# **POS Minimum Hardware Requirements**

## Server

The Server is the one computer which does all of the work. Since Windows is a multi-tasking operating system, the Server can also be at the same time a Client and do other tasks.

The functions of the Server will not be visible to anyone using it as a workstation. It is important though, that since it can be used for other tasks that the Server has adequate hardware resources to complete the many tasks it will be given.

We would recommend a workstation that uses an Intel i3 (or faster) dual-core processor (or AMD equivalent), which runs a Microsoft supported version of Windows Pro comfortably.

### Recommended hardware specifications for a server:

- Intel i3 CPU @ 3GHz (or better) 8th Generation or higher
  - **Note:** Intel Atom processors are <u>not</u> recommended.
- 8GB of RAM
- Windows 10 Pro if not available Windows 11 Pro
- 256GB HDD Minimum
- Wired network connection (Ethernet Port)

#### NOT SUPPORTED:

- Windows XP
- Windows Vista
- POSReady7
- Windows 7 Professional
- Home edition of ANY Windows Operating System
- Linux or Macintosh Operating Systems
- Note: Microsoft ended support for Windows 7 on January 14, 2020 and will not issue security updates

#### • NOT RECOMMENDED:

- Windows 8 Pro
- Windows 8.1 Pro

For best performance, the server computer should only be running as a POS server and located away from heat and liquids (ie. not in a kitchen).

**Important:** Please understand that Imagatec Helpdesk support are unable to improve performance and/or stability of server hardware that fall below the minimum hardware specifications recommended above.

The server computer will need a static IP address set in the same IP range as modem/router/gateway. VNC needs to be installed and the firewall needs to be configured to allow VNC and HTTP (web) connections.

**Note:** With the above taken into consideration, Imagatec recommends using a Laptop that meets minimum hardware requirements for the POS server. This will provide a single piece of hardware that

has a small footprint, allowing it to be stored with minimal impact on space, and includes its own built-in battery, which gives you vital time to close POS and shutdown the laptop in the event of a sudden power outage.

## Client

The POS Client computer connects to the server and displays the POS for use by operators.

In a retail environment, iPOS is best suited to using the specific Retail POS units. These units are robust and have built in features like a touch screen. They look professional and are built for a retail food environment. Under the hood these units are standard PC's.

We would recommend any Pentium dual-core based (or equivalent) workstation, which runs a Microsoft supported version of Windows Pro comfortably, as adequate for the job. Internet Explorer should be updated to version 10.0 or later.

### Recommended hardware specifications for a client:

- Intel Quad-core CPU @ 2Ghz (ie. intel Celeron j1900 Quad-Core or better)
  - **Note:** Intel Atom processors are <u>NOT</u> recommended.
- 4GB of RAM
- Windows 10 Pro
  - NOT SUPPORTED:
    - Windows XP
    - Windows Vista
    - POSReady7
    - Windows 7 Professional
    - Home edition of ANY Windows Operating System
    - Linux or Macintosh Operating Systems
    - Note: Microsoft ended support for Windows 7 on January 14, 2020 and will not issue security updates

#### • NOT RECOMMENDED:

- Windows 8 Pro
- Windows 8.1 Pro
- Internet Explorer 10.0 (or above)
- Wired network connection

The client will need a static IP address set in the same IP range as the server and modem/router/gateway. VNC needs to be installed and the firewall needs to be configured to allow VNC connections.

**Important:** Please understand that Imagatec Helpdesk support are unable to improve performance and/or stability of client terminals that fall below the minimum hardware specifications recommended above.

### Optional hardware that can be used as a client for some version of POS:

- Imagatec PiPOS Client\*
- Apple iPad\*
- Apple iPod\*
- Apple iPhone\*
- Selected Samsung Android phones and tablets\*
- \* Please contact Imagatec to determine if your POS supports the above Optional hardware

## **Make Line Monitor**

We would recommend any Pentium dual-core based (or equivalent) workstation, which runs Windows professional comfortably, as adequate for the job. The MLM computer should also include speakers to alert kitchen staff of new orders.

#### **Recommended hardware specifications for a client:**

- Intel Quad-core CPU @ 2Ghz (ie. intel Celeron j1900 Quad-Core or better)
  - **Note:** Intel Atom processors are <u>NOT</u> recommended.
- 4GB of RAM
  - Windows 10 Pro
  - NOT SUPPORTED:
    - Windows XP
    - Windows Vista
    - POSReady7
    - Windows 7 Professional
    - Home edition of ANY Windows Operating System
    - Linux or Macintosh Operating Systems
    - Note: Microsoft ended support for Windows 7 on January 14, 2020 and will not issue security updates

#### • NOT RECOMMENDED:

- Windows 8 Pro
- Windows 8.1 Pro
- Internet Explorer 10.0 (or above)
- · Wired network connection

The MLM computer will need a static IP address set in the same IP range as the server and modem/router/gateway. VNC needs to be installed and the firewall needs to be configured to allow VNC connections.

#### Optional hardware that can be used as a client for some version of POS:

- Imagatec PiPOS MLM\*
- Apple iPad\*
- Selected Samsung Android tablets\*
- \* Please contact Imagatec to determine if your POS supports the above Optional hardware

## **Customer Service Screen**

This can be run on a monitor connected to one of the the front POS terminals (or server) if the terminal/server hardware supports additional monitors. If a separate computer is to be used for CSS, we would recommend any Pentium dual-core based (or equivalent) workstation, which runs Windows professional comfortably, as adequate for the job. Internet Explorer should be updated to version 8.0 or later.

## Recommended hardware specifications for a client:

- Intel Dual-core CPU @ 2Ghz
- 4GB of RAM
- Windows 10 Pro

#### • NOT SUPPORTED:

- Windows XP
- Windows Vista
- POSReady7
- Windows 7 Professional
- Home edition of ANY Windows Operating System
- Linux or Macintosh Operating Systems
- Note: Microsoft ended support for Windows 7 on January 14, 2020 and will not issue security updates

#### • NOT RECOMMENDED:

- Windows 8 Pro
- Windows 8.1 Pro
- Internet Explorer 10.0 (or above)
- Wired network connection

The CSS computer will need a static IP address set in the same IP range as the server and modem/router/gateway. VNC needs to be installed and the firewall needs to be configured to allow VNC connections.

## Optional hardware that can be used as a client for some version of POS:

- Imagatec PiPOS CSS\*
- Apple iPad\*
- Selected Samsung Android tablets\*

## Network

If a site has more than one client workstation, it will require a network for the workstations to communicate.

<sup>\*</sup> Please contact Imagatec to determine if your POS supports the above Optional hardware

- Single Computer as POS server and POS client with IP printer and EFTPOS:
  - Unordered List ItemModem/router with a built in 4 port switch
  - Unordered List ItemStable Internet connection with a static external IP address
- Separate POS server and POS client computers with IP printers and EFTPOS:
  - Unordered List ItemModem/router
  - Unordered List ItemStable Internet connection with a static external IP address
  - Unordered List ItemNetwork switch with enough ports to accommodate all POS computers and IP printers

Generally, a modem/router (with a built in 4 port switch) is usually supplied with an ADSL Internet Connections, this can be used to run the network and connect to the Internet. If there are not enough Ethernet ports available in the modem/router, an additional network switch will be required.

In stores where the client computers are located out the front, away from the modem/router, it is recommended that a network switch be installed out the front as well, with all client computers connected directly to it to reduce networking problems occurring after initial store run-up.

## **Wireless Options**

Imagatec DOES NOT recommends using wireless connections between the POS server and POS clients. A wired network connections should be used at all times, as wired network connections will always be more reliable than wireless network connections.

In the event that there is no possible way of providing a wired connection (ie. if a cable cannot be safely laid), a wireless connection will still technically work, however performance and stability will suffer each time the wireless network connection congested or decreases in strength – if the wireless network drops out, the POS, MLM and/or CSS will no longer work.

If a POS client, MLM or CSS computer uses a wireless adapter, it will still need a static IP address set in the same IP range as the server and modem/router/gateway and should have VNC installed.

## **Printers**

At least one POS-type printer (commonly referred to as a "docket" printer) is required for POS to print customer receipts and dockets. Ideally, a site will have separate printers RECEIPTS and DOCKETS.

iPOS requires the Receipt and Docket printer to be installed and working in Windows and able to print a Windows Test Print at a minimum. If the printer is not working in Windows, POS will not be able to use it.

Printers can come in 3 different variations:

- IP the only variation recommended by Imagatec as it will provide the greatest compatibility with modern hardware
- COM will work with POS if the hardware and operating system support the printer itself. There are known compatibility problems with COM printers and Microsoft Windows 10.
- USB not recommended by Imagatec. USB printers suffer from instability and disconnection problems.

These printers not only print receipts, but are commonly used to control the cash drawer. There ability to control cash drawers provides greater flexibility when a site is being setup, as it allows a single cashdrawer to be used between multiple POS terminals, negating the need to place a POS terminal at every location a cash drawer is required.

POS printers are not a normal item and are only manufactured for POS applications - they are not the same as regular A4 printers used for printing documents. They therefore require specialised control and are more expensive because of the extra features they have built in to support POS systems and environments.

Receipt printers are directly controlled by iPOS. All receipt printers must be able to accept EPSON, ESCPOS or STAR printer commands. These 3 command sets are industry standard and most manufacturers will have a printer that supports them in an emulation mode.

POS also supports printing certain "reports" on a docket/receipt printer. If reports need to be printed, a "reports" printer needs to be configured, although this can be done on an existing printer if its drivers support this. \\Note: for report printing, due to HTML printing support in the Epson Advanced Printer Drivers.

\*Please note that we have found that not all manufacturers provide FULL POS support in their printers, which means that some may be able to print receipts, but not daily summaries or ope the cash drawer. Additionally, not all printers work the same way, with configuration being difficult to perform remotely. For this reason, Imagatec recommends Epson IP docket printers.

Additionally, you are not limited to printing reports while on site. Imagatec's POS systems are internet aware, with manager back office access allowing reports to be opened and printed remotely to any printer connected to the computer being used. This includes all various versions of bubble jet, laser and dot matrix printers on the market. As this is a personal preference and not a requirement of iPOS to print reports, Imagatec does not certify or support report printers. Any printer which can print from other applications on your workstation can, and will print iPOS reports.

## Recommended Docket/Receipt printers for use with POS:

- Epson TM-T88 Ethernet Thermal
- Epson TM-T82 Ethernet Thermal (low volume environments)
- Epson TM-U220 Ethernet Dot-Matrix (kitchen environments)

### Recommended Docket/Receipt printers for use with CLOUD POS:

- Imagatec PiPOS Print Server with any of the Epson printers mentioned above
- Epson TM-T88i Intelligent Ethernet Thermal
- \* Please contact Imagatec if you need assistance in choosing a printer to suit your needs and/or POS.

## **Cash Drawers**

These are dedicated POS devices and, as such, are rarely available from standard computer stores. Most (but certainly not all drawers) are 24V devices, a voltage which is not normally available from a

standard computer. Therefore various methods have been devised to trigger cash drawers.

Dedicated POS terminals usually have built-in cash drawer ports which require drivers from the manufacturer. iPOS does support some (but not all) of these devices. The most common, reliable and recommended method is to trigger the cash drawer from the back of a receipt printer.

## **Equipment Life Cycle**

POS equipment by its very nature gets a hard life. It is in a harsh environment and used for very long periods of time. Therefore it is important to note that the equipment will have a short life cycle with heavy use.

Most of the current specialized POS workstations come with optional 3 year next day onsite warranty and we strongly recommend that you take these options. This will cover the equipment for the expected life of the machine.

## **Certified Equipment**

- \* Indicates this **is not** supported due to security and/or stability concerns that can impact businesses financially.
- ~ Indicates problems with stability that makes it unreliable. Imagatec recommends against using this.

iPOS uses ASP which is only available in Windows Operating Systems. Linux, Apple and other operating systems cannot be used as a Server. Imagatec is increasing support for other operating systems as Clients only. However they will still be restricted in what they can do as most POS equipment only supports Windows Operating Systems.

#### \*Windows XP Home

Not supported. Does not include required server software. Considered extremely insecure. https://support.microsoft.com/en-au/help/14223/windows-xp-end-of-support

#### \*Windows XP Professional (SP3+)

Not Supported. Microsoft extended support has ended 8 April 2014. Considered extremely insecure. https://www.microsoft.com/en-au/windowsforbusiness/end-of-xp-support

#### \*Windows Vista

Not supported. Unstable Platform.

#### \*Windows 7

Not Supported. Microsoft extended support has ended 8 April 2014. Considered insecure. https://www.microsoft.com/en-au/windows/windows-7-end-of-life-support-information

#### ~Windows 8

Not supported.

## ~Windows 8 Pro

Not recommended.

#### ~Windows 8.1

Not supported.

#### ~Windows 8.1 Pro

Not recommended.

#### **Windows 10 IOT**

Not supported.

## Windows 10 IOT Enterprise Edition

Supported.

#### Windows 10 Professional

Supported. Strongly recommended

#### Windows Server 2008r2

Not Supported. Microsoft extended support ended on January 14, 2020.

#### Windows Server 2012 or later

Supported. For use in network with more than 10 workstations

#### \*Small Business Editions

Not supported. Installs versions of SQL Server, Exchange and Share Point services, which take resources and complicate maintenance and stability.

## **Workstations**

### **Supported Dedicated Retail POS units (as server or slave)**

AURES 690L J2 680

### **Supported Dedicated Retail POS units (as slave only)**

**NEXA AIO** 

## **Desktop PC & Laptops**

Any recent machine than meets the recommended specifications listed above.

It is recommended that PC's are fitted with touch screens to make them easier to use.

### **Touch Screens**

ELO resistive or capacitive screens (serial or USB) Microtouch 3M resistive or capacitive screens (serial or USB)

## **Receipt Printers**

**BIXOLON SRP-330II** 

STAR TSP200, TSP700

EPSON TM-T82II, TM-T88VI, TM-U220B (Highly recommended due to high quality)

#### **Cash Drawers**

All 24V Cash drawers which support remote triggering from a cable with a RJ12 plug.

#### \*ALL IBM Cash Drawers.

These have a choice of a proprietary IBM cable or a cable that ends with a RJ12 plug. Choose the RJ12 plug. **iPOS does not support the OPOS or UPOS standard being marketed by IBM.** 

## **Equipment Unsuitable for iPOS**

This list is where our testing has shown that the equipment does not support all of the functions expected by iPOS. Where possible iPOS relies on industry standards and testing is done against these standards; our results may contradict manufacturer's claims

## **Receipt Printers**

Bubble Jet, Ink Jet and Laser Printers are NOT suitable as Receipt Printers.

#### **IBM 4610-1NR**

Is able to act as a Receipt Printer for iPOS, but the EPSON emulation in the printer does not support the EPSON windows driver for printing reports like the Daily Summary from Internet Explorer.

## **Known Conflicting Software**

## Google, Yahoo and AntiVirus Toolbars for Internet Explorer

Most toolbars try to block pop-up and clipboard access. Antivirus toolbars also try to confirm the identity of iPOS over the internet to their servers, slowing iPOS down.

## **Shopping Toolbars for Internet Explorer**

These toolbars also try to help by blocking pop-ups, but only so they can add their own shopping recommendations in their own pop-ups. These are damaging in a business environment and should be removed.

**Antivirus Software which blocks scripts or has a Personal Firewall** Some Antivirus Software can be configured to allow iPOS to operate, however not all will work without problems.

## **Imagatec Supplied Hardware**

All hardware supplied by Imagatec meets the current specifications necessary to run Imagatec's POS software. As time passes, operating system upgrades and features and additional functionality developed in Imagatec's POS software may require hardware to be upgraded. It is therefore sound

business practice to budget to replace computer hardware on a regular basis.

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