Huawei Wireless Access Point AP7130DN-AC Datasheet

Huawei AP7130DN-AC Access Point

2.4 GHz and 5 GHz frequency bands

IEEE 802.11a/b/g/n/ac

The AP has the following advantages:

- Provides high-speed, reliable wireless access, and uses the new-generation 802.11ac chip with higher performance and stronger coverage capability.
- Has complete user access control capability and controls user access based on the user group. Supports a maximum of 128 users on an AP.
- Has external MIMO antennas for omnidirectional coverage. Supports beamforming with the radio rate of 1.3 Gbit/s.
- Provides high-grade network security by supporting multiple authentication and encryption modes.
- Provides flexible networking and has strong environment-adaptation capability, meeting access and WDS application scenarios.
- Simplifies device management and maintenance and supports automatic configuration after connecting to the AC.

The AP7130DN-AC is a nice-looking, standard 802.11ac 3×3 MIMO AP. It supports 2.4 GHz and 5 GHz frequency bands in which more users are connected, complies with IEEE 802.11a/b/g/n/ac, and supports the Fit AP mode.

The AP7130DN-AC is deployed indoors and features high reliability, high security, simple network deployment, automatic AC discovery and configuration, and real-time management and maintenance. The support for IEEE 802.11ac enables the AP7130DN-AC to support GE bandwidth, which greatly improves user experience.

Product Characteristics

- The AP7130DN-AC is applicable to the places with simple building structure, small size, dense users, and high capacity demands, such as small-size conference rooms, bars, and entertainment places.
- The new-generation 802.11ac chip is compatible with 802.11a/b/g/n wireless terminals.
- The 802.11ac 3×3 MIMO AP supports three spatial streams and provides the maximum radio rate of 1.3 Gbit/s for each radio and 1.75 Gbit/s for the system.
- The industry-level AP with external antennas and high protection grades applies to challenging environments.
- The AP7130DN-AC complies with 802.3at PoE power standard and is easy to install.
- The AP7130DN-AGN supports 2.4 GHz and 5 GHz frequency bands.

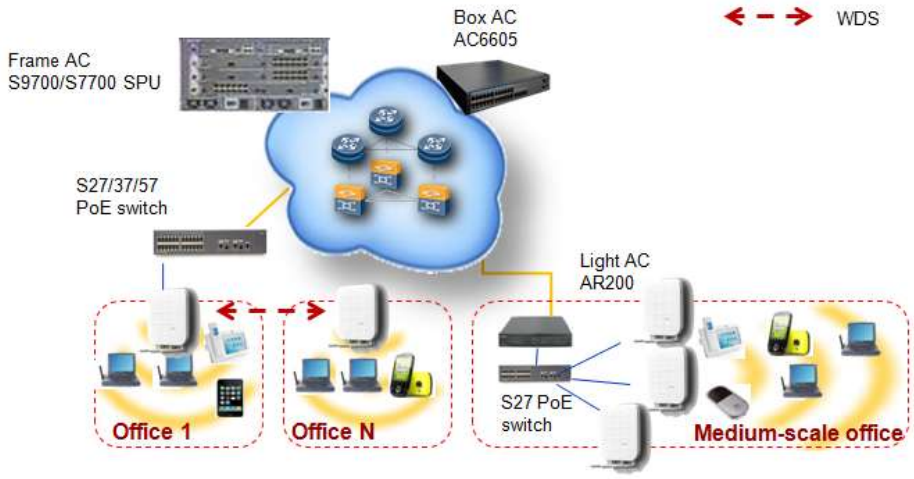
Scalability

Huawei Fit APs can be managed by ACs in a centralized manner. You can use automatic software upgrade technologies to add APs to implement seamless expansion of the WLAN and protect investments. Huawei 802.11ac APs can work with the AC and NMS to implement real-time monitoring, and provides intelligent RF management, load

AP Networking

The AP7130DN-AC is designed for use Fit AP networking and bridge networking.

Figure 1 Fit AP networking



In this network , the AP7130DN-AC functions as a Fit AP and provides only data forwarding functions. The AC is responsible for user access, AP management, authentication, routing, security, and Quality of Service (QoS)..

Product Specifications

<table>
<tr><th>Item</th><th colspan="5">Specifications</th></tr>
<tr><td>Part Number</td><td colspan="5">Huawei indoor AP with external antennas
AP7130DN-AGN 11a/b/g/n/ac, indoor dual-frequency 3×3 AP with external antennas
WLAN service
WLAN network design service
Huawei provides a comprehensive design considering the customer's requirements for signal coverage, network capacity, cost, security, and network performance.</td></tr>
<tr><td>Software</td><td colspan="5">Huawei WLAN AP V200R002C01 or later</td></tr>
<tr><td>WLAN access controller (AC)</td><td colspan="5">Huawei WLAN AC6605-26-PWR
Huawei WLAN S9700/S7700 SPU</td></tr>
<tr><td>802.11ac functions</td><td colspan="5">3×3 multiple-input multiple-output (MIMO) with three spatial streams
Maximum ratio combining (MRC)
Maximum likelihood detection (MLD)
Packet aggregation: A-MPDU (Tx/Rx), A-MSDU (Rx only)
802.11 dynamic frequency selection (DFS)
20 MHz, 40 MHz, and 80 MHz channels
256 quadrature amplitude modulation (QAM)
Automatic or manual adjustment of the radio rate. By default, the rate is adjusted automatically.
WLAN channel management and channel rate adjustment
Frame Burst for increasing the maximum throughput
Signal sustain technology (SST)
Unscheduled automatic power save delivery (U-APSD)
Dying Gasp</td></tr>
<tr><td rowspan="11">Supported data rate</td><td colspan="5">802.11a: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps</td></tr>
<tr><td colspan="5">802.11b/g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, and 54 Mbps</td></tr>
<tr><td colspan="5">802.11n data rate (2.4 GHz and 5 GHz):</td></tr>
<tr><td rowspan="2">MCS Index[1]</td><td colspan="2">GI[2] MCS Index[1] = 800 ns</td><td colspan="2">GI = 400 ns</td></tr>
<tr><td>20-MHz Rate (Mbps)</td><td>40-MHz Rate (Mbps)</td><td>20-MHz Rate (Mbps)</td><td>40-MHz Rate (Mbps)</td></tr>
<tr><td>0</td><td>6.5</td><td>13.5</td><td>7.2</td><td>15</td></tr>
<tr><td>1</td><td>13</td><td>27</td><td>14.4</td><td>30</td></tr>
<tr><td>2</td><td>19.5</td><td>40.5</td><td>21.7</td><td>45</td></tr>
<tr><td>3</td><td>26</td><td>54</td><td>28.9</td><td>60</td></tr>
<tr><td>4</td><td>39</td><td>81</td><td>43.3</td><td>90</td></tr>
<tr><td>5</td><td>52</td><td>108</td><td>57.8</td><td>120</td></tr>
<tr><td>6</td><td>58.5</td><td>121.5</td><td>65</td><td>135</td></tr>
<tr><td>7</td><td>65</td><td>135</td><td>72.2</td><td>150</td></tr>
</table>

	8	13	27	14.4	30
	9	26	54	28.9	60
	10	39	81	43.3	90
	11	52	108	57.8	120
	12	78	162	86.7	180
	13	104	216	115.6	240
	14	117	243	130	270
	15	130	270	144.4	300
	16	19.5	40.5	21.7	45
	17	39	81	43.3	90
	18	58.5	121.5	65	135
	19	78	162	86.7	180
	20	117	243	130	270
	21	156	324	173.3	360
	22	175.5	364.5	195	405
	23	195	405	216.7	450
	802.11ac data rate				
	MCS Index	**NSS**	**GI = 800 ns**		
			20-MHz Rate (Mbps)	**40-MHz Rate (Mbps)**	**80-MHz Rate (Mbps)**
	0	1	6.5	13.5	29.3
	1	1	13	27	58.5
	2	1	19.5	40	87.8
	3	1	26	54	117.0
	4	1	39	81	175.5
	5	1	52	108	234
	6	1	58.5	121.5	263
	7	1	65	135	292.5
	8	1	78	162	351
	9	1	-	180	390
	0	2	13	27	58.5
	1	2	26	54	117
	2	2	39	81	175.5
	3	2	52	108	234
	4	2	78	162	351
	5	2	104	216	468
	6	2	117	243	526
	7	2	130	270	585
	8	2	156	324	702
	9	2	-	360	780

	0	3	19.5	40.5	87.8
	1	3	39	81	175.5
	2	3	58.5	121.5	263.3
	3	3	78	162	351
	4	3	117	243	526.5
	5	3	156	324	702
	6	3	175.5	364.5	789.8
	7	3	195	405	877.5
	8	3	234	486	1053
	9	3	260	540	1170
	MCS Index	**NSS**	**GI = 400 ns**		
			20-MHz Rate (Mbps)	**40-MHz Rate (Mbps)**	**80-MHz Rate (Mbps)**
	0	1	7.2	15	32.5
	1	1	14.4	30	65
	2	1	21.7	45	97.5
	3	1	28.9	60	130
	4	1	43.3	90	195
	5	1	57.8	120	260
	6	1	65	135	292.5
	7	1	72.2	150	325
	8	1	86.7	180	390
	9	1	-	200	433.3
	0	2	14.4	30	65
	1	2	28.9	60	130
	2	2	43.3	90	195
	3	2	57.8	120	260
	4	2	96.7	180	390
	5	2	115.6	240	520
	6	2	130	270	585
	7	2	144.4	300	65
	8	2	173.3	360	780
	9	2	-	400	866.7
	0	3	21.7	45	97.5
	1	3	43.3	90	195
	2	3	65	135	292.5
	3	3	86.7	180	390
	4	3	130	270	585
	5	3	173.3	360	780
	6	3	195	405	877.5
	7	3	216.7	450	975
	8	3	260	540	1170

<table>
<tr><td></td><td>9</td><td>3</td><td>288.9</td><td>600</td><td>1300</td></tr>
<tr><td></td><td colspan="5">Note:
1.Modulation coding scheme (MCS) index: determines the spatial flow quantity, modulation, coding rate, and data rate.
2.Guard interval (GI): is the period in nanoseconds the radio listens between packets.
NSS: is the number of spatial streams.</td></tr>
<tr><td>Frequency band and 20-MHz operating channel</td><td colspan="5">Note: Customers are responsible for verifying approval for use in their countries.</td></tr>
<tr><td>Maximum number of non-overlapping channels</td><td colspan="2">2.4 GHz
➢ 802.11b/g:
20 MHz: 3
➢ 802.11n:
20 MHz: 3
40 MHz: 1</td><td colspan="3">5 GHz
➢ 802.11a:
20 MHz: 24
➢ 802.11n:
20 MHz: 24
40 MHz: 11
➢ 802.11ac:
20 MHz: 24
40 MHz: 11
80 MHz: 3</td></tr>
<tr><td colspan="6">Note: The maximum number of non-overlapping channels varies depending on regulatory domains.</td></tr>
<tr><td rowspan="3">Receiver sensitivity</td><td>2.4 GHz
802.11b (CCK)
–96 dBm @ 1 Mbit/s
–91 dBm @ 2 Mbit/s
–91 dBm @ 5.5 Mbit/s
–88 dBm @ 11 Mbit/s</td><td>2.4 GHz
802.11g (non-HT20)
–91 dBm @ 6 Mbit/s
–90 dBm @ 9 Mbit/s
–89 dBm @ 12 Mbit/s
–86 dBm @ 18 Mbit/s
–83 dBm @ 24 Mbit/s
–80 dBm @ 36 Mbit/s
–76 dBm @ 48 Mbit/s
–74 dBm @ 54 Mbit/s</td><td colspan="3">5 GHz
802.11a (non-HT20)
–89 dBm @ MCS0/8
–88 dBm @ MCS1/9
–86 dBm @ MCS2/10
–83 dBm @ MCS3/11
–80 dBm @ MCS4/12
–77 dBm @ MCS5/13
–73 dBm @ MCS6/14
–71 dBm @ MCS7/15</td></tr>
<tr><td>2.4 GHz
802.11n (HT20)
–91 dBm @ MCS0/8
–88 dBm @ MCS1/9
–86 dBm @ MCS2/10
–81 dBm @ MCS3/11
–78 dBm @ MCS4/12
–74 dBm @ MCS5/13
–72 dBm @ MCS6/14
–71 dBm @ MCS7/15</td><td>5 GHz
802.11n (HT20)
–90 dBm @ MCS0/8
–85 dBm @ MCS1/9
–84 dBm @ MCS2/10
–78 dBm @ MCS3/11
–75 dBm @ MCS4/12
–71 dBm @ MCS5/13
–70 dBm @ MCS6/14
–68 dBm @ MCS7/15</td><td colspan="3">5 GHz
802.11n (HT40)
–85 dBm @ MCS0/8
–82 dBm @ MCS1/9
–79 dBm @ MCS2/10
–75 dBm @ MCS3/11
–72 dBm @ MCS4/12
–68 dBm @ MCS5/13
–66 dBm @ MCS6/14
–64 dBm @ MCS7/15</td></tr>
<tr><td>5 GHz</td><td>5 GHz</td><td colspan="3">5 GHz</td></tr>
</table>

	802.11ac (VHT20) –90 dBm @ MCS0NSS1 –87 dBm @ MCS1NSS1 –85 dBm @ MCS2NSS1 –82 dBm @ MCS3NSS1 –78 dBm @ MCS4NSS1 –74 dBm @ MCS5NSS1 –73 dBm @ MCS6NSS1 –72 dBm @ MCS7NSS1 –67 dBm @ MCS8NSS1 –65 dBm @ MCS9NSS1	**802.11ac (VHT40)** –87 dBm @ MCS0NSS1 –84 dBm @ MCS1NSS1 –82 dBm @ MCS2NSS1 –79 dBm @ MCS3NSS1 –75 dBm @ MCS4NSS1 –71 dBm @ MCS5NSS1 –70 dBm @ MCS6NSS1 –69 dBm @ MCS7NSS1 –64 dBm @ MCS8NSS1 –62 dBm @ MCS9NSS1	**802.11ac (VHT80)** –84 dBm @ MCS0NSS1 –81 dBm @ MCS1NSS1 –79 dBm @ MCS2NSS1 –76 dBm @ MCS3NSS1 –72 dBm @ MCS4NSS1 –68 dBm @ MCS5NSS1 –67 dBm @ MCS6NSS1 –66 dBm @ MCS7NSS1 –61 dBm @ MCS8NSS1 –59 dBm @ MCS9NSS1
Maximum transmit power	**2.4 GHz** 802.11b ➢ 17 dBm, single antenna 802.11g ➢ 17 dBm, single antenna 802.11n (HT20) ➢ 17 dBm, single antenna 802.11n (HT40) ➢ 17 dBm, single antenna		**5 GHz** 802.11a ➢ 17 dBm, single antenna 802.11n (HT20) ➢ 17 dBm, single antenna 802.11n (HT40) ➢ 17 dBm, single antenna 802.11ac (HT20) ➢ 17 dBm, single antenna 802.11ac (HT40) ➢ 17 dBm, single antenna 802.11ac (HT80) ➢ 17 dBm, single antenna
Note: The maximum power setting varies depending on channels and country regulations.			
Available transmit power setting	**2.4 GHz** ➢ 6 dBm (3.98 mW) ➢ 7 dBm (5 mW) ➢ 8 dBm (6.31 mW) ➢ 9 dBm (7.94 mW) ➢ 10 dBm (10 mW) ➢ 11 dBm (12.59 mW) ➢ 12 dBm (15.85 mW) ➢ 13 dBm (19.95 mW) ➢ 14 dBm (25.12 mW) ➢ 15 dBm (31.62 mW) ➢ 16 dBm (39.81 mW) ➢ 17 dBm (50.12 mW)		**5 GHz** ➢ 6 dBm (3.98 mW) ➢ 7 dBm (5 mW) ➢ 8 dBm (6.31 mW) ➢ 9 dBm (7.94 mW) ➢ 10 dBm (10 mW) ➢ 11 dBm (12.59 mW) ➢ 12 dBm (15.85 mW) ➢ 13 dBm (19.95 mW) ➢ 14 dBm (25.12 mW) ➢ 15 dBm (31.62 mW) ➢ 16 dBm (39.81 mW) ➢ 17 dBm (50.12 mW)
Note: The maximum power setting varies depending on channels and country regulations.			
External antenna(as a free component of the AP7130)	➢ External 2.4 GHz omnidirectional antenna, 2.5 dBi gain ➢ External 5 GHz omnidirectional antenna, 4 dBi gain		

Interface	➢ 10/100/1000BASE-T (RJ-45) ➢ Console interface (RJ-45) ➢ Power input interface: 12 V DC ➢ Lock interface: protects the AP7130DN-AC against theft
Indicator	SYS LED: indicates the power module status, boot status, running status, and errors.
Dimensions (W x D x H)	220 mm×220 mm×53 mm
Weight	1.3 kg
Environment	Storage temperature: –40 ℃ to +70 ℃ Operating temperature: –10 ℃ to +50 ℃ Operating humidity: 5% to 95% (non-condensing) Protection class: IP31
System memory	256 MB DRAM 32 MB Flash
Input power	➢ DC power: 12 V DC ➢ PoE power: –48 V DC
Power options	➢ Poweradapter (100 to 240 V AC; 50 to 60 Hz; 12 V DC/2 A output) ➢ 802.3at-compliant PoE power supply ➢ 802.3at-compliant PoE power adapter
Maximum Power	19 W(Max) Note: The maximum power consumption varies depending on local laws.
Warranty	One year (including hardware and software)
Standards compliance	**Safety standards:** ➢ UL 60950-1 ➢ CAN/CSA 22.2 No.60950-1 ➢ IEC 60950-1 ➢ EN 60950-1 ➢ GB 4943 **Radio standards:** ➢ ESTI EN 300 328 ➢ ESTI EN 301 893 ➢ Part 15C: 15.247 ➢ Part 15E: 15.407 ➢ RSS-210 **EMC standards:** ➢ EN 301.489-1 ➢ EN 301.489-17 ➢ EN55022 (Class B) ➢ CISPR: 22 ➢ EN55024 ➢ CISPR: 24 ➢ EN60601-1-2

	➢ ICES-003 **EMF (Health):** ➢ EN62311 **IEEE standards:** ➢ IEEE 802.11a/b/g/n/ac ➢ IEEE 802.11h ➢ IEEE 802.11d ➢ IEEE 802.11e **Security standards:** ➢ 802.11i, Wi-Fi Protected Access 2 (WPA2), WPA ➢ 802.1X ➢ Advanced Encryption Standards (AES) and Temporal Key Integrity Protocol (TKIP) ➢ EAP Type **Environment standards:** ➢ ETSI 300 019-2-1 ➢ ETSI 300 019-2-2 ➢ ETSI 300 019-2-3 **Multimedia standard:** ➢ Wi-Fi Multimedia (WMM™)

More Information

For more information, visit http://enterprise.huawei.com or contact Huawei local office.