Predmetom zákazky je vybudovanie bezplatného WiFi pripojenia pre občanov aj návštevníkov obce prostredníctvom bezdrôtových prístupových bodov na verejných priestranstvách.

V čase vyhlásenia výzvy na predkladanie ponúk sa na verejných priestranstvách nenachádza WiFi pripojenie, ktoré by zasahovalo viac ako 30 % do pokrytia vybudovaného bezdrôtového prístupového bodu.

K pokrytiu verejných priestranstiev WiFi pripojením bude dodanie tovarov – **10 externých prístupových bodov** zahrňujúcich potrebné nevyhnutné príslušenstvo s inštaláciou a montážou WiFi siete.

Vybudovaná WiFi sieť bude používať označenie siete (SSID) WiFi pre Teba a poskytovať internetovú konektivitu s minimálnou rýchlosťou sťahovania 30 Mbps pre každý jeden WiFi bod bezplatne všetkým občanom a návštevníkom obce.

Prístupové body budú umiestnené na nižšie uvedených verejných priestranstvách:

Externý prístupový bod č. 1   Obecný úrad
Externý prístupový bod č. 2   Materská škola
Externý prístupový bod č. 3   Klub mladých
Externý prístupový bod č. 4   Reformovaný kostol
Externý prístupový bod č. 5   Multifunkčné ihrisko
Externý prístupový bod č. 6   Cintorín
Externý prístupový bod č. 7   Futbalový štadión
Externý prístupový bod č. 8   Katolícky kostol
Externý prístupový bod č. 9   Potraviny
Externý prístupový bod č. 10   Autobusová zastávka

Prístupové body, ktoré budú umiestnené na uvedených verejných priestranstvách musia spĺňať minimálne nasledujúce technické parametre:

Kompaktné dvojpásmové WiFi zariadenia (2,4GHz - 5 GHz), ktoré sú certifikované pre európsky trh,
Životný cyklus použitých produktov vyšší ako 5 rokov,
Stredná doba medzi poruchami (MTBF) minimálne 5 rokov,
Možnosť centrálneho manažmentu pre riadenie, monitoring a konfiguráciu siete (single point of management),
Súlad s „802.11ac Wave I, Institute of Electrical and Electronics Engineers" (IEEE) štandardom,
Podpora 802.1x IEEE štandardu,
Podpora 802.11r IEEE štandardu,
Podpora 802.11k IEEE štandardu,
Podpora 802.11v IEEE štandardu,
Schopnosť AP obsluhovať naraz aspoň 50 rôznych užívateľov bez zníženia kvality služby,
Minimálne 2x2 MIMO (multiple-input-multiple-output),
Súlad s Hotspot 2.0 (Passpoint WiFi Alliance certification program).

Sumár aktivít a výstupov:
Projektová dokumentácia, ktorá bude obsahovať sieťové zapojenie aktívnych prvkov siete s IP adresným plánom, simuláciu pokrytia priestoru, meranie skutočného pokrytia, technické listy aktívnych prvkov, funkčný popis a vyobrazenie obsahu hotspot portálu s umiestneným logom.

Test splnenia technických parametrov (TSTP) v rámci "Wifi pre Teba"

TSTP slúži pre žiadateľa ako podklad pre špecifikáciu riešenia spĺňajúcu minimálne technické parametre požadovaných výzvou.

Technické parametre riešenia sú navrhnuté v súlade so schválenou Štúdiou uskutočniteľnosti https://metais.finance.gov.sk/studia/detail/8c95df2d-700e-47ce-a1b0-4cbf3334b453?tab=documents a musia spĺňať požiadavky Robustného, Spoľahlivého a Bezpečného produktu, ktorý poskytne občanom bezplatný prístup na internet prostredníctvom Wifi pripojenia.

1. Robustný: definuje minimálne technické parametre Prístupového bodu (Access pointu), resp. ostatného HW vybavenia,
2. Spoľahlivý: definuje minimálne podmienky pre poskytnutie kvalitného internetového pripojenia,
3. Bezpečný: definuje minimálne podmienky pre sieťovú a fyzickú bezpečnosť.

Upozornenie: výsledky tohto testu slúžia výlučne pre potreby žiadateľa a nie sú zárukou výsledku v procese schvaľovania žiadosti o NFP.

Otázka č.	Znenie otázky	Odkaz na relevantnú časť Technických listov (žiadateľ uvedie predmetnú časť technických listov, resp. iného relevantného zdroja zodpovedajúceho konkrétnemu parametru)	Odpoveď (po kliknutí na bunku vyberte jednu z možností)
1.	Kompaktné dvojpásmové WiFi zariadenia (2,4GHz - 5 GHz), ktoré sú certifikované pre európsky trh?	TL - strana 3 - tabuľka WIFI - riadok Suported Channels TL – strana 1 - EU CE certifikát	Áno
2.	Životný cyklus použitých produktov vyšší ako 5 rokov?	TL - Standard End of Life Policy (na strane 1 v poslednom odstavci kapitoly Hardware je uvedené : „The last hardware repair/replace and support for advanced hardware replacement date for disconti-nued products is 5 years after the EOS date.") To znamená, že AP má životný cyklus minimálne 5,5 roka	Áno
3.	Stredná doba medzi poruchami (MTBF) minimálne 5 rokov?	3 623 115 hours Jedná sa o certifikované zariadenie (Wi-Fi Alliance) https://www.wi-fi.org/certification/programs	Áno
4.	Možnosť centrálneho manažmentu pre riadenie, monitoring a konfiguráciu siete (single point of management)?	TL - strana 4 - tabuľka Networking - ria-dok Controller Platform Support	Áno
5.	Súlad s „802.11ac Wave I, Institute of Electrical and Electronics Engineers" (IEEE) štandardom?	TL - strana 3 - tabuľka WIFI - riadok Wi-Fi Standards	Áno
6.	Podpora 802.1x IEEE štandardu?	TL - strana 4 - tabuľka Networking - ria-dok 802.1x	Áno
7.	Podpora 802.11r IEEE štandardu?	TL - strana 3 - tabuľka WIFI - riadok Other Wi-Fi Features	Áno
8.	Podpora 802.11k IEEE štandardu?	TL - strana 3 - tabuľka WIFI - riadok Other Wi-Fi Features	Áno
9.	Podpora 802.11v IEEE štandardu?	TL - strana 3 - tabuľka WIFI - riadok Other Wi-Fi Features	Áno
10.	Schopnosť AP obsluhovať naraz aspoň 50 rôznych užívateľov bez zníženia kvality služby?	TL - strana 3 - tabuľka Performance and Capacity - riadok Client Capacity	Áno
11.	Minimálne 2x2 MIMO (multiple-input-multiple-output)?	TL - strana 3 - tabuľka WIFI - riadok MIMO	Áno
12.	Súlad s Hotspot 2.0 (Passpoint WiFi Alliance certification program)?	TL - strana 3 - tabuľka WIFI - riadok Other Wi-Fi Features Jedná sa o certifikované zariadenie (Wi-Fi Alliance) https://www.wi-fi.org/certification/programs	Áno
13.	Súčasťou dodávky bude: projektová dokumentácia ktorá bude obsahovať sieťové zapojenie aktívnych prvkov siete s IP adresným plánom, Simuláciu pokrytia priestoru, Meranie skutočného pokrytia, technické listy aktívnych prvkov, funkčný popis a vyobrazenie obsahu hotspot portálu s umiestneným logom?	Súčasťou opisu predmetu zákazky	Áno

Všetky otázky sú zodpovedané

Minimálne technické podmienky sú zadefinované.

Počet odpovedí "nie"	0
Počet nezodpovedaných otázok	0

Príloha č. 3 Podrobný popis prístupového bodu (AP) s väzbou na finančné limity

Položka	Merná jednotka	Počet jednotiek	Jednotková cena (v EUR bez DPH)	Vysúťažená suma celkom (v EUR s DPH)	Limity podľa Príručky pre oprávnenosť výdavkov PO7 OPII pre dopytovo orientované projekty „Wifi pre Teba" (max. suma za 1 AP v EUR s DPH)
			(nevypĺňa sa)	14 992,80 €	1 500,00
Externý prístupový bod (AP) č. 1-10:		10	935,00 €	11 220,00 €	*(nevypĺňa sa)*
Externý prístupový bod	ks	10	195,90 €	2 350,80 €	*(nevypĺňa sa)*
Inštalácia a konfigurácia AP	ks	10	118,50 €	1 422,00 €	*(nevypĺňa sa)*
SW manažment AP	ks			14 992,80 €	
Celkom					

Príloha č. 4: Technické listy dodávaných aktívnych prvkov

T350 Technical Specifications: Certifications

Feature	T350c	T350d	T350se
Quality Systems	ISO 9001:2015 ISO14001:2015		
T350 MTTF (MTBF)	Per Telcordia SR-332 Issue 4 Method I 3,623,115 hrs @ 25C 90% UCL	Per Telcordia SR-332 Issue 4 Method I 3,021,586 hrs @ 25C 90% UCL 611,418 hrs @ 25C 90% UCL (Charter Method)	
ECCN		5A992	
Country of Origin		Taiwan, China	

COMMSCOPE®

RUCKUS WIRELESS™

Business Unit - Ruckus Wireless Inc.
350 West Java Dr.
Sunnyvale CA 94089 USA
T: +1 650 265 4200
F: +1 408 738 2065
www.commscope.com

EU Declaration of Conformity

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This declaration of conformity is issued under the sole responsibility of the manufacturer:
Ruckus Wireless, Inc., 350 West Java Drive Sunnyvale, CA 94089   USA

Object of declaration
Product Name: T350d & T350c Access Point
Brand: RUCKUS
Model: T350d & T350c

The object of the declaration described above is in conformity with the relevant Union harmonization legislation:
Radio Equipment Directive 2014/53/EU and the RoHS directive 2011/65/EU
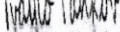
The product to which this declaration relates is in conformity with the following standards:

Safety
IEC 62368-1:2014 2nd Ed.
EN 62368-1:2014, AC:2017, A11:2017
EN 60950-22:2016
IEC 60950-1:2005, A1:2009, A2:2013
EN 60950-1: 2006 /A11:2009
 /A1:2010/A12:2011 /A2:2013

EMF
EN 62311:2008
EN 50385 2017

EMC
EN 301 489-1 V2.2.3
EN 301 489-17 V3.2.4

RF
EN 300 328 V2.2.2
EN 301 893 V2.1.1
EN 302 502 V2.1.1

RoHS
EN IEC 63000:2018

Additional Information
EU-Type examination issued by NB

Signed for and on behalf of Ruckus Wireless Inc.

Signature:
Name: Ivaylo Tankov
Title: Principal Wireless Compliance Engineering
Email: certifications@commscope.com
Date: 12 September 2021

Note: Find the complete set of AP documentation for all RUCKUS Wi-Fi products at
http://docs.commscope.com/?docs-box.

T350d, T350c – Outdoor Enterprise AP
Federal Communications Commission Notices

This product complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution: Changes or modifications to this equipment that have not been approved by Ruckus Wireless may void the user's authority to operate this equipment.

For Class B Equipment:
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna. - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
—Increase the separation between the equipment and receiver. - Consult the dealer or an experienced radio/TV technician for help.

This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Per FCC regulation, Wireless product
Note: The country code selection is for non-US Products only and is not available on US Products. Per FCC regulation, Wireless product marketed in the US must be restricted to operate only on spectrum allocated per FCC Rules and Regulations.

Canada Statement

Under ISED regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by ISED. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.
Conformément à la réglementation d'ISED, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par ISED. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

This device complies with ISED licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
Le présent appareil est conforme aux CNR d'ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems; the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall comply with the e.i.r.p. limit; and the maximum antenna gain permitted for devices in the band 5725-5825 MHz shall comply with the e.i.r.p. limits specified for point-to-point and non point-to-point operation as appropriate.
Le dispositif de fonctionnement dans la bande 5150-5250 MHz est réservé à une utilisation en intérieur pour réduire le risque d'interférences nuisibles à la co-canal systèmes mobiles par satellite, le gain d'antenne maximal autorisé pour les appareils dans les bandes 5250-5350 MHz et 5470-5725 MHz doit se conformer à la pire limite, et le gain d'antenne maximal autorisé pour les appareils dans la bande 5725-5825 MHz doivent être conformes avec le pire limites spécifiées à point-à-ponctuelles et non point-à-point de fonctionnement selon qu'il convient.

Operation in the 5600-5650 MHz band is not allowed in Canada. High-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.
Opération dans la bande 5600-5650 MHz n'est pas autorisée au Canada. Haute puissance radars sont désignés comme utilisateurs principaux (c.-à-utilisateurs prioritaires) des bandes 5250-5350 MHz et 5650-5850 MHz et que ces radars pourraient causer des interférences et / ou des dommages à dispositifs LAN-EL.

Radiation Exposure Statement

The device has been found to be compliant to the requirements set forth in CFR 47 Sections 2.1091 and ISED RSS-102 for an uncontrolled environment. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least **20 cm** from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Le dispositif a été jugé conforme aux exigences énoncées dans les articles 47 CFR 2.1091 et ISED RSS-102 pour un environnement non contrôlé. L'antenne (s) utilisée pour ce transmetteur doit être installé pour fournir une distance de séparation d'au moins **20 cm** de toutes les personnes et ne doit pas être co-localisés ou fonctionner en conjonction avec une autre antenne ou transmetteur.

Professionally Installed Products

The product is to be installed according to the installation instructions. The Use/Operator does not have access to the device once the device is installed and in use. Provisions for permanent grounding is provided.
1. Installation personal: This product is designed for specific application and needs to be installed by a qualified personal who has RF and related rule knowledge. The general user shall not attempt to install or change the setting.
2. Installation location: The product shall be installed at a location where the radiating antenna can be kept 20 cm from nearby person in normal operation condition to meet regulatory RF exposure requirement

a. Any installation of either a master or a client device within 35 km of a TDWR location shall be separated by at least 30 MHz center-to-center) from the TDWR operating frequency.

b. A voluntary WISPA sponsored database has been developed that allows operators and installers to register the location information of the UNII devices operating outdoors in the 5470 – 5725 MHz band within 35 km of any TDWR location (see http://www.spectrumbridge.com/udia/home.aspx). This database may be used by government agencies in order to expedite resolution of any interference to TDWRs.

c. Addition information can be obtained from the FCC Knowledge Database, Publication Number 443999. https://apps.fcc.gov/oetcf/kdb/index.cfm

3. External antenna: Use only the antennas which have been approved by Ruckus Wireless. The non-approved antenna(s) may produce unwanted spurious or excessive RF transmitting power which may lead to the violation of FCC limit and is prohibited.

4. Installation procedure: Please refer to user's manual for the detail.

5. Warning: Please carefully select the installation position and make sure that the final output power does not exceed the limit set force in US Rule CFR 47 part 15 section 15.247 & 15.407. The violation of the rule could lead to serious federal penalty.

Products intended to be powered by an external power supply:

Caution –This product is intended to be supplied by a Listed Direct Plug-In Power Unit marked Class 2 or LPS (sub-clause 2.5 of standard EN 60950-1). Available Ruckus power supplies intended for product operation are identified in the product datasheet. The last two digits of the power supply part number represent the country code. For additional applicable power supplies/options, see user instructions and product datasheet.

Medical Statement

Ruckus Wireless Access Points shall only be used in ME systems where the intended EM ENVIRONMENT does NOT does not rely on the WLAN radio link for BASIC SAFETY or ESSENTIAL PERFORMANCE of the ME SYSTEM.

Mexico Statement

"La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada."

Australia and New Zealand Statement

This device complies with the ACMA requirements for a WiFi device namely Radiocommunications (Short Range Devices) 2014 and Radiocommunications (Compliance Labelling – Devices) Notice 2014 and the New Zealand Radiocommunications Regulations (General User Radio Licence for Short-Range Devices). The equipment complies with the ACMA and New Zealand requirements for radiation exposure for a "general user/non-aware user". This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body. This equipment complies with the Australian and New Zealand safety requirements and should only be used with the specified power adapter carrying a RCM mark and Electrical Approval No.

Brazil Statement

For Brazil, those products are designed for specific application and needs to be installed by a qualified personal who has RF and related rule knowledge. Regarding the operation on range of 5150 MHz to 5350 MHz, the average output power of the equipment must be adjusted to the maximum limit of - 0,48 dBm and for 5470 MHz to 5725 MHz, the average output power of the equipment must be adjusted to the maximum limit of 6,44 dBm.

Para o Brasil, esses produtos são projetados para aplicações específicas e necessidades a serem instalados por um pessoal qualificado que tenha conhecimento regra RF e afins.Em relação à operação em série de 5150 MHz a 5350 MHz, a potência média de saída dos equipamentos deve ser ajustado para o limite máximo de - 0,48 dBm e para 5470 MHz a 5725 MHz, a potência média de saída dos equipamentos deve ser ajustada ao limite máximo de 6,44 dBm.
Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.
Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causa interferência a sistemas operando em caráter primário

Nigeria Statement

Connection and use of this communications equipment is permitted by the Nigerian Communications Commission

Thailand Statement

This telecommunication equipment conforms to NTC technical requirement

Hong Kong Statement

The 5.15 – 5.35 GHz band shall be restricted to indoor operations only. Obey local regulations when using this product.

Taiwan Statement

使用此產品時應避免影響附近雷達系統之操作   This product should not affect the operation of nearby radar systems.

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。前項合法低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。通信，指依電信法規定作業之無線電通信。

The control, adjustment and on/off operation of this device does not violate the "Administrative regulations on low power radio waves radiated devices". Any adjustments to the device should be carried out or be monitored by a specialist who has expertise on radio frequency devices. Replacement of components which may lead to the violation to the regulations is not allowed. Without permission granted by the NCC, any company, enterprise, or user is not allowed to change frequency, enhance transmitting power or alter original characteristic as well as performance to an approved low power radio-frequency devices. The low power radio-frequency device shall not influence aircraft security and interfere with legal communications; if found, the user shall cease operating immediately until no interference is achieved. The said legal communications means radio communications is operated in compliance with the

Telecommunications Act. The low power radio-frequency devices must not be susceptible with the interference from legal communications or ISM radio wave radiated devices.

限用物質含有情況標示聲明書

Declaration of the Presence Condition of the Restricted Substances Marking

設備名稱：無線網路基地台・型號（型式）：T350d & T350c						
Equipment name　　　　　Type designation (Type)						
單元Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛Lead (Pb)	汞Mercury (Hg)	鎘Cadmium (Cd)	六價鉻Hexavalent chromium (Cr+6)	多溴聯苯 Polybrominated Biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
Enclosure - Top 頂部外殼	O	O	O	O	O	O
Enclosure - Bottom 底部外殼	O	O	O	O	O	O
PWB 電路板	-	O	O	O	O	O
Connector and Receptacle 插口	O	O	O	O	O	O

備考1. ˇ超出0.1 wt %˝ 及 ˇ超出0.01 wt %˝ 係指限用物質之百分比含量超出百分比含量基準值。
Note 1："Exceeding 0.1 wt %" and "exceeding 0.01 wt %" indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.

備考2. ˇO˝ 係指該項限用物質之百分比含量未超出百分比含量基準值。
Note 2："o" indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.

備考3. ˇ-˝ 係指該項限用物質為排除項目。
Note 3：The "–" indicates that the restricted substance corresponds to the exemption.

Thailand

European Union Notices and National Restrictions

Maximum output power:
—2400-2483.5MHz: 19.9dBm EIRP
—5150-5250MHz: 22.9dBm EIRP
—5250-5350MHz: 22.9dBm EIRP
—5470-5725MHz: 29.9dBm EIRP

AT	FI	IT	PL	BG	RO
BE	FR	LV	PT	IS	TR
CY	DE	LT	SK	LI	HR
CZ	EL	LU	SI	NO	IE
DK	HU	MT	ES	CH	EE
NL	SE	UK(NI)			

The frequency band 5150 – 5350 MHz is restricted to indoor use.
The frequency band 5725 – 5875 MHz is restricted for use in some EU member states, check local Regulations

Hereby, Ruckus Wireless Inc., declares that the radio equipment type is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: http://docs.commscope.com/?docs-box

Български [Bulgarian]	С настоящото Ruckus Wireless декларира, че описаното по-горе радиосъоръжение е в съответствие с Директива 2014/53/ЕС. http://docs.commscope.com/?docs-box
Česky [Czech]	Ruckus Wireless tímto prohlašuje, že tento Radio LAN je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 2014/53/EU. http://docs.commscope.com/?docs-box
Dansk [Danish]	Undertegnede Ruckus Wireless erklærer herved, at følgende udstyr Radio LAN overholder de væsentlige krav og øvrige relevante krav i direktiv 2014/53/EU. http://docs.commscope.com/?docs-box
Deutsch [German]	Hiermit erklärt Ruckus Wireless, dass sich das Gerät Radio LAN in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 2014/53/EU befindet. http://docs.commscope.com/?docs-box
Eesti [Estonian]	Käesolevaga kinnitab Ruckus Wireless seadme Radio LAN vastavust direktiivi 2014/53/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele. http://docs.commscope.com/?docs-box
English	Hereby, Ruckus Wireless declares that this Radio LAN is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. http://docs.commscope.com/?docs-box
Español [Spanish]	Por medio de la presente Ruckus Wireless declara que el Radio LAN cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 2014/53/EU. http://docs.commscope.com/?docs-box
Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Ruckus Wireless ΔΗΛΩΝΕΙ ΟΤΙ Radio LAN ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2014/53/EU. http://docs.commscope.com/?docs-box
Français [French]	Par la présente Ruckus Wireless déclare que l'appareil Radio LAN est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 2014/53/EU. http://docs.commscope.com/?docs-box
Italiano [Italian]	Con la presente Ruckus Wireless dichiara che questo Radio LAN è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 2014/53/EU. http://docs.commscope.com/?docs-box
Latviski [Latvian]	Ar šo Ruckus Wireless deklarē, ka Radio LAN atbilst Direktīvas 2014/53/EU būtiskajām prasībām un citiem ar to saistītajiem noteikumiem. http://docs.commscope.com/?docs-box
Lietuvių [Lithuanian]	Šiuo Ruckus Wireless deklaruoja, kad šis Radio LAN atitinka esminius reikalavimus ir kitas 2014/53/EU Direktyvos nuostatas. http://docs.commscope.com/?docs-box
Nederlands [Dutch]	Hierbij verklaart Ruckus Wireless dat het toestel Radio LAN in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 2014/53/EU. http://docs.commscope.com/?docs-box
Malti [Maltese]	Hawnhekk, Ruckus Wireless, jiddikjara li dan Radio LAN jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 2014/53/EU. http://docs.commscope.com/?docs-box
Magyar [Hungarian]	Alulírott, Ruckus Wireless nyilatkozom, hogy a Radio LAN megfelel a vonatkozó alapvető követelményeknek és az 2014/53/EU irányelv egyéb előírásainak. http://docs.commscope.com/?docs-box
Polski [Polish]	Niniejszym Ruckus Wireless oświadcza, że Radio LAN jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 2014/53/EU. http://docs.commscope.com/?docs-box
Português [Portuguese]	Ruckus Wireless declara que este Radio LAN está conforme com os requisitos essenciais e outras disposições da Directiva 2014/53/EU. http://docs.commscope.com/?docs-box
Slovensko [Slovenian]	Ruckus Wireless izjavlja, da je ta Radio LAN v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 2014/53/EU. http://docs.commscope.com/?docs-box
Slovensky [Slovak]	Ruckus Wireless týmto vyhlasuje, že Radio LAN spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 2014/53/EU. http://docs.commscope.com/?docs-box
Suomi [Finnish]	Ruckus Wireless vakuuttaa täten että Radio LAN tyyppinen laite on direktiivin 2014/53/EU oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen. http://docs.commscope.com/?docs-box
Svenska [Swedish]	Härmed intygar Ruckus Wireless att denna Radio LAN står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 2014/53/EU. http://docs.commscope.com/?docs-box
Íslenska [Icelandic]	Hér með lýsir Ruckus Wireless yfir því að Radio LAN er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 2014/53/EU. http://docs.commscope.com/?docs-box
Norsk [Norwegian]	Ruckus Wireless erklærer herved at utstyret Radio LAN er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 2014/53/EU. http://docs.commscope.com/?docs-box

T350d & T350c, Access Point Installation Addendum

When the frequency band 5150 – 5250 MHz is used outdoors in the U.S.A, the FCC mandates that the energy radiated above 30° from the horizon remains below 21 dBm EIRP. This can be maintained during installation using the following guidance.

When the device is installed level to the horizon, (i.e. – device perpendicular to the surface of the earth, antenna radome pointing horizontal, parallel to the earth), the device operates in compliance with FCC rules without any adjustment of output power.

T350d & T350c – Antennas

When the device is installed outdoors at an angle above the horizon, it may be necessary to reduce output power to ensure the energy radiated above 30° from the horizon remains under 21 dBm EIRP. Please see table and elevation plots below.

Degree Above Horizon (A)	Output Power Reduction (dBm)
A <=12	0 dBm
12 < A <15	1 dBm
15 <= A < 30	3 dBm
30 <= A < 45	6 dBm
A > 45	7dB

T350d & T350c Omni Antenna

Elevation Pattern: The highest gain is -3.7dBi above 30° to 150°

0° reference
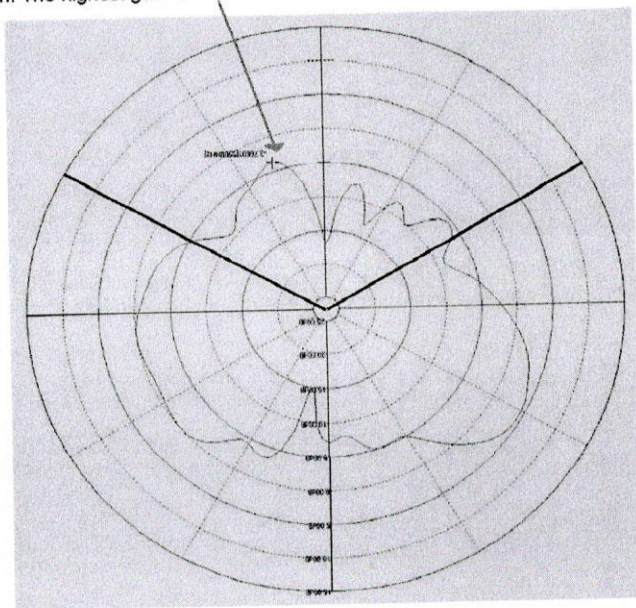
Ruckus Wireless Standard End of Life (EOL) Policy

Revision date: 20 December 2013

The following EOL policy applies to all Ruckus Wireless standard products. Figure 1 illustrates Ruckus Wireless Standard EOL Policy timeframe. Detailed dates outlining the timeframes set forth in this policy will be clearly outlined in each product's EOL notification.

Hardware

Ruckus Wireless will publish an end-of-life (EOL) notification to customers to give them advanced notice of a planned end-of-sale (EOS) event on a specific product. Customers will be provided an opportunity for last-time purchases of products prior to end-of-sale.

Standard policy requires the end-of-sale (EOS) date to occur **6 months** after the EOL notification is published on the Ruckus Wireless support site (support.ruckuswireless.com). At the EOS date, the discontinued product is removed from the price list and is no longer available for purchase. All accessories, kits and bundles uniquely applicable to the discontinued product may also be removed from the price list and may no longer available for purchase.

The last ship date for a discontinued product may extend to **6 months** after the EOS date. The last ship date excludes transportation considerations.

The last hardware repair/replace and support for advanced hardware replacement date for discontinued products is **5 years** after the EOS date. The replacement or advanced hardware replacement of discontinued product after the EOS may be product of a like-kind.

Software

Standard policy requires software maintenance for the discontinued product to continue until the end-of-maintenance (EOM) date, which occurs **1 year** after the product end-of-sale (EOS) date.

This EOL policy does not ensure that software maintenance for a discontinued product will always follow an EOL announcement. Mature products may use software for which no active maintenance has occurred for some time and for which no further active maintenance is planned. While typically the exception, Ruckus reserves the right to establish an end-of-maintenance date for products prior to the EOL announcement.

Support & License Upgrades

Ruckus Support and AP license upgrades are available for discontinued products for up to **5 years** after the EOS date. End-of-sale dates for 1-year, 3-year, and 5-year Support packages are timed such that Support shall not extend beyond 5 years after the EOS date of the discontinued product. The end-of-sale date for AP license upgrades for a discontinued controller is 5 years after the EOS date of the controller. Support package and license upgrade EOS dates are clearly defined in the discontinued product's EOL notification.

Support extending beyond the discontinued product's EOM date is limited in nature. Ruckus Support is unable to provide software fixes or upgrades which may be required to resolve support cases after the EOM date. Ruckus will continue to provide all other aspects of support. The customer accepts that a Support Contract for product is limited in terms of software maintenance beyond that product's EOM date. Note that the window of limited support for a discontinued product may be 4 years in duration, starting 1 year after the product's EOS date and ending 5 years after the EOS date.
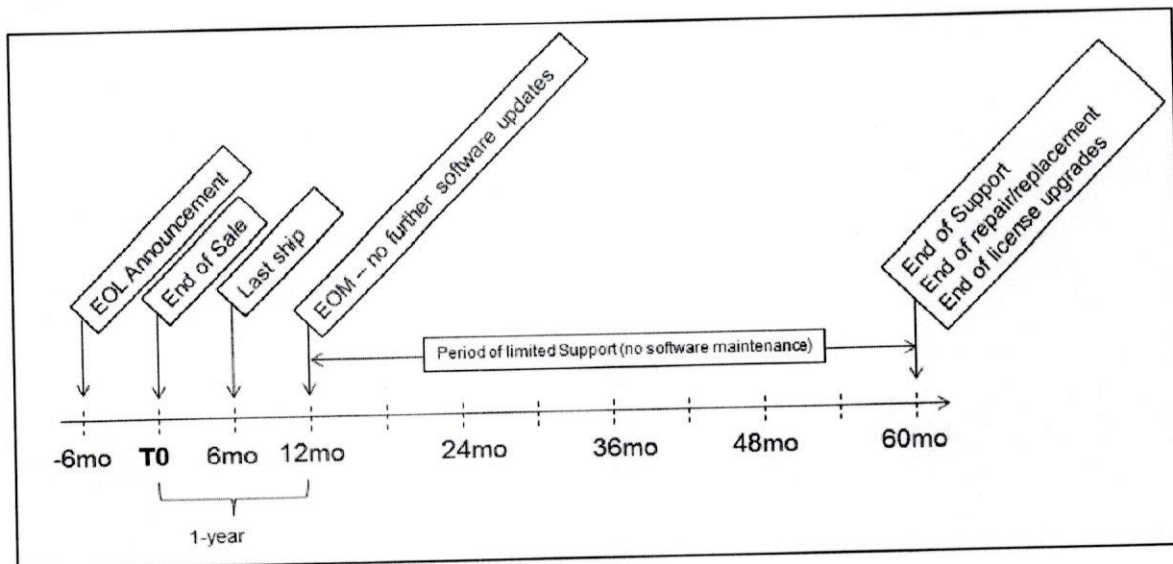

Figure 1. Ruckus Standard End of Life Policy Timeline

THE END

RUCKUS® T350

Outdoor 2x2:2 Wi-Fi 6 Access Point

COMMSCOPE

RUCKUS®

Benefits

SIMPLICITY

RUCKUS' Outdoor APs make Wi-Fi deployments extremely simple to deploy with one-touch technologies like SmartMesh™.

STUNNING WI-FI PERFORMANCE

Extends coverage with patented BeamFlex®+ adaptive antenna technology while mitigating interference by utilizing up to 64 directional antenna patterns.

GREAT OUTDOOR WI-FI

Experience high performance outdoor Wi-Fi 6 with IP-67 weather proofing.

MULTIPLE MANAGEMENT OPTIONS

Manage the T350 Series with physical or virtual controller appliances.

SERVE MORE DEVICES

Connect more devices simultaneously with two MU-MIMO spatial streams and concurrent dual-band 2.4/5GHz radios while also enhancing non-11ax device performance.

AUTOMATE OPTIMAL THROUGHPUT

ChannelFly® dynamic channel technology uses machine learning to automatically find the least congested channels. You always get the highest throughput the band can support.

MORE THAN WI-FI

Support services beyond Wi-Fi with RUCKUS IoT Suite, Cloudpath security and onboarding software, SPoT Wi-Fi locationing engine, and SCI network analytics.

Modern Wi-Fi device users expect reliable connectivity—anywhere, anytime. But in crowded outdoor venues with thousands of users and constant RF noise, they are often frustrated by poor coverage, dropped connections, and reduced data rates. These aggravating Wi-Fi experiences can easily translate to negative perceptions of the venue and the service provider, resulting in loss of business. The quality of the network experience becomes the "litmus test" for acceptance or rejection.

As the market leader in outdoor Wi-Fi deployments, RUCKUS knows that one AP solution cannot meet every possible challenge of varied and complex outdoor requirements. This is why the RUCKUS T350 Wi-Fi 6 series is designed with more variety than any other outdoor AP in the market today. Available with either internal omni-directional antennas or internal high-gain directional antenna models, the T350 Series uses patented RUCKUS antenna optimization and interference mitigation technologies to improve throughput, connection reliability, and deliver industry-leading Wi-Fi 6 performance to every connected client. At the same time, the T350 Series is designed for fast, simple installation with an ultra-lightweight, low profile, IP-67 rated enclosure that can stand up to the most challenging outdoor environments.

At RUCKUS, we know that outdoor AP deployments are especially challenging for installation and maintenance, which is why RUCKUS outdoor APs use a variety of technologies, like SmartMesh that help simplify outdoor AP deployment.

The RUCKUS T350 Series is perfect for high-density outdoor public venues such as airports, convention centers, plazas, malls, smart cities, and other dense urban environments. By providing a superior Wi-Fi experience to every user in high-density outdoor locations, venue operators can improve guest satisfaction and loyalty, deliver new kinds of wireless application services, and increase revenues.

The RUCKUS T350 Series incorporates patented technologies found only in the RUCKUS Wi-Fi portfolio.

- Extended coverage with patented BeamFlex+ utilizing multi-directional antenna patterns.
- Improve throughput with ChannelFly, which dynamically finds less congested Wi-Fi channels to use.

Whether you're deploying ten or ten thousand APs, the T350 Series is easy to manage through RUCKUS' appliance and virtual management options.

RUCKUS® T350

Outdoor 2x2:2 Wi-Fi 6 Access Point

Access Point Antenna Pattern

RUCKUS' BeamFlex+ adaptive antennas allow the T350 AP to dynamically choose among a host of antenna patterns in real-time to establish the best possible connection with every device. This leads to:

* Better Wi-Fi coverage

* Reduced RF interference

Traditional omni-directional antennas, found in generic access points, oversaturate the environment by needlessly radiating RF signals in all directions. In contrast, the RUCKUS BeamFlex+ adaptive antenna directs the radio signals per-device on a packet by-packet basis to optimize Wi-Fi coverage and capacity in real-time to support high device density environments. BeamFlex+ operates without the need for device feedback and hence can benefit even devices using legacy standards.

Figure 1. Example of BeamFlex+ pattern

● Client   ● Composite Pattern   ● BeamFlex+
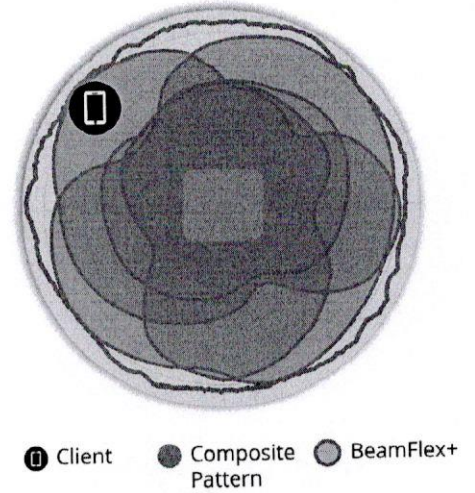
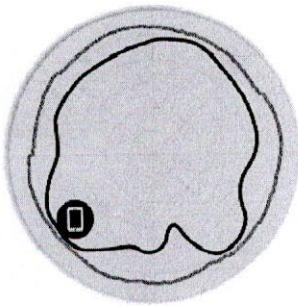Figure 2. 2.4GHz Azimuth Antenna Patterns

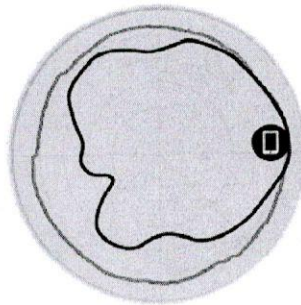

Figure 3. 5GHz Azimuth Antenna Patterns

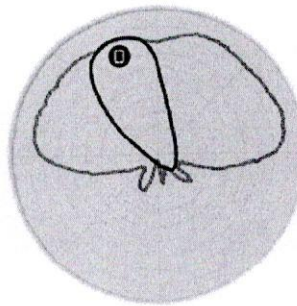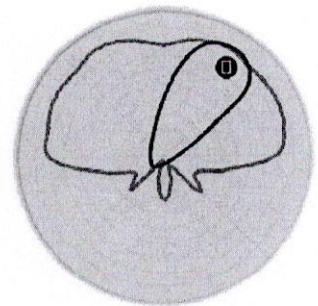Figure 4. 2.4GHz Elevation Antenna Patterns

Figure 5. 5GHz Elevation Antenna Patterns

Note: The outer trace represents the composite RF footprint of all possible BeamFlex+ antenna patterns, while the inner trace represents one BeamFlex+ antenna pattern within the composite outer trace.

RUCKUS® T350

Outdoor 2x2:2 Wi-Fi 6 Access Point

WI-FI

Wi-Fi Standards	• IEEE 802.11a/b/g/n/ac/ax
Supported Rates	• 802.11ax: 4 to 1774 Mbps • 802.11ac: 6.5 to 867 Mbps • 802.11n: 6.5 to 300Mbps • 802.11a/g: 6 to 54 Mbps • 802.11b: 1 to 11 Mbps
Supported Channels	• 2.4GHz: 1-13 • 5GHz: 36-64, 100-144, 149-165
MIMO	• 2x2 SU-MIMO • 2x2 MU-MIMO
Spatial Streams	• 2 streams SU/MU MIMO 5GHz • 2 streams SU/MU MIMO 2.4GHz
Radio Chains and Streams	• 2x2:2 (5GHz) • 2x2:2 (2.4GHz)
Channelization	• 20, 40, 80MHz
Security	• WPA-PSK, WPA-TKIP, WPA2-Personal, WPA2-Enterprise, WPA3-Personal, WPA3-Enterprise, AES, 802.11i, Dynamic PSK, OWE • WIPS/WIDS
Other Wi-Fi Features	• WMM, Power Save, Tx Beamforming, LDPC, STBC, 802.11r/k/v • Hotspot, Hotspot 2.0 • Captive Portal • WISPr

RF

	T350c	T350d	T350se
Antenna Type	Internal omnidir-ectional	Internal omnidir-ectional	Internal 120 deg sectorized + N-type female external connectors
	BeamFlex+ adaptive internal antennas with polarization diversity		
Antenna Gain (max)	Up to 3dBi		2.4GHz: 6dBi 5Ghz: 8dBi
Peak Transmit Power (Tx port/chain + 3dB Combining gain)	2.4GHz: 26 dBm 5GHz: 25 dBm		2.4GHz: 26dBm 5GHz: 25dBm
Frequency Bands	• ISM (2.4-2.484GHz) • U-NII-1 (5.15-5.25GHz) • U-NII-2A (5.25-5.35GHz) • U-NII-2C (5.47-5.725GHz) • U-NII-3 (5.725-5.85GHz)		

2.4GHZ RECEIVE SENSITIVITY

HT20		HT40		VHT20		VHT40	
MCS0	MCS7	MCS0	MCS7	MCS0	MCS7	MCS0	MCS7
-97	-78	-94	-75	-97	-78	-94	-75

HE20				HE40			
MCS0	MCS7	MCS9	MCS11	MCS0	MCS7	MCS9	MCS11
-97	-78	-73	-67	-94	-75	-70	-64

5GHZ RECEIVE SENSITIVITY

VHT20				VHT40				VHT80			
MCS0	MCS7	MCS8	MCS9	MCS0	MCS7	MCS8	MCS9	MCS0	MCS7	MCS8	MCS9
-97	-78	-75	-73	-95	-77	-71	-69	-92	-74	-68	-66

HE20				HE40				HE80			
MCS0	MCS7	MCS9	MCS11	MCS0	MCS7	MCS9	MCS11	MCS0	MCS7	MCS9	MCS11
-97	-78	-72	-67	-95	-77	-69	-64	-92	-74	-66	-61

2.4GHZ TX POWER TARGET

Rate	Pout (dBm)
MCS0 HT20	23
MCS7 HT20	18
MCS8 VHT20	17
MCS9 VHT40	16.5
MCS11 HE40	15

5GHZ TX POWER TARGET

Rate	Pout (dBm)
MCS0 VHT20	22
MCS7 VHT40, VHT80	20
MCS9 VHT40, VHT80	19
MCS11 HE20, HE40, HE80	15

PERFORMANCE AND CAPACITY

Peak PHY Rates	• 2.4GHz: 574 Mbps 5GHz: 1200 Mbps
Client Capacity	• Up to 512 clients per AP
SSID	• Up to 31 per AP

RUCKUS RADIO MANAGEMENT

Antenna Optimization	• BeamFlex+ • Polarization Diversity with Maximal Ratio Combining (PD-MRC)
Wi-Fi Channel Management	• ChannelFly • Background Scan Based
Client Density Management	• Adaptive Band Balancing • Client Load Balancing • Airtime Fairness • Airtime-based WLAN Prioritization
SmartCast Quality of Service	• QoS-based scheduling • Directed Multicast • L2/L3/L4 ACLs
Mobility	• SmartRoam
Diagnostic Tools	• Spectrum Analysis • SpeedFlex

RUCKUS® T350

Outdoor 2x2:2 Wi-Fi 6 Access Point

NETWORKING

Controller Platform Support	• SmartZone • ZoneDirector • Unleashed • Cloud • Standalone
Mesh	• SmartMesh™ wireless meshing technology. Self-healing Mesh
IP	• IPv4, IPv6
VLAN	• 802.1Q (1 per BSSID or dynamic per use based on RADIUS) • VLAN Pooling • Port-based
802.1x	• Authenticator & Supplicant
Tunnel	• L2TP, GRE, soft-GRE
Policy Management Tools	• Application Recognition and Control • Access Control Lists • Device Fingerprinting • Rate Limiting
IoT	• T350d: Integrated BLE and Zigbee (1 radio, switchable)

PHYSICAL INTERFACES

	T350c	T350d	T350se
Ethernet	1 x 1GbE port, RJ-45 PoE In - 802.3at Class 4		
USB	—	1 USB 2.0 port, Type A	
DC Power	—	12V DC Terminal Block (7V - 20V)	

PHYSICAL CHARACTERISTICS

	T350c	T350d	T350se
Physical Size	• 162.3 mm (W) x 194.9 mm (L) x 80.9 mm (H) • 6.38 in (W) x 7.67 in (L) x 3.19 in (H)	• 162.3 mm (W) x 213.7 mm (L) x 80.9 mm (H) • 6.38 in (W) x 8.41 in (L) x 3.19 in (H)	• 209.1 mm (W) x 261.7 mm (L) x 102.5 mm (H) • 8.23 in (W) x 10.30 in (L) x 4.04 in (H)
Weight (w/ included bracket)	1.01kg (2.23lbs)	1.07kg (2.36lbs)	2.2kg (4.85lbs)
Ingress Protection	IP-67		
Mounting	• Pole Mount • Wall Mount • Flat Surface • Bracket included in the box		
Operating Temperature	-20°C -(4°F) to 65°C (149°F)	-40°C -(-40°F) to 65°C (149°F)	
Operating Humidity	Up to 95%, non-condensing		
Wind Survivability	Up to 266km/h (165 mph)		
Altitude	Up to 3,048m (10,000 ft), functional operation		

POWER[2]

Power Mode	System Configuration	Max Power Consumption (includes USB power)		
		T350c	T350d	T350se
802.3at (PoE) - Class 4	Full Functionality	13.24W	17.57W	21.3W
802.3af (PoE) - Class 3	USB Disabled IoT Disabled	11.42W	12.94W	12.81W
Idle (PoE)		7.68W	7.78W	8.68W
DC - max power	Full Functionality	—	16.32W	19.34W
DC - idle		—	6.78W	7.92W

CERTIFICATIONS AND COMPLIANCE

Wi-Fi Alliance[3]	• Wi-Fi CERTIFIED™ a, b, g, n, ac • Wi-Fi CERTIFIED™ 6 • WPA3™ - Enterprise, Personal • Wi-Fi Enhanced Open™ • Wi-Fi Agile Multiband™ • Wi-Fi Optimized Connectivity™ • Wi-Fi Vantage™ • WMM® • Passpoint®
Standards Compliance[4]	• IEC/EN/UL 62368-1 & IEC/EN 60950-1 Safety • FCC 15B, RSS-Gen, EN 301 489-1/17 • EN 61000-3-x Emissions • EN 61000-4-2/3/5 Immunity • EN 60601-1-2 Medical • EN 50121-1/4 Railway EMC • IEC 61373 Railway Shock & Vibration • UL 2043 Plenum • EN 62311 Human Safety/RF Exposure • WEEE & RoHS • ISTA 2A Transportation

SOFTWARE AND SERVICES

Location Based Services	• SPoT
Network Analytics	• SmartCell Insight (SCI) • RUCKUS Analytics
Security and Policy	• Cloudpath

MODEL FEATURE DIFFERENCES

Model	Antenna	Low Temp	USB	DC Power
T350c	Internal omni	-20°C	N	N
T350d	Internal omni	-40°C	Y	Y
T350se	Internal sector (120°) + External antenna capable	-40°C	Y	Y

2 Max power varies by country setting, band, and MCS rate.

3 For complete list of WFA certifications, please see Wi-Fi Alliance website.

4 For current certification status, please see price list.

RUCKUS® T350

Outdoor 2x2:2 Wi-Fi 6 Access Point

ORDERING INFORMATION

	T350 OUTDOOR APs
901-T350-XX20	T350c, omni, outdoor access point, 2x2:2 Wi-Fi 6 internal BeamFlex+, dual band concurrent. One Ethernet port, PoE input. -20°C to 65°C Operating Temperature. Includes mounting bracket and one year warranty. Does not include PoE injector.
901-T350-XX40	T350d, omni, outdoor access point, 2x2:2 Wi-Fi 6 internal BeamFlex+, dual band concurrent. One Ethernet port, PoE input, DC input and USB port. -40°C to 65°C Operating Temperature. Includes mounting bracket and one year warranty. Does not include PoE injector.
901-T350-XX51	T350se, sector+external, outdoor access point, 2x2:2 Wi-Fi 6, internal 120 degree sector + external antenna capable, dual band concurrent access point. One Ethernet port, PoE input, DC input and USB port. -40°C to 65°C Operating Temperature. Includes adjustable mounting bracket and one year warranty. Does not include PoE injector.

See RUCKUS price list for country-specific ordering information. PLEASE NOTE: When ordering outdoor APs, you must specify the destination region by indicating -US, -WW, or -Z2 instead of XX. For access points, -Z2 applies to the following countries: Algeria, Egypt, Israel, Morocco, Tunisia, and Vietnam.
Warranty: Sold with a limited one year warranty.
For details see: http://support.ruckuswireless.com/warranty

OPTIONAL ACCESSORIES

902-0162-XXYY	• PoE injector (24W) (Sold in quantities of 1, 10 or 100)
902-0125-0000	• Secure articulating mounting bracket
902-0127-0000	• Extended cap to accommodate up to 6 cm long USB dongle
902-1121-0000	• Spare weatherizing cable gland with option of one hole or 2 hole connection
902-0183-000	• Spare cable gland for weatherizing the RJ-45 ports on outdoor APs.

PLEASE NOTE: When ordering PoE injectors or power supplies, you must specify the destination region by indicating -US, -EU, -AU, -BR, -CN, -IN, -JP, -KR, -SA, -UK, or -UN instead of -XX.

CommScope pushes the boundaries of communications technology with game-changing ideas and ground-breaking discoveries that spark profound human achievement. We collaborate with our customers and partners to design, create and build the world's most advanced networks. It is our passion and commitment to identify the next opportunity and realize a better tomorrow. Discover more at commscope.com

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P. č.	Obchodné meno a sídlo subdodávateľa	IČO	Údaje o osobe oprávnenej konať za subdodávateľa (v rozsahu: meno a priezvisko, adresa pobytu, dátum narodenia)	% podiel na zákazke	Predmet subdodávok
1	Bez subdodávateľov				