

## Cynap Pure Series Mirroring Modes

WolfVision  
recommended  
Miracast and  
other possible  
Miracast modes



Cynap  
Pure Mini

Cynap  
Pure

Cynap  
Pure Pro

Cynap  
Pure SDM

## General Information

Keep your system up-to-date with the latest patches and drivers to ensure the best user experience and the highest level of security. Outdated systems may not be fully supported.

To ensure the highest level of security, Chromecast devices must regularly update their certificates and require Internet access to do so.

### General MS-MICE Information (Miracast over Infrastructure connection establishment protocol)

Cynap and Windows devices must be connected to your corporate network via Ethernet or a secure Wi-Fi connection (e.g. using WPA2-PSK or WPA2-Enterprise security). If the Cynap or Windows devices is connected to an open Wi-Fi connection, an MS-MICE connection can't be established.

### Cynap settings (Active MS-MICE):

If MS-MICE is enabled, the Cynap system offers the option to your Windows device to use MS-MICE. In this case UDP port 5353 is used for multicast DNS (mDNS) advertisement over an existing network.

The mDNS broadcast is sent to the local subnets of each network interface the Cynap Pure series is connected to. If mDNS is blocked in the network, the Miracast connection fails. In such case add a DNS entry at the existing DNS server to the Cynap Pure series hostname.

The DNS Hostname (device name) of the Cynap Pure series must be resolvable via your DNS servers. You can achieve this by allowing Cynap Pure series to register automatically via Dynamic DNS or manually creating an A or AAAA record for the Cynap Pure series hostname.

Cynap Pure series sends a beacon via the integrated radio module with information about which Miracast possibilities are available.

# Firewall Rules Miracast MS-MICE

## Firewall rules

Cynap Pure (series) has firewall rules that must be adhered to in order to allow successful network communications, and the corresponding services to be used. To use services with user defined addresses and ports, be sure these are not blocked by your firewall and security applications.

## Miracast (Wi-Fi Direct)

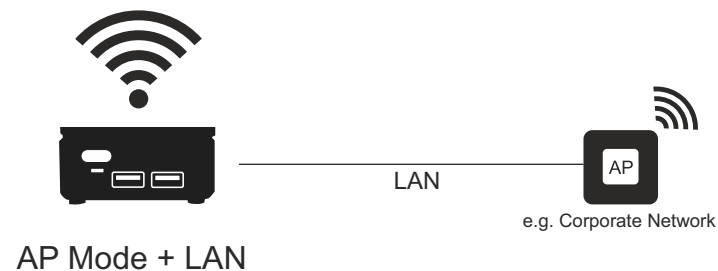
The Miracast (Wi-Fi Direct) connection operates in the 2.4 GHz band on channels 1, 6 or 11. When using Miracast (Wi-Fi Direct), make sure there is no channel overlapping in your corporate wireless environment. If there is some noise in the same channels are utilized for Wi-Fi Direct, the user experience and performance may be significantly degraded. For good quality and performance, the maximum distance to the Cynap Pure (series) up to 7 meters. It also depends on the installation situation.

For additional information, please refer to the “Network Integration Guide” at [wolfvision.com](http://wolfvision.com)

Function / Application	Port	Type	Inbound / Outbound	Description
<b>Miracast MS -MICE</b>				
Multicast DNS (mDNS)	5353	UDP	Inbound	Multicast DNS (mDNS 224.0.0.251)
DHCP	67 / 68	UDP	Inbound	DHCP communication between device and receiver
RTP Stream	19000 – 19007 19010 – 19017	UDP	Inbound	RTP media traffic port for delivering audio and video
RTSP Control	7236	TCP	Outbound	RTSP control port is used to establish and manage session
MS-MICE Control	7250	TCP	Inbound / Outbound	Control port on which Cynap family system listen for Miracast packets when over existing network mode is enabled
Touchback	50000	TCP	Outbound	This port is for touchback to send mouse events back between Cynap to the Windows computer. If this port is blocked, bi-directional inputs is not possible.
Hardware cursor extension	19020 – 19027 19030 – 19037	UDP	Inbound	Hardware cursor to reduce latency when using touchback.

## Cynap Pure Series: Mirroring modes

>> Mode: Access Point of Pure (Series) is active + Cynap Pure (Series) is connected with LAN to external AP



### Cynap Pure (Series) settings

#### Network

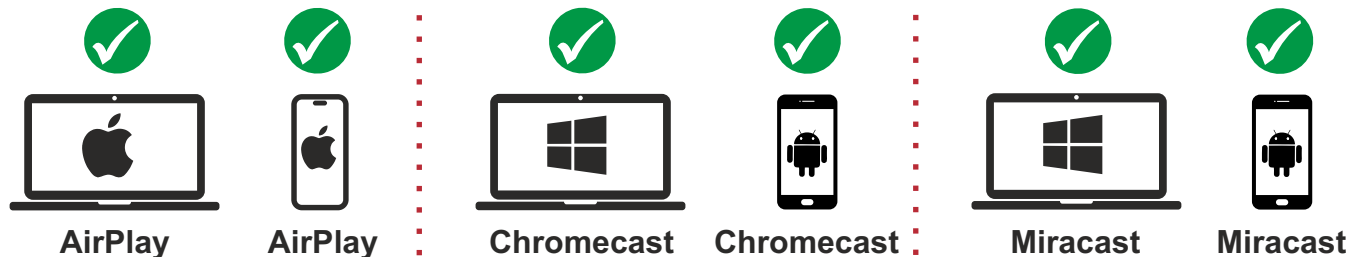
LAN: Connected  
WLAN (WiFi): Access Point Mode

#### Mirror

MS-MICE enable: Off

### Restrictions / Information

>> Mirroring via Miracast does not work if user device is connected to the SSID of Cynap Pure (Series)



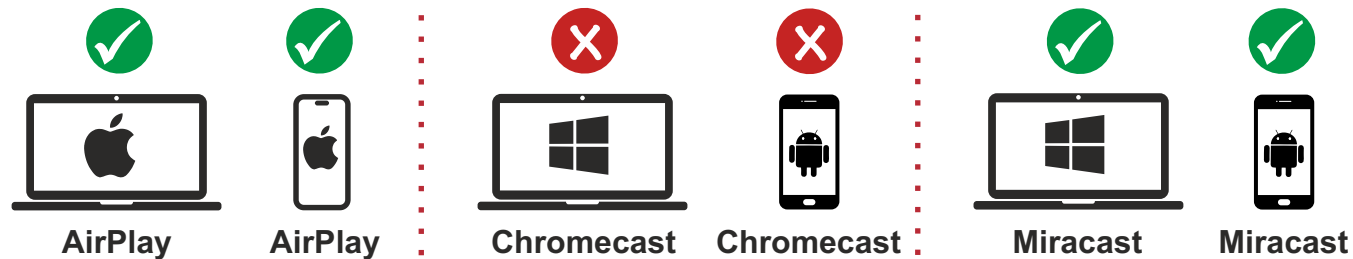
**RECOMMENDED**

## Cynap Pure Series: Mirroring modes

>> Mode: Access Point (AP) of Pure (Series) is active



AP Mode



### Cynap Pure (Series) settings

#### Network

LAN: Not Connected  
WLAN (WiFi): Access Point Mode

#### Mirror

MS-MICE enable: Off

### Restrictions / Information

>> Mirroring via Miracast does not work if Windows/Android user device is connected to the SSID of Cynap Pure (Series)

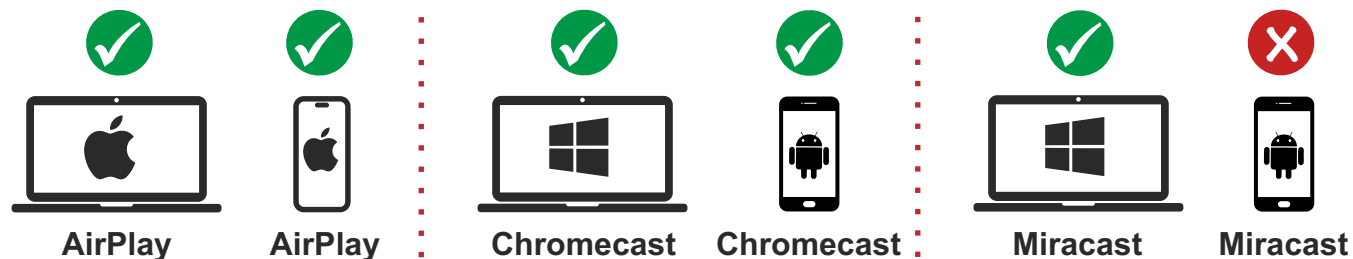
>> Chromecast: To ensure the highest level of security, Chromecast devices must regularly update their certificates and require Internet access to do so.

## Cynap Pure Series: Mirroring modes

>> Mode: Cynap Pure (Series) is connected via WiFi to external AP ("Infrastructure Mode"), MS-MICE is active & Cynap Pure (Series) is connected via LAN to external AP, MS-MICE is active



Infrastructure Mode & LAN  
MS-MICE active on WiFi & LAN



### Cynap Pure (Series) settings

#### Network

LAN: Connected  
WLAN (WiFi): Infrastructure Mode

#### Mirror

MS-MICE enable: On

### Restrictions / Information

>> Miracast mirroring does not work for Android and Windows 8.1 devices because MS-MICE is not supported

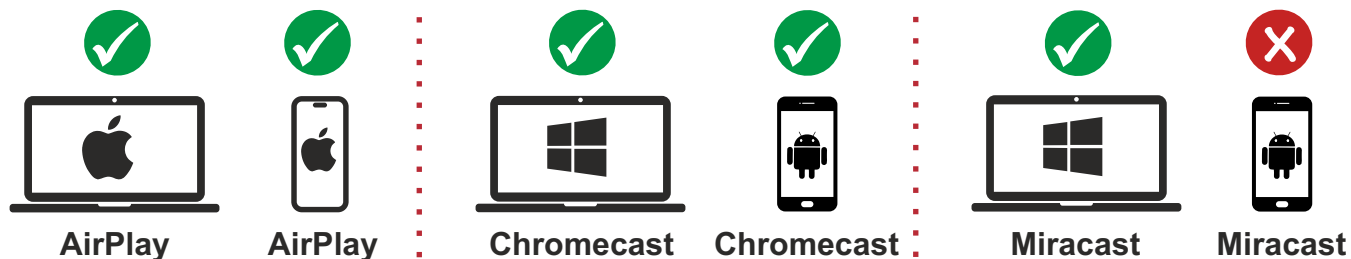
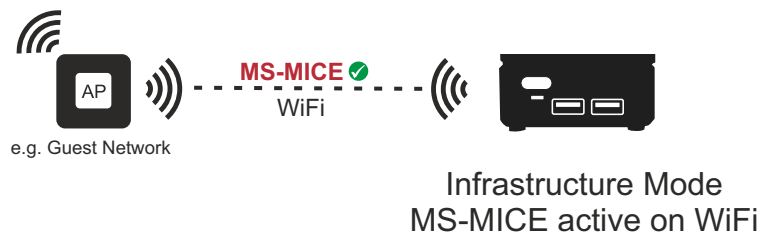
>> Miracast mirroring works for Windows (Win10 or higher) devices which are connected to WiFi or LAN (AP)

>> Windows devices (Win 10 or higher) can use WolfVision vSolution App or vSolution Cast app for mirroring as well

**RECOMMENDED**

## Cynap Pure Series: Mirroring modes

>> Mode: Cynap Pure (Series) is connected via WiFi to external AP ("Infrastructure Mode"), MS-MICE is active



### Cynap Pure (Series) settings

#### Network

LAN: Not connected  
WLAN (WiFi): Infrastructure Mode

#### Mirror

MS-MICE enable: On

### Restrictions / Information

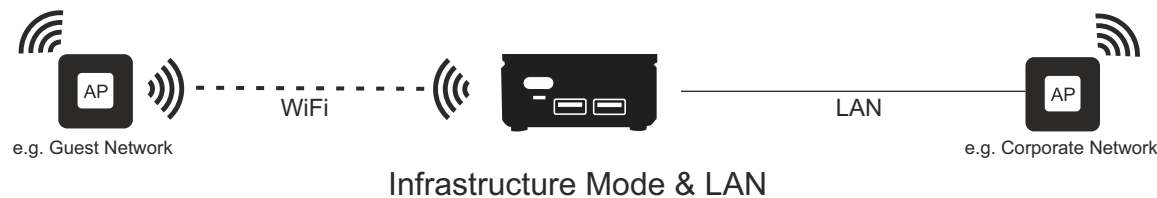
>> Miracast mirroring does not work for Android and Windows 8.1 devices

>> Miracast mirroring works for Windows (Win 10 or higher) devices which are connected to WiFi AP

>> Windows devices (Win 10 or higher) can use WolfVision vSolution App or vSolution Cast app for mirroring as well

## Cynap Pure Series: Mirroring modes

>> Mode: Cynap Pure (Series) is connected via WiFi to external AP ("Infrastructure Mode"), & Cynap Pure (Series) is connected via LAN to external AP



### Cynap Pure (Mini) settings

#### Network

LAN: Connected  
WLAN (WiFi): Infrastructure Mode

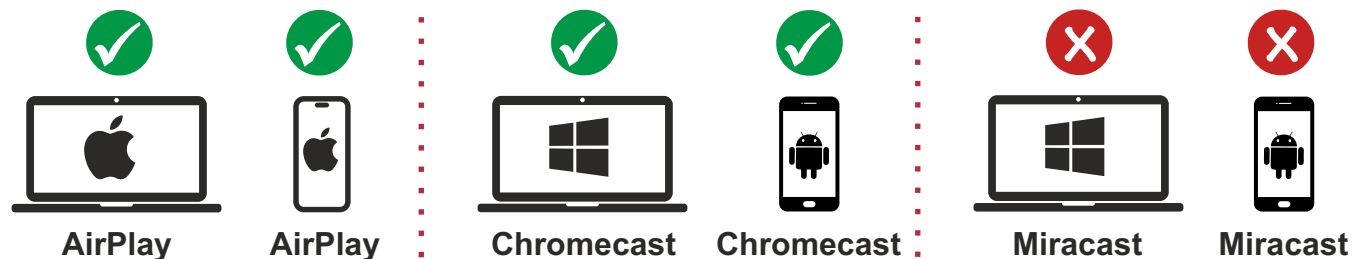
#### Mirror

MS-MICE enable: Off

### Restrictions / Information

>> Miracast mirroring does not work

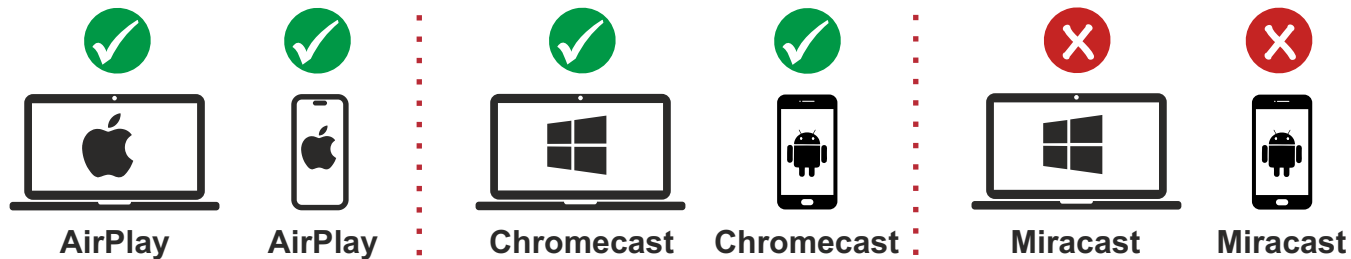
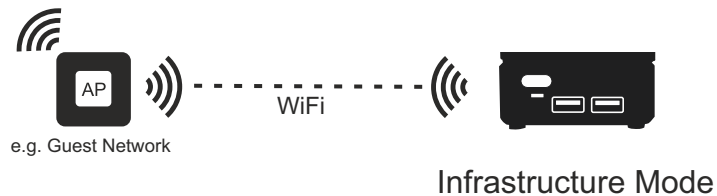
>> Windows devices (Win 10 or higher) can use WolfVision vSolution App or vSolution Cast app for mirroring as well





## Cynap Pure Series: Mirroring modes

>> Mode: Cynap Pure (Series) is connected via WiFi to external AP ("Infrastructure Mode")



### Cynap Pure (Series) settings

#### Network

LAN: Not connected  
WLAN (WiFi): Infrastructure Mode

#### Mirror

MS-MICE enable: Off

### Restrictions / Information

>> Miracast Mirroring does not work

>> Windows devices (Win 10 or higher) can use WolfVision vSolution App or vSolution Cast app for mirroring as well