Preparing for the Next Wave of Enterprise Wireless

Structured Cabling and Wi-Fi 7

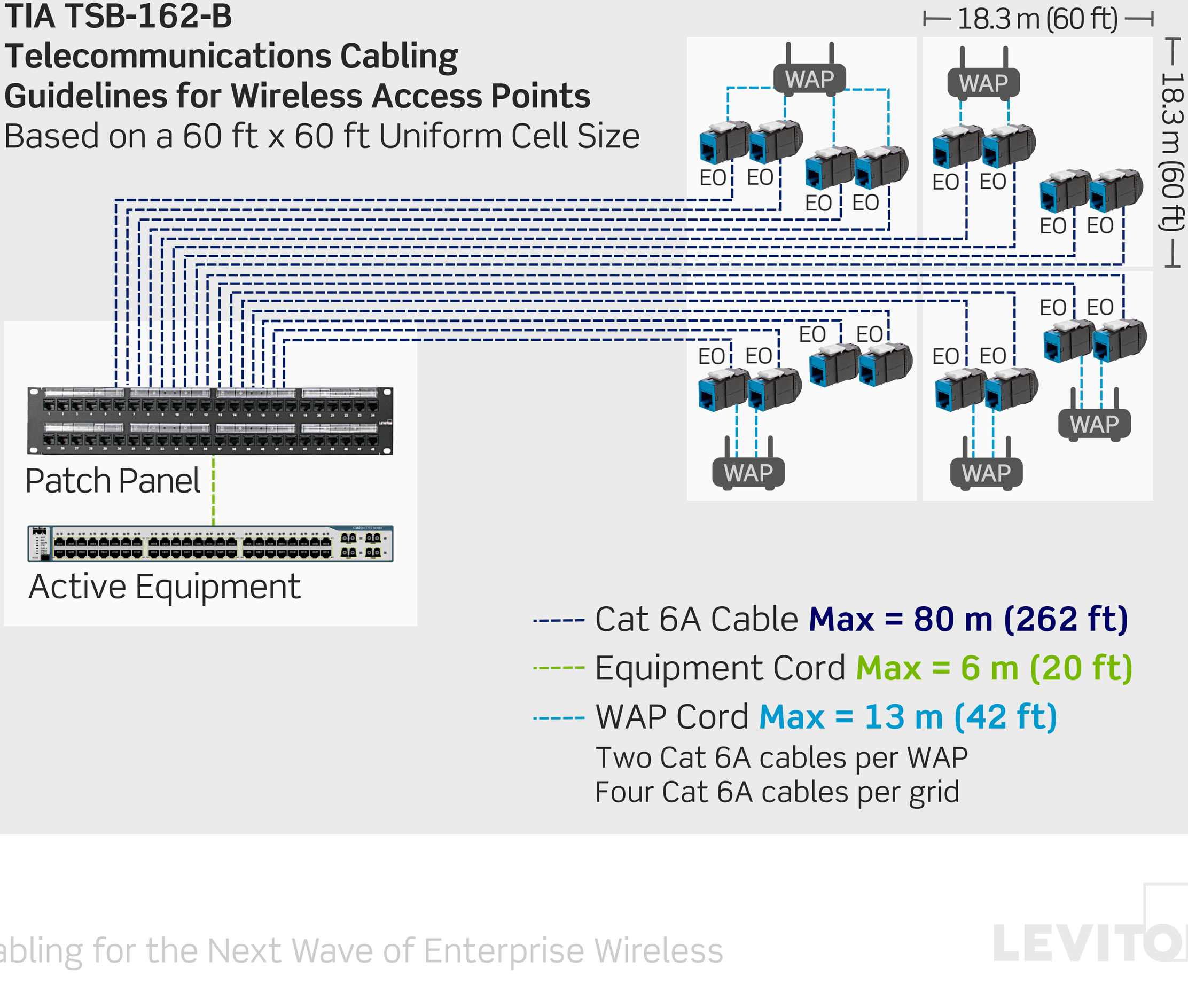
Smart building applications, the Internet of things (IoT), and machine-to-machine (M2M) connections can place significant strain on existing network infrastructure. Wi-Fi 6/6E (IEEE 802.11ax) and Wi-Fi 7 (IEEE 802.11be) technology can help support the new status quo of increased wireless demand.

Comparing Wi-Fi Generations

	Wi-Fi 4 802.11n	Wi-Fi 5 802.11ac Wave 1	Wi-Fi 5 802.11ac Wave 2	Wi-Fi 6 802.11ax	Wi-Fi 6E 802.11ax	Wi-Fi 7 802.11be
Year Introduced	2009	2013	2015	2021	2021	2024
Channel Bandwidth (MHz)	20, 40	20, 40, 80	20, 40, 80, 80+80/160			20, 40, 80, 80+80/160, 320
Frequency Band (GHz)	2.4, 5	5		2.4, 5	6	2.4, 5, 6
Spatial Streams	4	8		16		
Antenna Configuration	4X4 MIMO	8X8 MIMO	8X8 MU-MIMO	Downlink MU-MIMO and OFDMA		
Highest Order Modulation (QAM)	64	256		1024		4096
Maximum Throughput	600 Mb/s	1.3 Gb/s	6.93 Gb/s	~10 Gb/s		~ 40 Gb/s
Recommended Cable Category	Cat 6	Cat 6A				

Recommended cabling to provide the greatest probability for achieving the theoretical speeds of Wi-Fi 6/6E and 7

TIA TSB-162-B
Telecommunications Cabling
Guidelines for Wireless Access Points
Based on a 60 ft x 60 ft Uniform Cell Size



---- Cat 6A Cable **Max = 80 m (262 ft)**

---- Equipment Cord **Max = 6 m (20 ft)**

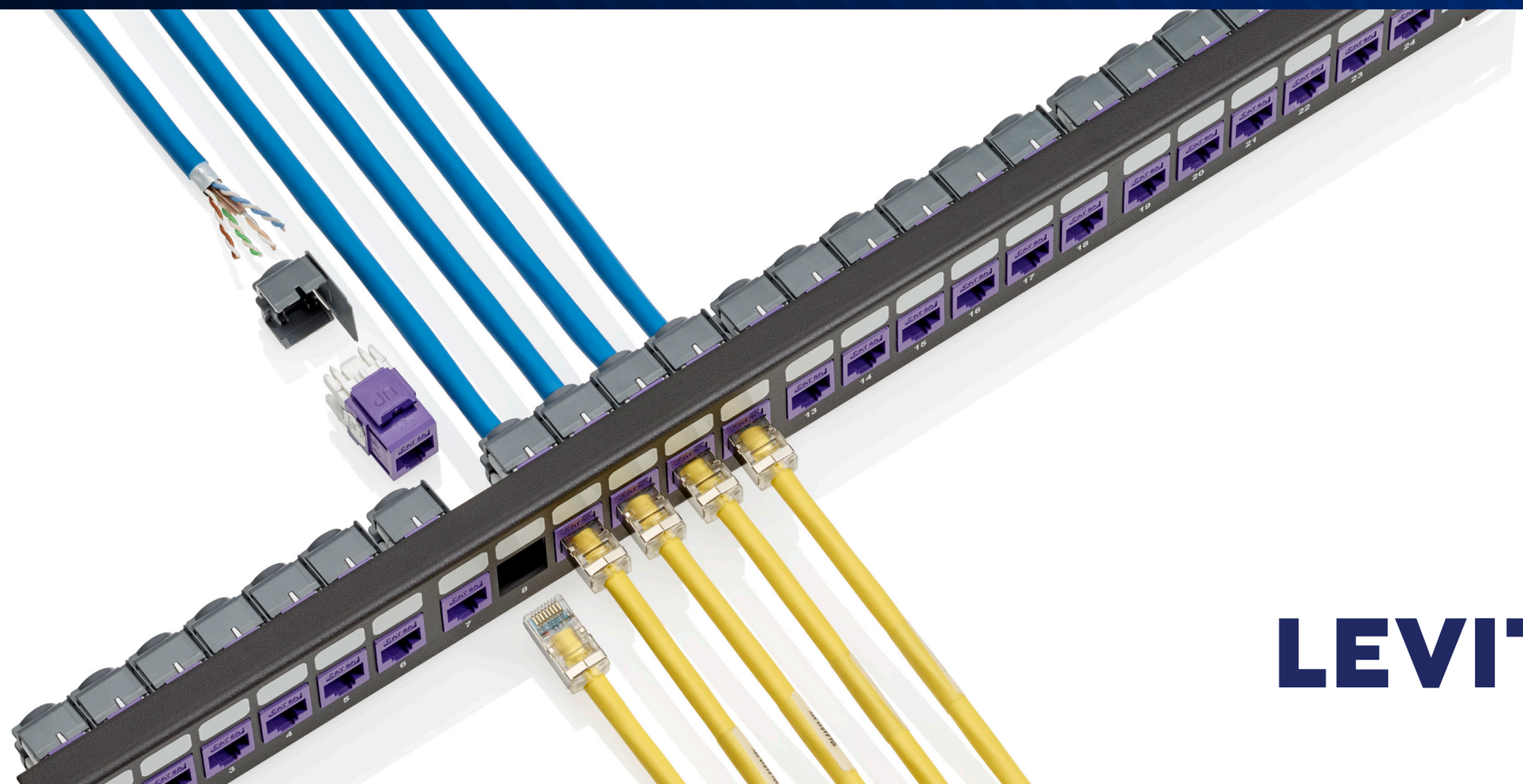
---- WAP Cord **Max = 13 m (42 ft)**

Two Cat 6A cables per WAP
Four Cat 6A cables per grid

LEVITON®

Cabling for the Next Wave of Enterprise Wireless

Learn more about Leviton cabling systems for enterprise wireless at **Leviton.com/wireless.**



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