



# Microsoft Windows 10 IoT Enterprise for Dell Wyse 5070 thin client

## Release Notes

Software releases are created to correct defects, make enhancements, or add new features. These releases are tested on all current, actively shipping platforms and operating systems, as applicable. This release notes contain details on the supported platforms, any changes in the configuration settings and licensing details as well. The bug fixes along with the workarounds are documented in the release notes. Any changes in the feature functionality from an end-user perspective are listed with the description of each feature at a high level.

**Release Date:** June 2018

## Contents

|                                  |    |
|----------------------------------|----|
| Release type and definition..... | 1  |
| Supported features.....          | 2  |
| Hardware capability.....         | 11 |
| Known issues.....                | 15 |
| Supported peripherals.....       | 15 |
| Used and free space details..... | 17 |
| Operating system components..... | 17 |
| QFEs.....                        | 19 |

## Release type and definition

This release note contains information for Microsoft Windows 10 IoT Enterprise Redstone 1 image release on Wyse 5070 thin client.

**Table 1. Release detail and specification**

| Release detail             | Specification   |
|----------------------------|---|
| <b>Platform</b>            | Wyse 5070 thin client   |
| <b>Operating system</b>    | Windows 10 IoT Enterprise   |
| <b>Product version</b>     | 10.0  |
| <b>Build version</b>       | 10.03.06.05.18.001  |
| <b>System type</b>         | 64-bit operating system   |
| <b>Supported languages</b> | <ul style="list-style-type: none"> <li>• English—en-US</li> <li>• German—de-DE</li> </ul> |

| Release detail                            | Specification   |
|---|---|
|   | <ul style="list-style-type: none"> <li>French France—fr-FR</li> <li>French Canada—fr-CA</li> <li>Italian—it-IT</li> <li>Spanish—es-ES</li> <li>Japanese—ja-JP</li> <li>Korean—ko-KR</li> <li>Chinese Simplified—zh-CN</li> <li>Chinese traditional—zh-TW</li> <li>Brazilian Portuguese—pt-BR</li> </ul> |
| <b>Supported USB Imaging tool version</b> | 3.1   |
| <b>Wyse Management Suite package Name</b> | WIN10_5070_July2018.exe   |
| <b>Build size</b>                         | 2,666,384,804 bytes   |
| <b>BIOS version</b>                       | 1.1.0   |

**CAUTION:** Please follow proper write filter and Windows Page File usage instructions at all times. Such instructions include making sure that the write filter is enabled during regular use and is disabled only temporarily by an administrator when required for image upgrades, applying security patches, registry changes and application installation. The write filter should be re-enabled as soon as such tasks are completed. Such instructions further include never enabling the Windows Page File feature during regular use of the thin client. Any operation of a Dell Wyse Windows Embedded Thin Client with the write filter turned off during regular use and/or with the Windows Page file enabled will prematurely wear out your Flash/SSD storage, decrease performance and decrease the lifespan of the product. Dell is not responsible for, and will not, warrant, support, repair or replace any thin client device or component that fails to operate properly due to a failure to follow these instructions.

## Supported features

The following features are supported in this release:

## Threat Defense

Dell Data Protection | Threat Defense Agent (powered by Cylance) version 2.0.1422.6 detects and blocks malware before it can affect your computer. Cylance uses a mathematical approach for malware identification. It uses machine learning techniques instead of reactive signatures, trust-based systems, or sandboxes. Dell Data Protection | Threat Defense analyzes potential file executions for malware in the operating system.

## Connection brokers

- VMware Horizon client is updated to version 4.5.0.8090.
- Citrix Receiver is updated to version 14.8.0.1010.
- Ericom WebConnect is updated to version 7.5.1.

## Out-of-Box driver install

All the respective device drivers are pre-installed in the operating system.

## Dell wallpapers

Older wallpapers and themes are replaced with the new Dell wallpapers and themes.

## XML driven PowerShell scripts

Customization scripts are ported to the PowerShell scripts, and are based on the XML file input.

## Log files for customization

A log file is created for the customization scripts where you can view the overall script execution.

## User accounts

You can log in as an administrator or as a standard user.

The following are the login credentials for user and administrator accounts:

**Table 2. Login credentials**

| Account detail         | Password   |
|------------------------|------------|
| User                   | DellCCCvdi |
| Admin                  | DellCCCvdi |
| TightVNC—Administrator | DELL       |
| BIOS—Administrator     | Fireport   |

## Flash.sys

Hostname calculation allows you to enable and disable the Hostname calculation in flash.sys.

The following are the features of Hostname calculation:

- You can disable or enable the Hostname calculation.
- You must ensure that altering the MAC ID for a client does not perform a Hostname calculation.
- If you require a Hostname calculation to perform after a change in MAC ID (NIC card change), then you must use the **MINWITHNET** option.

## Event Viewer log preservation

Event Viewer log preservation feature allows you to enable or disable Event Viewer log saving when the File Based Write Filter (FBWF) is on. This feature enables you to collect event logs if they are required for debugging or analysis purposes.

# Dell Thin Client Application

Dell Thin Client Application is a replacement for Client Information Application with a new User Interface (UI). You can view and configure thin client device, system shortcuts, custom fields, RAM disk, autologon, and CAD map.

## NOTE:

- If the Write filter is disabled on the thin client with 4 GB RAM, the default RAM disk size is set to 512 MB. If the Write filter is enabled, the default RAM disk size is set to 100 MB.
- By default, RAM disk size is 512 MB for thin clients with 8 GB RAM.

# Internet Explorer 11

- **Performance enhancements**—Microsoft has included support for web standards like CSS animations, HTML5 spell checking, and improved JavaScript performance.
- **Security enhancements**—The main security addition to Internet Explorer 11 is **Enhanced Protected Mode**, which locks down parts of the Windows operating system, preventing the browser from accessing the operating system.

The following Internet Explorer 11 features are customized by default:

- First run customizations are disabled.
- Internet Explorer 11 enhanced protection mode is enabled.
- Internet Explorer cookies and cache are redirected to z : RAM Disk.
- Cache content is limited to 100 MB.
- Browsing history is cleared when you exit Internet Explorer.

# USB redirection

USB redirection is applicable for all users of the client machine with all the published XenDesktop irrespective of the setting **Simplify device connections for me** in the XenDesktop connection preferences user interface.

# ENERGY STAR specification

Windows 10 IoT Enterprise on Wyse 5070 thin client is ENERGY STAR version 6.0 compliant.

The following are the details in the Control Panel applet for power options:

- Supports Wake on LAN (WoL) during power off.
- Supports Idle state wake up from the sleep mode.
- Screen off timer is 10 minutes.
- Sleep timer is 15 minutes.

# Microsoft SCCM 2016 R2 information

System Center Configuration Manager (SCCM) is supported for standard deployment of images.

## BIOS details

Wyse 5070 thin client supports Dell BIOS and Wyse BIOS entries. The BIOS image is included in the latest Wyse Management Suite release.

## Keyboard filters

You can use keyboard filters to disable key presses or combinations. For example, you can disable common Windows key combinations such as Ctrl+Alt+Delete and Alt+Tab. You can disable any key or key combination.

## Windows Defender Advanced Threat Protection

Windows Defender Advanced Threat Protection feature helps enterprises to detect, investigate, and respond to advanced attacks on their networks.

## C-A-D tool

The C-A-D tool allows administrators to map the Ctrl+Alt+Del key combination of VDI applications to display the Ctrl+Alt+Del screen of the VDI application. If the C-A-D tool is enabled, you can use Ctrl+Alt+Del key combination for all VDI applications.

 **NOTE: By default, the C-A-D tool is enabled.**

## Sysprep using User Interface

The System Preparation tool (Sysprep) can now be configured using the inbuilt user interface. Using this tool the data gets cleared from the system and the system can be customized as per the requirement. The operating system will be like a new installation.

The Sysprep tool is used with other deployment tools to install the Microsoft Windows operating systems with minimal intervention by an administrator.

**Buildmaster.cmd** is the main program that calls other executable files that prepares the thin client for the Windows installation.

**Buildmaster.cmd** is located in the `<drive C>\Windows\Setup` on all installations.

Sysprep must always be run from the `<drive C>\Windows\Setup` and must run on the version of Windows with which it was installed.

The Sysprep tool contains the following two options:

- Custom Sysprep, see [Running the Custom Sysprep tool](#).
- Config Sysprep, see [Running the Config Sysprep tool](#).

## Prerequisites

The following are the pre-requisites to run the Custom Sysprep tool:

- Unified Write Filter must be in disable state.
- Logging framework must be available on your thin client.

- Power Shell script execution environment must be available.
- Custom Sysprep and Configuration Sysprep (SCCM) scripts must be available.
- Host Name calculation feature must be available.
- If the flash size or HDD size is more than 32 GB, reduce it to less than 32 GB for a better custom sysprep process.

**NOTE:** You cannot access the thin client if you terminate the Sysprep process. Make sure that the device is ready before you use the Sysprep tool.

**CAUTION:** After you run the Sysprep tool, enable the Unified Write Filter to ensure device security.

## Running the Custom Sysprep tool

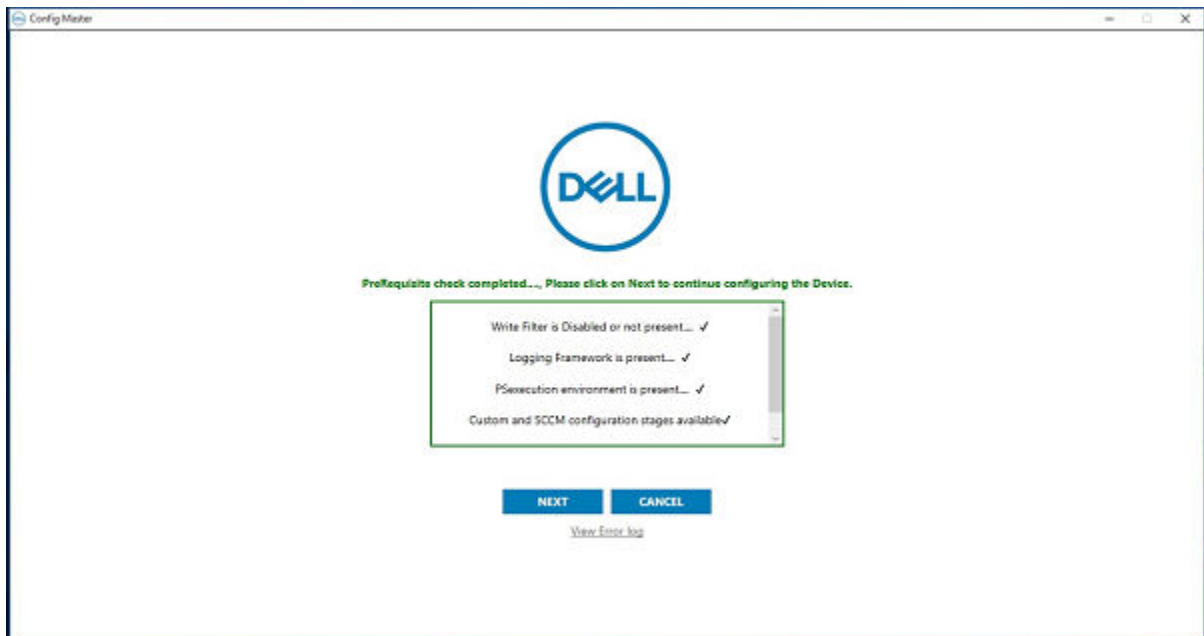
### About this task

When you access the operating system using Custom Sysprep, the operating system is configured according to OEM specification or customer requirement. The information in the user interface is saved as configuration files (.xml) and is used for the Custom Sysprep process. To run the Custom Sysprep tool, do the following:

### Steps

- 1 Go to <drive C>\Windows\Setup.
- 2 Right-click **Build\_Master.cmd**, and select **Run as administrator**.

The **Config Master** window is displayed.



**Figure 1. Config Master**

- 3 Click **Next**.  
The **Configuration** screen is displayed.

**Configurations**

Custom configuration     SCCM configuration

---

**Host Name calculation**

Enable     Disable     Retain current settings

---

**Configure Domain options**

User Name:

Password :

Domain :

OU :      Configure OU option   

---

**Configure local account credentials**

Enable local account credential changes

**Figure 2. Configurations**

- 4 In the **Configurations** section, select **Custom configuration**.
  - 5 In the **Host Name calculation** section, enable or disable hostname calculation.
  - 6 In the **Configure Domain Options** section, enter the appropriate values, and click **Save Credentials**.
  - 7 Click **OK** on confirmation dialog box.
  - 8 Select **Enable Local Account Credentials changes option** if you want the changes made to the credentials to take effect.
  - 9 Click **NEXT**.
- The **Credentials Manager** page is displayed.

**Credential Manager**

Admin  
User

User Name: Admin

Enter New Password: ●●●●●●●●

Confirm New Password: ●●●●●●●●

Save

Apply Cancel

**Figure 3. Credential manager**

- 10 On the **Credentials Manager** page, select the user for which credentials have to be changed and provide the login credentials.
- 11 Click **Save**.
- 12 Click **Apply** to save the changes.

This process may take 5–10 minutes to complete. The device turns off after the Sysprep process is complete.

**NOTE:** If SFC scan is enabled, the process may take 45–60 minutes to complete.

## Running the Config Sysprep tool

### About this task

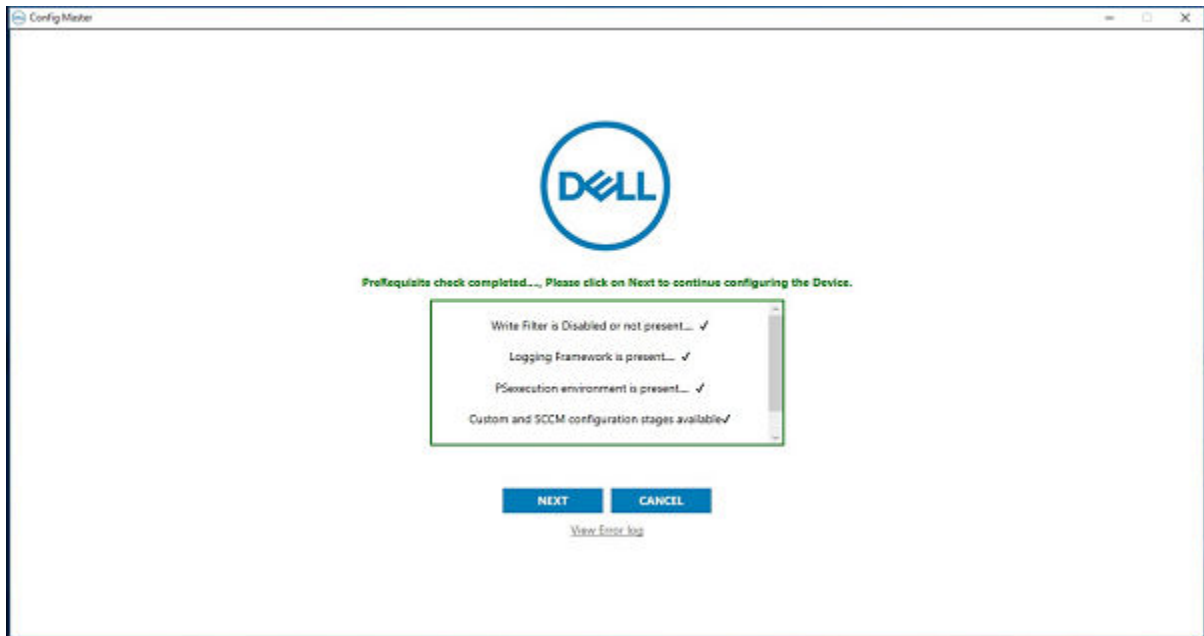
To run the Config Sysprep tool, do the following:

### Steps

- 1 Go to <drive C>\Windows\Setup.
- 2 Right-click **Build\_Master.cmd**, and select **Run as administrator**.

The **Config Master** window is displayed.





**Figure 4. Config Master**

- 3 Click **Next**.  
The **Configuration** screen is displayed.

**Configurations**

Custom configuration
  SCCM configuration

**Host Name calculation**

Enable
  Disable
  Retain current settings

**Configure Domain options**

User Name:

Password :

Domain :

OU :   Configure OU option

**Configure local account credentials**

Enable local account credential changes

**Figure 5. Configuration**

4 In the **Configurations** section, select **SCCM configuration**.

5 In the **Host Name calculation** section, enable or disable hostname calculation.

**NOTE:** The **Configure Domain Option** and **Configure local account credentials** field are grayed out.

6 Click **Apply** to save the changes.

After the completion of SCCM Config Sysprep, the HAgent service ends. You can now perform the pull operation using SCCM.

## Hardware support information

- Rich 4K display capability is provided.
- Option for 802.11 a/b/g/n/ac wireless is provided.
- Intel Celeron® J4105 CPU at 1.50 GHz (Economy configuration), Intel Pentium® Silver J5005 at 1.50 GHz (Standard and Extended configuration) is supported.
- Video adapters—DP to DVI, DP to VGA—is supported.
- Dynamic throttling for higher performance is supported.

# Hardware capability

## Display settings for Wyse 5070 thin client

By default, the Display Settings UI is available in both user mode and admin mode. Any changes to display preferences made through this UI is saved for the user.

**Table 3. Port preferences**

|  |  |
|--|--|
| Wyse 5070 thin client with Celeron processor | <ul style="list-style-type: none"> <li>Optional port can be used as second RJ-45, SFP, VGA, or second serial port.</li> <li>If wireless is enabled, the optional port cannot be used as second RJ-45 or SFP.</li> <li>When monitor is connected on USB-C port, DisplayPort 2 becomes inactive.</li> </ul>  |
| Wyse 5070 thin client with Pentium processor | <ul style="list-style-type: none"> <li>Optional port can be used as second RJ-45, SFP, VGA, or second serial port.</li> <li>If wireless is enabled, the optional port cannot be used as second RJ-45 or SFP.</li> <li>Back headset is disabled if front headphone is used.</li> <li>When monitor is connected on USB-C port, DisplayPort 2 becomes inactive.</li> <li>When the VGA monitor is present on VGA optional port, DisplayPort 3 becomes inactive.</li> </ul>   |
| Wyse 5070 Extended thin client               | <ul style="list-style-type: none"> <li>Optional port can be used as second RJ-45, SFP, or VGA.</li> <li>If wireless is enabled, the optional port cannot be used as second RJ-45 or SFP.</li> <li>Back headset is disabled if front headphone is used.</li> <li>When monitor is connected on USB-C port, DisplayPort 2 becomes inactive.</li> <li>When the VGA monitor is connected on VGA optional port, DisplayPort 3 becomes inactive.</li> <li>Power option is available on the first serial port.</li> <li>PCIe slot is available.</li> </ul> |

### Wyse 5070 thin client with Celeron processor

**Table 4. Wyse 5070 thin client with Celeron processor**

| Number of Displays | Supported display resolution |                                 |
|--------------------|------------------------------|---------------------------------|
|                    | 4K resolution <sup>1</sup>   | Non- 4K resolution <sup>2</sup> |
| One display        | Yes                          | Yes                             |
| Two displays       | Yes                          | Yes                             |
| Three displays     | No <sup>3</sup>              | Yes <sup>3</sup>                |

<sup>1</sup> 4K resolution—3840 x 2160 @ 60 Hz

- 2 Non-4K resolution—Up to 2560 x 1600 @ 60 Hz
- 3 VGA port does not support 4K display. However, it supports a display with 1080p screen resolution.

**Table 5. Ports**

| Ports                 | DP1 | DP2             | VGA              | USB Type-C      |
|-----------------------|-----|-----------------|------------------|-----------------|
| Monitor priority      | 1   | 2B <sup>2</sup> | 3                | 2A <sup>2</sup> |
| 4K display resolution | Yes | Yes             | No <sup>1</sup>  | Yes             |
| Non-4K resolution     | Yes | Yes             | Yes <sup>1</sup> | Yes             |

- 1 VGA port does not support 4K display. However, it supports a display with 1080p screen resolution.
- 2 DP2 and USB Type-C port are mutually exclusive with USB Type-C port taking higher priority.

**Wyse 5070 thin client with Pentium processor**

**Table 6. Wyse 5070 thin client with Pentium processor**

| Number of Displays | Supported display resolution |                                 |
|--------------------|------------------------------|---------------------------------|
|                    | 4K resolution <sup>1</sup>   | Non- 4K resolution <sup>2</sup> |
| One display        | Yes                          | Yes                             |
| Two displays       | Yes                          | Yes                             |
| Three displays     | No <sup>3</sup>              | Yes                             |

- 1 4K resolution—3840 x 2160 @ 60 Hz
- 2 Non-4K resolution—Up to 2560 x 1600 @ 60 Hz
- 3 If you connect three displays, two monitors will have 4K resolution and one monitor will have 2560 x 1600 @ 60 Hz.

**Table 7. Ports**

| Ports                 | DP1 | DP2             | DP3             | VGA             | USB Type-C      |
|-----------------------|-----|-----------------|-----------------|-----------------|-----------------|
| Monitor priority      | 1   | 2B <sup>2</sup> | 3B <sup>3</sup> | 3A <sup>3</sup> | 2A <sup>2</sup> |
| 4K display resolution | Yes | Yes             | Yes             | No <sup>1</sup> | Yes             |
| Non-4K resolution     | Yes | Yes             | Yes             | Yes             | Yes             |

- 1 VGA port does not support 4K display. However, it supports a display with 1080p screen resolution.
- 2 DP2 and USB Type-C port are mutually exclusive with USB Type-C port taking higher priority.
- 3 DP3 and VGA port are mutually exclusive with VGA port taking higher priority.

**Wyse 5070 Extended thin client with AMD GPU**

**Table 8. Wyse 5070 Extended thin client with AMD GPU**

| Number of Displays          | Supported display resolution |                                 |
|-----------------------------|------------------------------|---------------------------------|
|                             | 4K resolution <sup>1</sup>   | Non- 4K resolution <sup>2</sup> |
| One display                 | Yes                          | Yes                             |
| Two displays                | Yes                          | Yes                             |
| Three displays <sup>4</sup> | Yes                          | Yes                             |
| Four displays <sup>5</sup>  | Yes                          | Yes                             |
| Five displays               | No <sup>3</sup>              | Yes                             |
| Six displays                | No <sup>3</sup>              | Yes                             |

1 4K resolution—3840 x 2160 @ 60 Hz

2 Non-4K resolution—Up to 2560 x 1600 @ 60Hz – Support only up to four monitors with 4K screen resolution @60 Hz.

3 If you connect five or six displays, four monitors will have 4K resolution and other monitors will have a maximum resolution of 2560 x 1600 @ 60 Hz.

4 For three displays, Dell recommends that you configure first two 4K displays on the main board (DP1~DP3), and the third 4K display on AMD GPU card.

5 For four displays, Dell recommends that you configure first two 4K displays on the main board (DP1~DP3), and the remaining two 4K displays on AMD GPU card.

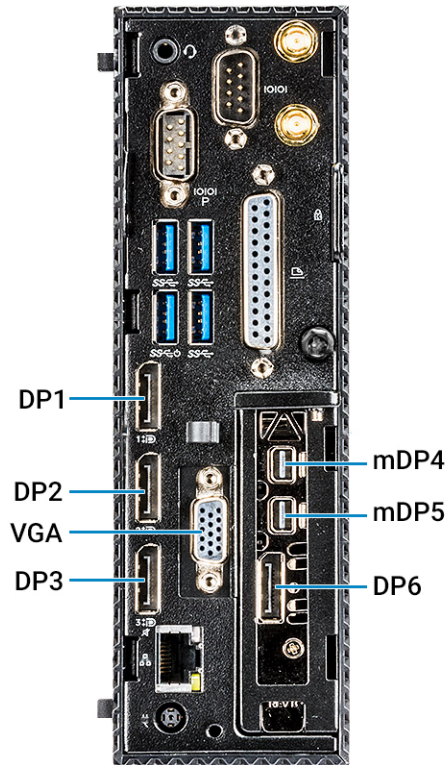


Figure 6. Ports of Wyse 5070 Extended thin client

Table 9. Ports

| Ports                        | DP1 | DP2             | DP3             | VGA              | USB-C           | mDP4 <sup>3</sup> | mDP5 <sup>4</sup> | DP6 <sup>5</sup> |
|------------------------------|-----|-----------------|-----------------|------------------|-----------------|-------------------|-------------------|------------------|
| <b>Monitor priority</b>      | 1   | 2B <sup>6</sup> | 3B <sup>7</sup> | 3A <sup>7</sup>  | 2A <sup>6</sup> | 4                 | 5                 | 6                |
| <b>4K display resolution</b> | Yes | Yes             | Yes             | No <sup>1</sup>  | Yes             | Yes               | Yes               | Yes              |
| <b>Non-4K resolution</b>     | Yes | Yes             | Yes             | Yes <sup>2</sup> | Yes             | Yes               | Yes               | Yes              |

- 1 VGA port does not support 4K display. However, it supports a display with 1080p screen resolution.
- 2 VGA port supports 1080p screen resolution.
- 3 mDP4 port refers to the top mDP port of the AMD GPU slot.
- 4 mDP5 port refers to the middle mDP port of the AMD GPU slot.
- 5 DP6 refers to the bottom DP port of the AMD GPU slot.
- 6 DP2 and USB Type-C port are mutually exclusive with USB Type-C port taking higher priority.
- 7 DP3 and VGA port are mutually exclusive with VGA port taking higher priority.

**Monitor priority**—The following order defines the monitor priority set on Windows 10 IoT Enterprise for Wyse 5070 thin client:

- DP1 > DP2 > DP3 > mDP4 > mDP5 > DP6
- DP1 > USB-C > DP3 > mDP4 > mDP5 > DP6
- DP1 > DP2 > VGA > mDP4 > mDP5 > DP6
- DP1 > USB-C > VGA > mDP4 > mDP5 > DP6

**Audio capability**—Audio is supported on all DP ports except DP3.

## Known issues

**Table 10. Known issues**

| Issue number | Description   | Workaround  |
|--------------|---|---|
| WC-684       | Citrix Receiver opens in the minimized mode in the Wyse Easy Setup shell.   | No workaround   |
| WC-652       | After performing HotPlug function on the DP1 port, display does not identify the first monitor when two monitors are connected.                                   | No workaround   |
| WC-633       | The window title for both <b>About Dell Wyse Easy Setup Shell</b> and <b>About Dell Wyse Easy Setup Admin</b> is displayed as <b>About Dell Wyse Easy Setup</b> . | No workaround   |
| WC-630       | RDP connection window launched without enabling Full Screen option cannot be maximized.   | No workaround   |
| WC-603       | When you add or set the newly created user account in auto logon, the <b>This user does not exist</b> error message is displayed.                                 | Logging into the account manually once will allow for subsequent logins to auto-login until the device is rebooted. |
| WC-594       | <b>Shrinkable OS volume</b> alert window is displayed when you run the ConfigMgr Sysprep in the SCCM configuration.   | If the volume shrinks, there is no impact to the device or the experience.  |
| WC-751       | Low memory issue observed when you play 4K videos using a local browser on multiple displays.   | No workaround   |
| BITS368006   | Intel virtual monitor option is displayed in Display Settings when the Intel display port—DP1, DP2, or DP3 is hot plugged to AMD display port mDP4, mDP5, or DP6. | No workaround   |
| WC-590       | <b>Speed and Duplex</b> option is not displayed in the Ethernet Status properties.  | No workaround   |

## Supported peripherals

**Table 11. Supported peripherals**

|       |  |
|-------|--|
| Audio | Dell Pro Stereo Headset - Skype for Business - UC350 |
|       | Professional Sound Bar - Skype for Business - AE515  |

|               |   |
|---------------|---|
|               | Dell USB Sound Bar - AC511                                |
|               | Jabra Pro 935 MS Wireless headset (Mono) - Office Centric |
| Cables        | DP to HDMI adapter  |
|               | DP to VGA adapter   |
|               | USB - C to DP adapter                                     |
|               | USB - C to HDMI adapter                                   |
|               | USB-C to VGA adapter                                      |
|               | USB to Serial adapter - Trendnet                          |
|               | USB to Serial adapter - Cables-2-Go                       |
| Input devices | Dell USB Wired Keyboard - KB216                           |
|               | Dell USB Wired Optical Mouse - MS116                      |
|               | Dell USB Wired Keyboard with Smart Card reader - KB813    |
|               | Dell Wireless Keyboard and Mouse - KM636                  |
|               | Dell USB Wired Laser mouse – Naruto                       |
|               | Japanese Keyboard – KB216                                 |
| Monitors      | Dell 24 Monitor - E2417H                                  |
|               | Dell 23 Monitor- E2318H                                   |
|               | Dell 22 Monitor - E2218HN                                 |
|               | Dell 20 Monitor - E2016H                                  |
|               | Dell 19 Monitor - E1916H                                  |
|               | Dell 24 Monitor - P2418HT (touch)                         |
|               | Dell 24 Monitor - P2417H                                  |
|               | Dell 23 Monitor - P2317H                                  |
|               | Dell 22 Monitor - P2217H                                  |
|               | Dell 22 Monitor - P2217                                   |
|               | Dell 20 Monitor - P2016                                   |
|               | Dell 24 Monitor - U2415                                   |
|               | Dell 43 Monitor - P4317Q                                  |



|            |   |
|------------|---|
|            | Dell 24 Monitor - MR2416  |
|            | Dell 24 Monitor - P2415Q 4K2K (UHD) monitor                                   |
|            | Dell UltraSharp 34 Monitor - P3418HW  |
|            | Dell UltraSharp 27 Monitor - U2518D   |
|            | Dell UltraSharp 27 Monitor - U2718Q (4K)                                      |
| Networking | Add On 1000 Base-T SFP transceiver (RJ-45) - 310-7225-AO                      |
|            | Allied Telesis 1 Gbps SFP transceiver - fiber connector - AT-SPSX-90          |
|            | Allied Telesis 100 Mbps SFP fiber transceiver AT-SPFX/2-90                    |
|            | Allied Telesis 10/100/1000 RJ-45 SFP transceiver - copper (NOT TAA) - AT-SPTX |
|            | Dell Finisar 1 GB SFP - FTLF8519P3BNL   |
|            | Dell Finisar 100 Mbps SFP - FTLF1217P2BTL-FC                                  |

## Used and free space details

**Table 12. Used and free space details**

| Platform              | Flash size | Used space <drive C> | Free space |
|-----------------------|------------|----------------------|------------|
| Wyse 5070 thin client | 32 GB      | 19.8 GB              | 6.34 GB    |
| Wyse 5070 thin client | 64 GB      | 19.8 GB              | 38.4 GB    |
| Wyse 5070 thin client | 128 GB     | 19.8 GB              | 97.8 GB    |


## Operating system components

**Table 13. Driver details**

|                      |   |
|----------------------|---|
| BIOS version         | 1.0.3   |
| Display Adapter      | AMD Radeon Graphics—23.20.768.0<br>Intel UHD Graphics—23.20.16.4933   |
| Ethernet Adapter     | Realtek PCIe GBE Family Controller—10.21.811.2017   |
| Audio                | <ul style="list-style-type: none"> <li>Intel Display Audio—10.24.0.3</li> <li>Realtek Audio—6.0.1.8378</li> </ul> |
| Wireless Adapter     | Intel® Wireless AC 9560—20.30.4.1   |
| Bluetooth            | Intel® Wireless Bluetooth®—20.50.1.2  |
| USB xHCI driver      | AMD USB 3.0 eXtensible Host Controller 1.0 (Microsoft)—10.0.14393.1794  |
| Wyse RAM Disk driver | 5.0.2183.5  |

|                      |  |
|----------------------|--|
|                      | If the Write filter is disabled on the thin client with 4 GB RAM, the default RAM disk size is set to 512 MB . If the Write filter is enabled, the default RAM disk size is set to 100 MB. By default, RAM disk size is 512 MB for thin clients with 8 GB RAM. |
| Flash.sys            | 1.0.7.11   |
| Dell Command Monitor | 9.3.1.320  |
| CAD-MAP-VDI          | 1.0.0.0  |

**Table 14. Common application, features, and files**

| <b>Application/features/files</b>              | <b>Version—if applicable</b>  |
|--|---|
| RDC  | 10.0.14393—RDP 10.2 is supported  |
| Citrix Receiver—Standard                       | 4.8.0.1010  |
|  | Citrix Online Plugin 14.8.0.1010  |
| Citrix HDX Real Time Media Engine              | 2.2.100.949   |
| VMware Horizon Client                          | 4.5.0.8090—In <b>Dell Thin Client Application and Programs and Features</b>   |
|  | 4.5.0—In VMware Horizon Client  |
| Ericom PowerTerm Interconnect for Thin Clients | 12.0  |
| SCCM 2016 client                               | 5.00.8412.1307  |
| Windows Media Player                           | 12.0.14393  |
| Internet Explorer                              | 11.00.14393   |
| Tight VNC                                      | 2.6.4.0   |
| Ericom connect web connect                     | 7.5.1   |
| .NET Framework                                 | 4.6.2   |
| Wyse Device Agent                              | 14.1.0.8  |
| Bit locker with TPM                            | Supported by default.<br> <b>NOTE: TPM 2.0 firmware is supported as a factory configuration.</b> |
| Windows Multi touch                            | Supported   |
| Windows Defender with latest definition        | 1.257.713.0   |
| Microsoft Management Console                   | Management Console 3.0  |
|  | Version 1607—OS Build 14393.1884  |
| Microsoft Silverlight                          | 5.1.50907.0   |

| <b>Application/features/files</b>                             | <b>Version—if applicable</b>           |
|---|--|
| Background Intelligent Transfer Service (BITS)                | Supported                              |
| MSXML   | Supported                              |
| XML Paper Specification (XPS)                                 | Supported                              |
| Network Access Protection                                     | Not Supported                          |
| Credential Roaming  | Supported                              |
| WPA2  | Supported                              |
| CredSSP   | Supported                              |
| Dell Wyse Wallpaper on All Users                              | Supported                              |
| DirectX   | 12                                     |
| <b>DellThinClientApplication.exe</b> —NewClient Application   | 10.0.0.13                              |
| <b>Unified Write Filter manager -Uwfmgr.exe</b> —File Version | 10.0.14393.1770                        |
| <b>UWF system tray UI – UWFTray.exe</b>                       | 1.0.4.6                                |
| <b>UWF Service – UWFSvc.exe</b>                               | 1.0.4.6                                |
| <b>NetXClean.exe</b>  | 3.0.0.8                                |
| <b>Disk_Size.exe</b>  | 3.0.0.5                                |
| <b>DeleteFreeSpace.exe</b>                                    | 1.2.1.0                                |
| Custom Sysprep support in scripts                             | Supported                              |
| Windows Time Service  | Supported                              |
| FI Core changes   | Scripts changes are part of the build. |
| CAD MAP Application   |  |
| <b>DWKbFilter.sys</b>   | 2.3.0.1                                |
| <b>DWKbFilterMon.exe</b>                                      | 2.2.0.4                                |
| <b>DWKbFilterWatchdog.exe</b>                                 | 2.2.0.4                                |

## QFEs

KB4048953 is added as part of this release. For more information, see [support.microsoft.com](https://support.microsoft.com).