

EKI-6340 Series

IEEE 802.11 a/b/g/n
Outdoor Wi-Fi Mesh AP



Features

- Highly secured self-healing & self-forming Mesh capability
- Ultra-fast roaming (hand-over switch time ≤ 20 ms)
- High throughput multiple hopping (≥ 100 Mbps @10 hops)
- Ease of use installation utilities: antenna alignment, distance calculation and site survey tools
- Compliant with IEEE 802.11 a/b/g/n
- Up to 3 radios for Mesh back haul and Access Point
- MIMO 2 x 2, up to 300 Mbps data rate
- Dual 12 ~ 48 V redundant DC input power
- 802.3 at PoE input
- Gigabit Ethernet support
- WEP, WPA, WPA2-PSK/EAP (IEEE 802.1X/RADIUS, TKIP and AES)
- IP67 enclosure, wide operating temperature range
- EN50155 compliant

Introduction

The EKI-6340 series are perfect wireless Mesh AP for your outdoor deployment. With self-healing & self-forming capabilities, the wireless network is free from interruption even part of Mesh nodes failed. It's especially critical to infrastructures where wired solutions are hard to deploy. The ultra-fast roaming seamlessly enables the applications of high-speed mobility. The low latency and high throughput multiple hopping features greatly enables the extension of network coverage. This high throughput Mesh network perfectly covers growing rich data demands such as video security, surveillance and entertainment. Comprehensive security features prevent system from intrusion. IP67 sturdy waterproof enclosure with wide-temperature design enables excellent performances under all harsh outdoor environments.

Specifications

Standard Support

- **Wireless** IEEE 802.11a/b/g/n compliant
- **Ethernet** IEEE 802.11i, IEEE 802.3/802.3u/802.3ab, IEEE 802.3at PoE, 802.1d, 802.1w, 802.1q, 802.1p
- **Data Rates** IEEE 802.11b: 1, 2, 5.5, 11 Mbps
IEEE 802.11a, g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
IEEE 802.11n: @ 800ns (400ns) GI
20 MHz BW
1 Nss: 65 (72.2) Mbps maximal
2 Nss: 130 (144.4) Mbps maximal
40 MHz BW
1 Nss: 135 (150) Mbps maximal
2 Nss: 270 (300) Mbps maximal

Physical Specifications

- **Power** Dual redundant 12 ~ 48 V_{DC}
IEEE 802.3at PoE
- **Power Consumption** Normal operation:
EKI-6340-1 Max. 17 W
EKI-6340-2 Max. 21 W
EKI-6340-3 Max. 25 W
Cold start:
EKI-6340-1 Max. 13 W
EKI-6340-2/3 Max. 25 W
- **Dimensions (W x H x D)** 225 x 242 x 65 (8.86" x 9.53" x 2.56")
- **Weight** 2.25 Kg
- **Enclosure** Metal, IP67 protection
- **Mounting** Pole, Wall, VESA

Environment

- **Operating Temperature** -35 ~ 75°C (-31 ~ 167°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Ambient Relative Humidity** 5% ~ 100% (non-condensing)

Interface

- **Antenna** N-type female connector
EKI-6340-1: 2 connectors
EKI-6340-2: 4 connectors
EKI-6340-3: 6 connectors
- **Power** M12 D-code connector
- **LAN** M25 cable gland

System Operation Mode

- Bridge/ Router/ Mesh

Other Features

- DHCP Client/Server, Statistic routing table, RIP v1&v2, WMM, Multi-SSID (up to 16x ESSID for each radio), traffic limitation, IEEE 802.11h DFS, Syslog, L2 management utility, HTTP (s), Telnet, SSH, CLI, SNMP, installation utilities.

Modulation Techniques

- **IEEE 802.11a/n** OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
- **IEEE 802.11b** DSSS (DBPSK, DQPSK, CCK)
- **IEEE 802.11g/n** OFDM (BPSK, QPSK, 16-QAM, 64-QAM)

Frequency Range

- **USA** 2.400 ~ 2.483 GHz, 5.725 ~ 5.825 GHz
- **Europe** 2.400 ~ 2.483 GHz, 5.15 ~ 5.35 GHz, 5.47 ~ 5.725 GHz
- **China** 2.400 ~ 2.483 GHz, 5.725 ~ 5.85 GHz

Note: radio is capable to be operated within FCC DFS2 band or ETSI/EC DFS band, or other countries which is regulating or is planning to regulate mid -5 GHz band. The usage of mid -5 GHz band is subject to the regulatory approval status.

EKI-6340 Series

Certificates

- **EMC** US FCC Part 15 Class B & C & E, Europe ETSI 301 489-1&17
- **Radio** ETSI 300 328, ETSI 301 893, FCC 15.247
- **Rail Traffic** EN50155, EN50121-1/-4
- **Safety** EN 60950

Ordering Information

- **EKI-6340-1A** 802.11 a/b/g/n Outdoor Single Radio Mesh AP
- **EKI-6340-2A** 802.11 a/b/g/n Outdoor Dual Radio Mesh AP
- **EKI-6340-3A** 802.11 a/b/g/n Outdoor Triple Radio Mesh AP
- **EKI-6340-1U** 802.11 a/b/g/n Outdoor Single Radio Mesh AP (EU)
- **EKI-6340-2U** 802.11 a/b/g/n Outdoor Dual Radio Mesh AP (EU)
- **EKI-6340-3U** 802.11 a/b/g/n Outdoor Triple Radio Mesh AP (EU)

Transmit Power Settings (Typical Composite Power) Tolerance: +2/-2 dB

802.11a	802.11b	802.11g	802.11n 2.4GHz/ HT20	802.11n 2.4GHz/ HT40	802.11n 5GHz/HT20	802.11n 5GHz/HT40
+19 dBm @ 6, 9, 12, 18, 24 Mbps	+19 dBm	+22 dBm @ 6, 9, 12, 18, 24 Mbps	+20 dBm @ MCS 0/8	+20 dBm @ MCS 0/8	+18 dBm @ MCS 0/8	+17 dBm @ MCS 0/8
+18 dBm @ 36 Mbps	-	+21 dBm @ 36 Mbps	+20 dBm @ MCS 1/9	+20 dBm @ MCS 1/9	+18 dBm @ MCS 1/9	+17 dBm @ MCS 1/9
+17 dBm @ 48 Mbps	-	+20 dBm @ 48 Mbps	+20 dBm @ MCS 2/10	+20 dBm @ MCS 2/10	+18 dBm @ MCS 2/10	+17 dBm @ MCS 2/10
+15 dBm @ 54 Mbps	-	+18 dBm @ 54 Mbps	+20 dBm @ MCS 3/11	+20 dBm @ MCS 3/11	+18 dBm @ MCS 3/11	+17 dBm @ MCS 3/11
-	-	-	+20 dBm @ MCS 4/12	+19 dBm @ MCS 4/12	+18 dBm @ MCS 4/12	+17 dBm @ MCS 4/12
-	-	-	+20 dBm @ MCS 5/13	+19 dBm @ MCS 5/13	+18 dBm @ MCS 5/13	+17 dBm @ MCS 5/13
-	-	-	+18 dBm @ MCS 6/14	+17 dBm @ MCS 6/14	+17 dBm @ MCS 6/14	+16 dBm @ MCS 6/14
-	-	-	+16 dBm @ MCS 7/15	+15 dBm @ MCS 7/15	+13 dBm @ MCS 7/15	+12 dBm @ MCS 7/15

Receiver Sensitivity

	Data Rate	IEEE Spec (1 Rx dBm)	Typical/Maximum (2 Rx dBm)		Data Rate	IEEE Spec (1 Rx dBm)	Typical/Maximum (2 Rx dBm)
802.11a	6M	-80	-93/-89	802.11a/n HT40	MCS0	-77	-89/-85
	9M	-79	-93/-89		MCS1	-74	-88/-84
	12M	-77	-92/-88		MCS2	-72	-85/-81
	18M	-75	-90/-86		MCS3	-69	-82/-78
	24M	-72	-86/-82		MCS4	-65	-80/-76
	36M	-68	-83/-79		MCS5	-61	-76/-72
	48M	-64	-79/-75		MCS6	-60	-74/-70
	54M	-63	-77/-73		MCS7	-59	-72/-68
802.11b	5.5M	-79	-94/-90	802.11b/g/n HT20	MCS0	-81	-94/-90
	11M	-75	-90/-86		MCS1	-78	-93/-89
802.11g	6M	-81	-94/-90		MCS2	-76	-91/-87
	9M	-80	-94/-90		MCS3	-73	-87/-83
	12M	-78	-93/-89		MCS4	-69	-84/-80
	18M	-76	-92/-88		MCS5	-65	-79/-75
	24M	-73	-89/-85		MCS6	-64	-78/-74
	36M	-69	-85/-81		MCS7	-63	-76/-72
	54M	-64	-79/-75	802.11b/g/n HT40	MCS0	-78	-89/-85
802.11a/n HT20	MCS0	-80	-93/-89		MCS1	-75	-89/-85
	MCS1	-77	-91/-87		MCS2	-73	-88/-84
	MCS2	-75	-88/-84		MCS3	-70	-84/-80
	MCS3	-72	-85/-81		MCS4	-66	-81/-77
	MCS4	-68	-82/-78		MCS5	-62	-77/-73
	MCS5	-64	-78/-74		MCS6	-61	-76/-72
	MCS6	-63	-77/-73		MCS7	-60	-73/-70
	MCS7	-62	-75/-71				

EKI-6351-A

IEEE 802.11 a/b/g/n
Wi-Fi Mesh AP/Station



Features

Unique features of EKI-6351-A

- Highly secured self-healing & self-forming Mesh capability
- Ultra-fast roaming (hand-over switch time ≤ 20 ms)
- High throughput multiple hopping (≥ 100 Mbps @ 10 hops)

Common features:

- Ease of use installation utilities: antenna alignment, distance calculation and site survey tools
- Compliant with IEEE 802.11a/b/g/n
- MIMO 2 x 2 11n, up to 300 Mbps data rate
- Dual 12 ~ 48 V redundant DC input power
- 802.3at PoE input
- Gigabit Ethernet support
- WEP, WPA, WPA2-PSK/EAP (IEEE 802.1X/RADIUS, TKIP and AES)
- Wide operating temperature range from -35 to 75°C
- EN50155 compliant

Introduction

The EKI-6351-A are perfect wireless AP/stations for your deployment. With self-healing & self-forming capabilities, the wireless network is free from interruption even if part of the Mesh node fails. Ultra-fast roaming seamlessly enables the applications to achieve high-speed mobility. This high throughput Mesh network covers the increasing data demands of applications such as video security, surveillance and entertainment.

Comprehensive security features prevent the system from intrusion whilst the wide operating temperature range enables excellent performances in harsh outdoor environments.

Specifications

Standard Support

- **Wireless** IEEE 802.11a/b/g/n compliant
- **Ethernet** IEEE 802.11i, IEEE 802.3/802.3u/802.3ab, IEEE 802.3at PoE, 802.1d, 802.1w, 802.1q, 802.1p
- **Data Rates** 802.11b: 1, 2, 5.5, 11 Mbps
802.11a, g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
Passive 15 V PoE, max. distance: 20 meters
IEEE 802.11n: @ 800ns (400ns) GI
20 MHz BW
1 Nss: maximal
2 Nss: 130 (144.4) Mbps maximal
40 MHz BW
1 Nss: 135 (150) Mbps maximal
2 Nss: 270 (300) Mbps maximal

Physical Specifications

- **Power** Dual redundant 12 ~ 48 V_{DC}
IEEE 803.2at PoE
- **Power Consumption** Normal operation: Max. 17 W
Cold start: Max. 13 W
- **Dimensions (W x H x D)** 37 x 140 x 95 mm (1.46" x 5.51" x 3.74")
- **Weight** 0.63 Kg
- **Enclosure** Metal, IP30 protection
- **Mounting** DIN-rail, Wall

Environment

- **Operating Temperature** -35 ~ 75°C (-31 ~ 167°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Ambient Relative Humidity** 5% ~ 100% (non-condensing)

Interface

- **Antenna** 2 x RSMA connector
- **Power** Terminal block
- **LAN** RJ45

System Operation Mode

- EKI-6351-A - Bridge/Router/Mesh

Other Features

- DHCP Client/Server*, Statistic routing table*, RIP v1&v2*, WMM, Multi-SSID (up to 16x ESSID for each radio), traffic limitation, IEEE 802.11h DFS, Syslog, L2 management utility, HTTP (s), Telnet, SSH, CLI, SNMP, installation utilities.

Modulation Techniques

- **IEEE 802.11a/n** OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
- **IEEE 802.11b** DSSS (DBPSK, DQPSK, CCK)
- **IEEE 802.11g/n** OFDM (BPSK, QPSK, 16-QAM, 64-QAM)

Frequency Range

- **USA** 2.400 ~ 2.483 GHz, 5.15 ~ 5.25GHz, 5.725 ~ 5.825 GHz
- **Europe** 2.400 ~ 2.483 GHz, 5.15 ~ 5.35 GHz, 5.47 ~ 5.725 GHz
- **China** 2.400 ~ 2.483 GHz, 5.725 ~ 5.85 GHz

Note: radio is capable to be operated within FCC DFS2 band or ETSI/EC DFS band, or other countries which is regulating or is planning to regulate mid-5 GHz band. The usage of mid-5 GHz band is subject to the regulatory approval status.

Certificates

- **EMC** US FCC Part 15 Class B & C & E,
Europe ETSI 301 489-1&17
- **Radio** ETSI 300 328, ETSI 301 893, FCC 15.247
- **Rail Traffic** EN50155, EN50121-1/-4
- **Safety** EN 60950

Ordering Information

- **EKI-6351-A** 802.11 a/b/g/n Wi-Fi Mesh AP/Station
- **EKI-6351-U** 802.11 a/b/g/n Wi-Fi Mesh AP/Station (EU)