Tangerpay WiFi Specifications & Recommendations

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Introduction

To accept mobile and kiosk cashless payments in your laundry, a Tangerpay "Pip" smart device is installed inside each of your laundry machines. The Pip device uses a secure, encrypted, wireless technology protocol to deliver electronic credit to your laundry machine when a customer makes a cashless payment from their mobile or Tangerpay kiosk. The use of wireless technology in Pip eliminates the need to do costly and high maintenance wiring in your laundry machines and modem router.

To keep everything simple and easy to install, the Tangerpay kiosk also connects to the internet over WiFi using a secure PCI DSS compliant network protocol.

For your laundry room to accept cashless payments smoothly, it is essential that you have a good quality WiFi network in your store that is capable of sending a strong WiFi signal to your laundry machines. Similar to electrical, phone and plumbing infrastructure, as the store owner you are responsible for the setup and maintenance of a robust WiFi network in your store which provides uninterrupted connectivity to your laundry machines for cashless payments.

Please refer to our specification and recommendations below on how to set up your instore WiFi infrastructure ahead of installing Tangerpay Pips and kiosk in your store. If you are not familiar with router setup and configuration, we strongly recommend contacting your local IT provider for assistance. The requirements are fairly simple and can be implemented by any experienced IT provider quite easily.

Specifications and Recommendations

SI No.	Network Attribute	Required Value	Comments	Importance
1.	Network Frequency	2.4 GHz	The Tangerpay cashless system is designed to run on 2.4GHz frequency networks as these networks provide better signal strength then 5Ghz networks. The Pip devices will not connect to WiFi unless your router is set to 2.4 GHz frequency. DO NOT BROADCAST PAYPONT1/PAYPONT2 NETWORK ON 5GHZ CHANNEL.	CRITICAL
2.	Network channel width	20 Hz	Some routers may be operating on 40 Hz or "Auto" channel width by default. Please ensure you set this to 20 Hz if the control exists on your router. Operating your store on 40 Hz channel width will result in dropped connections.	CRITICAL
3.	Network Protocol	802.11b/g	Network protocol must be either 802.11b or 802.11g, which is also indirectly implied through the network frequency and channel width settings above.	CRITICAL
4.	WiFi Channel	Any FIXED channel 11 or lower	Please check that your router is not set to "Auto" WiFi channel selection as this will cause dropped connections.	CRITICAL
5.	WiFi Security	WPA2-PSK AES	Please check that WiFi security is set to this standard. Devices will not connect otherwise.	CRITICAL
6.	Router Region and TIme Setting	Geography Dependent	Please check that this is correctly set to the correct geographical region you are operating in. The tablet can sometimes have problems connecting to the router if this check is ignored.	CRITICAL

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7.	Firewall Setting	Only applicable to routers that have inbound or outbound firewalls enabled	The Tangerpay devices open a persistent TCP socket with the Cloud using an encrypted version of CoAP through outgoing port 5683 on your network. Port 5683 on your network must be kept open for the devices to communicate in both directions.	CRITICAL
8.	WiFi Name (SSID) & Password	SSID=PAYPONT2 Password=epaylaundry 2	The devices will automatically connect to this network ID and password. Note that these are case sensitive and must be typed exactly as listed otherwise devices will not connect. If you plan to run multiple networks in order to have failover capability, please contact Tangerpay for additional network SSID and Passwords. To limit who can connect to this network, you can implement a connection white list based on IP address or MAC ids. Please refer to item 10 for more details.	CRITICAL
9.	WiFi Signal Strength	-40dbm to -60dbm	For optimal operations the WiFi signal strength at each of your laundry machines, near its coin mech, should be in the range of -40dbm to -60dbm. If the WiFi signal strength is lower than -60dbm (eg. -65 dbm) then it is likely that you will experience intermittent connection dropouts in your store due to poor signal strength. There are free phone apps available to measure WiFi signal strength in your laundry room, using your phone handset. Please remember to connect your phone handset to the PAYPONT1 (pwd:epaylaundry1), PAYPONT2 (pwd:epaylaundry2) or PAYPONT3 (pwd:epaylaundry3)	HIGH

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			WiFi network in your store before your check WiFi signal strength.	
10.	Connections White List	Store Owner Decided	For security, you may choose to implement a router connection white list restrict that allows only the Pips and Kiosk to connect to the designated WiFi network in your store. This is a post Go Live activity and the MAC Address and IP addresses for each of your devices is available from Tangerpay. Please contact Tangerpay at the appropriate time for assistance.	MEDIUM
11.	Router Connection Limit	1 per laundry machine + 1 for kiosk	Depending on the number of machines in your store and the type of router you have installed, your router may not have a sufficient number of WiFi connections available for the devices to connect to. If this is the case, we recommend that you upgrade to a suitable network infrastructure involving a high capacity, fit for purpose, WiFi access point such as those available from Unify, Ubiquiti, Cisco Meraki. Your local IT provider will be able to advise you on the best and most effective configuration for your store based on these listed requirements.	HIGH
12.	Network Failover and Redundancy	As needed	Stores running 100% cashless operations or stores wishing to avoid WiFi downtime in their stores may want to consider routers that offer automatic failover capability, for example routers that will automatically fail over to a backup 4G connection when the primary broadband connection goes down. Alternatively, a store may decide to implement two separate broadband connections from different providers and use one as backup to the other.	MEDIUM

			Your local IT provider will be able to advise you on the best options available in your area. Please ask your IT provider to contact Tangerpay for any assistance needed.	
13.	Router location and position	As needed	Large sites should ideally consider having one or more ceiling mounted WiFi access points (such as Ubiquiti, Unifi, Meraki) that deliver a strong signal to all the machines in your laundry. The access points are able to have either a wireless or wired connection back to your main router (wired connection recommended). Your local IT provider will be able to advise you on the optimum router placement strategies inside your store.	HIGH
14.	Network Speed and Bandwidth	Review as needed.	The cashless payment devices can be impacted by improperly configured in store camera security systems that consume too much of your instore network bandwidth. Please consult your IT and security system provider to ensure your cameras are not slowing down your network or congesting it.	HIGH
15.	Network Data Requirement	10Mb per day per Pip 100Mb per day per Kiosk	Please calculate your total internet data requirement as needed.	HIGH
16.	DHCP Lease Time	Review as needed	DHCP lease time controls how long the router will allow a device to stay connected before forcing it to drop connection and reconnect. Some routers have a low default value of just 1 or 2 hours. Unless you change the setting on your router, it may keep disconnecting your devices very frequently and which will impact cashless payments in your store.	HIGH

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				To avoid this happening please review and update the DHCP lease time on your route. Your local IT provider can help you with this if needed.	