

**CITY OF ELK GROVE
SMUD SERVICES REQUEST
FOR TELECOMMUNICATOINS
SERVICE PROVIDER**



Date of Request: 6/19/2020

Approximate Date Service Connection is Needed: Q4 2020

START _____ DISCONNECT _____ TRANSFER OF SERVICE

Telecommunications Service Provider (TSP) Name: Verizon Wireless

TSP Billing Address: PO BOX 21074, Tulsa, OK 74121

Contact Person and Number: DeeAnn Jurach (916) 612-3789

Point of Connection (POC): City Service# (XXXX): 0613

SMUD POC to City Conductor:

1. Descriptive Address: Measurements must be from the street center line and must be listed as x feet, the side of the street, and include north/south and east/west directions. For example:
50 feet of East Street and 10 feet South of J Street.

161' West and 54' South of Elk Grove Blvd. and Wymark Drive

2. California State, Zone 2, NAD83 in Feet: X,Y coordinate of the connection point:

NAD83: 38.408910, -121.408503

CA State, Zone 2: 6731159.867ftUSE 1911289.547ftUSN

Attach City Map with SMUD POC to City Conductor with an X or highlight on the map.

(Note: please only submit the drawing with this location. Do not submit all drawing pages.)

See attached map.

City Pole Number: **SLT-8002003**

Location of TSP Devices on City Street lights:

1. Descriptive Address: Measurements must be from the street center line and must be listed as x feet, the side of the street, and include north/south and east/west directions. For example:
50 feet of East Street and 10 feet South of J Street.

445' West and 55' South of Elk Grove Blvd and Big Horn Blvd.

2. California State, Zone 2, NAD83 in Feet: X,Y coordinate of the connection point:

NAD83: 38.408913, -121.406711

CA State, Zone 2: 6731673.349ftUSE 1911293.987ftUSN

3. Attach City Map with location of TSP devices on City Street light with an X or highlight on the map. (Note: please only submit the drawing with this location. Do not submit all drawing pages.) **See attached map.**

Point of Service (**CITY POS**): SMUD POS

1. Descriptive Address: Measurements must be from the street center line and must be listed as x feet, the side of the street, and include north/south and east/west directions. For example: 50 feet of East Street and 10 feet South of J Street.

662' West and 56' South of Elk Grove Blvd and Big Horn Blvd

2. California State, Zone 2, NAD83 in Feet: X,Y coordinate of the connection point:

NAD83: 38.408914°, -121.407494°

CA State, Zone 2: 6731448.982ftUSE 1911292.888ftUSN

3. Attach City Map with SMUD POC to City Conductor with an X or highlight on the map. (Note: please only submit the drawing with this location. Do not submit all drawing pages.) **See attached map.**

Number/Type of Devices: (How many transmitters, antennae, etc.) **3**

Make and Model of Devices: **Samsung AT1K0I 5G NR AU**

Maximum Wattage of each Device: **416**

Small cell attachment equipment specification sheet attached **X**

Note:

This area reserved for SMUD use

ATTACHMENTS (IN THIS ORDER)

1. LOCATION MAP: GOOGLE MAP SHOWING: (Do not change orientation of the map)
 - a. POC (Source that feeds the service pedestal)
 - b. POS (City service pedestal)
2. PE CERTIFICATION: Signed and with seal from Electrical Engineer
3. FIELD VERIFICATION: Small Cell Load Summary sheet(s)
4. EQUIPMENT SPECS: Specific to each SMUD Service Notice Request

SMUD POC

38.408913, -121.406711

6731673.349ftUSE 1911293.987ftUSN

161' West and 54' South of Elk Grove Blvd
and Wymark Drive

SMUD POC LAGUNA_045

POS#0613

Verizon Installation - LAGUNA_045

POS #0613.

38.408914, -121.407494

6731448.982ftUSE 1911292.888ftUSN

662' West and 56' South of Elk Grove Blvd and
Big Horn Blvd

Verizon Installation - LAGUNA_045

Pole #8002003

38.408913, -121.406711

6731673.349ftUSE 1911293.987ftUSN

445' West and 55' South of Elk Grove Blvd and
Big Horn Blvd.



240 Stockton Street, 3rd Floor
San Francisco, CA 94108
www.modusllc.com

June 18, 2020

Carrier: Verizon Wireless
2785 Mitchell Drive, Suite 9
Walnut Creek, CA 94598

To Whom It May Concern,

I, Manan Christian PE state that Samsung Distributed 5G Radio/Antenna Unit model #AT1K01 is designed to use a maximum of 416 watts per unit at 120 volts and that the electrical power load presented in this document meets the requirements of the California Electrical Code 2019 , NEC 2017 and National electrical safety code 2017.

Scenario 1 : Three distributed DU-RU Radio/Antenna Units

Unit	W
Distributed DU-RU	416
Distributed DU-RU	416
Distributed DU-RU	416
Total	1248

Scenario 2 : Three distributed DU-RU Radio/Antenna Units

Unit	W
Distributed DU-RU	416
Distributed DU-RU	416
Total	832

Sincerely,



Manan H Christian, P.E. – E.E.
California License: E22864
Expiration Date: 12/31/2020

FIELD WALK DATA COLLECTION FORM




Vendor/Carrier Name:	VERIZON WIRELESS
City Project Number:	
Site Walk Date & Time:	4/6/2020
Electrical Plan Sheet Number:	N/A

Project/Site ID:	CA_ELK GROVE_LAGUNA_045		
Installation Address:	Across from 8145 Elk Grove Blvd.		
Installation Coordinates:	38.408913, -121.406711		
Node Number:	LAGUNA_045		
Street Light Pole ID:	8002003		
City Service Address:	8216 Bruceville Rd.		
City Service Number:	0613		
SMUD Point of Connection Address:	8216 Bruceville Rd.		
SMUD Point of Connection Coordinates:	38.408910, -121.408503		
RF Configuration:		Radio Load:	Future Radio Load:

Circuit Breaker:	#B 1.2 amps existing load		
Voltage:	<input checked="" type="checkbox"/> 120 V <input type="checkbox"/> 277 V <input type="checkbox"/> 480 V		
Number of Existing Loads:	SL-LED:	3	SL-HPS:
Other Existing Loads:			

Street Light Poles Requiring Photocell Retrofit			
Street Light Pole ID	Pole Address	Pole Type (MA, PT, ORN)	Fixture Rating (Watts)
3111X49	8220 Elk Grove Blvd.	MA/ORN	N/A
8002009	8220 Elk Grove Blvd.	MA/ORN	N/A
Total of Proposed and Future Radio Loads: (watts):			
Grand total of Street Lighting and Radio loads: (watts):			

5G NR AU (AT1K01) Product Overview

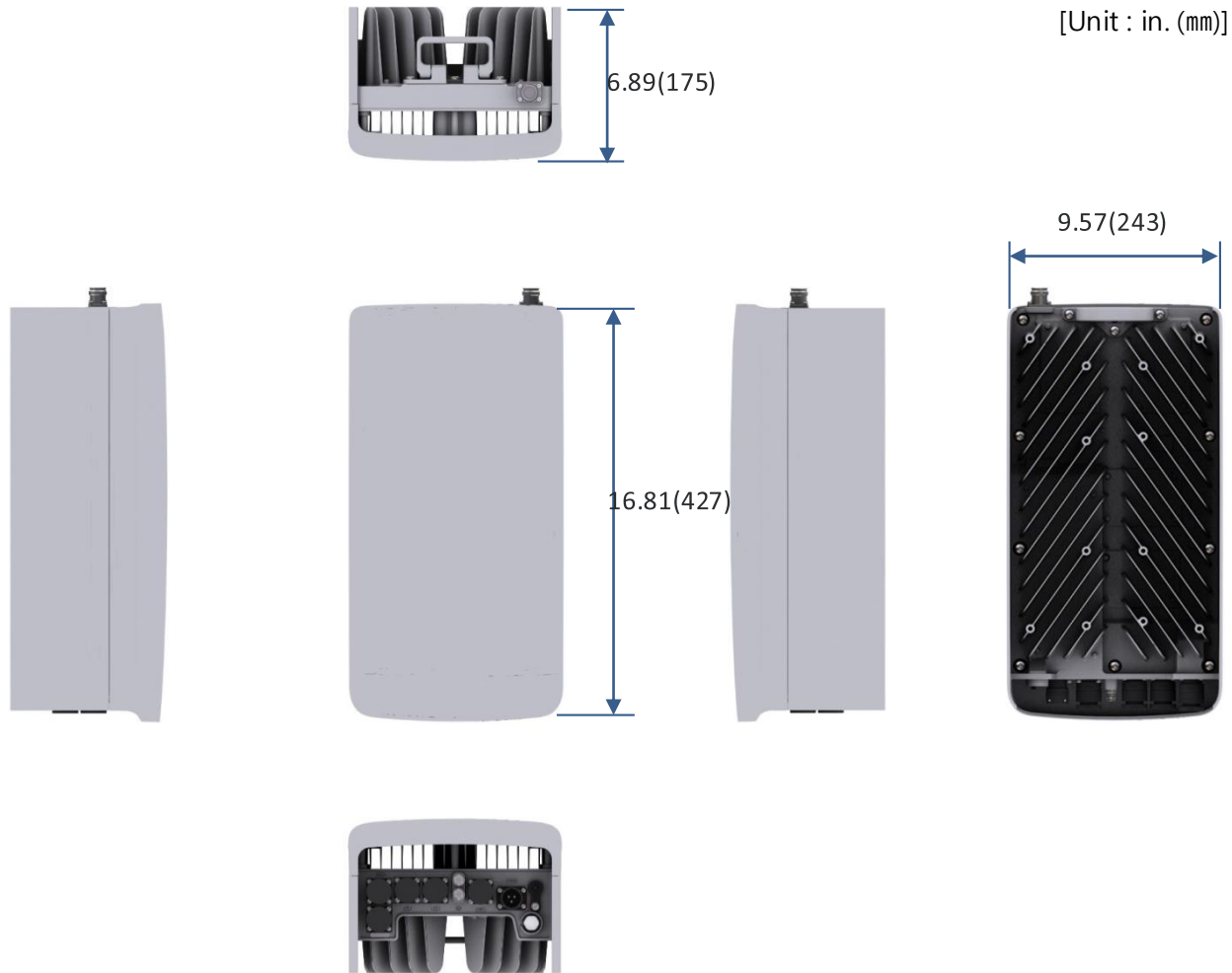
	28GHz
Integrated AU	
Operating frequency	26.5 ~ 29.5GHz
IBW/OBW	850MHz/800MHz
EIRP	60dBm
Antenna Gain	24dBi
Tx/Rx	4T4R
Antenna Elements	1,024
Beam Scan Range	120H / 40V
Size/Weight	9.57 x 16.81 x 6.89 in (<18.16L) / <15.8Kg (33.07lbs) *
Input Power	-48VDC / 100 ~ 240VAC
Power Consumption	AC Version: 416W, DC Version: 402W (Load 100%, Temp. 55°C, TDD Ratio 4:1)
Midhaul (gNB-CU Interface)	10G Optic x 2 ports
Installation	Outdoor Pole/Wall Mount
Clock Synchronization	GPS and IEEE 1588v2
Operating Temperature	-40 deg C to +55 deg C with solar load
Cooling	Natural Convection

* Without Cover & GPS Port

5G NR AU (AT1K01) Product Specifications

Item	AT1K01
Technology	5G NR
Operating Frequency	27.5 to 28.35 GHz
RF Chain	1024 TR/unit
Antenna Array	
Configuration	1024 AE (4T4R)
Element	256 AE (16H16V)/path, 1024 AE/unit
Gain	28 dBi/path
IBW/OBW	850/800 MHz
Channel Bandwidth/Capacity	100 MHz
Max 8CC (50/200/400 MHz will be supported in ES2, SVR19A: 100 MHz)	
RF Output Power	EIRP 54dBm/path , 60dBm/unit
Input Voltage	-48 V DC (-36 to -58 V DC) or 100 to 240 V AC
Input Current	8.4 A @ -48 V DC 4.3 A @ 100 to 240 V AC
LED	Total: 1 EA Powered, Operational, Fail (3 Status w/different colors)
Operational Temperature	-40~55°C (with solar load)
Humidity	TBD
IP rating	IP65
EMC	FCC Title 47 CFR Part 15 Subpart B
Safety	UL 60950 or 62368
Installation	Pole/Wall/Tower mounting
Dimension (W × D × H)	· 9.57 in. (243 mm) × 6.89 in. (175 mm) × 16.81 in. (427 mm) • (@without cover) · 9.57 in. (243 mm) × 6.89 in. (175 mm) × 19.4 in. (493 mm) (@with cover & GPS Port)
Volume	< 18.16 L
Weight	< 33.07 lb. (15.8 kg)

Appearance



■ 28GHz AU(AT1K01-A00) – Label attached location

