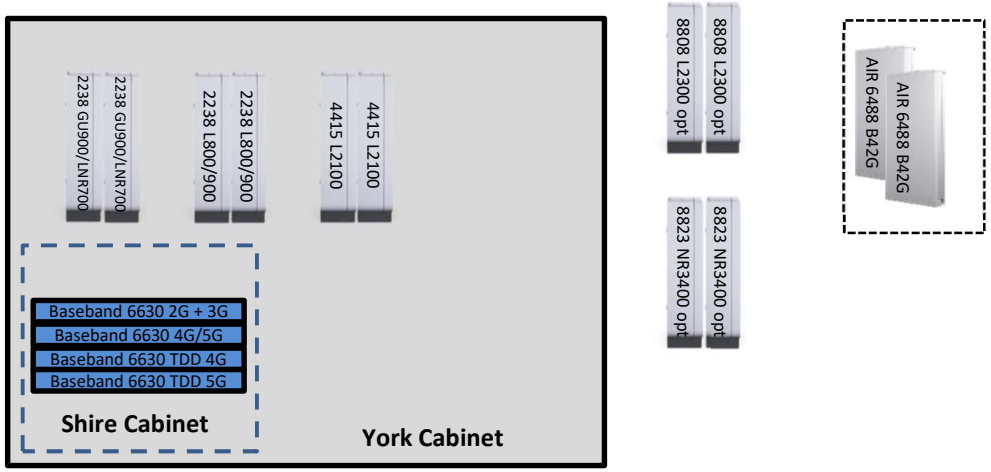
0/1/1 NR3400 (option)

0/1/1 L2300 (option)

0/1/1 NR700 (option)

0/1/1 NR2100 (ESS)

GPS



Technology		
G900	4 TRX (2 TRX /Sector)	20W
U900	2cc	20W
NR700	-	20W
L900	TEF 2x5-10MHz 2x2 MIMO	20W
L800	TEF 2x10MHz 2x2 MIMO	20W
L2100	TEF 2x10 MHz 4x4 MIMO	20W
L2300 TDD	TEF 2x20+20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 2x40MHz 8x8 MIMO or TEF 2x40MHz M-MIMO	20W
NR2100	Initially, 2x10MHz 2x2 MIMO (ESS) 2x10MHz 4x4 MIMO (ESS)	20W

Note:

- NR3400 TDD can be deployed, if Apollo pole is deployed.
- If Apollo pole is deployed, 1 x Radio 8808 are installed in York cabinet.

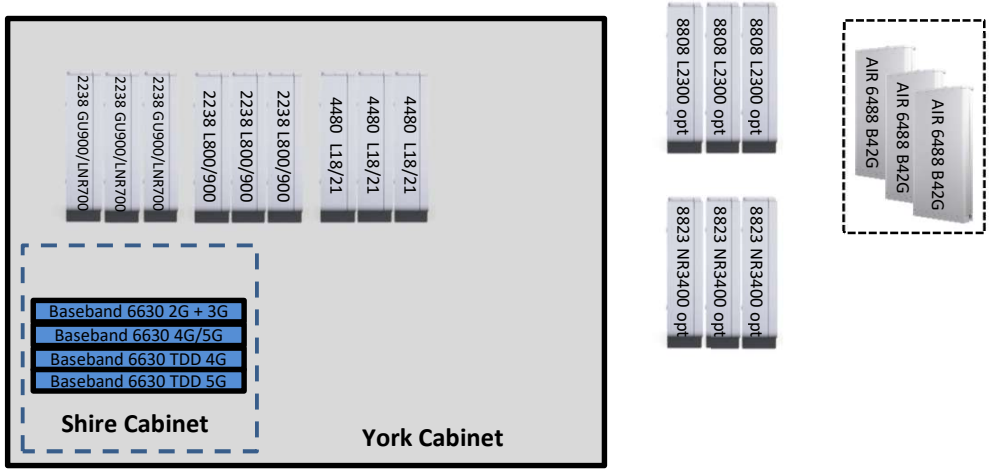
Key

TF

Configuration	Ordering Code
B3 Outdoor ERS TEF L18 Small SF 3 sectors	6E3L18SCSFERS

2/2/2 G900
1/1/1 U900
1/1/1 L800
1/1/1 L2100
1/1/1 L1800
1/1/1 L900
1/1/1 NR3400 (option)
1/1/1 L2300 (option)
1/1/1 NR700 (option)
1/1/1 NR2100 (ESS)

GPS



Technology		
G900	6 TRX (2 TRX /Sector)	20W
U900	3cc	20W
NR700	-	20W
L900	TEF 3x5-10MHz 2x2 MIMO	20W
L800	TEF 3x10MHz 2x2 MIMO	20W
L2100	TEF 3x10 MHz 4x4 MIMO	20W
L1800	TEF 3x5 MHz 4x4 MIMO	20W
L2300 TDD	TEF 3x20+20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 3x40MHz 8x8 MIMO or TEF 3x40MHz M-MIMO	20W
NR2100	Initially, 3x10MHz 2x2 MIMO (ESS) 3x10MHz 4x4 MIMO (ESS)	20W

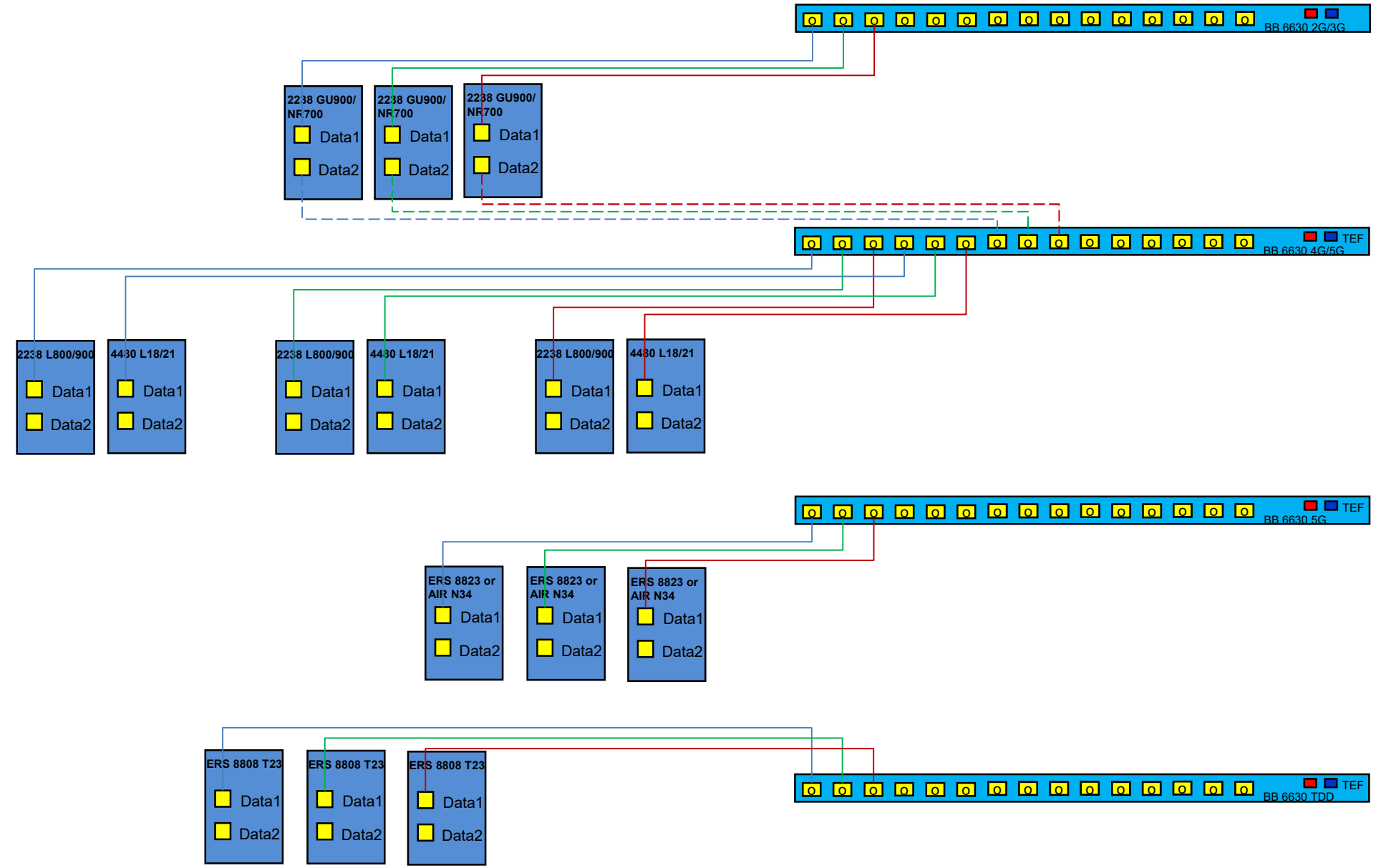
Note:

- NR3400 TDD can be deployed, if Apollo pole is deployed.
- If Apollo pole is deployed, 2 x Radio 8808 are installed in York cabinet

Key

TF

L18 Small SF 3 sectors – connectivity diagram



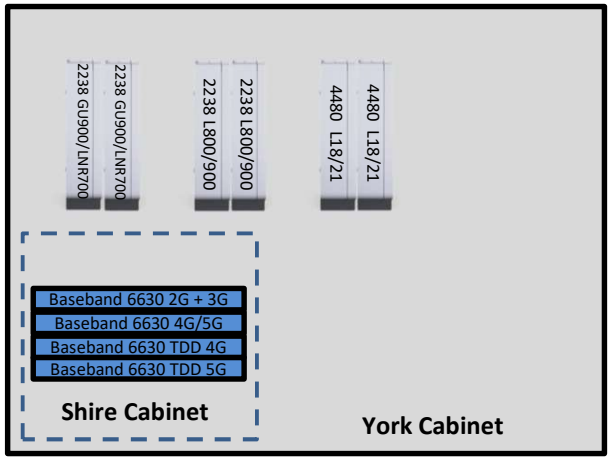
Key

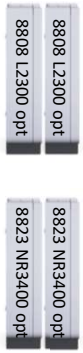
TF

Configuration	Ordering Code
B3 Outdoor ERS TEF L18 Small SF 2 sectors	6E2L18SCSFERS

0/2/2 G900
0/1/1 U900
0/1/1 L800
0/1/1 L2100
0/1/1 L1800
0/1/1 L900
0/1/1 NR3400 (option)
0/1/1 L2300 (option)
0/1/1 NR700 (option)
0/1/1 NR2100 (ESS)

GPS





Technology		
G900	4 TRX (2 TRX /Sector)	20W
U900	2cc	20W
NR700	-	20W
L900	TEF 2x5-10MHz 2x2 MIMO	20W
L800	TEF 2x10MHz 2x2 MIMO	20W
L2100	TEF 2x10 MHz 4x4 MIMO	20W
L1800	TEF 2x5 MHz 4x4 MIMO	20W
L2300 TDD	TEF 2x20+20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 2x40MHz 8x8 MIMO or TEF 2x40MHz M-MIMO	20W
NR2100	Initially, 2x10MHz 2x2 MIMO (ESS) 2x10MHz 4x4 MIMO (ESS)	20W

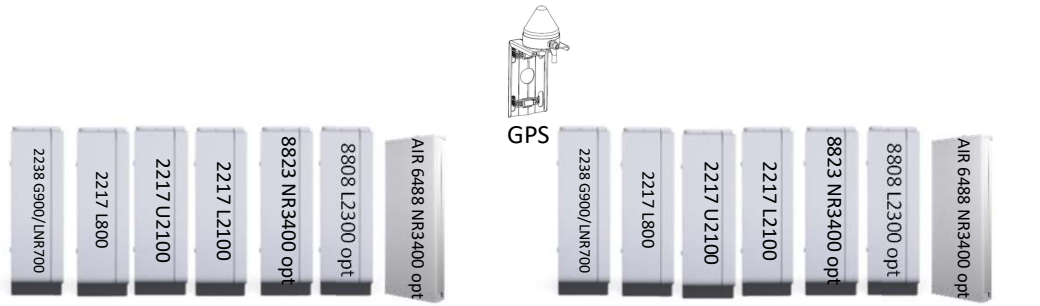
Note:

- NR3400 TDD can be deployed, if Apollo pole is deployed.
- If Apollo pole is deployed, 1 x Radio 8808 are installed in York cabinet.

Key

TF

Configuration	Ordering Code
B3 Indoor ERS TEF Network Rail (NR) 3 sectors	6E3NRIDERS
B3 Outdoor ERS TEF Network Rail (NR) 3 sectors	6E3NROAERS



2/2/2 G900

1/1/1 U2100

1/1/1 L800

1/1/1 L2100

1/1/1 NR3400 (option)

1/1/1 L2300 (option)

1/1/1 NR700 (option)

1/1/1 NR2100 (ESS)

Baseband 6630 2G + 3G

Baseband 6630 4G/5G

Baseband 6630 TDD 4G

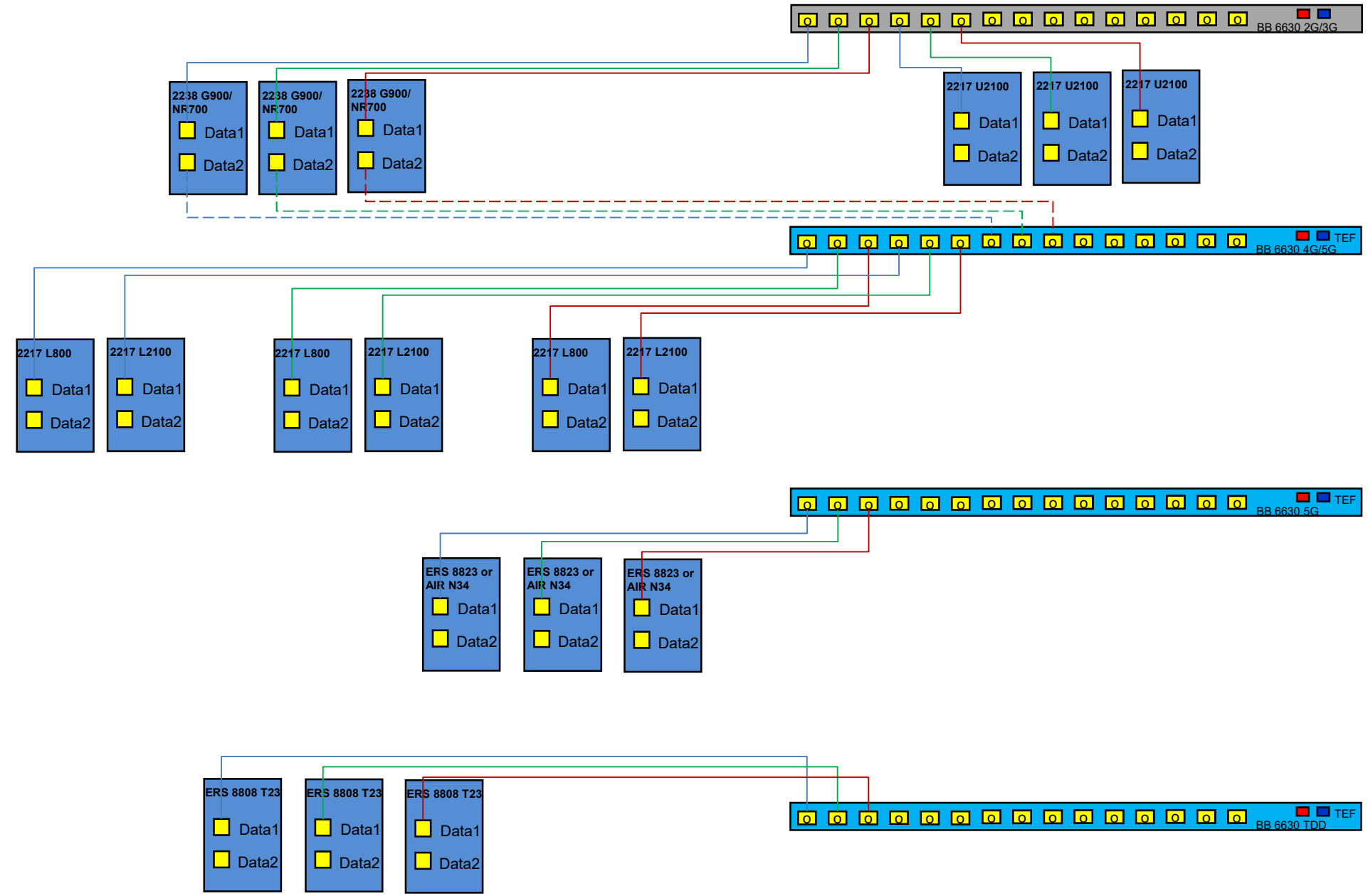
Baseband 6630 TDD 5G

Technology		
G900	6 TRX (2 TRX /Operator/Sector)	20W
NR700	-	20W
U2100	Tef 3cc	20W
L900	-	20W
L800	TEF 3x10MHz 2x2 MIMO	20W
L2100	TEF 3x5 MHz 2x2 MIMO	20W
L2300 TDD	TEF 3x20+20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 3x40MHz 8x8 MIMO or TEF 3x40MHz M-MIMO	20W
NR2100	Initially, 3x10MHz 2x2 MIMO (ESS) 3x10MHz 4x4 MIMO (ESS)	20W

Key

TF

Network Rail (NR) 3 sectors – connectivity diagram



Key

TF

Configuration	Ordering Code
B3 Indoor ERS TEF Network Rail (NR) 2 sectors	6E2NRIDERS
B3 Outdoor ERS TEF Network Rail (NR) 2 sectors	6E2NROAERS

0/2/2 G900

0/1/1 U2100

0/1/1 L800

0/1/1 L2100

0/1/1 NR3400 (option)

0/1/1 L2300 (option)

0/1/1 NR700 (option)

0/1/1 NR2100 (ESS)

Technology		
G900	4 TRX (2 TRX /Operator/Sector)	20W
NR700	-	20W
U2100	Tef 2cc	20W
L900	-	20W
L800	TEF 2x10MHz 2x2 MIMO	20W
L2100	TEF 2x5 MHz 2x2 MIMO	20W
L2300 TDD	TEF 3x20+20MHz 4x4 MIMO	20W
NR3400 TDD	TEF 2x40MHz 8x8 MIMO or TEF 2x40MHz M-MIMO	20W
NR2100	Initially, 2x10MHz 2x2 MIMO (ESS) 2x10MHz 4x4 MIMO (ESS)	20W

Key

TF

Configuration	Ordering Code
B3 Indoor ERS TEF Low 3 sectors	6E3LCIDERS
B3 Outdoor ERS TEF Low 3 sectors	6E3LCOAERS

GPS

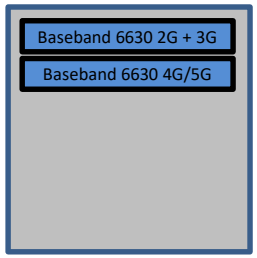
2/2/2 G900

1/1/1 U900

1/1/1 L800

1/1/1 L900

1/1/1 NR700 (option)

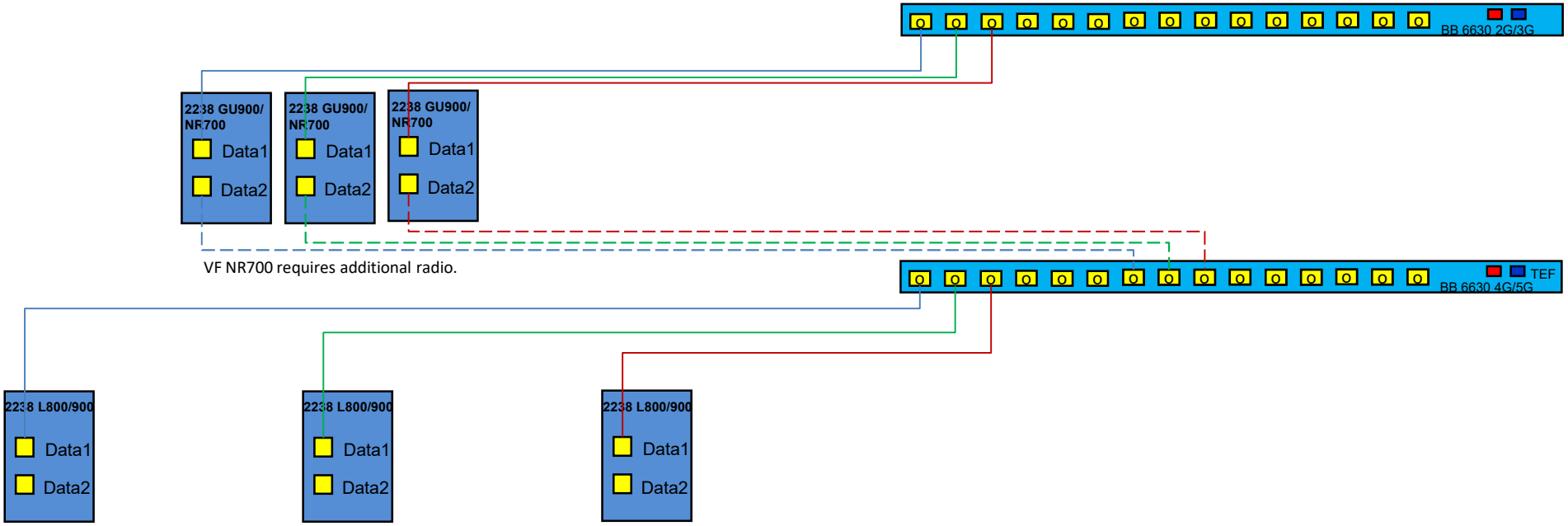


Technology		
G900	6 TRX (2 TRX /Operator/Sector)	20W
U900	3cc	20W
L900	TEF 3x5-10MHz 2x2 MIMO	20W
L800	TEF 3x10MHz 2x2 MIMO	20W
NR700	-	

Key

TF

Low – 3 sectors– connectivity diagram



Key

TF

Configuration	Ordering Code
B3 Indoor ERS TEF Low 2 sectors	6E2LCIDERS
B3 Outdoor ERS TEF Low 2 sectors	6E2LCOAERS

GPS

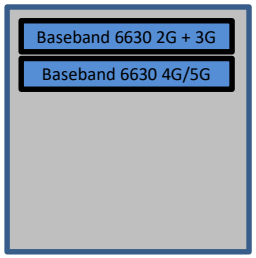
0/2/2 G900

0/1/1 U900

0/1/1 L800

0/1/1 L900

0/1/1 NR700 (option)



Technology		
G900	4 TRX (2 TRX /Operator/Sector)	20W
U900	2cc	20W
L900	TEF 2x5-10MHz 2x2 MIMO	20W
L800	TEF 2x10MHz 2x2 MIMO	20W
NR700	-	

Appendix 1

Equipment Reference

RADIO 2217

- 2TX/2RX, 4TX/4RX by use of two 2217
- 2x40W, FDD, WCDMA, LTE
- Up to 6 carriers WCDMA
- Up to 40 MHz LTE carriers (max 3 carriers)
- 2x 2.5/4.9/9.8 Gbps CPRI
- Antenna ports 2 x 4.3-10 (f)
- -48 VDC
- AISG TMA & RET support
- 2 external alarm
- Optional fan for increased site flexibility
- IP 65, -40 to +55˚C
- Maximum power consumption for B1 <300W
- Supported bands: B20, B8, B3, B1
- Dimensions without Fan Unit (H/W/D) mm: 351/298/128
- Dimensions with Fan Unit (H/W/D) mm: 351/298/138
- Weight 12-13kg
- IBW: 35MHz-B8*, 30MHz- B20, 40MHz- B1, 45MHz- B3*
- OBW: 35MHz-B8*, 30MHz – B20, 40MHz- B1, 45MHz B3*

*) 1.4 and 3 MHz LTE carriers within 20 MHz IBW

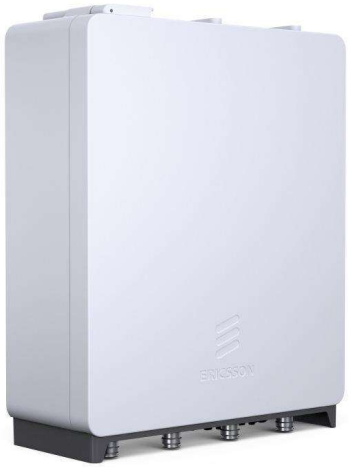
RADIO 2212

- 2TX/2RX, 4TX/4RX by use of two 2212
- Up to 2x80W
- Up to 75 MHz IBW
  - 20 MHz IBW for GSM or LTE1.4/3MHz carriers
- Up to 8 carriers GSM
- Up to 8 carriers WCDMA
- Up to 6 carriers LTE in MIMO
- 2x 2.5/4.9/9.8/10.1 Gbps CPRI
- 17 liter, 18kg for high bands, 20kg for low bands
- -48 VDC 3-wire (2-wire with adapter)
- AISG TMA & RET support via RS-485 or RF connectors
- 2 external alarm
- Optional fan for increased site flexibility
- IP 65, -40 to +55˚C
- Dimensions without Fan Module (HxWxD): 420x342x123 mm
- Power consumption for max load: 570 - 660W
- Supported bands: B8, B1

Optional FAN

RADIO 4415

- 4TX/4RX
- Supported bands: B1, B3, B7A
- Up to 4x40W
- Up to 8 carriers GSM in MSR
- Up to 8 carriers WCDMA
- Up to 6 carriers LTE in MIMO
- 2x 2.5/5/9.8/10.1 Gbps CPRI
- Antenna ports 4 x 4.3-10 (f)
- -48 VDC
- AISG TMA & RET support
- 2 external alarm
- Optional fan for increased site flexibility
- IP 65, -40 to +55˚C
- 21 kg, 22.5kg with Fan Unit
- Dimensions without Fan Module (HxWxD): 380x335x137 mm (17l)
- Dimensions with Fan Module (HxWxD): 380x335x157 mm (20l)
- IBW*: B7A, B1 - 60MHz, B3-40MHz
- Power consumption for max load: 570-660 W

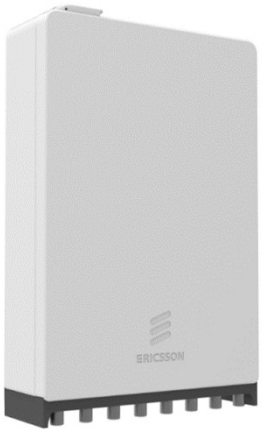


Optional FAN

*) 20 MHz IBW for GSM or LTE1.4/3MHz carriers

RADIO 8808

- Frequency band: 2300 ofcom compliant
- 8TX/8RX
- Up to 8x20W
- 60 MHz IBW TDD
- Up to 3 LTE carriers
- Support 2 4T4R split mode
- 2x 2.5/5/9.8Gbps CPRI
- Power supply 2-wire DC -48V
- AISG RET support
- External antenna calibration
- 2 external alarm
- IP 65, -40 to +55˚C
- Dimensions (H/W/D):450x335x143
- Weight: 22kg
- Heat dissipation: 553W



On the picture is shown a version of Radio 8808 with N type connectors. The version for UK is with 4.3 -10 connectors.

RADIO 2238 B8,B20,B28B

- 2TX/2RX – 2x120W FDD
  - Power shared between bands.
  - Per Band 2x60W Max (other bands share the Remainder of power)
  - Capable to operate as triple-band or dual-band radio.
  - Dual band support can require use of external filters dependent national regulations.
  - No inbuilt support for use as dual band B8 B20 in co-exist with DTV above 698 MHz.
- IBW:
  - Full band in each of bands
- 2 Antenna ports, each port shared by three bands
  - 4.3-10 plus (f) or equivalent
- LTE, WCDMA, GSM, NB-IoT
- 2.5; 4.9; 9.8; 10.1 Gbit/s CPRI
- 380mm x 335mm x 240mm
- 31 liter, 30 kg
- Portrait or bookshelf mounting
- -48 VDC
- AISG TMA & RET support via RF ports and RS-485
- Fan module not supported
- 2 external alarm
- IP 65, -40 to +55˚C

Carrier Configurations Examples

Radio 2238	B8	B20	B28B	Total	
Power Config #1	40	40	40	120	[W]
Power Config #2	60	60	0	120	[W]
Power Config #3	60	0	60	120	[W]
Power Config #4	60	30	30	120	[W]

RADIO 4480

- Dual band
- Up to 4TX/4RX per band
- Up to 4x60W per band (B7, B28: 4x40W)
- Up to 4x80W total without fan
- Up to 4x100W total with fan
- G, W, L, NR, NB-IoT with GSM in mixed mode
- 2x 2.5/4.9/9.8/10.1 Gbps CPRI
- 26.5 liter 32 kg (B1 B3, B2/B25 B66A, B1 B7, B3 B7)
  - 34 liter 38 kg (B0A B28, B8 B28, B5 B28)
- -48 VDC 3-wire or 2-wire (different cable connectors)
- AISG TMA & RET support via RS-485 or RF connectors
- 2 external alarm
- Optional fan for increased site flexibility and increased output power
- Convectional cooling
- IP 65, -40 to +55°C

RADIO 8823

- 8TX/8RX
- Support split mode (2 x 4T4R or 4 x 2T2R as multi-sector solution)
- Tx Power 8x20W
- 200MHz IBW TDD
- Up to 3 carriers
- Up to 100MHz NR
- Up to 40MHz LTE + 40MHz NR mixed mode
- 2x10.1Gbps CPRI
- 20 liter, 20kg
- Support NEX10 RF connector
- External antenna calibration
- -48 VDC 2-wire
- AISG RET support via RS-485
- 2 external alarm
- Convectional cooling
- IP 65, -40 to +55˚C

ENCLOSURE 6140

Main characteristics

- Power systems
  - DC distribution: 15x CB
  - AC ≤ 8 kW (200 A) DC power
    - 15x CB (6x Prio + 9x Main)
  - 12Ah-210Ah internal batteries
  - Additional DC distribution as option (15x CBs)
- Climate system
  - HEX / DAC (for battery compartment)
  - Designed for self-sustained equipment
  - Temp. range: -33°C - +50°C (Heater optional)
- Mechanical
  - 10U equipment space (19”) + up to 210Ah (AC Config)
  - 21U equipment space (19”) (DC Config)
  - IP55
  - HxWxD: 1607x700x752 mm
  - Weight: 190kg (AC Config)
- Control
  - Integrated with OSS/ENM
  - External alarms

ENCLOSURE 6150

- Power systems
  - AC: ≤ 8 kW (200 A) DC power
    - 15x CB (6x Prio + 9x Main)
  - AC: ≤ 20 kW (400 A) DC power
    - 31x CB (6x Prio + 25x Main)
  - 12Ah-210Ah batteries
  - Additional DC distribution as option (15x CBs)
- Climate system
  - HEX / DAC or A/C (for battery compartment)
  - Designed for self-sustained equipment
  - Temp. range: -33°C - +50°C (Heater optional)
- Mechanical
  - 9U/13U/24U equipment space (19”) + up to 420Ah battery back-up (AC Config)
  - IP55
  - HxWxD: 2050x800x740 mm
  - Weight: 230kg (AC Config)
- Control
  - Integrated with OSS/ENM
  - External alarms

ENCLOSURE 6147

- Space for up to 12 ERS Radios
  - Less for upcoming dual-band
- ERS Rail system
  - 2x rails
- No active components
  - Natural convection
- Cost effective solution
- Delivered as flatpack or assembled
  - Site dependent
- Scalable system

ENCLOSURE 6147

- Dimensions:
  2064 x 1100 x 680mm (H x W x D)
- Weight: 209kg
- Galvanized steel (G60, 182g/m2)
- Powder paint (NCS 2002-B)
- IP20
  - No access using finger/tool
- Vandal/theft RC1 with additional brace
  - Hand tools
- Combiners in base frame / rail bracket

ENCLOSURE 6215

- **Capacity**
- ERS Radio Up to 12x ERS Radios
  MECHANICAL SPECIFICATION
- Weight 73 kg (excl. active equipment)
- Dimension (H x W x D) 2000 x 1100 x 676mm
- Mounting position Ground
- Enclosure material Galvanized steel

POWER 6302

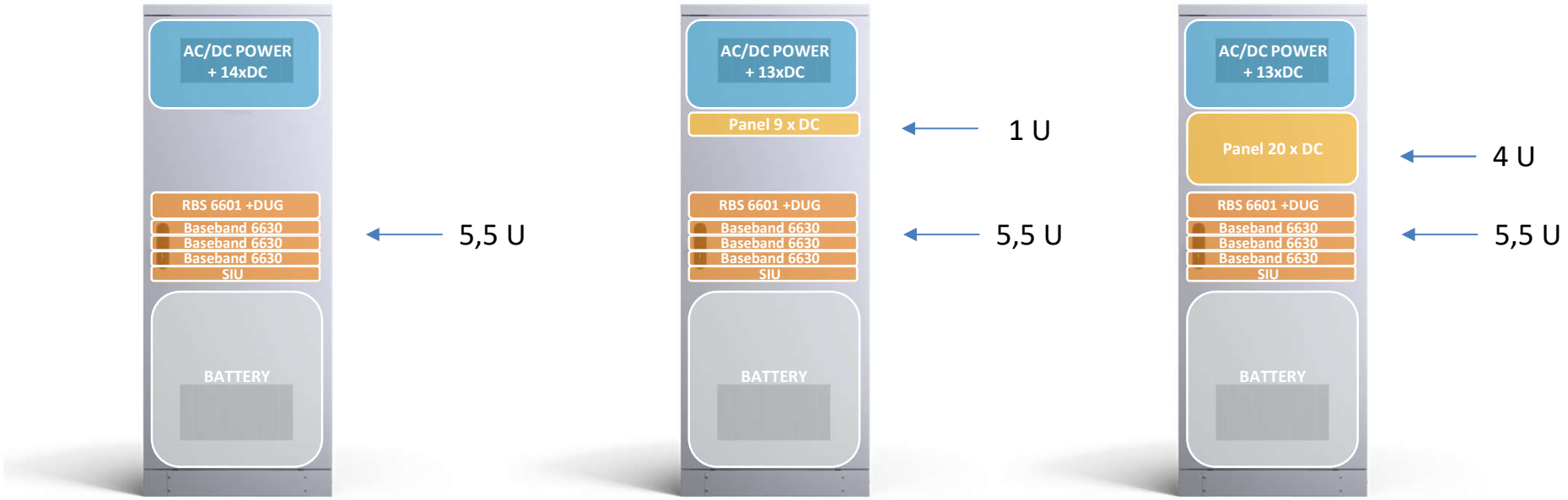
- AC input 172-275VAC, 50-60 Hz
- 2.3 kW DC -48V output power
- High efficiency rectifier > 95%
- 3 separate -48VDC feeds for rail Radio
- 3 separate APC light interfaces
- Ericsson Rail mounting
- Max 9 kg
- Size H: 300mm W: 290mm W:90mm
- Convection cooled
- IP 65, -40 to +60°C

ENCLOSURE 6140

9xDC and 8KW available for
ERS Radios
Low Capacity (6xERS)

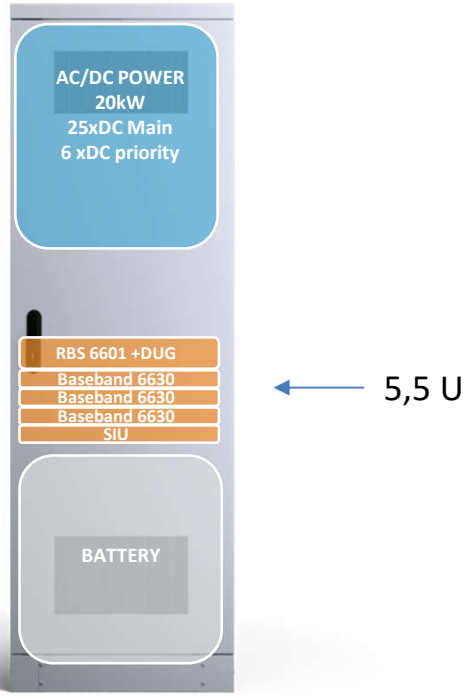
17xDC and 8kW available for
ERS Radios
Small Capacity (15xERS)
Network Rail (15xERS)

32xDC and 8kW available for
ERS Radios
Medium Capacity (18xERS)
Stealth Capacity (18xERS)



Space available for baseband/transport and additional DC panels – 10U

ENCLOSURE 6150



20kW available for ERS Radios and basebands
Small Capacity (15xERS)
Network Rail (12xERS)
Stealth Capacity (15xERS)
Medium Capacity (18xERS)

Space available for baseband/transport and additional DC panels – 10U

ERICSSON