

Wi-Fi 7 Quick Guide

JUNIPER NETWORKS

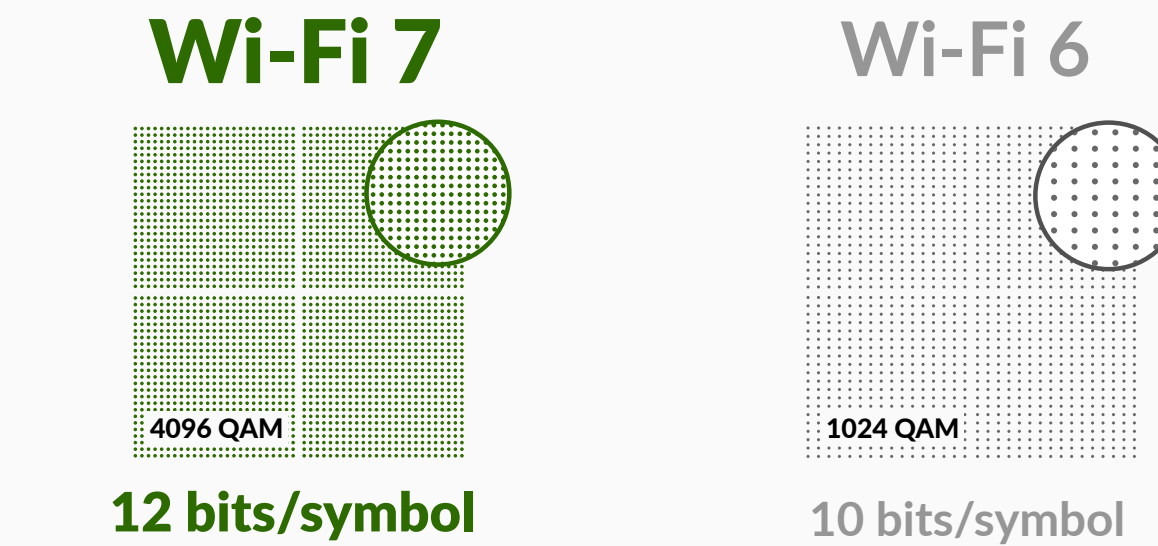
The next-generation 802.11 standard delivers faster, more secure, more resilient connections — and a host of other improvements.

320 MHz Channels: 2X higher throughput

Wi-Fi 7 introduces ultrawide 320 MHz channels that are only available in the 6 GHz spectrum, effectively doubling throughput and significantly enhancing network speeds compared to previous Wi-Fi standards.

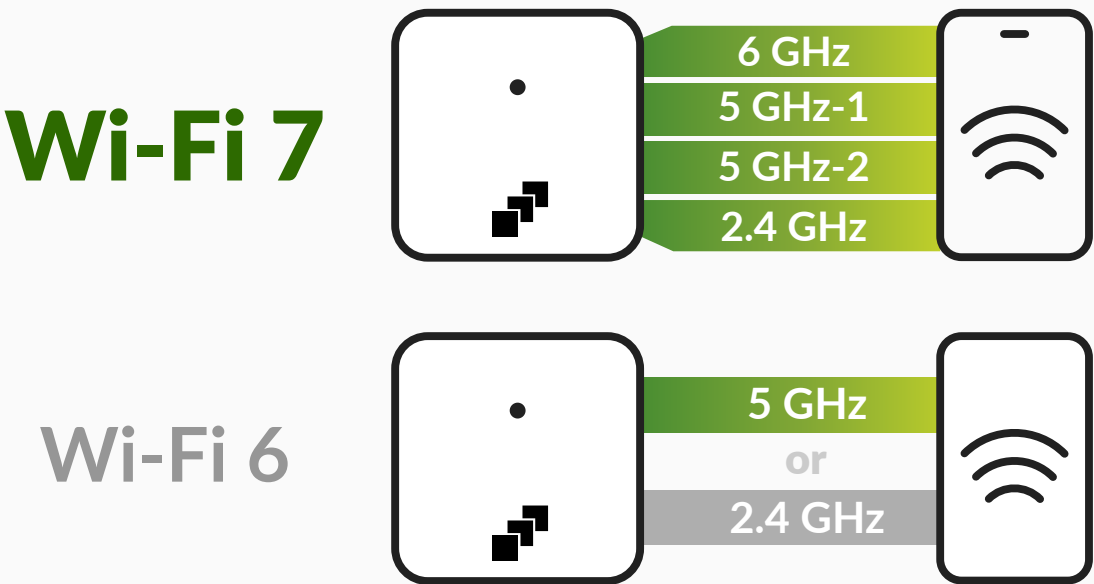


4K QAM: Higher transmission efficiency



4K-QAM (Quadrature Amplitude Modulation) boosts data transmission rates by up to 20% compared to the 1K-QAM of Wi-Fi 6, thanks to its ability to pack signals more densely in the same amount of spectrum.

Multi-Link Operation (MLO): Increased throughput, lower latency, enhanced reliability



Prior to Wi-Fi 7, devices used a single band for data transmission. For the first time, Multi-Link Operation (MLO) employs simultaneous bands to transmit and receive over multiple links, supporting more efficient load balancing, lowering latency, and enhancing reliability.

6 GHz Channel Allocations		1200 MHz	
FCC — USA			
Low Power Indoor	5dBm/MHz - Net EIRP 18dBm		
Radio Band		U-NII-5	U-NII-6
Center Frequency			U-NII-7
			U-NII-8
20MHz	1 5 9 13 17 21 25 29 33 37 41 45 49 53 57 61 65 69 73 77 81 85 89 93 97 101 105 109 113 117 121 125 129 133 137 141 145 149 153 157 161 165 169 173 177 181 185 189 193 197 201 205 209 213 217 221 225 229 233	QTY 59	
40MHz	3 11 19 27 35 43 51 59 67 75 83 91 99 107 115 123 131 139 147 155 163 171 179 187 195 203 211 219 227	QTY 29	
80MHz	7 23 39 55 71 87 103 119 135 151 167 183 167 183	QTY 14	
160MHz	15 47 79 111 143 175 207	QTY 7	
320MHz	31 95 159 191		
Allowed Unlicensed Usage	Low Power Indoor	Low Power Indoor, Standard Power AP	Low Power Indoor, Standard Power AP
	Fixed Service, Satellite Service	Satellite Service, TV & Broadcast Services	Satellite Service, TV and Broadcast Services

- US 6 GHz support : UNII-5 (5.955-6.425), UNII-6 (6.425-6.525), UNII-7 (6.525-6.875), UNII-8 (6.875-7.125)
- EU 6 GHz support : UNII-5 (5.955-6.425)

Learn more about Wi-Fi 7 and Juniper solutions →