

**TECHNICAL SPECIFICATION
SUPPLY OF WIRELESS ACCESS POINT**

(TYPE A: LESS 20 PEOPLE)

Type A Wireless Access point is suitable for small density deployment for up to 20 people such as class room, small meeting room.

No.	SPECIFICATION	COMPLIANCE	PROPOSAL DESCRIPTION
Type A	WIRELESS ACCESS POINT		
1.	Supply Wireless Access Point 802.11ac wave 2 <ul style="list-style-type: none"> ▪ AP type: Indoor, minimum dual radio, 5GHz 802.11ac 4x4 MIMO and 2.4GHz 802.11n 2x2 MIMO. ▪ Minimum One 10/100/1000BASE-T Ethernet network interface (RJ-45) <ul style="list-style-type: none"> ✓ Auto-sensing link speed and MDI/MDX ✓ 802.3az Energy Efficient Ethernet (EEE) ▪ 5GHz 4x4 MIMO (4.8 Gbps max rate) and 2.4GHz 4x4 MIMO (575 Mbps max rate) radios, with a total of three integrated omni-directional down-tilt dual-band antennas. ▪ Compatible with IIUM existing Wireless Controller <ul style="list-style-type: none"> ✓ Aruba Mobility Controller 7240XM ✓ Aruba OS 8.6.0.15 		
2.	Supply Cabling together with each access point installed. Cable type is UTP Cat6 (AMP or Equivalent quality)		
3.	Supply accessories per access point as stated below: <ul style="list-style-type: none"> ▪ Access Point ceiling mounting ▪ Access Point license that support Policy Enforcement ▪ Proprietary console cable ▪ Power Injector for POE+ power requirement. ▪ Label and Tagging at both end ▪ Security bracket (if required) 		
4.	Provide Support and Warranty for hardware and software. <ul style="list-style-type: none"> ▪ Must come with minimum 1 YEAR support and limited lifetime product warranty by Principle. 		

*This specification has been endorsed at the **Technical Specification Endorsement meeting** dated **17th November 2022** – “Wireless hotspot at Mahallah IIUM Pagoh and Access Points”

(TYPE B: UP TO 40 PEOPLE)

Type B Wireless Access Point is suitable for unobstructed Medium Density deployment for up to 40 people such as medium Offices and open spaces.

No.	SPECIFICATION	COMPLIANCE	PROPOSAL DESCRIPTION
Type B	WIRELESS ACCESS POINT		
1.	Supply Wireless Access Point 802.11ac wave 2 <ul style="list-style-type: none"> ▪ AP type: Indoor, minimum dual radio, 5GHz 802.11ac 4x4 MIMO and 2.4GHz 802.11n 4x4 MIMO. ▪ Minimum One 10/100/1000BASE-T Ethernet network interface (RJ-45) <ul style="list-style-type: none"> ✓ Auto-sensing link speed and MDI/MDX ✓ PoE-PD: 48 Vdc (nominal) 802.3at PoE ▪ 5 GHz (2.4 Gbps max rate) and 2.4 GHz (1,150 Mbps max rate) radios, each with 4x4 MIMO support and a total of eight integrated omni-directional down tilt antennas. ▪ Compatible with IIUM existing Wireless Controller (minimum) <ul style="list-style-type: none"> ✓ Aruba Mobility Controller 7240XM ✓ Aruba OS 8.6.0.15 		
2.	Supply Cabling together with each access point installed. Cable type is UTP Cat6 (AMP or Equivalent quality)		
3.	Supply accessories per access point as stated below: <ul style="list-style-type: none"> ▪ Access Point ceiling mounting ▪ Access Point license that support Policy Enforcement ▪ Proprietary console cable ▪ Power Injector for POE+ power requirement. ▪ Label and Tagging at both end ▪ Security bracket (if required) 		
4.	Provide Support and Warranty for hardware and software. <ul style="list-style-type: none"> ▪ Must come with minimum 1 YEAR support and limited lifetime product warranty by Principle. 		

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(TYPE C: UP TO 100 PEOPLE)

Type C Wireless Access Point is suitable for High Density deployment for up to 100 people such as Conference Hall or Lecture Hall.

No.	SPECIFICATION	COMPLIANCE	PROPOSAL DESCRIPTION
Type C	WIRELESS ACCESS POINT		
1.	<p>Supply Wireless Access Point 802.11ac wave 2</p> <ul style="list-style-type: none"> ▪ AP type: Indoor, minimum dual radio, 5GHz 802.11ac 8x8 MIMO and 2.4GHz 802.11n 4x4 MIMO. ▪ Minimum One 10/100/1000BASE-T Ethernet network interface (RJ-45) <ul style="list-style-type: none"> ✓ Auto-sensing link speed and MDI/MDX ✓ PoE-PD: 48 Vdc (nominal) 802.3at PoE ▪ With 8x8 MIMO support 5 GHz (4.8 Gbps max rate) and with 4x4 MIMO support 2.4 GHz (1,150 Mbps max rate) radios, each and a total of eight integrated omni-directional down tilt antennas. ▪ Compatible with IIUM existing Wireless Controller (minimum) <ul style="list-style-type: none"> ✓ Aruba Mobility Controller 7240XM ✓ Aruba OS 8.6.0.15 		
2.	<ul style="list-style-type: none"> ▪ Supply Cabling together with each access point installed. Cable type is UTP Cat6A (AMP or Equivalent quality) ▪ Requires uplink MultiGIG switch 		
3.	<p>Supply accessories per access point as stated below:</p> <ul style="list-style-type: none"> ▪ Access Point ceiling mounting ▪ Access Point license that supports Policy Enforcement ▪ Proprietary console cable ▪ Power Injector for POE+ power requirement. ▪ Label and Tagging at both end ▪ Security bracket (if required) 		
4.	<p>Provide Support and Warranty for hardware and software.</p> <ul style="list-style-type: none"> ▪ Must come with minimum 1 YEAR support and limited lifetime product warranty by Principle. 		

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