

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



Date of Request: 6/17/2020

Approximate Date Service Connection is Needed:

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)

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.

480' East & 70' South of Elk Grove Blvd & Franklin Blvd

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

38.408465, -121.448252

6719770.938ftUSE 1911055.847ftUSN

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.

City Pole Number: **Unknown**

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.

670' East & 50' South of Elk Grove Blvd & Franklin Blvd

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

38.408551, -121.447599
6719957.863ftUSE 1911088.302ftUSN

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.

480' East & 60' South of Elk Grove Blvd & Franklin Blvd

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

38.408537, -121.448239
6719774.504ftUSE 1911082.090ftUSN

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.) **2**

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

City Pedestal/POS #583
38.408537, -121.448239
6719774.504ftUSE 1911082.090ftUSN
480' East & 60' South of Elk Grove Blvd &
Franklin Blvd

Elk Grove Blvd

Franklin Blvd

POS #583
SMUD POC

Verizon Installation

SMUD POC
38.408465, -121.448252
6719770.938ftUSE 1911055.847ftUSN
480' East & 70' South of Elk Grove Blvd &
Franklin Blvd

SLT-Unknown
38.408551, -121.447599
6719957.863ftUSE 1911088.302ftUSN
670' East & 50' South of Elk Grove Blvd
& Franklin Blvd

Crown Bench Cir

J8



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_037				
Installation Address:	5538 Elk Grove Blvd.				
Installation Coordinates:	38.408551, -121.447599				
Node Number:	LAGUNA_037				
Street Light Pole ID:	Unkown				
City Service Address:	5010 Elk Grove Blvd.				
City Service Number:	0583				
SMUD Point of Connection Address:	5010 Elk Grove Blvd.				
SMUD Point of Connection Coordinates:	38.408453, -121.448270				
RF Configuration:	2	Radio Load:	416	Future Radio Load:	832

Circuit Breaker:	#D 4.6 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:	5	SL-HPS:		LP-LED: LP-HPS:
Other Existing Loads:					

Street Light Poles Requiring Photocell Retrofit			
Street Light Pole ID	Pole Address	Pole Type (MA, PT, ORN)	Fixture Rating (Watts)
N/A	38.4086, -121.4460	MA	110
N/A	38.4086, -121.4445	MA	110
N/A	38.408621, -121.443061	MA	110
N/A	38.408625, -121.44157	MA	110
N/A	5538 Elk Grove Blvd	MA	110
	Note: All poles on Elk Grove Blvd.		
Total of Proposed and Future Radio Loads: (watts):			832
Grand total of Street Lighting and Radio loads: (watts):			1382

5G NR AU (AT1K01) Product Overview

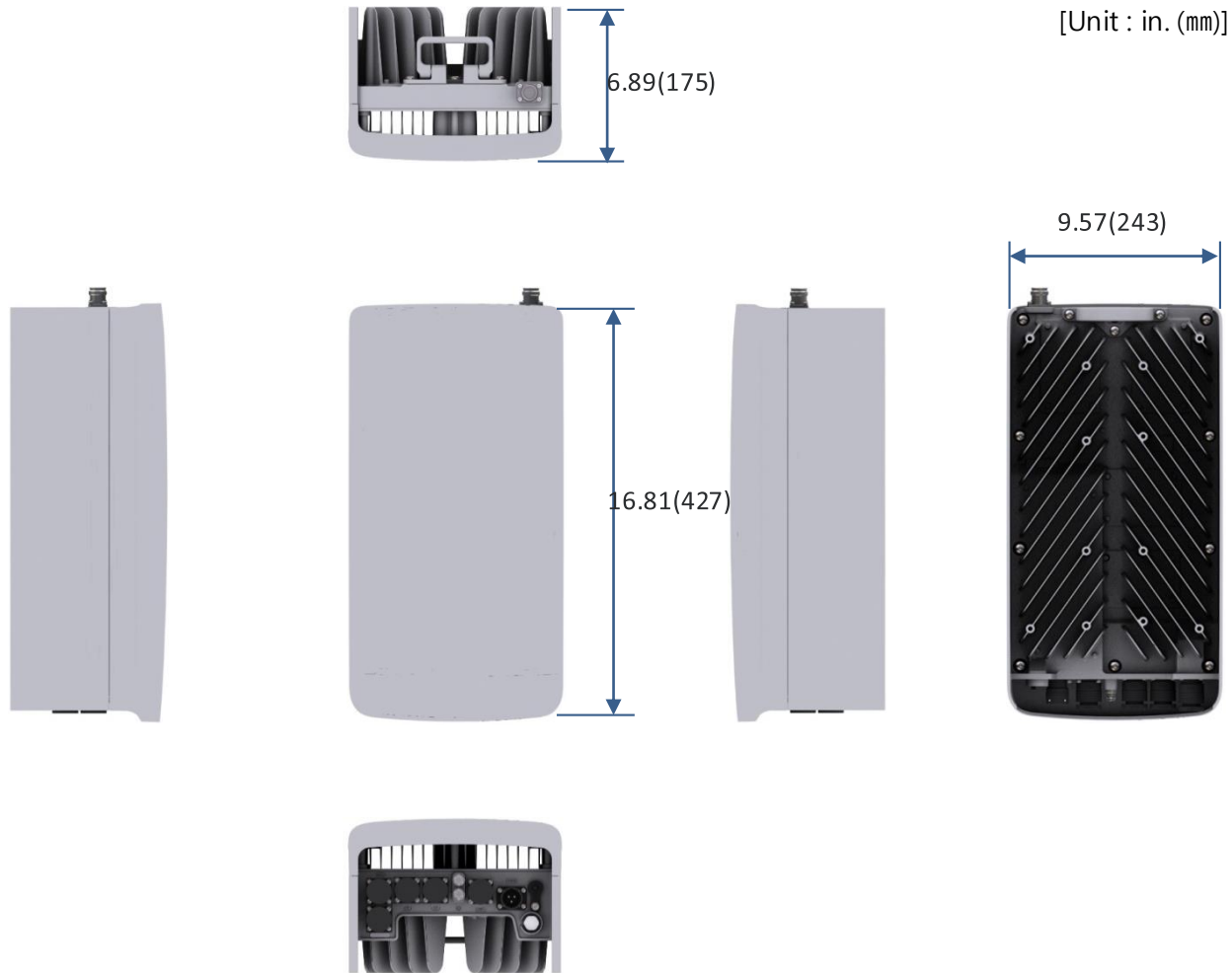
	28GHz
Integrated AU	
Operating frequency	26.5 ~ 29.5GHz
IBW/OBW	850MHz/800MHz
EIRP	60dBm
Antenna Gain	24dBi
Tx/Rx	4T4R
Antenna Elements	1,024
Beam Scan Range	120H / 40V
Size/Weight	9.57 x 16.81 x 6.89 in (<18.16L) / <15.8Kg (33.07lbs) *
Input Power	-48VDC / 100 ~ 240VAC
Power Consumption	AC Version: 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

