

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE: :
 :
A PETITION OF SBA COMMUNICATIONS : PETITION NO. 1547
CORPORATION FOR A DECLARATORY :
RULING ON THE NEED TO OBTAIN A :
SITING COUNCIL CERTIFICATE FOR THE :
MODIFICATION OF AN EXISTING :
TELECOMMUNICATIONS FACILITY AT :
277 HUCKLEBERRY HILL ROAD, AVON, :
CONNECTICUT : DECEMBER 14, 2022

**RESPONSES OF CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS
TO CONNECTICUT SITING COUNCIL INTERROGATORIES**

On December 8, 2022, the Connecticut Siting Council (“Council”) issued Interrogatories to Cellco Partnership d/b/a Verizon Wireless (“Cellco”), relating to Petition No. 1547. Below are Cellco’s responses.

Question No. 1

Is Cellco’s proposed installation needed to improve coverage and/or provide capacity relief to adjacent sites/sectors? Explain.

Response

The proposed Avon tower site is primarily a coverage site, providing service along significant portions of Routes 4 and 179 as well as local roads in western portion of Avon. The site will also provide capacity relief to Cellco’s existing AVON 2 CT facility (24 Ridgewood Road – Water Tank) and BURLINGTON CT facility (719 George Washington Tpk. monopole tower).

Question No. 2

Why was an antenna height of 110 feet chosen on the proposed replacement tower? Did

Cellco consider installing antennas at 120 feet? Would coverage be improved to the south and east if antennas were located at 120 feet? Explain.

Response

Cellco's RF Engineers determined that the minimum height needed to satisfy its coverage objective in the area is the 110-foot level on the replacement tower. Due to the site's location and topography in the area, installing antennas ten feet higher, at the 120-foot level, does not provide Cellco with any substantial increase in service (coverage) in the area.

Question No. 3

What is the lowest height at which Cellco's antennas could achieve its wireless service objectives from the proposed replacement facility? What would be the consequences in terms of hand-off, coverage and/or capacity relief if Cellco installed its antennas at a lower centerline height?

Response

The 110-foot level is the lowest acceptable height for the Cellco antennas. Mounting Cellco antennas at a height lower than 110 feet on the replacement tower would result in gaps in wireless service opening up along Route 4 and eastern portions of Route 179, the two primary coverage objectives in the area and impact this site's ability to interact with the AVON 2 CT and BURLINGTON CT cell sites referenced above. Based on information provided to Cellco by the Petitioner, AT&T and T-Mobile, tenants on the existing tower, will continue to occupy the 90-foot and 80-foot levels on the replacement tower.

Question No. 4

Provide detail of Cellco's proposed equipment within the compound.

Response

Cellco will install two equipment cabinets on a concrete pad in the expanded portion of the site compound. One cabinet will house Cellco's radio equipment and the second will house Cellco's backup batteries. The batteries will be used in lieu of a backup generator if commercial power to the facility is interrupted. Cellco will install a total of nine (9) antennas (three (3) model NHH-65B-R2B antennas; three (3) model NHHSS-65B-R2BT0 antennas; and three (3) model MT6407-77A) and twelve (12) remote radio heads ("RRH") (three (3) model B2/B66A RRHs; three (3) B5/B13 RRHs; three (3) RT 4401-48A/CBRS RRHs; and three (3) model MT 6407-77A RRHs) on a triangular antenna mounting platform. Radio equipment will be connected to Cellco's antennas via HYBERFLEX fiber optic antenna cables, installed inside the new monopole tower. Specifications for Cellco's equipment cabinet, battery cabinet, antennas, RRHs and antenna cables are attached.

Question No. 5

Approximately when was the search ring established for the Cellco installation?

Response

Cellco identified a need for a facility in this area and established the Burlington 2 search ring around 2005.

Question No. 6

Were other potential sites considered for the proposed Cellco installation? If so, please identify the other potential sites and why they were rejected.

Response

No. As the Council is aware from previous filings, Cellco prefers to share existing facilities if one exists in the area where a need has been identified, even if that existing facility requires some modification, like the SBA tower in Avon.

Question No. 7

Would Cellco's, proposed co-location(s) at the replacement tower support text-to-911 service? Is additional equipment required for this purpose?

Response

Yes, Cellco's new facility would support Text-to-911 service without the need for any additional equipment.

Question No. 8

Would Cellco's antennas comply with federal E911 requirements?

Response

Yes.

Question No. 9

Would Cellco's installation(s) comply with the intent of the Warning, Alert and Response Network Act of 2006?

Response

Yes.

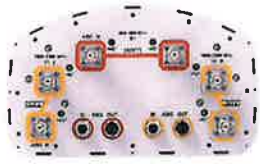
Question No. 10

Provide emergency backup generator/fuel tank specifications and run times for Cellco's installation. Identify fuel spill containment measures.

Response

Cellco is not proposing to install a back-up generator at the modified cell site. Back-up power would be provided by a battery cabinet, located on Cellco's concrete equipment pad. These batteries are capable of providing Cellco's equipment with back-up power for 4-8 hours depending upon load, before recharging would be required.

NHH-65B-R2B



6-port sector antenna, 2x 698–896 and 4x 1695–2360 MHz, 65° HPBW, 2x RET. Both high bands share the same electrical tilt.

- Interleaved dipole technology providing for attractive, low wind load mechanical package
- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- Separate RS-485 RET input/output for low and high band
- One RET for low band and one RET for both high bands to ensure same tilt level for 4x Rx or 4x MIMO

General Specifications

Antenna Type	Sector
Band	Multiband
Color	Light gray
Grounding Type	RF connector body grounded to reflector and mounting bracket
Performance Note	Outdoor usage Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
Radome Material	Fiberglass, UV resistant
Radiator Material	Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, low band	2
RF Connector Quantity, total	6

Remote Electrical Tilt (RET) Information

RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	2 female 2 male
Input Voltage	10–30 Vdc
Internal Bias Tee	Port 1 Port 3
Internal RET	High band (1) Low band (1)
Power Consumption, idle state, maximum	2 W
Power Consumption, normal conditions, maximum	13 W

NHH-65B-R2B

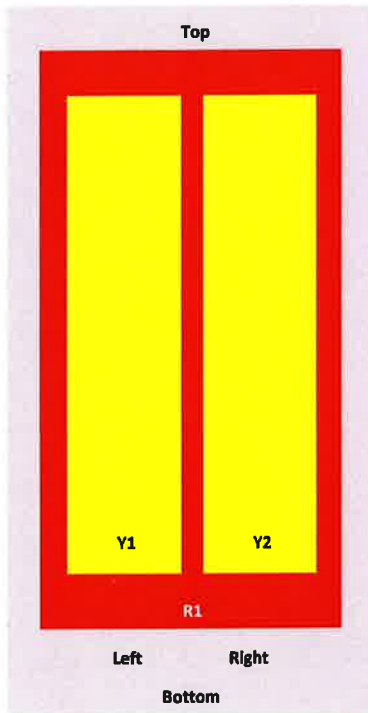
Protocol 3GPP/AISG 2.0 (Single RET)

Dimensions

Width 301 mm | 11.85 in
Depth 180 mm | 7.087 in
Length 1828 mm | 71.969 in
Net Weight, without mounting kit 19.8 kg | 43.651 lb

Array Layout

NHH



Array	Freq (MHz)	Comp	RET (SRFT)	AISG RET UID
R1	1695-2360	1,2	1	ANXXXXXXXXXXXXXXX1
Y1	1695-2360	3,4	2	ANXXXXXXXXXXXXXXX2
Y2	1695-2360	5,6		

View from the front of the antenna

(Sizes of colored boxes are not true depictions of array sizes)

Electrical Specifications

Impedance 50 ohm
Operating Frequency Band 1695 – 2360 MHz | 698 – 896 MHz

NHH-65B-R2B

Polarization	±45°
Total Input Power, maximum	900 W @ 50 °C

Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain, dBi	14.9	15	17.7	17.9	18.4	18.7
Beamwidth, Horizontal, degrees	65	60	71	69	64	57
Beamwidth, Vertical, degrees	12.4	11.2	5.7	5.2	4.9	4.6
Beam Tilt, degrees	0–14	0–14	0–7	0–7	0–7	0–7
USLS (First Lobe), dB	13	14	18	18	19	18
Front-to-Back Ratio at 180°, dB	30	29	31	30	29	31
Isolation, Cross Polarization, dB	25	25	25	25	25	25
Isolation, Inter-band, dB	30	30	30	30	30	30
VSWR Return loss, dB	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port at 50°C, maximum, watts	300	300	300	300	300	300

Electrical Specifications, BASTA

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain by all Beam Tilts, average, dBi	14.5	14.5	17.3	17.7	18.1	18.5
Gain by all Beam Tilts Tolerance, dB	±0.6	±1.1	±0.4	±0.4	±0.5	±0.3
Gain by Beam Tilt, average, dBi	0° 14.4 7° 14.6 14° 14.3	0° 14.7 7° 14.7 14° 14.1	0° 17.2 4° 17.3 7° 17.3	0° 17.6 4° 17.7 7° 17.7	0° 18.0 4° 18.2 7° 18.1	0° 18.3 4° 18.5 7° 18.6
Beamwidth, Horizontal Tolerance, degrees	±2	±2.1	±3	±4.1	±6.5	±2.9
Beamwidth, Vertical Tolerance, degrees	±0.7	±0.7	±0.3	±0.2	±0.3	±0.2
USLS, beampeak to 20° above beampeak, dB	13	14	16	16	17	15
Front-to-Back Total Power at 180° ± 30°, dB	23	22	27	27	25	25
CPR at Boresight, dB	22	21	23	23	22	19

NHH-65B-R2B

CPR at Sector, dB 10 7 16 13 11 4

Mechanical Specifications

Effective Projective Area (EPA), frontal	0.26 m ² 2.799 ft ²
Effective Projective Area (EPA), lateral	0.22 m ² 2.368 ft ²
Wind Loading @ Velocity, frontal	278.0 N @ 150 km/h (62.5 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	230.0 N @ 150 km/h (51.7 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	537.0 N @ 150 km/h (120.7 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	282.0 N @ 150 km/h (63.4 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h 149.75 mph

Packaging and Weights

Width, packed	409 mm 16.102 in
Depth, packed	299 mm 11.772 in
Length, packed	1952 mm 76.85 in
Weight, gross	32.3 kg 71.209 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant



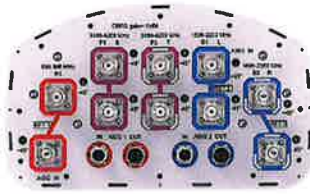
Included Products

- BSAMNT-3 – Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

* Footnotes

Performance Note Severe environmental conditions may degrade optimum performance

NHHSS-65B-R2BT10



10-port sector antenna, 2x 698–896, 4x 1695–2200 and 4x 3100–4200 MHz, 65° HPBW, 2x RETs and 2x SBTs. Both high bands share the same electrical tilt.

- Perfect antenna to add 3.5GHz CBRS to macro sites
- Low band and mid band performance mirrors the performance of existing NHH hex port antennas
- Interleaved dipole technology providing for attractive, low wind load mechanical package
- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- One LB RET and one HB RET. Both high bands are controlled by one RET to ensure same tilt level for 4x MIMO

General Specifications

Antenna Type	Sector
Band	Multiband
Color	Light Gray (RAL 7035)
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Performance Note	Outdoor usage
Radome Material	Fiberglass, UV resistant
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, mid band	4
RF Connector Quantity, low band	2
RF Connector Quantity, total	10

Remote Electrical Tilt (RET) Information

RET Hardware	CommRET v2
RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	2 female 2 male
Input Voltage	10–30 Vdc
Internal RET	High band (1) Low band (1)

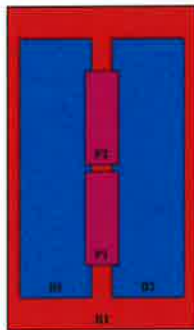
NHHSS-65B-R2BT10

Power Consumption, active state, maximum	10 W
Power Consumption, idle state, maximum	2 W
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	301 mm 11.85 in
Depth	181 mm 7.126 in
Length	1828 mm 71.969 in
Net Weight, without mounting kit	23.1 kg 50.927 lb

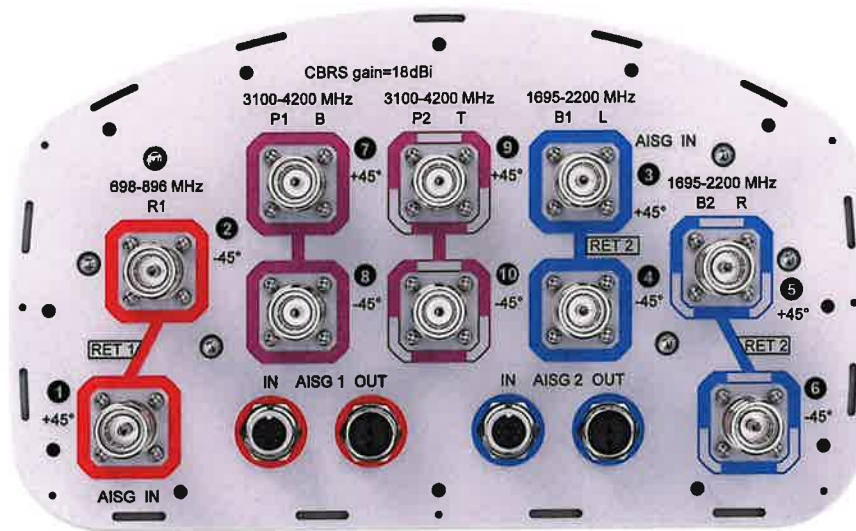
Array Layout



Array ID	Frequency (MHz)	RF Connector	RET (RET)	AISG No.	AISG RET UID
R1	698-896	1 - 2	1	AISG1	CPxxxxxxxxxxxxR1
B1	1695-2200	3 - 4	2	AISG2	CPxxxxxxxxxxxxB1
B2	1695-2200	5 - 6			
P1	3100-4200	7 - 8	N/A	NA	N/A
P2	3100-4200	9 - 10			

(Sizes of colored boxes are not true depictions of array sizes)

Port Configuration



NHHSS-65B-R2BT10

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2200 MHz 3100 – 4200 MHz 698 – 896 MHz
Polarization	±45°
Total Input Power, maximum	1,000 W @ 50 °C

Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	3100–3550	3550–3700	3700–4200
Gain, dBi	14.8	15.2	17.4	17.8	18	17.8	17.6	17.2
Beamwidth, Horizontal, degrees	65	62	66	61	64	52	60	62
Beamwidth, Vertical, degrees	13	11.6	5.5	5.2	4.9	5.7	5.3	5.1
Beam Tilt, degrees	0–14	0–14	0–7	0–7	0–7	10	10	10
USLS (First Lobe), dB	15	15	16	18	18	15	19	18
Front-to-Back Ratio at 180°, dB	26	29	31	28	27	30	34	31
Isolation, Cross Polarization, dB	25	25	25	25	25	25	25	25
Isolation, Inter-band, dB	25	25	25	25	25	28	28	28
VSWR Return loss, dB	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-145	-145	-145
Input Power per Port at 50°C, maximum, watts	300	300	300	300	300	100	100	100

Electrical Specifications, BASTA

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	3100–3550	3550–3700	3700–4200
Gain by all Beam Tilts, average, dBi	14.6	14.8	17	17.5	17.7	17.4	17.1	16.6
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.4	±0.6	±0.3	±0.4	±0.7	±0.9	±0.8
Beamwidth, Horizontal Tolerance, degrees	±1.7	±1.3	±7.2	±3.1	±6.2	±8.1	±7	±7.2
Beamwidth, Vertical Tolerance, degrees	±0.8	±0.8	±0.2	±0.2	±0.4	±0.5	±0.2	±0.3
USLS, beampeak to 20° above beampeak, dB	15	15	14	15	17	14	14	12
Front-to-Back Total Power at 180° ± 30°, dB	22	25	25	25	24	26	24	23

NHHSS-65B-R2BT10

CPR at Boresight, dB	24	17	16	21	19	15	17	14
CPR at Sector, dB	12	6	11	10	8	7	7	4

Mechanical Specifications

Wind Loading @ Velocity, frontal	278.0 N @ 150 km/h (62.5 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	230.0 N @ 150 km/h (51.7 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	537.0 N @ 150 km/h (120.7 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	282.0 N @ 150 km/h (63.4 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h 149.75 mph

Packaging and Weights

Width, packed	1973 mm 77.677 in
Depth, packed	441 mm 17.362 in
Length, packed	337 mm 13.268 in
Weight, gross	35.1 kg 77.382 lb

Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system



Included Products

BSAMNT-3	Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.
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* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance
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SAMSUNG

SAMSUNG C-Band 64T64R Massive MIMO Radio

for High Capacity and Wide Coverage

Samsung C-Band 64T64R Massive MIMO Radio enables mobile operators to increase coverage range, boost data speeds and ultimately offer enriched 5G experiences to users in the U.S..

Model Code: MT6407-77A



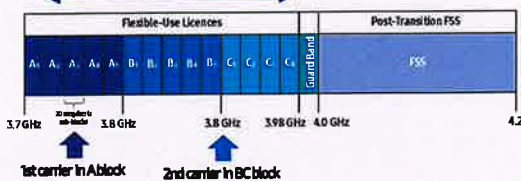
Points of Differentiation

Wide Bandwidth

With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

Samsung C-Band massive MIMO Radio covers the entire C-Band 280 MHz spectrum, so it can meet the operator's needs in current A block and future B/C blocks

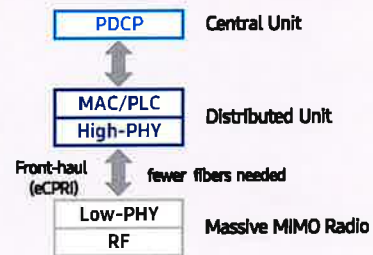
C-Band spectrum supported by Massive MIMO Radio



Future Proof Product

Samsung C-Band 64T64R Massive MIMO radio supports not only CPRI but also eCPRI as front-haul interface.

It enables operators can cut down on OPEX/CAPEX by reducing front-haul bandwidth through low layer split and using ethernet based higher efficient line.



Enhanced Performance

C-Band massive MIMO Radio creates sharp beams and extends networks' coverage on the critical mid-band spectrum using a large number of antenna elements and high output power to boost data speeds.

This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

Furthermore, as C-Band massive MIMO Radio supports MU-MIMO (Multi-user MIMO), it enables to increase user throughput by minimizing interference.



Well Matched Design

Samsung C-Band Massive MIMO radio utilizes 64 antennas, supports up to 280MHz bandwidth, and delivers a 200W output power. despite the above advanced performance, the Radio has a compact size of 50.9L and 79.4lbs. This makes it easy to install the Radio.

It is designed to look solid and compact, with a low profile appearance so that, when installed, harmonizes well with the surrounding environment.



Technical Specifications

Item	Specification
Tech	NR
Band	n77
Frequency Band	3700 - 3980 MHz
EIRP	78.5dBm (53.0 dBm+25.5 dBi)
IBW/OBW	280 MHz / 200 MHz
Installation	Pole/Wall
Size/Weight	16.06 x 35.06 x 5.51 inch (50.86L) / 79.4 lbs



SAMSUNG



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SAMSUNG

Dual-Band Radio Unit AWS/PCS (B66/B2) RFV01U-D1A

Samsung's RFV01U-D1A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.



The RFV01U-D1A RU targets dual-band support across Band 66 (AWS) and Band 2 (PCS), making it an ideal product for broad coverage footprints across multiple common mid-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed- and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation
- Built-in Broadcast Auxiliary Services (BAS) filter ensures compliant AWS operation without impacting footprint

Key Technical Specifications

Duplex Type: FDD
Operating Frequencies:
B66: DL(2,110-2,180MHz)/UL(1,710-1,780MHz)
B2: DL(1,930-1,990MHz)/UL(1,850-1,910MHz)
Instantaneous Bandwidth:
70MHz(B66) + 60MHz(B2)
RF Chain: 4T4R/2T4R/2T2R
Output Power: Total 320W
DU-RU Interface: CPRI (10Gbps)
Dimensions: 380 x 380 x 255mm (36.8L)
Weight: 38.3kg
Input Power: -48V DC
Operating Temp.: -40 - 55°(w/o solar load)
Cooling: Natural convection

SAMSUNG

Dual-Band Radio Unit 700/850MHz (B13/B5) RFV01U-D2A

Samsung's RFV01U-D2A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.



The RFV01U-D2A RU targets dual-band support across Band 13 (700MHz) and Band 5 (850MHz), making it an ideal product for broad coverage footprints across multiple common low-end, long-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed- and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation

Key Technical Specifications

Duplex Type: FDD
Operating Frequencies:
 B13: DL(746-756MHz)/UL(777-787MHz)
 B5: DL(869-894MHz)/UL(824-849MHz)
Instantaneous Bandwidth: 10MHz(B13) + 25MHz(B5)
RF Chain: 4T4R/2T4R/2T2R
Output Power: Total 320W
DU-RU Interface: CPRI (10Gbps)
Dimensions: 380 x 380 x 207mm (29.9L)
Weight: 31.9kg
Input Power: -48V DC
Operating Temp.: -40 - 55°(w/o solar load)
Cooling: Natural convection

Specifications

The table below outlines the main specifications of the RRH.

Table 1. Specifications

Item	RT4401-48A
Air Technology	LTE
Band	Band 48 (3.5 GHz)
Operating Frequency (MHz)	3550 to 3700
RF Chain	4TX/4RX
Input Power	-48 V DC (-38 to -57 V DC, 1 SKU), with clip-on AC-DC converter (Option)
Dimension (W × D × H) (mm)	8.55 in. (217.4) × 4.15 in. (105.5) × 13.91 in. (353.5) * RRH only 11.39 in. (289.4) × 5.45 in. (138.5) × 16.16 in. (410.5) * with Clip-on antenna, AC-DC power unit
Cooling	Natural convection
Unwanted Emission	3GPP 36.104 Category A [B48]: FCC 47 CFR 96.41 e)
Spectrum Analyzer	TX/RX Support
Antenna Type	Integrated (Clip-on) antenna (Option), External antenna (Option)
Operating Humidity	5 to 100 [%] (RH), condensing, not to exceed 30 g/m ³ absolute humidity
Altitude	-60 to 1,800 m
Earthquake	Telcordia Earthquake Risk Zone4 (Telcordia GR-63-CORE)
Vibration in Use	Office Vibration
Transportation Vibration	Transportation Vibration
Noise	Fanless (natural convection cooling)
Wind Resistance	Telcordia GR-487-CORE, Section 3.34
EMC	FCC Title 47, CFR Part 96
Safety	UL 60950-1 2nd ED

Item	RT4401-48A
	UL 62368-1
	UL 60950-22
RF	FCC Title 47, CFR Part 96

The table below outlines the AC/DC power unit specifications of the RRH system.



MASTERLINE Classic Hybrid (MLCH) 6/12 Low Induction Hybrid Cable

HUBER+SUHNER AG
Fiber Optics
MASTERLINE classic hybrid
DOC-0000460627 Rev E

2016-11-03
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Introduction

Hybrid-riser cable with distribution box

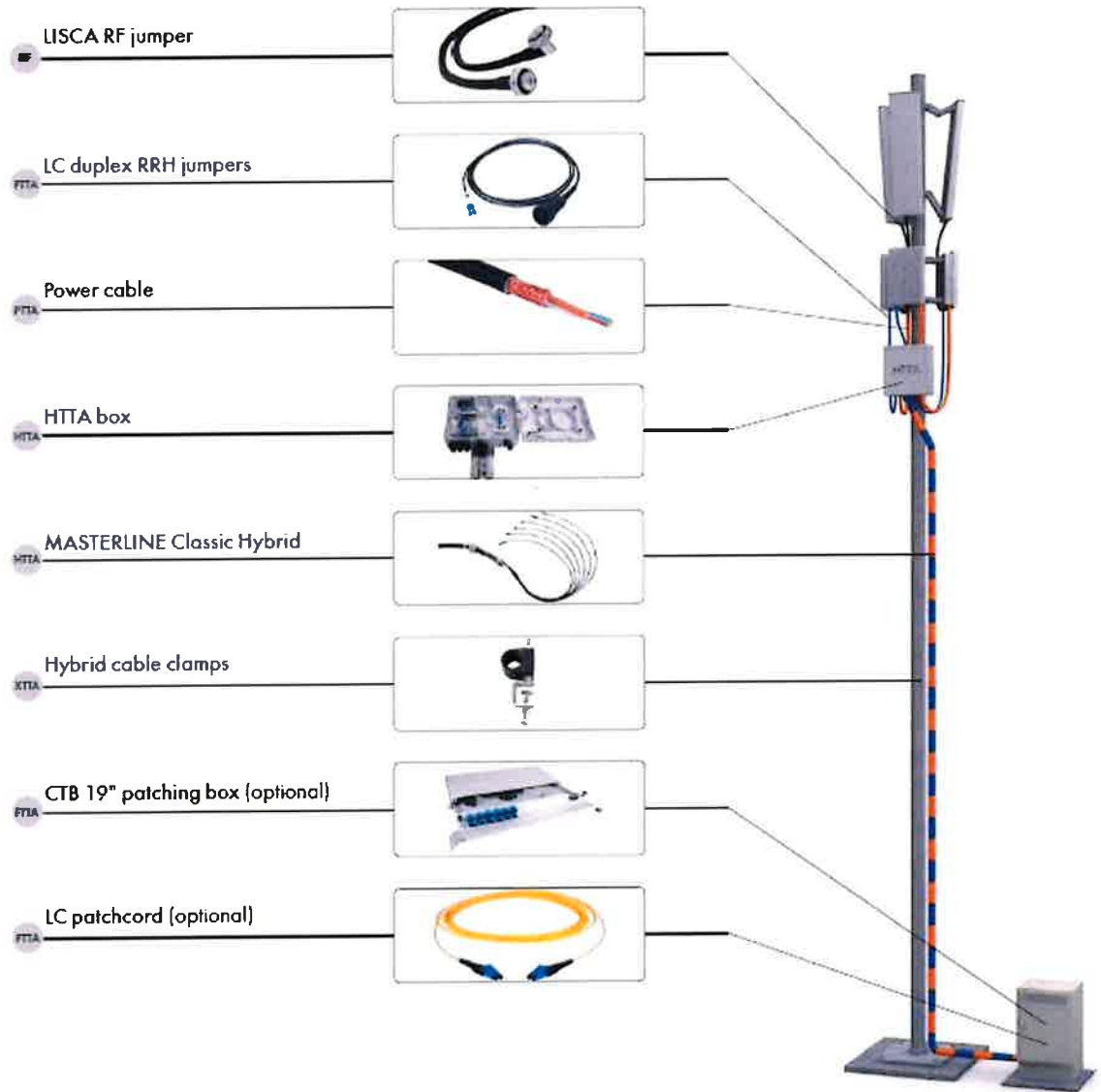
This solution, a factory-terminated hybrid-riser cable assembly, minimises the amount of cables running up the mast. At the hybrid distribution box the multi-fiber / wire cable are split into individual cables which are linked to the RRHs with short jumper cables. The jumpers allow an adaptation to different RRH interfaces and therefore make the solution independent from the system vendor's hardware.



MASTERLINE Classic Hybrid (MLCH) 6/12 Low Induction Hybrid Cable

MLCH installation solution

+ Configuration with surge protection and circuit breakers possible

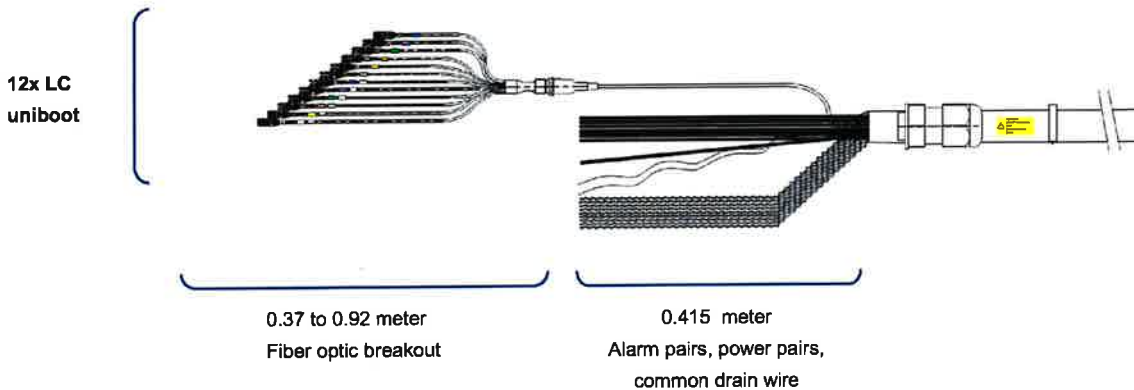




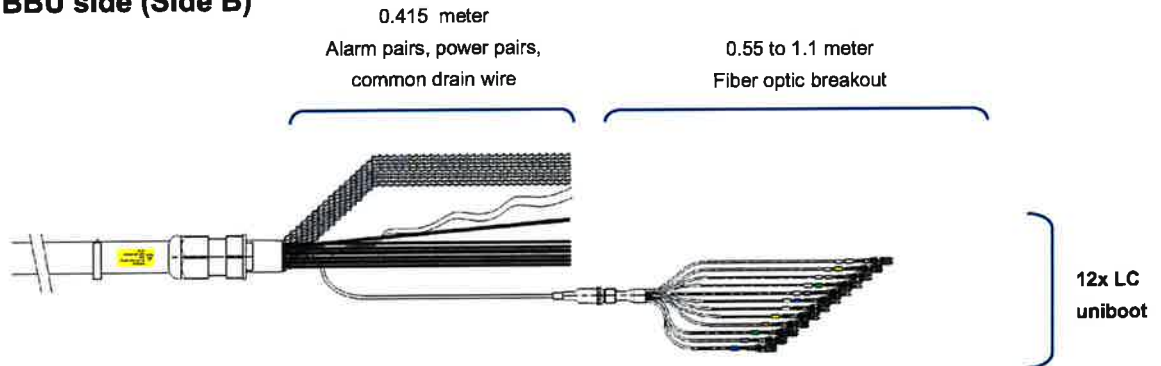
MASTERLINE Classic Hybrid (MLCH) 6/12 Low Induction Hybrid Cable

MLCH product properties

RRH side (Side A)



BBU side (Side B)



Assembly color coding

Fiber optic

RRH	Fiber Optic							
	Side A (LC uniboot)				Side b (LC uniboot)			
#	Length	Color	Bundle	Pin	Pin	Bundle	Color	Length
1	370±25	blue	Alpha 1 - 3 (no coding)	A	B	Alpha 1 - 3 (no coding)	blue	550±25
	420±25	violet		B	A		violet	600±25
2	470±25	green		A	B		green	650±25
	520±25	brown		B	A		brown	700±25
3	570±25	yellow		A	B		yellow	750±25
	620±25	white		B	A		white	800±25
4	670±25	blue	Beta 4 - 6 white	A	B	Beta 4 - 6 white	blue	850±25
	720±25	violet		B	A		violet	900±25
5	770±25	green		A	B		green	950±25
	820±25	brown		B	A		brown	1000±25
6	870±25	yellow		A	B		yellow	1050±25
	920±25	white		B	A		white	1100±25



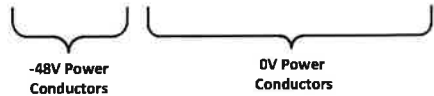
MASTERLINE Classic Hybrid (MLCH) 6/12 Low Induction Hybrid Cable

Alarm pairs

9 Alarm pairs		
Signal		
Pair	Color	
x1	black	
	black / white	
x2	black	
	orange	
x3	black	
	violet	
x4	black	
	yellow	
x5	black	
	red	
x6	black	
	slate	
x7	black	
	blue	
x8	black	
	brown	
x9	white	
	white / black	

Power pairs

Coaxial			
Coax	Color/Identification	Layer	Function
Wire 1	1-ONE	outer wire	0V
	1-ONE	inner wire	-48V
Wire 2	2-TWO	outer wire	0V
	2-TWO	inner wire	-48V
Wire 3	3-THREE	outer wire	0V
	3-THREE	inner wire	-48V
Wire 4	4-FOUR	outer wire	0V
	4-FOUR	inner wire	-48V
Wire 5	5-FIVE	outer wire	0V
	5-FIVE	inner wire	-48V
Wire 6	6-SIX	outer wire	0V
	6-SIX	inner wire	-48V

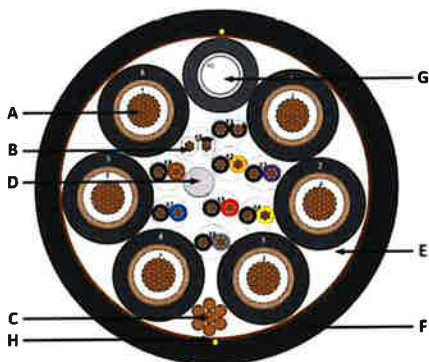


General specification assembly

Cable head connectors	Fiber	12 x LC uniboot (Side A and B)
	Power	Blunt cut (low induction design)
Cable design		find table below

Hybrid cable specification

Low induction design



- A – Conductors
- B – Alarming wire
- C – Ground wire/drain Wire
- D – Flame resistant non hygroscopic fillers
- E – Copper tape layer
- F – Avian resistant cable jacket (PVC)
- G – Fiber optic cable, OD=7mm
- H – 2x Rip cord



MASTERLINE Classic Hybrid (MLCH) 6/12 Low Induction Hybrid Cable

Fiber optic	
Cable type	Glass-armoured multi-fiber loose tube jelly-filled
Cable diameter	7.0 mm
Number of fibers per fiber optic cable	24
Fiber type	SM E9/125 acc. G.652.D
Strain relief	Glass-armoured
Jacket material	LSFH
Jacket color	Black

Conductors	
Number of conductors	12
Conductor construction	Coaxial pairs
Conductor cross section	AWG 6
Conductor class	C
Conductor jacket material	PVC black
Conductor jacket diameter	0.372" (9.5 mm)
Resistance of core (+20°C)	1.31 Ω/km
Inductance	< 0.2 μH/m
Maximum operating voltage	600 V
Test voltage	8.4 kVdc

Composite	
Screen material	Wrapped copper foil 0.003" (0.07 mm)
Screen coverage	100%
Screen diameter	1.295 ± 0.064" (32.9 ± 1.6 mm)
Drain wire / Earth conductor	Copper AWG 6, class B
Alarm wires	9 twisted pairs AWG 18
Outer sheath material	PVC heat, moisture and sunlight resistant
Outer sheath color	Black
Outer sheath diameter	1.515 ± 0.076" (38.5 ± 1.9 mm)
Outer sheath wall thickness	0.098 – 0.118" (2.5 – 3.0 mm)
Rip cord	2 x RT1680x1x3, minimum 3x1500 dTex, Ø 0.5mm
Operating temperature range	-40°F to + 158°F
Weight	1.699lbs/ft (2.865 kg/m)

HUBER+SUHNER disclaims any liability resulting from incorrect installation and use, including any damages resulting from the use of tools and accessories other than the ones recommended herein. Any installation performed by unqualified personnel voids the product warranty provided by HUBER+SUHNER. All due care and attention must be exercised when performing the installation of these products. For advice concerning the general handling of these products please contact HUBER+SUHNER.



MASTERLINE Classic Hybrid (MLCH) 6/12 Low Induction Hybrid Cable

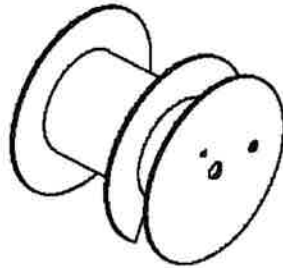
Bending radius during installation	10x cable-Ø
Bending radius fixed installation	8x cable-Ø
Flame retardant	FT4, DIRECT BURIAL
Standards	UL 1277, UL 2882, UL 83, UL 1685
Ratings	UL TC-OF-ER 600V, 90°C DRY / WET, 75°C JKT
Printing on jacket after each meter	HUBER+SUHNER " item no" "conductor type" "fiber type" "rating" "manufacturing date" "length indication"

Packaging/Drum:

Masterline classic hybrid is deployed on a double flange wooden reel with the inner and outer ends presented on different sections of the reel to allow easy installation whilst protecting the assembly.

Normally delivered strapped to a euro pallet for ease of shipping – once removed from pallet can be rolled on-site if necessary (taking care not to damage assembly by running across excessively rough terrain).

Care must be taken when removing assembly from the reel so as not to damage assembly – installation instructions should be followed closely.





MASTERLINE Classic Hybrid (MLCH) 6/12 Low Induction Hybrid Cable

MLCH 6/12 low induction products

Length (ft)	Item no.	Verizon PeopleSoft description	Cable weight (lbs)	Weight spool incl. (lbs)	Spool dimension
10	85030068	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_010 ft	18.5	81.3	
20	85030069	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_020 ft	37	99.8	
30	85016606	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_030 ft	55.5	118.3	
40	85030070	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_040 ft	74	136.8	
50	85030071	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_050 ft	92.5	155.3	
60	85016607	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_060 ft	111	173.8	
70	85021094	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_070 ft	129.5	192.3	
80	85030072	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_080 ft	148	210.8	
90	85016609	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_090 ft	166.5	229.3	
100	85021093	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_100 ft	185	247.8	
110	85030073	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_110 ft	203.5	266.3	
120	85016610	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_120 ft	222	284.8	
130	85021092	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_130 ft	240.5	303.3	
140	85030074	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_140 ft	259	321.8	
150	85016661	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_150 ft	277.5	340.3	
160	85021091	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_160 ft	296	358.8	
170	85020934	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_170 ft	314.5	377.3	
180	85016662	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_180 ft	333	395.8	
190	85021090	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_190 ft	351.5	414.3	
200	85030075	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_200 ft	370	432.8	
210	85016664	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_210 ft	388.5	451.3	
220	85021078	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_220 ft	407	469.8	
230	85030076	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_230 ft	425.5	488.3	
240	85016186	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_240 ft	444	506.8	
250	85021077	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_250 ft	462.5	525.3	
260	85030077	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_260 ft	481	543.8	
270	85016666	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_270 ft	499.5	562.3	
280	85021076	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_280 ft	518	580.8	
290	85020936	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_290 ft	536.5	599.3	
300	85016667	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_300 ft	555	617.8	
310	85021075	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_310 ft	573.5	636.3	
320	85030078	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_320 ft	592	654.8	
330	85016187	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_330 ft	610.5	673.3	
340	85021074	H+S_MLC-Hybrid 6x12 Low Inductance (6 AWG)SM-ICDx12_340 ft	629	691.8	

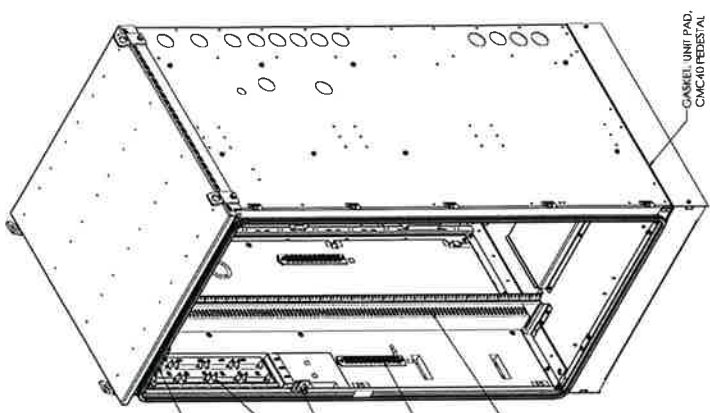


MASTERLINE Classic Hybrid (MLCH) 6/12 Low Induction Hybrid Cable

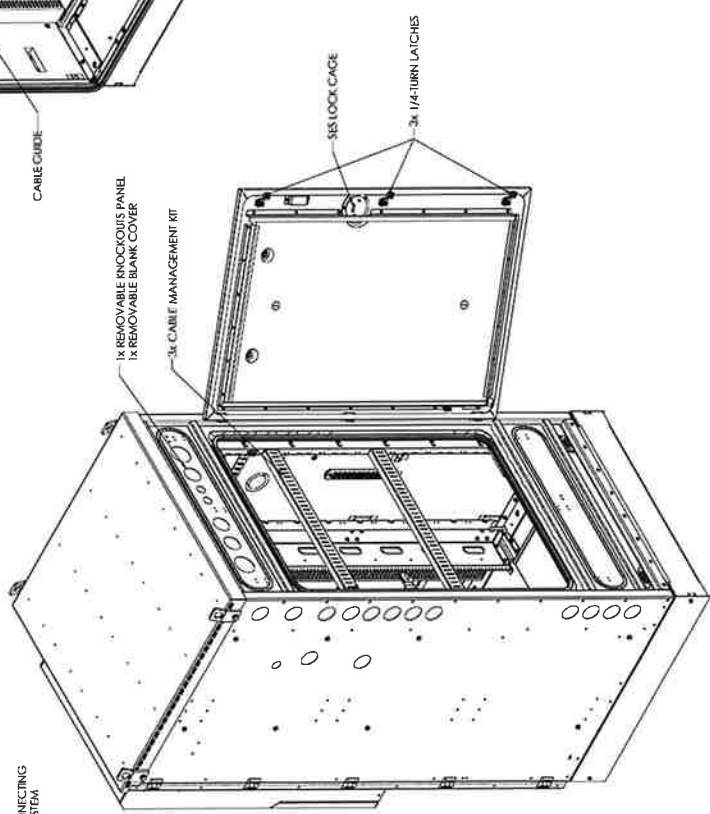
Length (ft)	Item no.	Verizon PeopleSoft description	Cable weight (lbs)	Weight spool incl. (lbs)	Spool dimension
350	85030079	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_350 ft	647.5	710.3	Ø 39.4 × 39.4 inch (Ø 1000 × 1000 mm)
360	85016669	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_360 ft	666	728.8	
370	85016608	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_370 ft	684.5	747.3	
380	85030080	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_380 ft	703	765.8	
390	85016671	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_390 ft	721.5	784.3	
400	85016004	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_400 ft	740	802.8	
410	85030081	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_410 ft	758.5	821.3	
420	85016672	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_420 ft	777	839.8	
430	85016663	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_430 ft	795.5	858.3	
440	85030082	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_440 ft	814	876.8	
450	85016673	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_450 ft	832.5	895.3	
460	85016665	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_460 ft	851	913.8	
470	85030083	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_470 ft	869.5	932.3	
480	85016674	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_480 ft	888	950.8	
490	85016668	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_490 ft	906.5	969.3	
500	85030084	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_500 ft	925	987.8	
510	85016676	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_510 ft	943.5	1006.3	
520	85016670	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_520 ft	962	1024.8	
530	85030085	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_530 ft	980.5	1043.3	
540	85016189	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_540 ft	999	1061.8	
550	85016188	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_550 ft	1017.5	1080.3	
560	85030086	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_560 ft	1036	1098.8	
570	85016780	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_570 ft	1054.5	1117.3	
580	85016675	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_580 ft	1073	1135.8	
590	85030087	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_590 ft	1091.5	1154.3	
600	85016781	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_600 ft	1110	1172.8	
610	85016677	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_610 ft	1128.5	1191.3	
700	85016191	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_700 ft	1295	1357.8	
800	85016795	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_800 ft	1480	1542.8	Ø 66.9 × 35.4 inch (Ø 1700 × 900 mm)
900	85030088	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_900 ft	1665	1727.8	
1000	85030089	H+S_MLC-Hybrid 6x12 Low Inductance {6 AWG}SM-LCDx12_1000 ft	1850	1912.8	



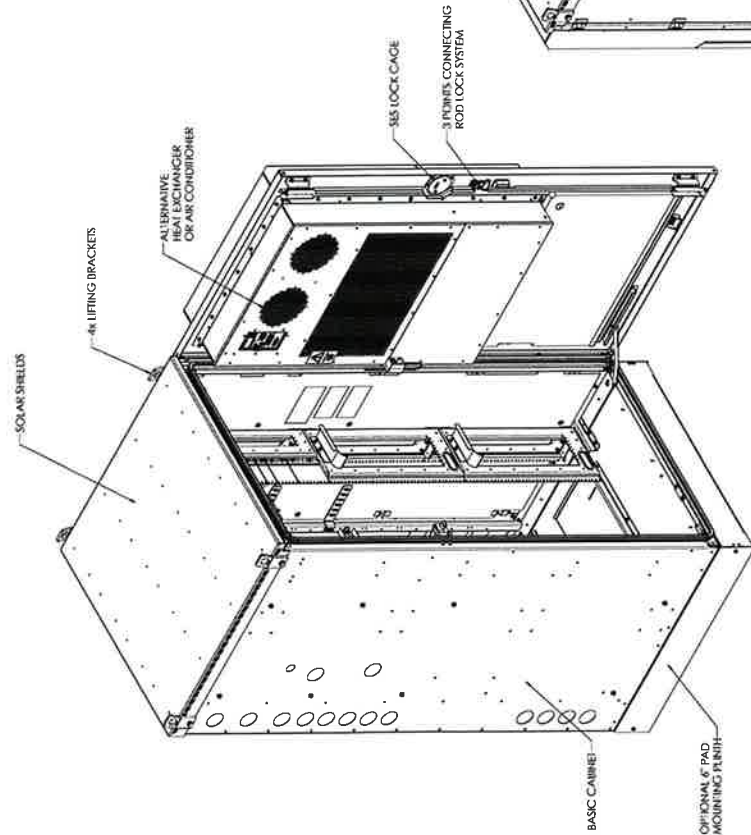
NOTES:
 1.0 UNLESS OTHERWISE SPECIFIED, UNITS ARE MILLIMETER(INCH).
 2.0 FOR INDIVIDUAL DETAIL INFORMATION NOT SHOWN HERE, REFER TO THE INDIVIDUAL CABINET SPEC DRAWINGS.



FRONT TOP RIGHT ISO VIEW



REAR TOP LEFT ISO VIEW

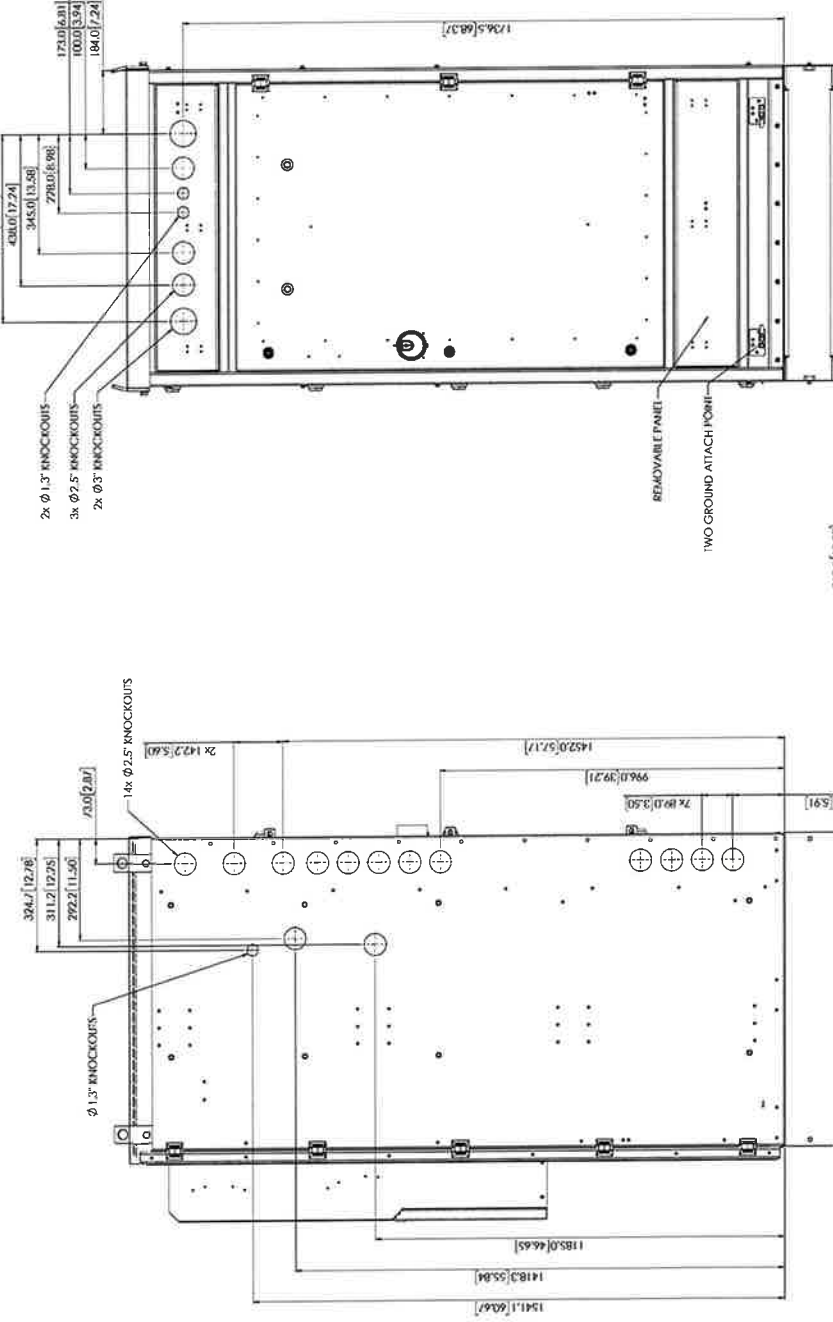


FRONT TOP LEFT ISO VIEW

19 EQUIPMENT RACK SPACE	40RU HORIZONTAL (EXTRA 19" 790U VERTICAL (RS))
OR 27 EQUIPMENT RACK SPACE	48RU HORIZONTAL (EXTRA 19" 38U VERTICAL(S))
CABINET WEIGHT	4.2LBS (EMPTY CABINET WITHOUT PLINTH UNPACKAGED) 35LBS (PACKAGED ON PALLET)
SHIPPING PALLET DIMENSIONS	42.5" W X 49" D
COOLING METHOD AND CAPACITY	4100W DC AIR CONDITIONER OR 2500W THERMOCHRON HEAT EXCHANGER
COLOR	RAL9005 GRAY
MATERIAL	2.5MM WELDED ALUMINUM
SOLAR SHIELDS	(OPTIONAL)
BONDING AND GROUNDING	2GA OUTSIDE ENCLOSURE (REAR SURFACE); SEE SHEET 2
CABLE ENTRANCE	SEE SHEET 2 FOR KNOCKOUT DIMENSIONS

CMC74-36E
 SECTION 270000-00
 COMMSCOPE, INC. OF NORTH CAROLINA
 1100 W. 10TH ST. SUITE 100
 RALEIGH, NC 27601
 PHONE: 919.876.1000
 FAX: 919.876.1001
 E-MAIL: SALES@COMMSCOPE.COM
 WWW.COMMSCOPE.COM

CMC74-36E-KW AC-1'S EQUIP CAB SPEC
 1:10
 SHEET 2 OF 2



- 2x Ø 1.3" KNOCKOUTS
- 3x Ø 2.5" KNOCKOUTS
- 2x Ø 3" KNOCKOUTS

REMOVABLE PANEL

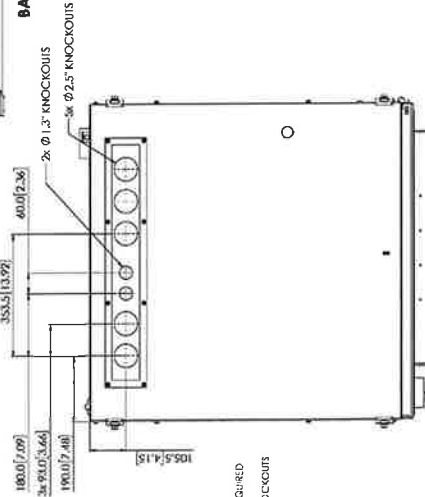
TWO GROUND ATTACH POINTS

RIGHT SIDE VIEW

BACK VIEW

LEFT SIDE VIEW

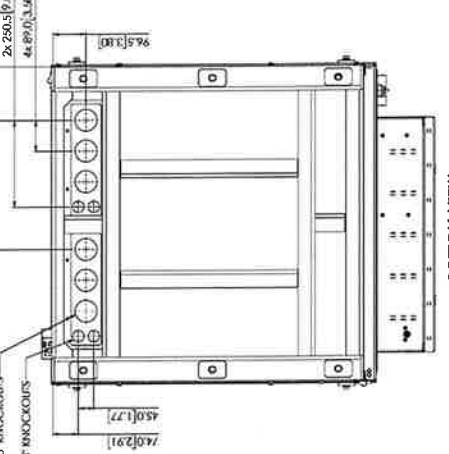
NOTE: LEFT SIDE VIEW SAME DIMENSIONS AS RIGHT SIDE VIEW.



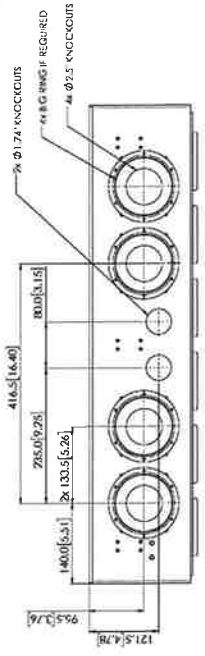
BACK VIEW

LEFT SIDE VIEW

NOTE: LEFT SIDE VIEW SAME DIMENSIONS AS RIGHT SIDE VIEW.



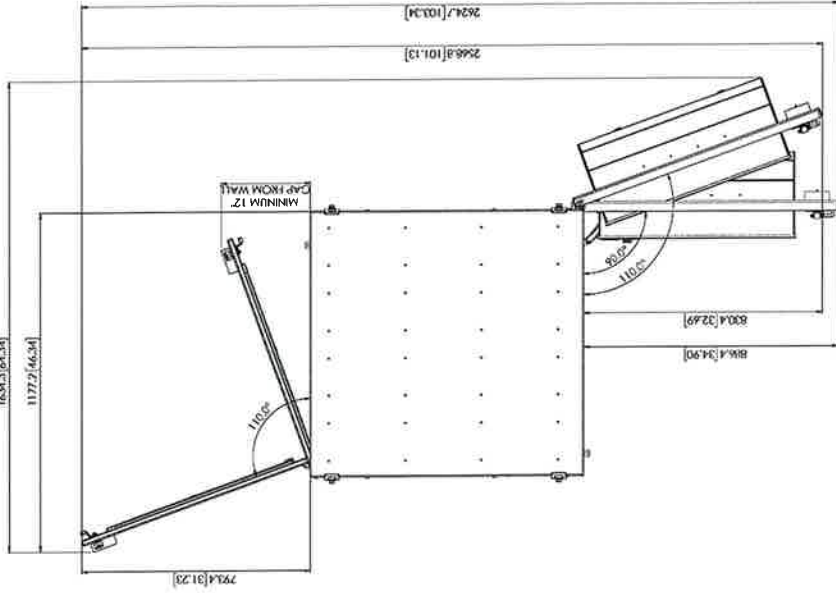
BOTTOM VIEW



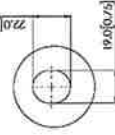
OPTIONAL 4" ROUND ROXTEC GLAND PANEL VIEW

TOP VIEW WITHOUT ROOF

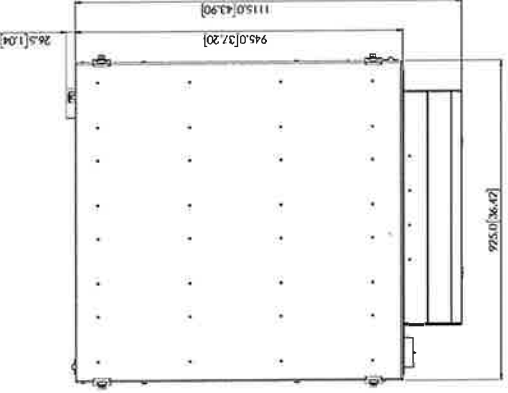
CONROSCOPE INC. OF NORTH CAROLINA
 CMC74 RE-40W AC'S EQUIP CAS E5C
 DRAWING NO. CMC74 RE-40W E5C
 SCALE: 1:10
 SHEET NO. 1 OF 1



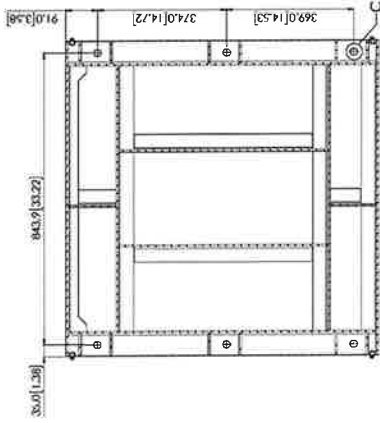
PLAN VIEW



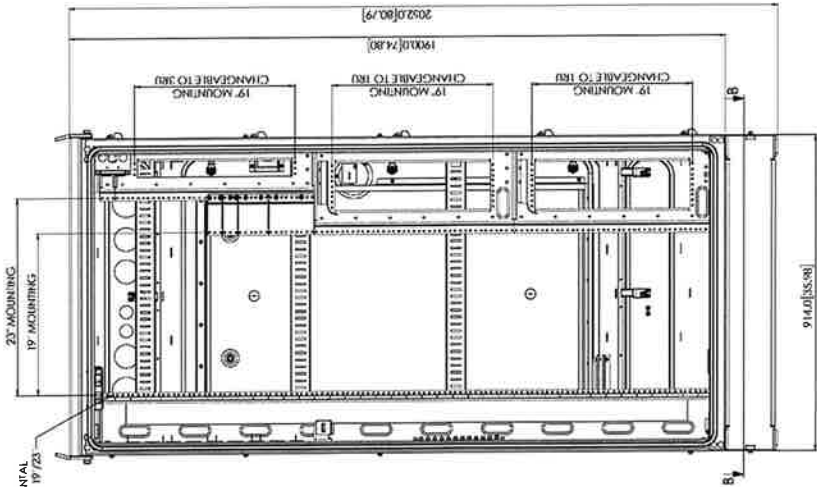
DETAIL C
 SCALE 1 : 1
 MOUNTING HOLE SIZES



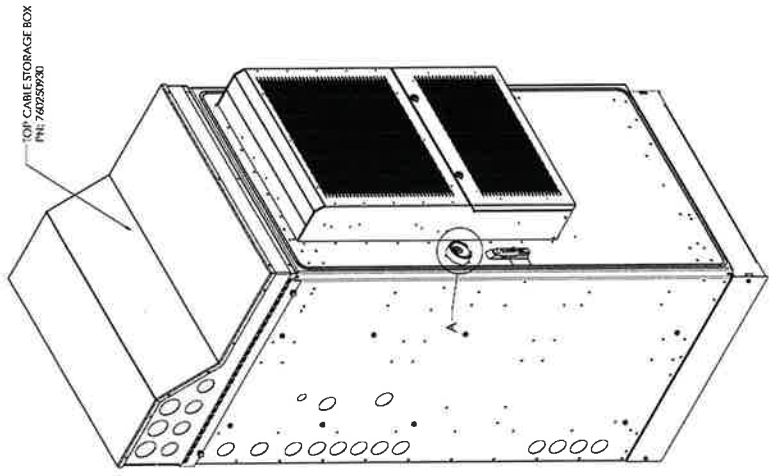
TOP VIEW (DOOR CLOSE)



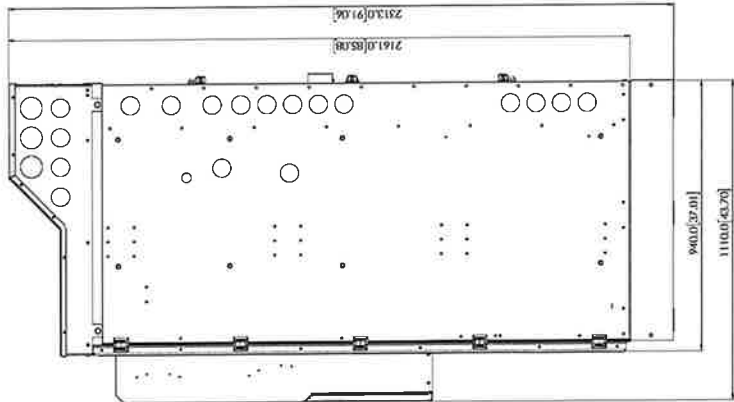
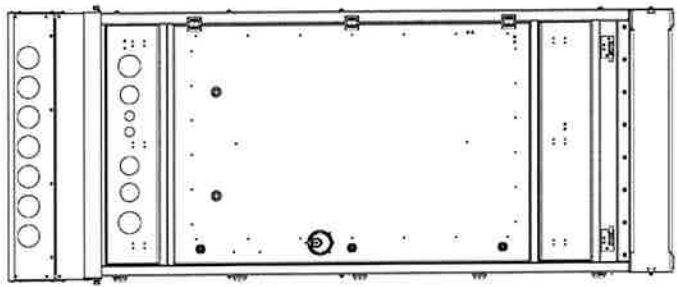
SECTION B-B
FOOTPRINT FOR PAD MOUNTING KIT



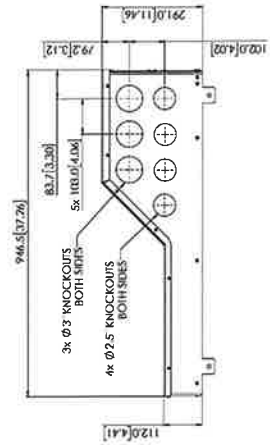
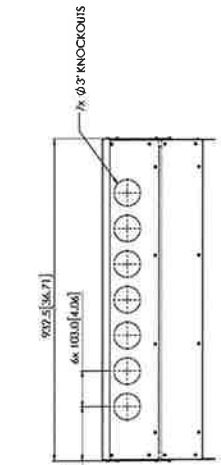
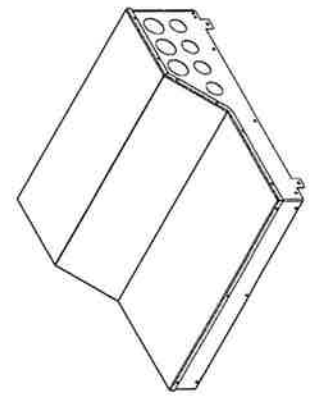
FRONT VIEW (DOOR OPEN)



DETAIL A
SCALE 1:1
SES LOCK APPLICATION



CMC74-36E CABINET WITH TOP MOUNT FIBER STORAGE ENCLOSURES



TOP MOUNT FIBER STORAGE ENCLOSURES
PN: 760250930

COMMERCIAL P.C. OF NORTH CAROLINA	
PROJECT	CMC74-36E-401 NC 15 500-CAS SPEC
DATE	07/10/10
SCALE	AS SHOWN
BY	CMC74-36E-SPEC
CHECKED	CMC74-36E-SPEC
APP'D	
DATE	

Customer Service Information

- Technical support
Call: 1-800-255-1479 (Option3 / Wireless Products) – Web: www.commscope.com/wisupport.

Safety Agency Statements and Safety Precautions

Safety Agency Statements:

- Only qualified personnel are to install and maintain the cabinet.
- Install cabinet within a restricted access location where access is by use of a tool, lock and key or other means of security; and controlled by the authority responsible for the location.
- The cabinet is only suitable for mounting on a concrete or other noncombustible surface.
- Maximum ambient temperature (T_{ma}) of 46° C (115° F) permitted by manufacturer specification.
- All conduit hubs must be of Type 3R or equivalent to maintain the cabinet as *Rainproof*.
- It is essential to connect the cabinet to earth ground before connecting supply, high leakage current.
- The door and rear access panel alarm switches must only connect to safety extra low voltage (SELV) and limited power source (LPS) circuits.
- All cabinet equipment cabling is to meet applicable NEC¹ and network communications standards.

Safety Precautions:

Note: *In areas that utilize joint buried plant, and per company practice, test and verify that voltage is not present on the cable shield. If voltage is present on the shield, stop work and notify supervision.*

- Follow all product warnings and instructions as specified in this document, cabinet, and equipment labels inside the cabinet to reduce risk of fire, electric shock, and injury.
- Install all equipment and supplied hardware as specified in this document.
 - Install only approved devices in the cabinet and do not drill, saw, or cut inside the cabinet.
 - Never install cable, connectors, jacks in a wet location unless designed for wet locations.
 - Never install electrical equipment during a thunderstorm, there is risk of electric shock.
 - Never touch uninsulated live power wires or terminals, always disconnect from power first.
 - It is mandatory to use insulated tools using power and hand tools.
- All personnel must wear standard safety headgear, eye protection, and insulated gloves (if required).
- At all times, keep bystanders away from all work operations.

WARNING:

Do not drill or punch any holes in the cabinet. Use only the provided knockouts in the cabinet for cable ingress and cable egress. Drilling or punching holes in any other location will immediately void the warranty. No exemptions.

¹ Registered trademark of the National Fire Protection Association.

► Common Features

- All cabinets have same mounting footprint – Figure 23
- Front door and rear access panel with theft deterrent padlocks, open/close turn-latches (see Table D for aftermarket electronic and keyed non-electronic SES pucks, items 6, 9) – see ► **Cabinet Views** and Figure 7.
- LED light and door intrusion switches - Figure 14
- One 2/10-pair LSA (Krone) alarm block on cabinet left side wall - Figure 7
- Four each battery shelves (VRLA or NiCd) - Figure 35, Figure 40
- Main earth ground lugs, bottom rear - Figure 2, Figure 4, Figure 6, Figure 31
- Side wall, rear, and floor knockouts for cable ingress/egress - Figure 32 to Figure 34
- Side solar shield on right side wall (moveable to left side as needed) – Figure 8, Figure 9

► Field Replacement Units (FRU) and Aftermarket Kits (AMK)

See the following tables for common and specific FRUs and AMKs.

- **Table D** – FRUs/AMKs common to all CMC74-36B VRLA and NiCd models.
- **Table E** – FRUs specific to VRLA models 760250540, 760250964, 760251393, 760251444
- **Table F** – FRUs specific to NiCd models 760250541, 760250965, 760251392, 760251445
- **Table G** – FRUs/AMKs specific to models 760250541, 760250965, 760251392, 760251445

Table D: FRUs and AMKs Common to all CMC74-36B VRLA and NiCd Models

Item	Material ID	Description
1	760246443	AMK, Interconnect, 3PR, 4/0, 2", CMC74-36B
2	760250573	FRU, Rear Door Assembly, CMC74-36B
3	760250922	FRU, Handle, Front Door
4	760250927	FRU, Solar Shield, Top
5	760250928	FRU, Circuit Breaker, Battery String, 250 A
6	760250929	AMK, Non Electronic Pucklock, Keyed
7	760250933	AMK, 6" High Plinth, Cabinet Mounting
8	760250961	FRU, Solar Shield, Side
9	SK-BSP-STDV	AMK, Puck Lock, SES

Table E: FRUs – VRLA Models 760250540, 760250964, 760251703, 760251393, 760251444 Only

Item	Material ID	Description
1	760250922	Front Door Assembly with 1 kW HVAC with 500 W Heater

Table F: FRUs – NiCd Models 760250541, 760250965, 760251702, 760251392, 760251445 Only

Item	Material ID	Description
1	760250959	Front Door Assembly, Passive Door

Table G: FRUs/AMKs – NiCd Models 760250541, 760250965, 760251701, 760251392, 760251445 Only

Item	Material ID	Description
1	760250959	FRU - Front Door Assembly with 1 kW Heater
2	760250962	AMK – Battery Heater, DC, 1 kW, Upgrade

► CMC74-36B NiCd Models, HVAC with Passive Door

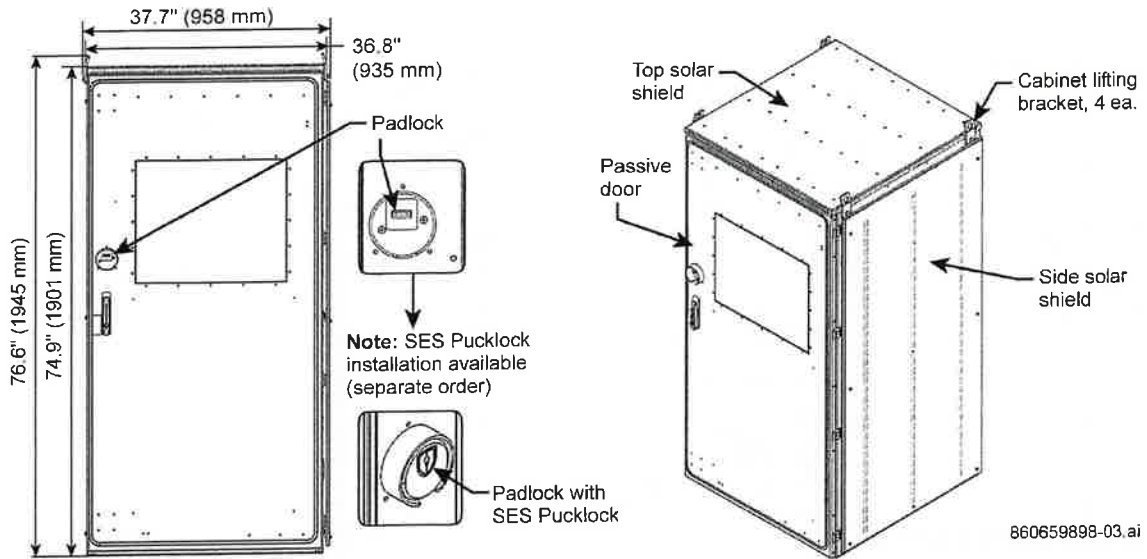


Figure 3. Front Views – CMC74-36B, Passive Door, NiCd

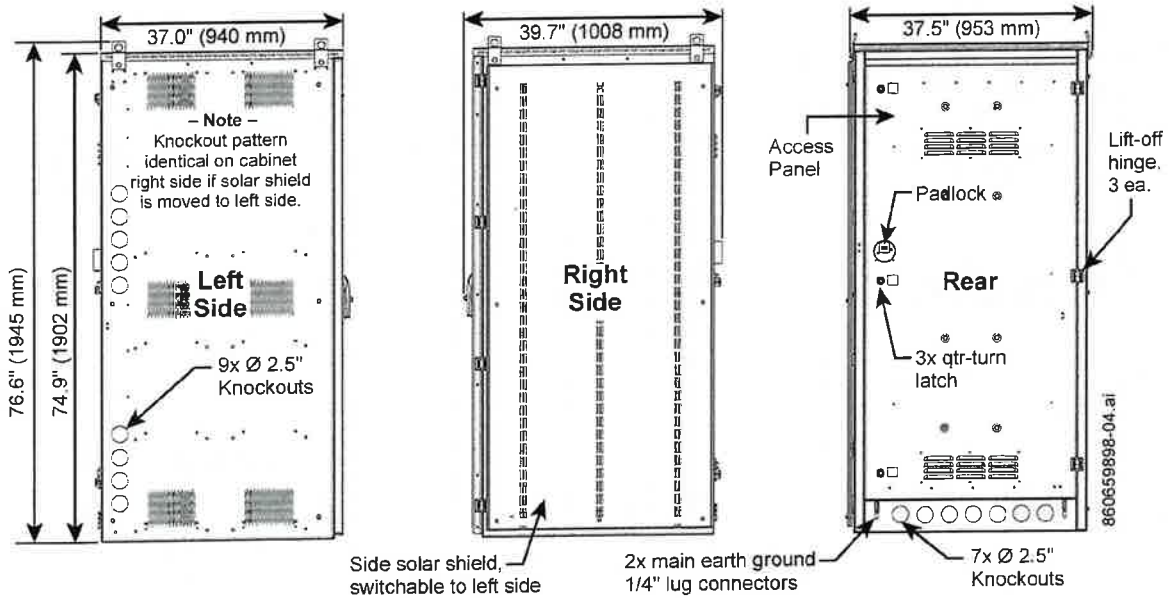
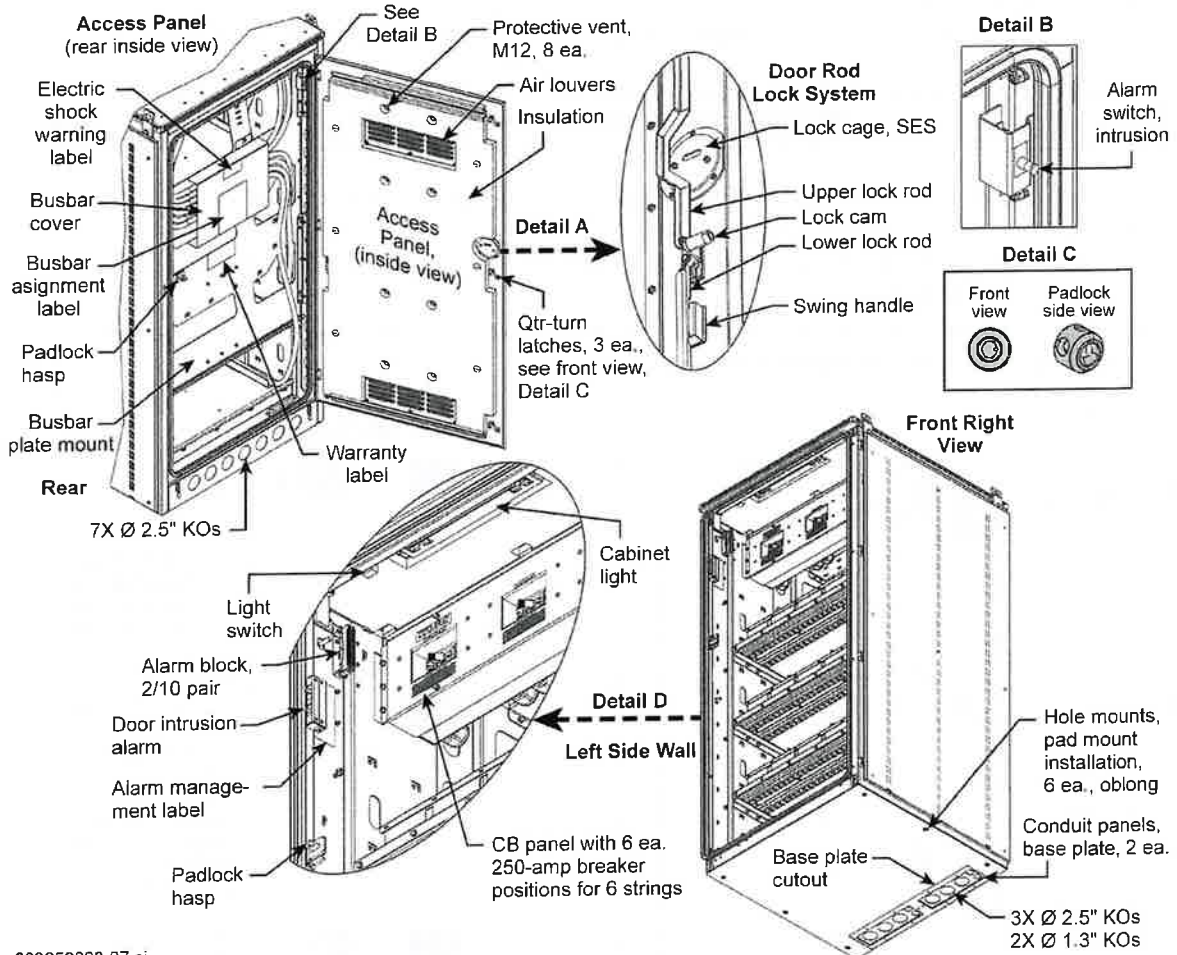


Figure 4. Left, Rear, and Right Views – CMC74-36B, Passive Door, NiCd

► **CMC74-36B Common Views, VRLA / NiCd**

Use the door key (Figure 16) that ships with cabinet to open or close the front door or 1/4-turn latches on rear access panel, Figure 7. An optional front door and rear panel SES pucklock is available, Table D.



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Figure 7: CMC74-36B Left Front View, Front Door and Rear Access Panel Open

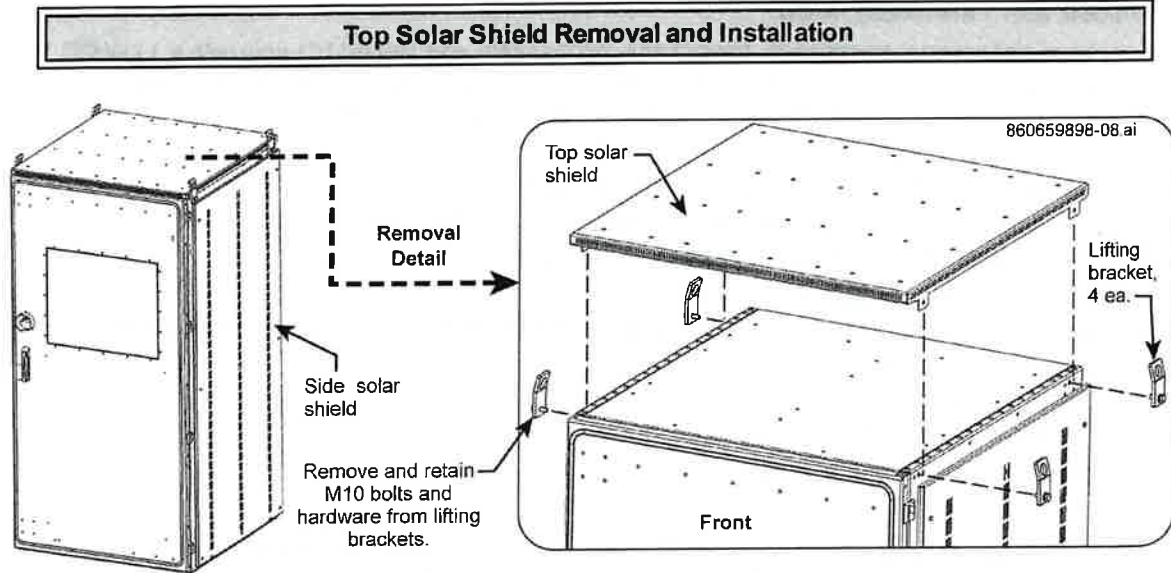


Figure 9. Top Solar Shield Removal

► Door Views with Cooling/Heating, VRLA / NiCd

The factory provides preterminated power and alarm cabling to a cooling/heating unit customer is to route to the power shelf and alarm block on an equipment cabinet. The factory coils and labels out going cables inside the cabinet.

- Power cable label = 860661484 (VRLA or NiCd cabinet)
- Alarm cable label = 460200704 (VRLA or NiCd cabinet)
- The door unit has power input and alarm terminal blocks, I/O and RJ45 ports. Refer to the schematic drawing (SD) and operation manuals included with the documentation packet shipped inside the cabinet.

CMC74-36B with HVAC with 500 W Heater, VRLA

VRLA cabinets 760250540, 760250964, 760251393, 760251444, and 760251703 ship with a battery HVAC cooling/heating unit, Figure 10. The unit requires a 25-amp breaker (shipped with cabinet); customer is to install the breaker onto power shelf of a CMC85-36 or CMC74-36C cabinet.

- Cooling capacity 1,000 Watts at 35°C (95°F) internal, 35°C (95°F) ambient
- Heating capacity 500 Watts (+5/0% Min)
- Acoustic Noise <60 dBA (5' away operating at max noise ability)
- Environmental (Ambient) Operating Temperature: -40°C (-40°F) to +55°C (131°F)
- Environmental (Ambient) Storage Temperature: -40°C(-40°F) to +70°C (158°F)
- Temperature Equipment Control Position:
 - Return air flow temperature near internal fan intake (factory set to default heater capacity)
- Equipment Control Set Points:
 - Cooling – Start temp 25°C (77°F), Off temp 20°C (68°F)
 - Heating – Start temp 10°C (50°F), Off temp 15°C (59°F)
- Alarm Temperature Thresholds:
 - High Temp alarm: 35°C (95° F)
 - Low Temp alarm: -5°C (23°F)
- Unit Weight: 64 lbs. (29 Kg), Max

Note: Hi-temp (over temperature) alarm default setting is 60°C (140°F).

► Door Clearances – Plan Views

The CMC74-36E, CMC85-36, or CMC74-36 equipment and combo cabinets can accommodate a CMC74-36B battery cabinet on either left or right sides for backup power; see example of battery cabinet to right of equipment cabinet in Figure 10.

Note: Make sure and order interconnection kit 760246443 for the CMC74-36B cabinet, or as required for either equipment cabinet.



Important:

- The CMC74-36B normally install alongside a CMC85-36 or CMC74-36C cabinet. **Make sure to install aftermarket kit (AMK) 760246443 interconnect kit first prior to battery installation see Section 4.**
- Check and verify cabinet alignment before and after CMC74-36B installation to equipment cabinet prior to kit 760246443 installation, see Figure 12 and Figure 13 below.
- A minimum 12" gap from wall required to remove rear panel from lift-off hinges, Figure 2.

► Single Plan View, CMC74-36B Cabinet

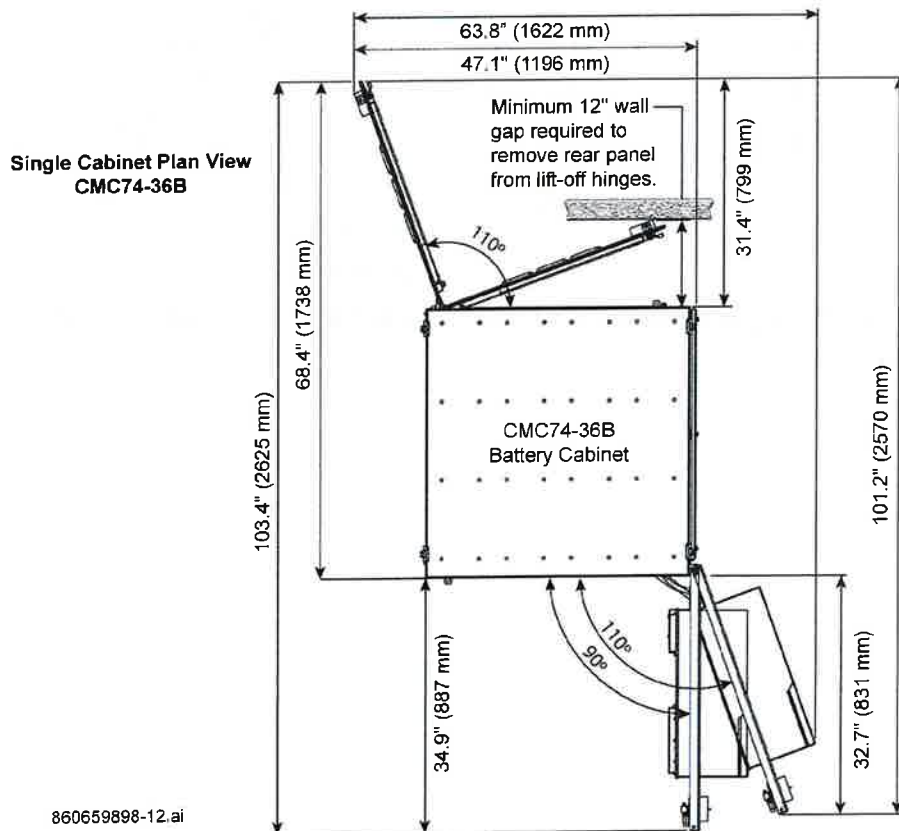


Figure 11. Top View, CMC74-36B Cabinet, Front Door and Rear Access Panel Open

► Plan View, CMC85-36 or CMC74-36C Cabinet with CMC74-36B Cabinet

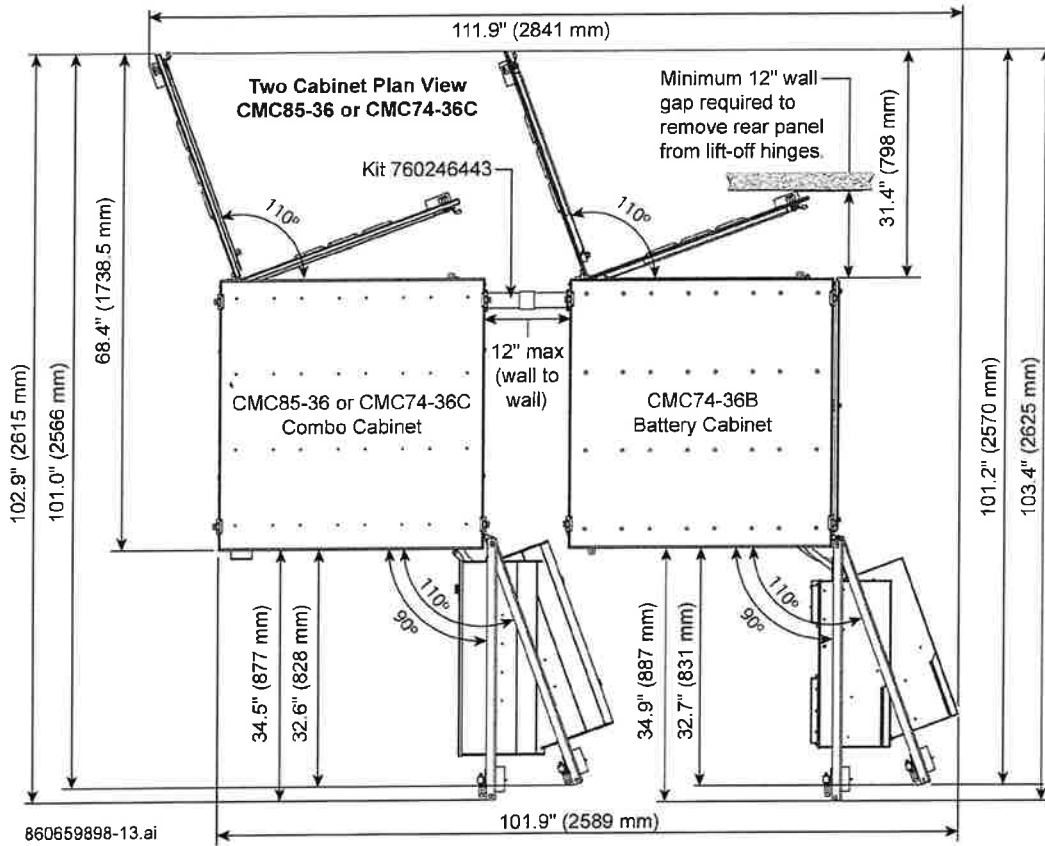


Figure 13. Top View, CMC85-36 or CMC74-36C Cabinet with CMC74-36B Battery Cabinet