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Implementing

5G O-RAN Architecture

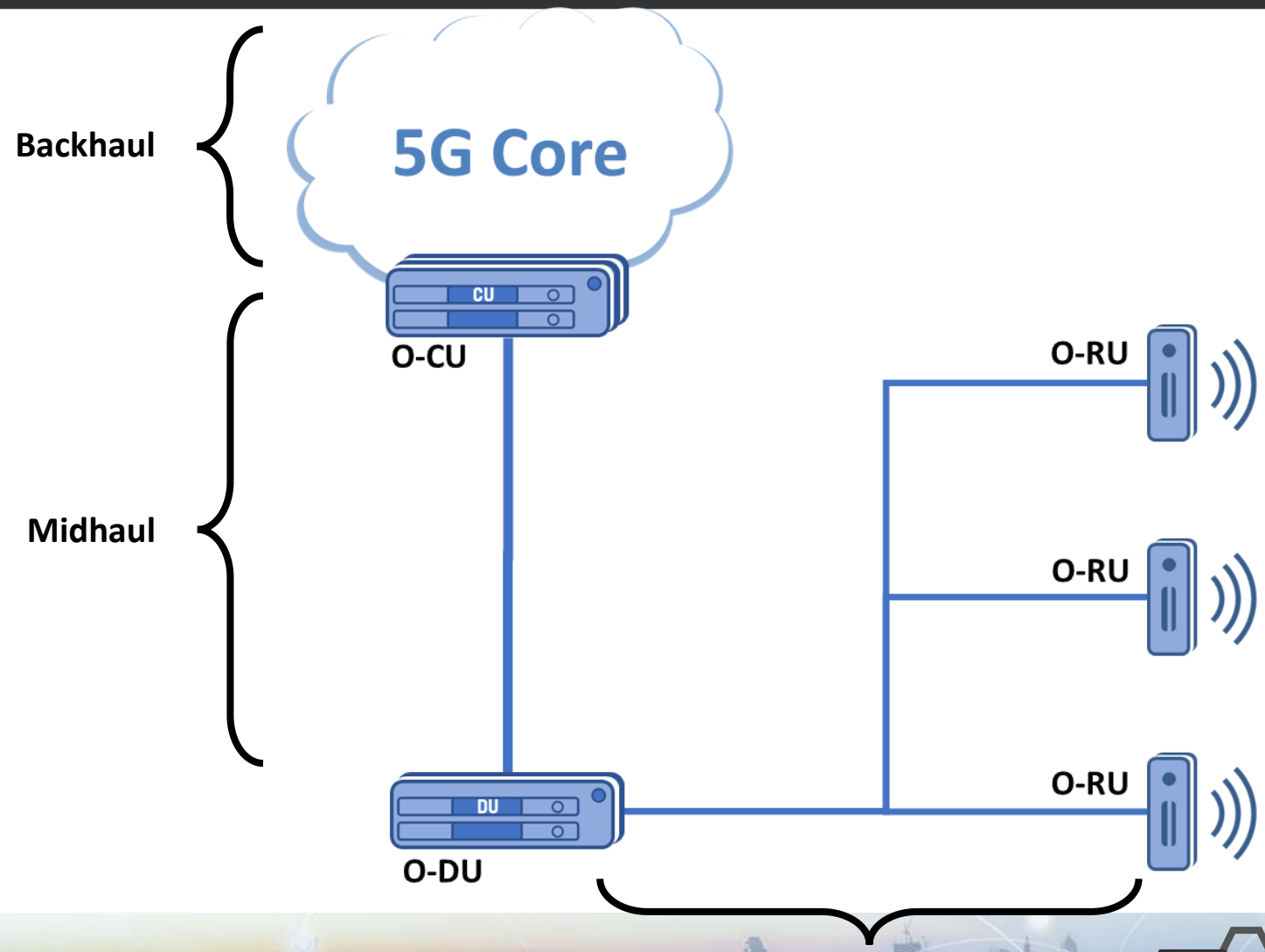
with the Falcon-RX

O-RAN Model

- Enabling interoperable multi-vendor 5G architecture
- Open Ecosystem by disaggregating the gNB to functional components:
  - O-CU: Open Central Unit
  - O-DU: Open Distributed Unit
  - O-RU: Open Radio Unit
- Synchronization between disaggregated element is key aspect
  - Midhaul/Backhaul – 1.1uSec Time Error
  - Fronthaul – 260 nSec Time Error (and lower, depends on application)

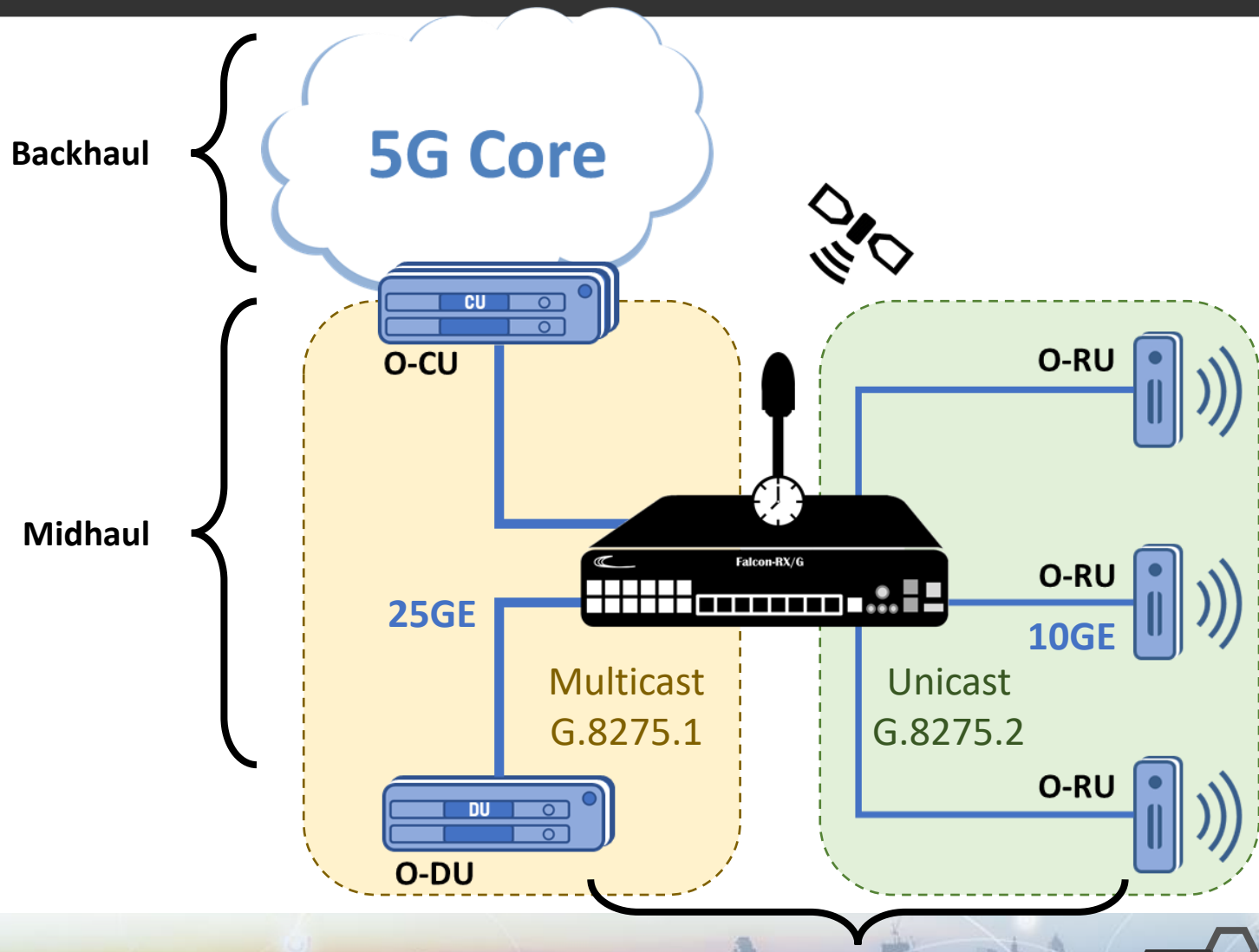
O-RAN Architecture Key Elements

- Base Station Elements
  - O-CU
  - O-DU
  - O-RU
- Network Segments
  - Backhaul
  - Midhaul
  - Fronthaul



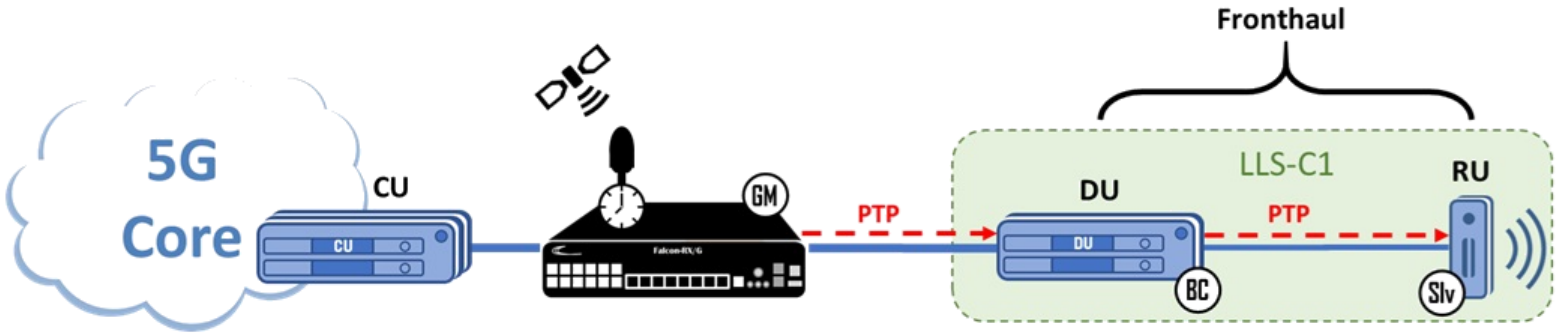
Falcon-RX: O-RAN PTP Switch

- Fronthaul/Midhaul Transport
  - C/U Plane, M Plane, S Plane
  - Low latency forwarding
  - TSN support
- PTP Grandmaster
  - Multiple PTP profiles
  - 4 concurrent clock instances
  - SyncE on all interfaces
  - Rubidium Clock option

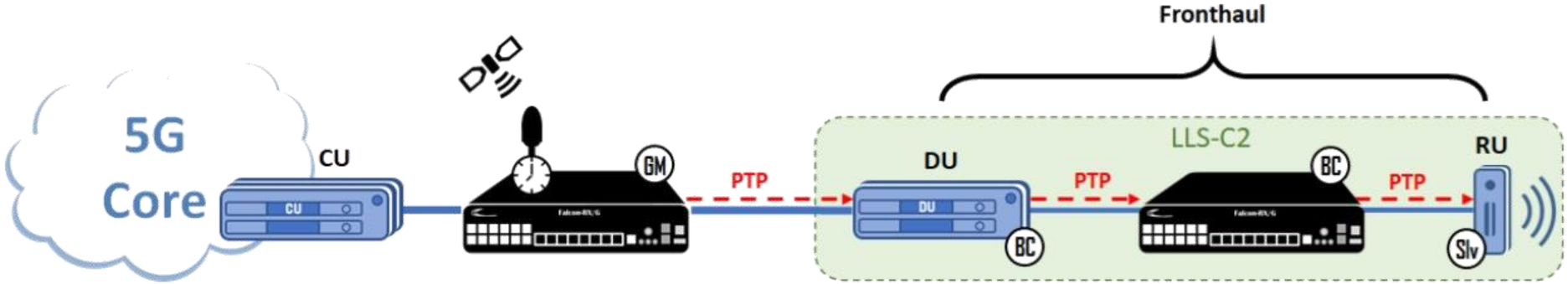


O-RAN Lower Layers Split 7.2

- LLS-C1: GM sync DU (BC)

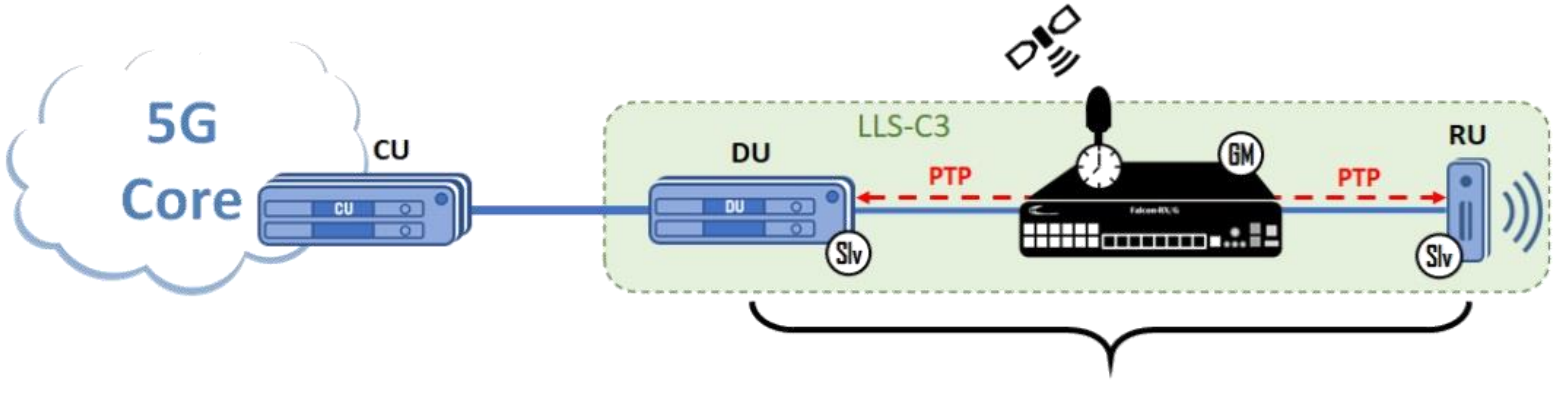


- LLS-C2: GM sync DU (BC) + PTP Aware Switch

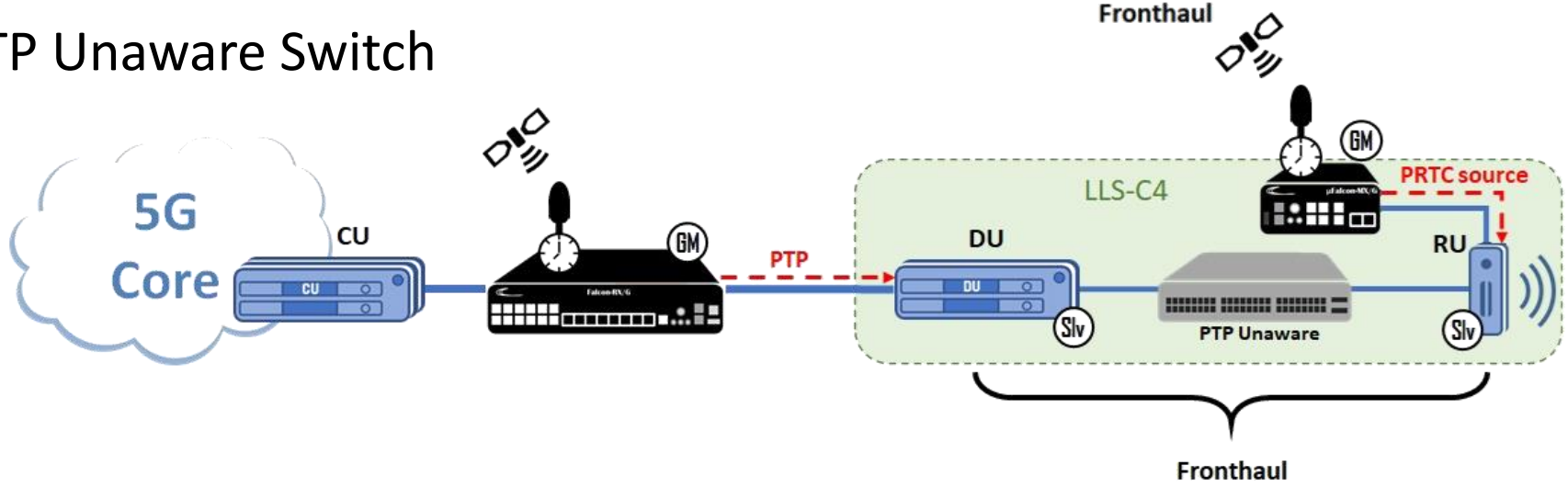


O-RAN Lower Layers Split 7.2

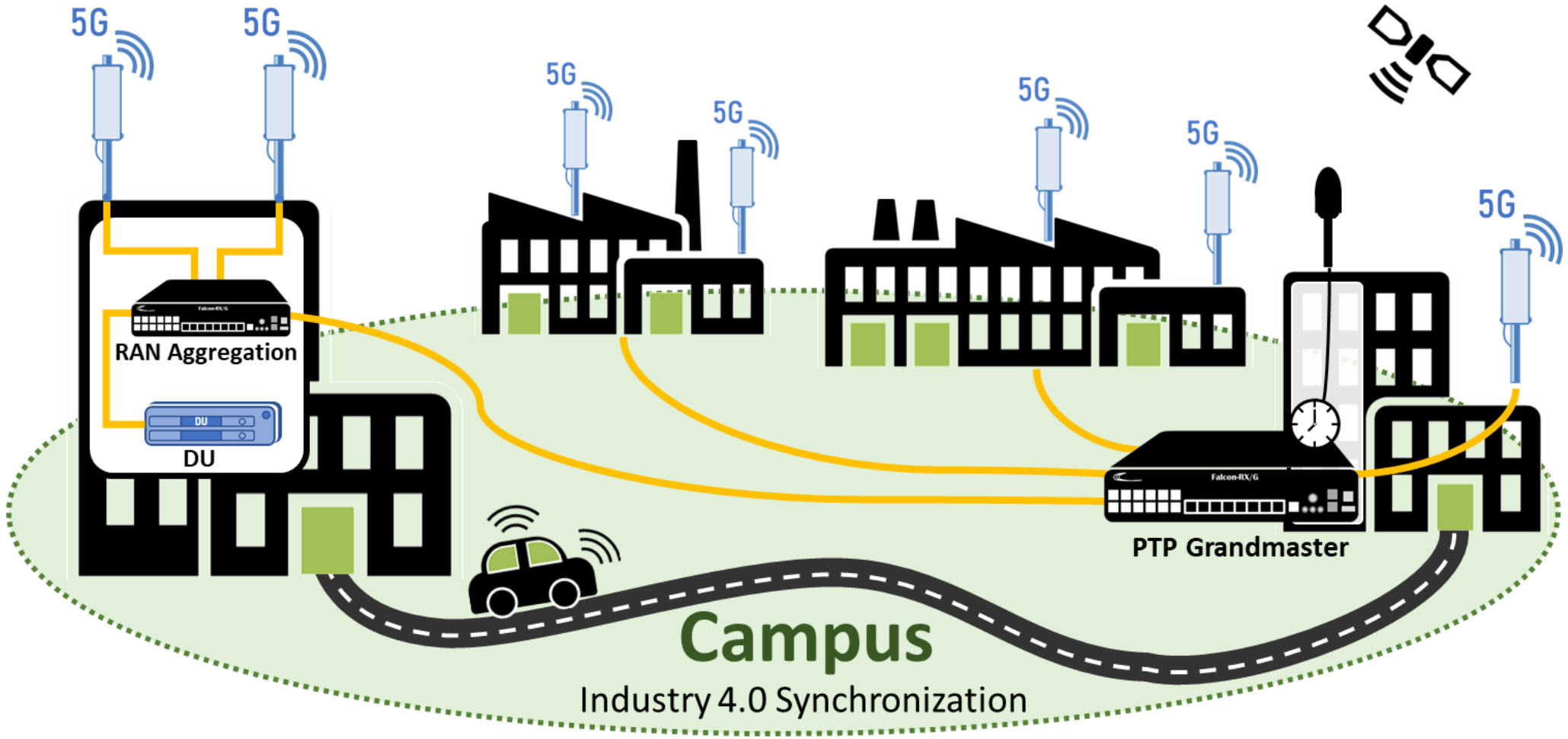
- LLS-C3: Inline GM + PTP Aware Switch



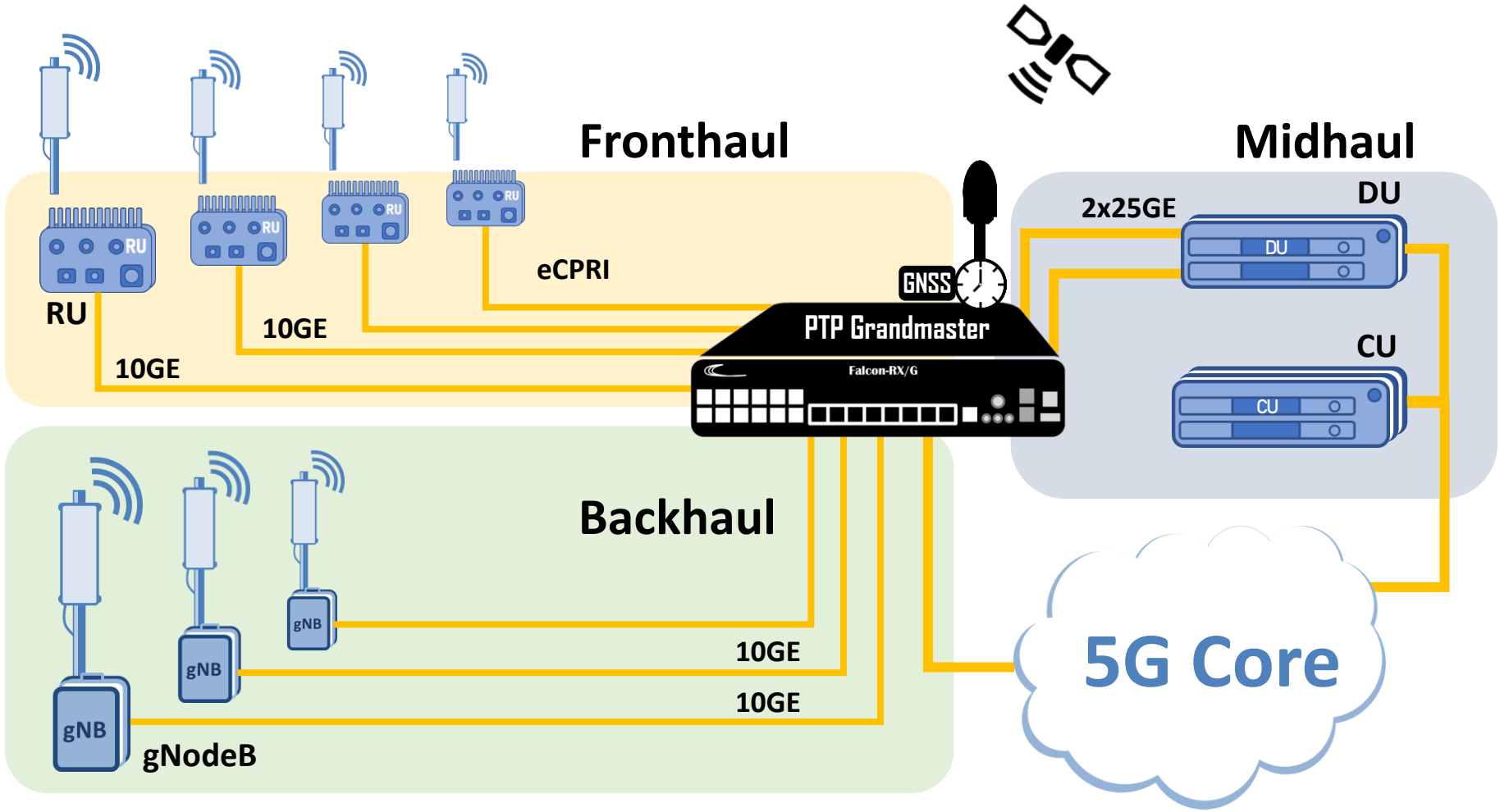
- LLS-C4: GM sync RU + PTP Unaware Switch



Industry 4.0 Campus Sync

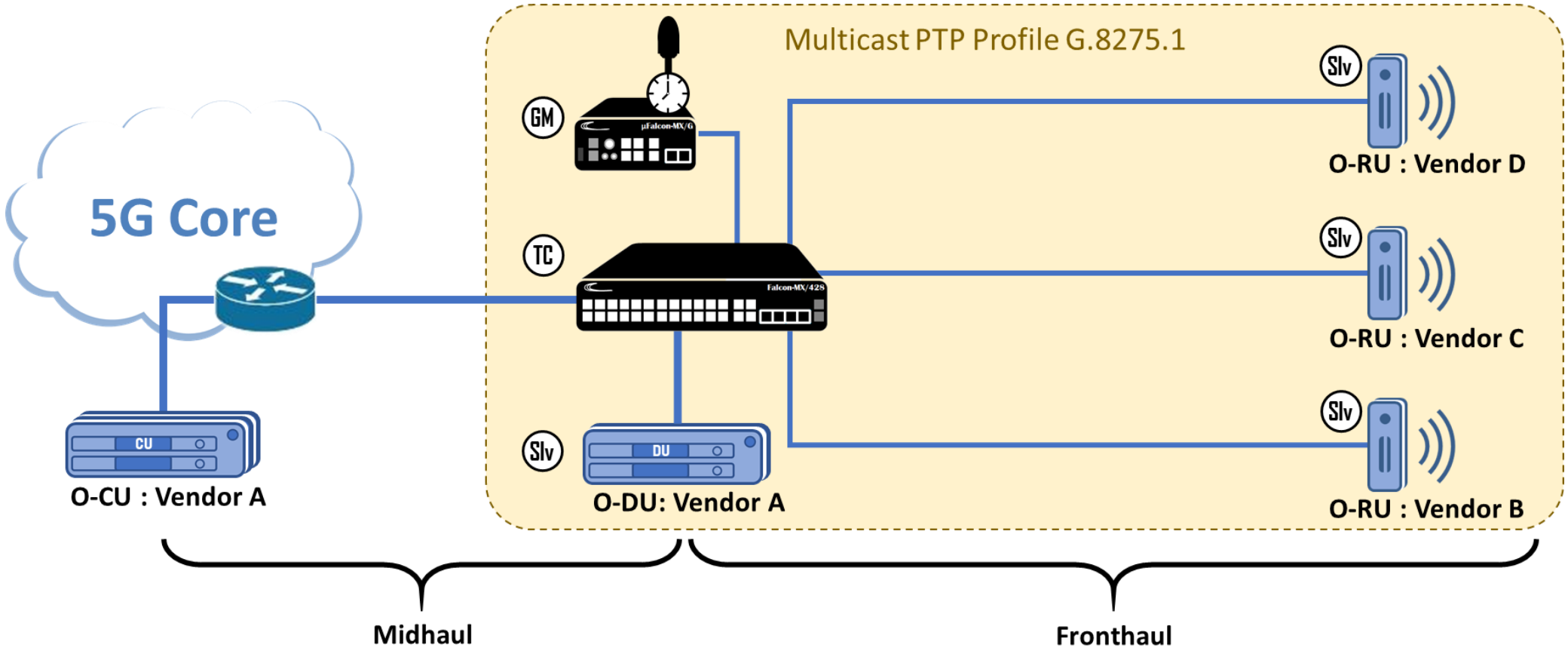


O-RAN xHaul Deployment



TIP Reference Deployment

- Deployed in a TIP Founding member lab facility



Falcon R Class

Models/Ports	10GE	10/25GE	10/100/1000	Notes
Falcon-RX/812	12	8	1	
Falcon-RX/206	6	2	1	Outdoor option
Falcon-RX/214/C	14 (Cu)	2	1	PoE options

* Additional models will be added to the product line in the future

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Thank you!