Data Communications Company

Comms Hub Aerial Information Pack

Overview of Aerial Types

16th April 2018

Aerials for DCC Communications Hubs

- DCC provides Cellular and Mesh Aerial types to be utilised with specific Communications Hub variants to provide:
  - Additional methods to connect to the Smart Metering Wide Area Network (SM WAN) to resolve initial installation issues and;
  - A method to resolve connectivity issues after the initial installation following the logging of a No SM WAN incident with the DCC
- Aerials are only used in the CSP Central and South regions and only with the Cellular + Mesh (SKU2) and the SIMCH (SKU3) single or dual band Communications Hubs. Aerials are not used in the CSP North region.
- Some aerials can be ordered directly from DCC using the Order Management System; other aerials are provided by DCC in the field to installers to resolve issues.
- Aerials are known as “Auxiliary Equipment” in the Smart Energy Code and usage guidance is provided in the DCC ‘Communications Hub Supporting Information’ document.

Aerial Types Table

Aerial Type	Radio Use	Manufacturer		Who orders?	Who installs?	Who provides?	On which Hubs?
T1 Low Gain	Cellular	Panorama	WNC	DCC Customer or their Registered Agent	DCC Customer or their Registered Agent	DCC (OMS)	Toshiba SKU2 (or on a SKU3 through No SM WAN incident resolution)
T2 High Gain		Panorama	WNC				
T3 High Gain		Panorama	Oriel	DCC (in field)			Toshiba SKU2/3
M1 Short	Mesh	TBA					Toshiba SKU3
M2 Long		TBA					

**Data from the DCC 'Communications Hub Supporting Information' document and the DCC Product Information Website*

Aerial Volume Information

Aerial Type	Overall Installation Utilisation	Mesh Installation Utilisation
T1 Aerial Type	6% of all installations*	approximately 57-60% of Mesh Communications Hub installations*
T2 Aerial Type	4% of all installations*	approximately 37-40% of Mesh Communications Hub installations*
T3 Aerial Type	0.5% of all installations*	approximately 3-5% of Mesh Communications Hub installations*

**Data from the DCC 'Communications Hub Supporting Information' document*

Aerial Installation Planning

Prior to Installation

- DCC Customers are obliged to check the DCC Coverage Checker 30 days prior to the Installation Date

- Within the CSP Central and South regions, the Coverage Checker provides details of which Comms Hub variant should be used at a premises level
- Where the Coverage Checker identifies which premises require a Cellular + Mesh (SKU2) Comms Hub, the aerial type will be indicated.

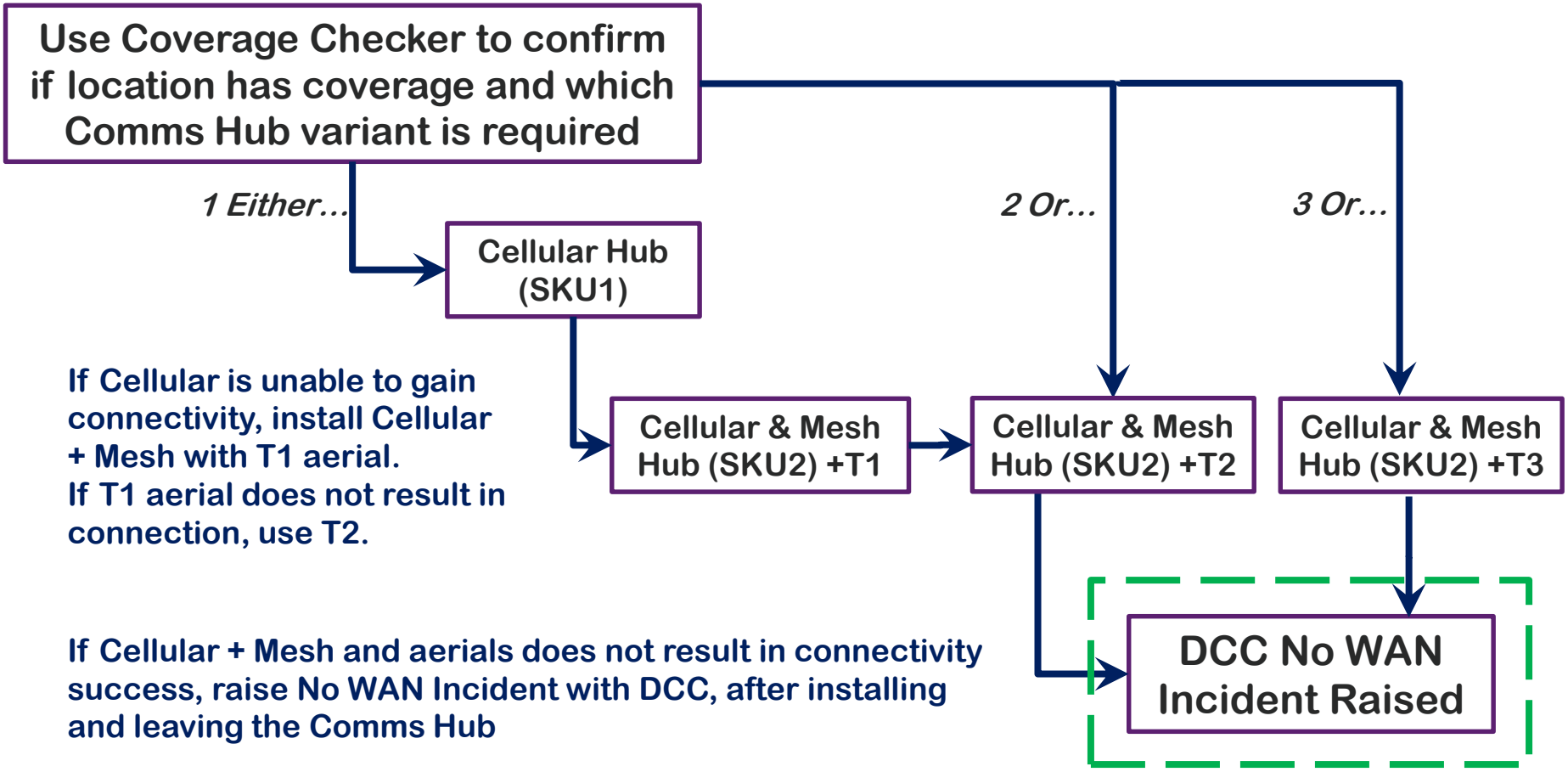
During Installation

- Where the Coverage Checker indicates a Cellular (SKU1) Comms Hub is required but connectivity is not achieved during installations a Cellular + Mesh (SKU2) plus T1/T2 can be used.*

**Processes from Appendix I CH Installation and Maintenance Support Materials*

Aerial Installation

Installation Flows*



**Processes from Appendix I CH Installation and Maintenance Support Materials*

Aerial Details

T1 Cellular Panorama Aerial

PANORAMA ANTENNAS

Technology

- Cellular

Type

- Low Gain

Points of note

- For use in entire CSP Central and South regions with SKU2/3 Comms Hub
- Used for obstacle avoidance
- Installed close to Comms Hub

**Data from DCC Product Information Website*

Aerials

T1 Cellular WNC Aerial

Technology

- Cellular

Type

- Low Gain

Points of note

- For use in entire CSP Central and South regions with SKU2/3 Comms Hub
- Used for obstacle avoidance
- Installed close to Comms Hub

**Data from DCC Product Information Website*

Aerials

T2 Cellular Panorama Aerial

PANORAMA ANTENNAS

Technology

- Cellular

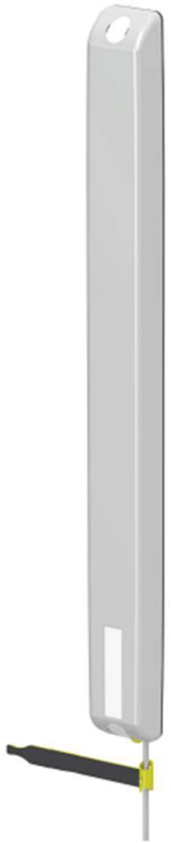
Type

- High Gain

Points of note

- For use in entire CSP Central and South regions with SKU2/3 Comms Hub
- Used for small range extension
- Installed close to Comms Hub

**Data from DCC Product Information Website*



Aerials

T2 Cellular WNC Aerial

Technology

- Cellular

Type

- High Gain

Points of note

- For use in entire CSP Central and South regions with SKU2/3 Comms Hub
- Used for small range extension
- Installed close to Comms Hub

**Data from DCC Product Information Website*

Aerials

T3 Cellular Panorama Aerial

Technology

- Cellular

Type

- High Gain

Points of note

- For use in entire CSP Central and South regions with SKU2/3 Comms Hub
- Used for large range extension
- Mounted on outside of property

**Data from DCC Product Information Website*

PANORAMA ANTENNAS

Aerials

T3 Cellular Oriel Aerial

Technology

- Cellular

Type

- High Gain

Points of note

- For use in entire CSP Central and South regions with SKU2/3 Comms Hub
- Used for large range extension
- Mounted on outside of property

**Data from DCC Product Information Website*

Aerials

M1 Mesh Aerial

Technology

- Mesh

Type

- Low Gain

Image and Vendor TBA

Points of note

- For use in entire CSP Central and South regions with SKU3 Comms Hub
- Used to resolve SM WAN issues and to facilitate Mesh installations

**Data from DCC Product Information Website*

Aerials

M2 Mesh Aerial

Technology

- Mesh

Type

- High Gain

Image and Vendor TBA

Points of note

- For use in entire CSP Central and South regions with SKU3 Comms Hub
- Used to resolve SM WAN issues and to facilitate Mesh installations

**Data from DCC Product Information Website*

Aerial Type Dimensions

Aerial	Manufacturer	Dimensions (mm)	Lead Length (m)
T1 Low Gain	Panorama	165 x 32 x 20	1.5
	WNC	128 x 25 x 17	1
T2 High Gain	Panorama	372 x 33 x 20	1.5
	WNC	380 x 41 x 17	2
T3 High Gain	Panorama	695 x 25 x 25	10
	Oriel	580 x 100 x 40	10
M1 Short	TBA	TBA	TBA
M2 Long	TBA	TBA	TBA

**Data from the DCC Product Information Website*

References

Document	Location
APPENDIX H CH Handover Support Materials	https://smartenergycodecompany.co.uk/the-smart-energy-code-2/ • SEC Subsidiary Documents
APPENDIX I CH Installation and Maintenance Support Materials	
Communications Hub Supporting Information	https://www.smartdcc.co.uk/media/452558/ch_supporting_information_issue_v1.4.pdf • Communications Hub Support Materials (current April 2018)
DCC Product Information	https://www.smartdcc.co.uk/implementation/design-and-assurance/communications-hubs/communications-hub-product-information/ • Comms Hub Product Information • Aerial Product Information