

The logo for AirCastPro 3 features a stylized network icon consisting of a central white dot with several lines radiating outwards to smaller white dots, positioned above the letter 'A'. The text 'AirCastPro 3' is written in a large, white, serif font. A small 'TM' trademark symbol is located to the upper right of the word 'Pro'.

AirCastProTM 3

Mobile and Desktop Wireless Print Server

API GUIDE



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DISCOVERY

LOCATING AIRCASTPRO PRINTERS

AirCastPro Printers, by default, are broadcast over mDNS from AirCastPro.local, though AirCastPro gives users the ability to change the mDNS name.

As a result, we encourage developers to first search for available printers, then use the printer's DNS record to determine if it is an AirCastPro printer.

If you're unfamiliar with mDNS or Apple's Bonjour, you may want to download a free helper app. You can view local DNS records easily with the app, "Discovery - DNS-SD Browser", free on iPhone, iPad, and MacOS. The Discovery app will show all DNS-SD broadcasts on a local network, giving a wide scope of TXT records, fields, and their values. Get the app [here](#).

Apple makes **NetServiceBrowser** available in Swift, which is fairly straightforward to implement in your app to help you locate IPP/AirPrint capable printers:

```
self._netServiceBrowser?.searchForServices(ofType:"_ipp._tcp", inDomain:"local.")
```

NOTE: With AirCastPro 3, you can use either "_ipps._tcp" or "_ipp._tcp".

MDNS TXT RECORDS

AIRCASTPRO 3 WITH DEFAULT DNS

_ipp._tcp. (Internet Printing Protocol over HTTPS)

DNP DS620 @ aircastpro

aircastpro.local.

192.168.0.114:631

[fe80::1e08:3619:67fb:8760]:631

txtvers=1

qtotal=1

rp=printers/DNP_DS620

ty=AirCastPro 3, 1.1

adminurl=http://aircastpro.local./printers/DNP_DS620

note=AirCastPro

priority=0

product=(AirCastPro)

pdl=application/octet-stream,application/pdf,application/postscript,image/jpeg,image/png,image/pwg-raster,image/urf

URF=DM3

UUID=b5ab4cd7-0828-3d13-67a1-0061a6a8b17a

TLS=1.2

Color=T

Copies=T

printer-state=3

printer-type=0x104E



AIRCASTPRO 3 WITH CUSTOM DNS

DNP DS620 @ AllenChris

AllenChris.local.

192.168.0.114:631

[fe80::1e08:3619:67fb:8760]:631

txtvers=1

qtotal=1

rp=printers/DNP_DS620

ty=AirCastPro 3, 1.1

adminurl=https://AllenChris.local.:631/printers/DNP_DS620

note=AirCastPro

priority=0

product=(AirCastPro)

pdl=application/octet-stream,application/pdf,application/postscript,image/jpeg,image/png,image/pwg-raster,image/urf

URF=DM3

UUID=912c7b20-d100-327b-4aa5-d694e2c0657a

TLS=1.2

Color=T

Copies=T

printer-state=3

printer-type=0x104EPower Panel

Instead of searching strictly by DNS name or printer name, use the **_ipp._tcp/_ipps._tcp** record to find AirCastPro by reading specific key values:

note=AirCastPro

product=(AirCastPro)

These values, regardless of the customization of AirCastPro, will always remain the same.

PRINTING WITH AIRCASTPRO

While you can rely solely on iOS to manage your print, AirCastPro allows apps to dictate the print size, effectively overriding the default size set by AirCastPro.

Example:

AirCastPro Printer: DNP_DS620

Installed media: 6x4

Available Print Sizes: 2x6, 2x6-2, 3.375x6, 3.5x6, 3.75x6, 4x6

Current Default: 4x6

When AirCastPro receives your print request, it receives your image along with an instruction set similar to this:

DNP_DS620	Printer Name
1	Copies
print-quality=5	Print Quality; 5 is default
sides=one-sided	Duplex Setting; value should always be “one-sided”.
media=w288h432	Installed Media size as designated in Points. (not a required parameter. Use “PageSize” data if unknown).
PageSize=w288h432	Page size as designated in Points: 4 inches=288x72 6 inches=432x72

If no PageSize parameter is set, AirCastPro will use its default print size setting, w288h432 (4x6). If you need to print 2x6 strips, you would set PageSize=w288h432-div2 (2x6—2).

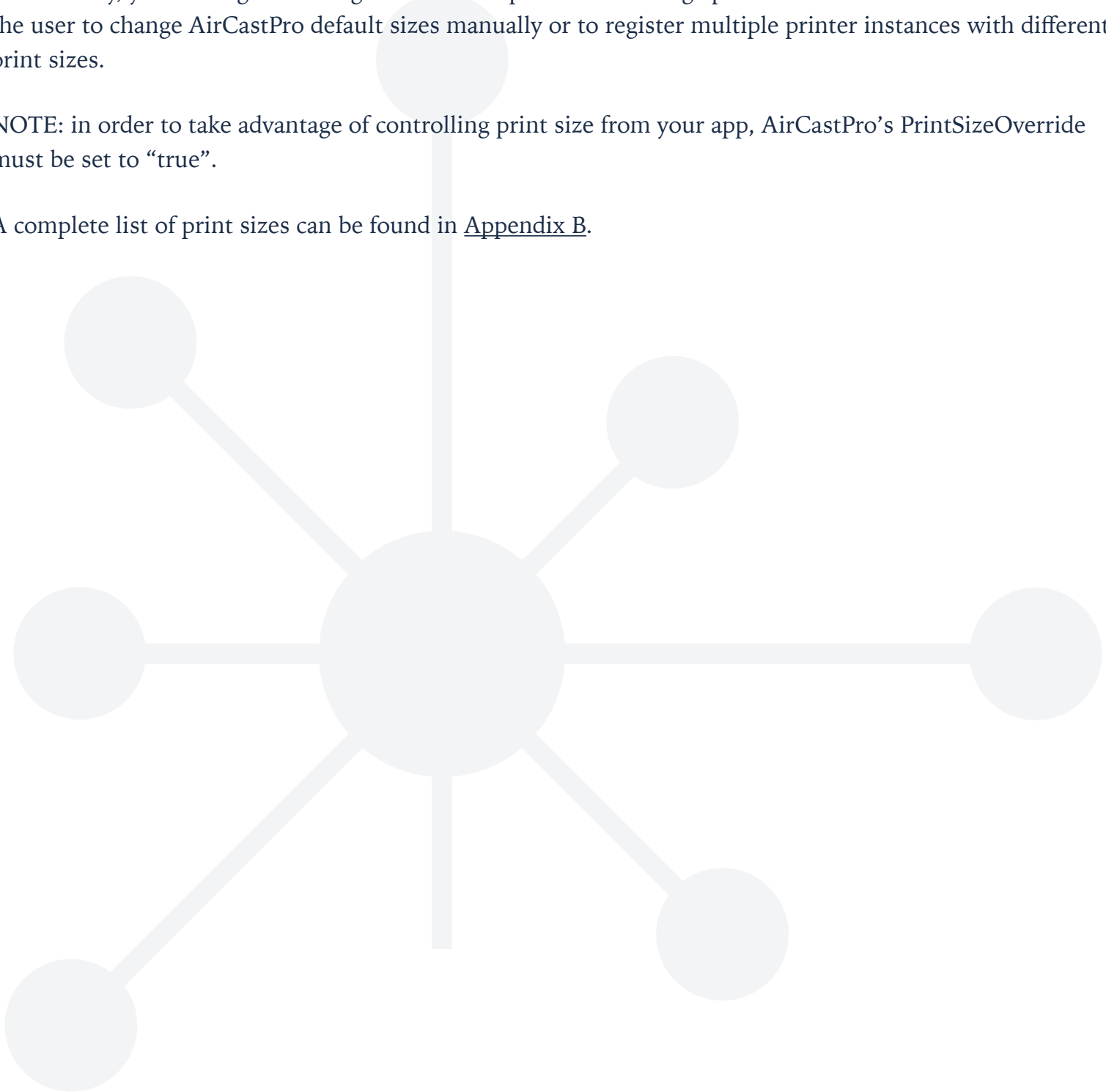
Why use the PageSize parameter with printing?

Utilizing the PageSize parameter allows you to take full advantage of all print sizes available with the installed media WITHOUT the need to register multiple printer instances.

In Summary, you can register a single AirCastPro printer and change print sizes at will without the need of the user to change AirCastPro default sizes manually or to register multiple printer instances with different print sizes.

NOTE: in order to take advantage of controlling print size from your app, AirCastPro’s PrintSizeOverride must be set to “true”.

A complete list of print sizes can be found in [Appendix B](#).





AIRCASTPRO API CONTROL

AirCastPro allows developers to request AirCastPro global configuration settings as well as connected printers. AirCastPro also provides access to change key printer settings, allowing their users make changes without leaving their app.

CLASSES

There are there are eight types of classes:

GLOBAL

ACP-RESTART

TESTPRINT

PRINTERRESET

PRINTERS

ACP-SHUTDOWN

PRINTQR

PHOTOARCHIVE

DATA CONTAINERS

There are there are four types of containers you will encounter with AirCastPro's Json output:

BOOLEAN

Value is either true or false.

STRING

These cannot be edited.

ARRAY

Contains a list of options for a setting.

OBJECT

Can contain a subset of Boolean, String, and Array types.



CONTROL OBJECTS

ACP-RESTART

Type: Class

Class: Super

Description: Use this class to issue a restart command to AirCastPro.

ACP-SHUTDOWN

Type: Class

Class: Super

Description: Use this class to issue a shutdown command to AirCastPro.

TESTPRINT

Type: Class

Class: Super

Description: The TestPrint command will send a print to the installed AirCastPro printer of your choice.

PRINTQR

Type: Class

Class: Super

Description: The PrintQR command will print out a wifi connect QR code (your AirCastPro's hotspot) to the installed AirCastPro printer of your choice.

PHOTOARCHIVE

Type: Class

Class: Super

Description: The PhotoArchive command will retrieve an archive link if available. You can also use it to create an archive of available prints.

PRINTERRESET

Type: Class

Class: Super

Description: PrinterReset is a powerful class that can quickly clear problems and get a user back up and running with minimal effort. This command will remove all printers from AirCastPro.

If one or more printers are attached to AirCastPro and powered on, AirCastPro will automatically install and configure these printers after a reset is complete.

Never send this command in repeated succession as it may interrupt AirCastPro's process of auto-configuring attached printers.

GLOBAL

Type: Class

Class: Super

Description: GET retrieves all Global settings data. SET can change Global settings data.

VENDOR

Type: String (Read-Only)

Class: Global

Description: Returns the vendor name, which should always read as “Allen Christopher”.

MODEL

Type: String (Read-Only)

Class: Global

Description: Returns the model name of the AirCastPro device; ex: “AirCastPro 3”.

VERSION

Type: String (Read-Only)

Class: Global

Description: Returns the version of the AirCastPro device; ex: “2025.0.0”.

BUILD

Type: String (Read-Only)

Class: Global

Description: Returns the build number of the AirCastPro device; ex: “458”.

HARDWARE

Type: String (Read-Only)

Class: Global

Description: Returns the hardware version of the AirCastPro device; ex: “Arch64 HW v2”.

SINGLEPRINTERINSTANCE

Type: Boolean

Class: Global

Description: Directs AirCastPro to install only one instance of a printer by default.

PRINTSIZEOVERRIDE

Type: Boolean

Class: Global

Description: Allows 3rd party applications to utilize a print size other than the set default.

USERUPLOAD

Type: Object

Class: Global

Description: When active, this allows users connected to the same network as AirCastPro can upload and print their own images (AirCastPro.local/upload).

UserUpload contains three variables:

- **ULEnabled** (Boolean): Determines if the service is available. Set to true or false.
- **ULPrintLimit** (Array): Limits the number of images a user can upload to AirCastPro. A value between 1-10 must be set.
- **ULPrinter** (Array): A printer must be assigned to handle incoming user images. This parameter requires a valid printer name to be set.

PRINTERS

Type: Class

Class: Super

Description: GET retrieves all Printer settings data. SET can change Printer settings data.

PRINTER_NAME

Type: String (Read-Only)

Class: Printers

Description: Returns the printer name; cannot be edited.

MEDIA

Type: String (Read-Only)

Class: Printers

Description: Returns the printer media installed; cannot be edited.

REMAININGMEDIA

Type: String (Read-Only)

Class: Printers

Description: Returns media usage (ex: 187/400). The first number shows the amount of prints completed; the second number is the total number of prints that the installed media is capable of printing.

SERIALNUMBER

Type: String (Read-Only)

Class: Printers

Description: Returns the serial number of the printer.

FIRMWARE

Type: String (Read-Only)

Class: Printers

Description: Returns the current firmware version installed in the printer.

REMOVEWHITESPACE

Type: Boolean

Class: Printers

Description: Set as true, this will remove unwanted whitespace that may exist along the outside edges of an image. Unwanted whitespace is common when an image does not completely fill the page size, or when a PDF wrapper is used to encase an image.`PrintSize`

Type: Array

Class: Printers

Description: Contains a list of a printer's available print sizes. The current default size is marked with an asterisk(*).

The `PrintSize` array can be used to change the default print size. It can also be used to ensure that the printer is capable of a particular print size; this can be especially useful if taking advantage of the Global Setting: `PrintSizeOverride`.

ICC

Type: Array

Class: Printer

Description: Contains a list of ICC profiles that are available to the printer. The current default is marked with an asterisk(*).



GET CALLS

Retrieving data from AirCastPro is accomplished with a URL request and is answered in Json.

GETTING GLOBAL SETTINGS INFORMATION

<http://AirCastPro.local/dev/get/3171924/Global>

Returned data:

```
{
  "AirCastPro": {
    "Vendor": "Allen Christopher",
    "Model": "AirCastPro™ 3",
    "Version": "2025.0.0",
    "Build": "458",
    "Hardware": "Arch64 HW v2"
  },
  "Global": {
    "SinglePrinterInstance": "False",
    "PrintSizeOverride": "True",
    "UserUpload": [
      {
        "ULEnabled": "False",
        "ULPrintLimit": [
          "*1",
          "2",
          "3",
          "4",
          "5",
          "6",
          "7",
          "8",
          "9",
          "10"
        ],
        "ULPrinter": [
          "DNP_DS620",
          "DNP_DS620_2x6-2"
        ]
      }
    ]
  }
}
```

GETTING PRINTER INFORMATION

<http://AirCastPro.local/dev/get/3171924/Printers>

This will return information on all printers installed on AirCastPro.

Returned data for two AirCastPro printers:

```
{
  "Printer": [
    {
      "Name": "DNP_DS620",
      "Media": "4x6",
      "RemainingMedia": "187/400",
      "SerialNumber": "DS6X68015229",
      "Firmware": "DS620A 04.31",
      "RemoveWhitespace": "false",
      "PrintSize": [
        "2x6/w144h432",
        "3.375x6/w243h432",
        "3.5x6/w252h432",
        "3.75x6/w270h432",
        "*4x6/w288h432",
        "2x6-2/w288h432-div2"
      ],
      "ICC": [
        "DS620_cAM.icc",
        "*DS620_PD_Natural.icm",
        "DS620_Metallic_Plus.icm",
        "DS620_Metallic_Ultra.icm",
        "DS620_Pearl_Plus.icm"
      ]
    },
    {
      "Name": "DNP_DS620_2x6-2",
      "Media": "4x6",
      "RemainingMedia": "187/400",
      "SerialNumber": "DS6X68015229",
      "Firmware": "DS620A 04.31",
      "RemoveWhitespace": "false",
```

```

"PrintSize": [
  "2x6/w144h432",
  "3.375x6/w243h432",
  "3.5x6/w252h432",
  "3.75x6/w270h432",
  "4x6/w288h432",
  "*2x6-2/w288h432-div2"
],
"ICC": [
  "*DS620_cAM.icc",
  "DS620_PD_Natural.icm",
  "DS620_Metallic_Plus.icm",
  "DS620_Metallic_Ultra.icm",
  "DS620_Pearl_Plus.icm"
]
}
]
}

```

NOTE: The default value of a container that uses an array is marked with an asterisk(*).

QUERYING A SINGLE PRINTER

When requesting information for a single printer, you can use the printer name found in the rp value of the DNS record for the printer (rp=printers/DNP_DS620).

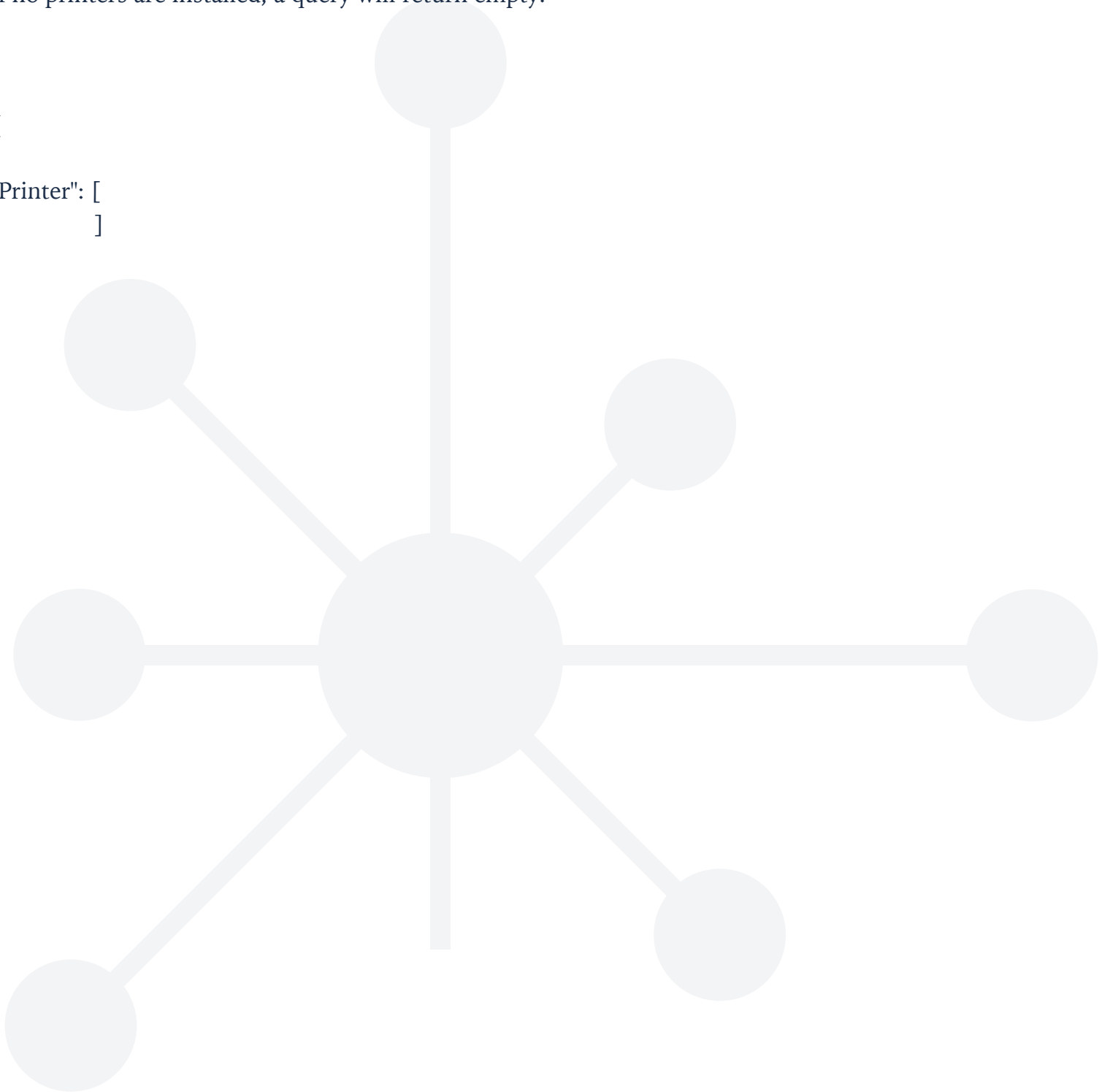
http://AirCastPro.local/dev/get/3171924/Printers/DNP_DS620

Returned data for a single, installed printer:

```
{
  "Printer": [
    {
      "Name": "DNP_DS620",
      "Media": "4x6",
      "RemainingMedia": "187/400",
      "SerialNumber": "DS6X68015229",
      "Firmware": "DS620A 04.31",
      "RemoveWhitespace": "false",
      "PrintSize": [
        "2x6/w144h432",
        "3.375x6/w243h432",
        "3.5x6/w252h432",
        "3.75x6/w270h432",
        "*4x6/w288h432",
        "2x6-2/w288h432-div2"
      ],
      "ICC": [
        "DS620_cAM.icc",
        "*DS620_PD_Natural.icm",
        "DS620_Metallic_Plus.icm",
        "DS620_Metallic_Ultra.icm",
        "DS620_Pearl_Plus.icm"
      ]
    }
  ]
}
```

If no printers are installed, a query will return empty:

```
{  
  "Printer": [  
  ]  
}
```





SET CALLS

PRINTERRESET SETTINGS

The PrinterReset class is the easiest and perhaps the most powerful of all classes. PrinterReset operates only as GET.

PrinterReset

GLOBAL SETTINGS

There are two main global setting parameters and three sub-object parameters that can be changed:

PrintSizeOverride

UserUpload

ULEnabled

ULPrintLimit

ULPrinter

NOTE: If a valid printer name is not assigned, the ULEnabled parameter will be set to false.

PRINTER SETTINGS

There are three main global setting parameters that can be changed:

RemoveWhitespace

PrintSize

ICC



CHANGE SETTINGS REQUEST

Sending your settings changes are straight-forward, sent in URL form and begin like this:

GLOBAL

<http://aircastpro.local/dev/set/3171924/Global?>

PRINTER

http://aircastpro.local/dev/set/3171924/Printers/PRINTER_NAME?

SYNTAX

Each top-level parameter is separated by a double-ampersand (&&). An object is proceeded by a colon (:) and parameters within an object are separated by single ampersand (&). It is not necessary to include values for every object in a class when using SET.

Set the value of a parameter using an equal sign (=).

SET EXAMPLES

PRINTER RESET

Request PrinterReset

<http://aircastpro.local/dev/get/3171924/PrinterReset>

GLOBAL

A. Enable PrintSizeOverride

<http://aircastpro.local/dev/set/3171924/Global?PrintSizeOverride=true>

B. Enable and Set UserUpload Parameters

[http://aircastpro.local/dev/set/3171924/Global?
UserUpload:ULEnabled=true&ULLimit=5&ULPrinter=DNP_DS620](http://aircastpro.local/dev/set/3171924/Global?UserUpload:ULEnabled=true&ULLimit=5&ULPrinter=DNP_DS620)

C. Enable PrintSizeOverride, and Set UserUpload Parameters

[http://aircastpro.local/dev/set/3171924/Global?
PrintSizeOverride=true&&UserUpload:ULEnabled=true&ULLimit=5&ULPrinter=DNP_DS620](http://aircastpro.local/dev/set/3171924/Global?PrintSizeOverride=true&&UserUpload:ULEnabled=true&ULLimit=5&ULPrinter=DNP_DS620)

PRINTERS

A. Change Default PrintSize

http://aircastpro.local/dev/set/3171924/Printers?DNP_DS620&&PrintSize=w288h432

B. Change Default ICC

http://aircastpro.local/dev/set/3171924/Printers?DNP_DS620&&ICC=DS620_PD_Natural.icm

C. Set RemoveWhitespace, Change Default PrintSize, and Change Default ICC

[http://aircastpro.local/dev/set/3171924/Printers?
DNP_DS620&&RemoveWhitespace=false&&PrintSize=w288h432&&ICC=DS620_PD_Natural.icm](http://aircastpro.local/dev/set/3171924/Printers?DNP_DS620&&RemoveWhitespace=false&&PrintSize=w288h432&&ICC=DS620_PD_Natural.icm)

When setting the default PrintSize, send only the points designation rather than the imperial or metric size (ex: 4x6 would be sent as w288h432).



APPENDIX A

API COMMANDS AND SYNTAX

GET Commands

Global	Syntax: /dev/get/3171924/Global Retrieves Global settings.
Printers	Example Syntax: /dev/get/3171924/Printers Retrieves installed settings.
	Example Syntax: /dev/get/3171924/Printers/DNP_DS620 Retrieves settings for a known printer.
PrinterReset	Example Syntax: /dev/get/3171924/PrinterReset Removes all installed AirCastPro printers.
ACP-Restart	Example Syntax: /dev/get/3171924/ACP-Restart Reboots AirCastPro.
ACP-Shutdown	Example Syntax: /dev/get/3171924/ACP-Shutdown Powers off AirCastPro.
TestPrint	Example Syntax: /dev/get/3171924/TestPrint?DNP_DS620 Sends a test print to a specified printer.
PrintQR	Example Syntax: /dev/get/3171924/TestPrint?DNP_DS620 Sends a test print to a specified printer.
PhotoArchive	Example Syntax: /dev/get/3171924/PhotoArchive Returns a photo archive link if available.

SET Commands

PrintSizeOverride	Example Syntax: /dev/set/3171924/Global?PrintSizeOverride=true If true, allows apps to use print sizes other than the AirCastPro printer's default size.
UserUpload	UserUpload: Class that must accompany at least one parameter change. Allows guests to upload photos directly to AirCastPro.
ULEnabled	Example Syntax: /dev/set/3171924/Global?UserUpload:ULEnabled=true If true, allows guests to upload photos directly to AirCastPro.
ULLimit	Example Syntax: /dev/set/3171924/Global?UserUpload:ULLimit=4 Additional Syntax: /dev/set/3171924/Global?UserUpload:ULEnabled=true&ULLimit=4 Sets the photo limit that a guest can upload to AirCastPro.

ULPrinter

Example Syntax: /dev/set/3171924/Global?UserUpload:ULPrinter=DNP_DS620
Additional Syntax: /dev/set/3171924/Global?
UserUpload:ULPrinter=DNP_DS620&ULLimit=1

Assigns a printer for guest uploads.

PrintSize

Example Syntax: /dev/set/3171924/Printers?DNP_DS620&&Printsize=w288h432
Sets the default print size.

ICC

Example Syntax: /dev/set/3171924/Printers?DNP_DS620&&ICC=DS620_PD_Natural.icm
Sets the printer's color profile.

RemoveWhitespace

Example Syntax: /dev/set/3171924/Printers?DNP_DS620&&RemoveWhiteSpace=true
If true, AirCastPro will remove unwanted whitespace around a photo.

PhotoArchive

Example Syntax: /dev/set/3171924/PhotoArchive?Make=True
If true, AirCastPro will create a photo archive of all available prints. If set to false, any existing archives will be deleted.



APPENDIX B

SUPPORTED PRINT SIZES WITH API SYNTAX

API Print Size – Printer Media – Print Size

w144h432
w243h432
w252h432
w270h432
w288h432
w288h432-div2

4x6

2x6
3.375x6
3.5x6
3.75x6
4x6
2x6-2

W360h252
W360h360
W360h504
w360h504-div2
w360h504-w360h360_w360h144

5x7

5x3.5
5x5
5X7
5x5+5x2
5x3.5-2

W324h432
W432h432
w432h576
w432h576-w432h432_w432h144
w432h576-div4
w432h576-div2

6x8

4.5x6
6x6
6x8
6x6+6x2
6x2-4
6x4-2

w432h612
w432h648
w432h648-div2

6x9

6x8.5
6x9
6x9

w432h1025
w432h1466

6x8/6x9
Continuous
Panorama

6x14
6x26

w432h1169
W432h1754

6x8/6x9
Discrete
Panorama

6x16
6x24

w288h288	4x6	4x4
w288h288-div2	QW410/	4x2-2
w288h216 4x3	CZ-01	4x3
w288h288_w288h144		4x4+4x2
w288h432 4x6		4x6
W288h432-div2		4x3-2
w288h432-div3		4x2-3
w288h288_w288h144		4x4+4x2
w288h576	4x8	4x8
w288h432_w288h144	QW410/	4x6+4x2
w288h432-div2_w288h144	CZ-01	4x3-2+4x2
w288h576-div2		4x4-2
w288h576-div4		4x2-4
W324h216	4.5x6	4.5x3
W324h288	QW410/	4.5x4
W324h324	CZ-01	4.5x4.5
w324h432		4.5x6
W324h432-div2		4.5x3-2
W324h432-div3		4.5x2-3
W324h486	4.5x8	4.5x6.75
w324h576 4.5x8	QW410/	4.5x8
w324h576-div2	CZ-01	4.5x4-2
W324h576-div4		4.5x2-4
W324h432_W324h144		4.5x6+4.5x2
W324h432-div2_w324h144		4.5x3-2+4.5x2
w288h576	8x10	4x8
w360h576		5x8
W432h576		6x8
w504h576		7x8
w576h576		8x8
w576h576-div2		8x4-2
w576h648		8x9
w576h648-w576h360_w576h288		8x5+8x4
c8x10		8x10
c8x10-div2		8x5-2
c8x10-w576h432_w576h288		8x6+8x4

w576h792-w576h432_w576h360	8x12	8x6+8x5
w576h842		8x11.7
w576h864		8x12
w576h864-div2		8x6-2
w576h864-w576h576_w576h288		8x8+8x4
w576h864-div3		8x4-3

w576h1305	8x10/8x12	8x18
w576h1881	Continuous	8x26
w576h1593	Panorama	8x22
w576h2312		8x32

w576h1440	8x10/8x12	8x20
w576h2160	Discrete	8x30
w576h1728	Panorama	8x24
w576h2592		8x36

A4x4inch	A4	A4x4
A4x5 inch		A4x5
A5		A5
A4x6 inch		A4x6
A4x8inch		A4x8
A4x10inch		A4x10
A4x10inch-div2		A4x5 2
A4		A4
A4-div2		