RUCKUS® T670sn

Outdoor Wi-Fi 7 (802.11be) Access Point with Programmable Sector Antenna

BENEFITS

Connect more devices simultaneously
Improve device performance, by enabling more simultaneous device connections with 6 spatial streams (2x2:2 in 2.4GHz, 5GHz, and 6GHz) technology. 9.34 Gbps combined data rate.

High client density and performance
Provides exceptional end-user experience within large meeting halls, general enterprise spaces, and large classrooms.

Unique Programmable Sector Antenna
To maximize deployment flexibility, throughput, and range, the T670sn features the industry's first programmable sector antenna, delivering both narrow and wide sector coverage on demand. This innovation optimizes signal strength, enhances throughput, and increases network capacity and works seamlessly with any client device.

Great Outdoor Wi-Fi
Experience high performance outdoor Wi-Fi 7 with IP-67 weather proofing and multi-gigabit 5 GbE Ethernet port.

5 GbE minimizes wired backhaul bottleneck
Optimized multi-gigabit Wi-Fi performance delivered using the built-in 1/2.5/5GbE port to connect to multi-gigabit switches.

Built-in GPS
Facilitate the deployment of Automated Frequency Coordination (AFC) ensuring adherence to regulatory requirements for 6GHz frequency use.

Multiple management options
Manage the T670sn with on premise physical/virtual appliances and control auto-provisioning for faster deployment and seamless firmware upgrades.

Enhanced Security
The latest Wi-Fi security standard with WPA3 and receive enhanced protection from man-in-the-middle attacks. Adds the power of RUCKUS DPSK3 to WPA3/SAE combining enhanced security with the flexibility and ease of use of dynamic passphrase to secure network access.

More Than Wi-Fi
Support solutions beyond Wi-Fi with RUCKUS AI, RUCKUS One, RUCKUS Cloudpath Enrollment System and on-boarding software

Outdoor venues like stadiums and arenas present some of the most demanding wireless challenges due to high client density. The RUCKUS® T670sn access point (AP), powered by the latest Wi-Fi 7 standard combined with RUCKUS unique patented technologies, delivers multi-gigabit Wi-Fi to meet the ever-growing demand for top-tier performance. Designed for durability, the T670sn is IP-67 rated to withstand the harsh conditions of outdoor deployments.

The availability of Wi-Fi 7 marks the beginning of a new era of possibilities. With groundbreaking advancements in speed, capacity, latency, and reliability, it is set to revolutionize the way we connect and engage with the digital world.

Moreover, industries such as hospitality and education can benefit immensely from Wi-Fi7 low latency and high reliability. Other verticals like, MDUs, large public venues and service providers gain greatly from Wi-Fi 7 unprecedented advancements in speed and capacity.

The RUCKUS T670sn is a high-end Wi-Fi 7, tri-band concurrent outdoor AP that delivers 6 spatial streams (2x2:2 in 2.4GHz/5GHz/6GHz or, in dual-band mode, 2x2:2 in 2.4GHz and 4x4:4 in 5GHz) With Multi-Link-Operation (MLO), Preamble Puncturing, 4K QAM Modulation and 320MHz channels. It delivers industry-leading performance environments with a combined data rate of 9.34 Gbps.

T670sn Programmable Sector Antenna

The T670sn unique programmable sector antenna delivers both narrow and wide sector coverage on demand. This offers many great benefits:

Deployment Flexibility

With software-defined sector coverage, network operators can easily adapt the AP to different environments—narrowing the beam for high-density areas or expanding it for broader coverage.

Optimized Performance & Signal Control

By precisely controlling the antenna's coverage, interference is minimized, and signal strength is maximized, ensuring better connectivity and higher data rates in targeted areas.

Simplified Network Planning

Instead of deploying multiple APs with fixed coverage patterns, a single AP with a programmable sector antenna can be adjusted as needed, reducing hardware costs and simplifying network design.

Dynamic Adaptation for Changing Needs

As network requirements evolve—whether due to seasonal crowd variations, temporary events, or new infrastructure—the antenna pattern can be reconfigured remotely, eliminating the need for costly physical adjustments.

Enhanced Spectral Efficiency

By directing RF energy only where it's needed, this technology improves spectrum utilization, reducing co-channel interference and improving overall network capacity.

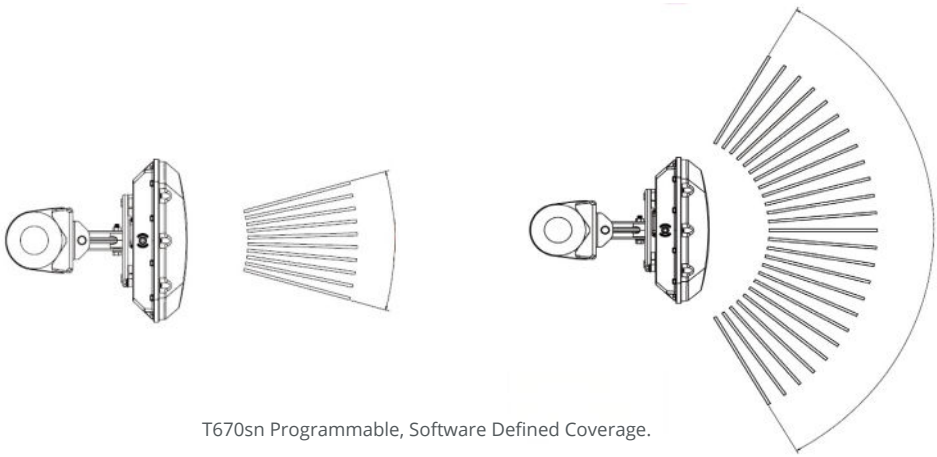
RUCKUS programmable sector antenna

T670sn Programmable Sector Antenna Pattern

The T670sn programmable sector antenna enhances outdoor Wi-Fi AP deployments by offering flexible, software-defined coverage that adapts to different environments. It can be switched between narrow beam for high-density areas and wide beam for broader coverage, offering several key benefits.

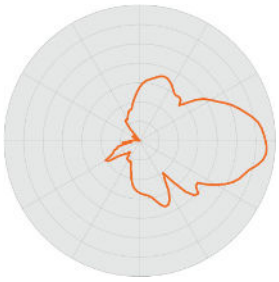
- Better Deployment Flexibility
- Dynamic Adaptation for Changing Needs
- Simplified Network Planning

This dynamic control minimizes interference while maximizing signal strength and data rates, leading to better connectivity and performance in targeted areas. Additionally, the ability to modify coverage patterns remotely eliminates the need for physical adjustments, making it ideal for scenarios with changing network demands, such as seasonal events or infrastructure expansions.

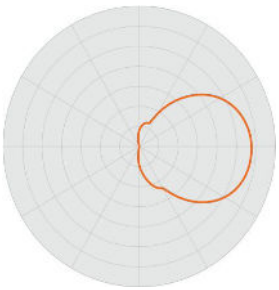


T670sn Programmable, Software Defined Coverage.

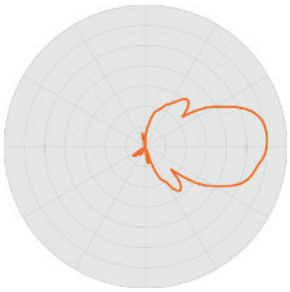
4 channels, 5.5 GHz, Narrow



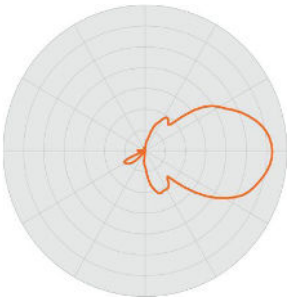
2 channels, 2.45 GHz, Narrow



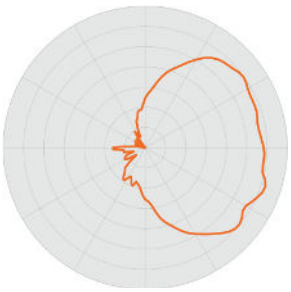
2 channels, 6.5 GHz, Narrow



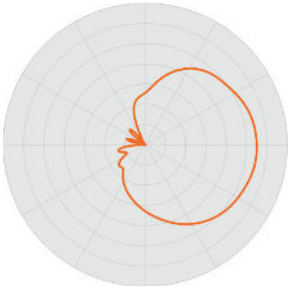
2 channels, 5.5 GHz, Narrow



4 channels, 5.5 GHz, Wide

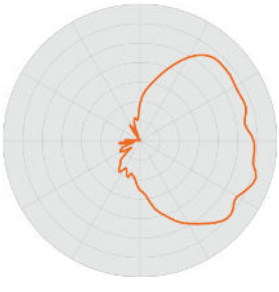


2 channels, 2.45 GHz, Wide



2 channels, 6.5 GHz, Wide

2 channels, 5.5 GHz, Wide



WI-FI	
Wi-Fi Standards	• IEEE 802/11a/b/g/n/ac/ax/be, Wi-Fi 7
Supported Rates	• 802.11be: 4 to 5765 Mbps • 802.11ax: 4 to 4804 Mbps • 802.11ac: 6.5 to 866 Mbps • 802.11n: 6.5 to 300 Mbps • 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 • 6GHz: 1-233
MIMO	• 2x2 SU-MIMO in tri-band mode. 4x4(5GHz) in dual-band • 2x2 MU-MIMO in tri-band mode. 4x4(5GHz) in dual-band
Spatial Streams	• 2 in tri-band mode or 4 in dual-band mode at 5GHz
Radio Chains and Streams	• 2x2:2 in all 3 bands. 4x4:4(5GHz) in dual-band mode
Channelization	• 20, 40, 80, 160, 320 MHz
Security	• WEP, WPA, WPA-PSK, WPA2, WPA2-PSK, WPA3, WPA3-SAE, OWE, PMF (802.11w), Dynamic PSK, DPSK3 • WIPS/WIDS. TPM 2.0, Secure Boot
Other Wi-Fi Features	• WMM, Power Save, Tx Beamforming, LDPC, STBC, 802.11r/k/v, MBO • MLO (Multi-link operation), Preamble Puncturing • Web Authentication and Guest Access • Hotspot, Hotspot 2.0 • Captive Portal • WISPr

RF	
Antenna Type	• Built-in programmable wide/narrow sector antenna • Support for both wide and narrow degree coverage
Antenna Gain (max)	• Up to 12.8 dBi (narrow) and 11.3dBi (wide)
Peak Transmit Power (Tx port/ chain + Combining gain)	• 2.4GHz: 26dBm (2x2) • 5GHz: 25dBm(2x2). 28dBm(4x4) • 6GHz: 25dBm (2x2)
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) • U-NII-5 (5.925–6.425GHz) • U-NII-6 (6.425–6.525GHz) • U-NII-7 (6.525–6.875GHz) • U-NII-8 (6.875–7.125GHz)

2.4GHZ RECEIVE SENSITIVITY (dBm)

HT20		HT40		VHT20		VHT40	
MCS0	MCS7	MCS0	MCS7	MCS0	MCS7	MCS0	MCS7
-97	-79	-94	-76	-97	-79	-94	-76
HE20/EHT20				HE40/EHT40			
MCS0	MCS7	MCS9	MCS11	MCS0	MCS7	MCS9	MCS11
-97	-79	-74	-68	-94	-76	-71	-65

5GHZ RECEIVE SENSITIVITY (dBm) in 2x2 tri-band mode

HT20/VHT20				HT40/VHT40				VHT80			
MCS0	MCS7	MCS8	MCS9	MCS0	MCS7	MCS8	MCS9	MCS0	MCS7	MCS8	MCS9
-96	-79	-76	-73	-93	-75	-73	-70	-90	-72	-70	-67
HE20/EHT20				HE40/EHT40				HE80/EHT80			
MCS0	MCS9	MCS13		MCS0	MCS9	MCS13		MCS0	MCS9	MCS13	
-96	-73	-61		-93	-70	-58		-90	-67	-55	
HE160/EHT160											
MCS0	MCS9	MCS13									
-87	-64	-52									

5GHZ RECEIVE SENSITIVITY (dBm) in 4x4 dual-band mode

HT20/VHT20				HT40/VHT40				VHT80			
MCS0	MCS7	MCS8	MCS9	MCS0	MCS7	MCS8	MCS9	MCS0	MCS7	MCS8	MCS9
-100	-82	-79	-76	-97	-79	-76	-73	-94	-76	-73	-70
HE20/EHT20				HE40/EHT40				HE80/EHT80			
MCS0	MCS9	MCS13		MCS0	MCS9	MCS13		MCS0	MCS9	MCS13	
-100	-76	-64		-97	-73	-61		-94	-70	-58	
HE160/EHT160											
MCS0	MCS9	MCS13									
-91	-67	-55									

6GHZ RECEIVE SENSITIVITY (dBm)

HE20/EHT20			HE40/EHT40			HE80/EHT80		
MCS0	MCS9	MCS13	MCS0	MCS9	MCS13	MCS0	MCS9	MCS13
-96	-73	-61	-93	-70	-58	-90	-67	-55
HE160/EHT160				EHT320				
MCS0	MCS9	MCS11	MCS13	MCS0	MCS9	MCS11	MCS13	
-87	-64	-58	-52	-84	-61	-55	-49	

2.4GHZ TX POWER TARGET (PER CHAIN)

Rate	Pout (dBm)
MCS0, HT20	22
MCS7, HT20	19
MCS9, VHT20	18
MCS11, HE40	16
MCS13, EHT40	12

5GHZ TX POWER TARGET (PER CHAIN)

Rate	Pout (dBm)
MCS0, HT40	22
MCS7, HT40	19
MCS9, VHT80	17.5
MCS11, HE160	16
MCS13, EHT160	14

6GHZ TX POWER TARGET (PER CHAIN)

Rate	Pout (dBm)
MCS0, HT40	22
MCS7, HT40	17.5
MCS9, VHT80	16.5
MCS11, HE160	15
MCS13, EHT320	13

POWER CONSUMPTION

Mode	Max Power	Capabilities	Wi-Fi Radios
DC Power	35W	*Full Functionality* • 5Gbps Ethernet Enabled • 1Gbps Ethernet Enabled • GPS Enabled • USB Enabled (3W)	*Full Functionality* Tri-band mode • 2.4GHz (2x2) Tx 22 dBm • 5GHz (2x2) Tx 22 dBm • 6GHz (2x2) Tx 22 dBm Dual-band mode • 2.4GHz (2x2) Tx 22 dBm • 5GHz (4x4) Tx 22 dBm
802.3bt5 PoH, uPoE	35W		
802.3at	25.5W	• 5Gbps Ethernet Enabled • 1Gbps Ethernet Enabled • USB Disabled (0W) • GPS Enabled	Tri-band mode • 2.4GHz (2x2) Tx 19 dBm • 5GHz (2x2) Tx 20 dBm • 6GHz (2x2) Tx 20 dBm Dual-band mode • 2.4GHz (2x2) Tx 20 dBm • 5GHz (4x4) Tx 21 dBm

PERFORMANCE AND CAPACITY

Peak PHY Rates	• 2.4GHz: 689 Mbps • 5GHz: 5765 Mbps (4x4:4) or 2882 Mbps (2x2:2) • 6GHz: 5765 Mbps
Client Capacity	• Up to 768 clients per AP
SSID	• Up to 36 per AP

RUCKUS RADIO MANAGEMENT

Antenna Optimization	• Polarization Diversity with Maximal Ratio Combining (PDMRC)
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, QoS Mirroring • Directed Multicast • L2/L3/L4 ACLs
Mobility	• SmartRoam
Diagnostic Tools	• Spectrum Analysis • SpeedFlex

NETWORKING

Controller Platform Support	• SmartZone • RUCKUS Unleashed* • RUCKUS One
Mesh	• SmartMesh™ wireless meshing technology. Self-healing Mesh in 2.4 GHz, 5GHz, and 6GHz
IP	• IPv4, IPv6, dual-stack
VLAN	• 802.1Q (1 per BSSID or dynamic per user based on RADIUS) • VLAN Pooling • Port-based
802.1x	• Authenticator & Supplicant
Tunnel	• GRE, Soft-GRE
Policy Management Tools	• Application Recognition and Control • Access Control Lists • Device Fingerprinting • Rate Limiting • URL Filtering

PHYSICAL INTERFACES

Ethernet	• One 100M/1/2.5/5GbE (PoE) port and one 10M/ 100M/1GbE port • Power over Ethernet (802.3af/at/bt) with Category 5e (or better) cable • LLDP support
USB	• 1 USB 2.0 port, Type C
DC Power	• 48V DC Terminal Block

PHYSICAL CHARACTERISTICS

Physical Size	• 42.1cm (L), 29.1cm (W), 10.8.cm (H) • 16.5in (L) x 11.5in (W) x 4.3in (H)
Weight **Weight with bracket**	• 3.24kg / 7.15lbs • 4.47kg / 9.85lbs
Mounting	• Wall Mount, Pole Mount, Flat Surface. • Bracket included in the box
Operating Temperature	• -40°C (-40°F) to 65°C (145°F)
Operating Humidity	• Up to 95%, non-condensing
Wind Survivability	• 165 Miles Per Hour

PROGRAMMABLE SECTOR ANTENNA COVERAGE ANGLES

	Wide Sector Side View	Wide Sector Top View	Narrow Sector Side View	Narrow Sector Top View
2.4 GHz	30°	100°	30°	40°
5 GHz (1st chain)	18°	110°	16°	25°
5 GHz (2nd chain)	20°	100°	20°	30°
6 GHz	20°	100°	20°	30°

Product owner is responsible to abide by the country of deployment spectrum regulations when configuring and deploying this product/device.

The 6GHz band is enabled in countries where it is authorized by the local regulations. AP operates as per local regulations via country regulatory domain, otherwise 6GHz radio is disabled. Once this product is certified to operate in a particular country the 6GHz band may be enabled with a future software release..

* *Expected in a future software release.*

CERTIFICATIONS AND COMPLIANCE	
Wi-Fi Alliance[1]	• Wi-Fi CERTIFIED™ a, b, g, n, ac, ax, be (Wi-Fi 6, Wi-Fi 7) • Passpoint®, Vantage
Standards Compliance[2]	• IEC/EN/UL 60950-1 Safety • IEC/EN/UL 62368-1 Safety • EN 60601-1-2 Medical • EN 61000-4-2/3/5 Immunity • EN 50121-1 Railway EMC • EN 50121-4 Railway Immunity • IEC 61373 Railway Shock & Vibration • UL 2043 Plenum • EN 62311 Human Safety/RF Exposure • WEEE & RoHS • ISTA 2A Transportation

SOFTWARE AND SERVICES	
Cloud Based Services	• RUCKUS One
Network Analytics	• RUCKUS AI (Formerly known as RUCKUS Analytics)
Security and Policy	• Cloudpath

ORDERING INFORMATION	
901-T670-XX51	RUCKUS T670sn Wi-Fi 7 tri-band outdoor wireless Access Point software switchable internal sectorized narrow and wide antenna 2x2:2 (2.4GHz) + 2x2:2 (5GHz) + 2x2:2 (6GHz). Wi-Fi 7 in all three bands. 6GHz SP mode support with AFC Software configurable to 2x2 (2.4GHz) + 4x4 (5GHz) dualband mode. One 5/2.5/1-Gigabit Ethernet backhaul one 1-Gigabit port, PoH/uPoE/ 802.3bt PoE support TPM 2.0, and Secure Boot. Built-in GPS. Power adapter not included. Includes one year limited warranty. Mounting brackets included

See RUCKUS price list for country-specific ordering information.
Warranty: Sold with a limited lifetime warranty.
For details see: **http://support.ruckuswireless.com/programs-warranty_registration.**

OPTIONAL ACCESSORIES	
902-1180-XX00	• Multigigabit PoE injector (2.5/5/10)-BaseT PoE port, 60W
902-0134-0000	• Secure Articulating Mounting Bracket with 10° increment
902-0183-XX00	• Spare cable gland for weathering the RJ45 port, outdoor AP

PLEASE NOTE: When ordering Indoor APs, you must specify the destination region by indicating -US, -WW, or -Z2 instead of XX. 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. For access points, -Z2 applies to the following countries: Algeria, Egypt, Israel, Morocco, Tunisia, and Vietnam.

[1] For complete list of WFA certifications, please see Wi-Fi Alliance website.

[2] For current certification status, please see price list.

About RUCKUS Networks

RUCKUS Networks builds and delivers purpose-driven networks that perform in the demanding environments of the industries we serve. Together with our network of trusted go-to-market partners, we empower our customers to deliver exceptional experiences to the guests, students, residents, citizens and employees who count on them.

www.ruckusnetworks.com

Visit our website or contact your local RUCKUS representative for more information.

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RUCKUS® COMMSCOPE