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# ZyPer4K USB Interoperability

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# ZyPer4K USB Interoperability

The ZyPer4K product line offers a wide range of uncompressed encoder and decoder options.

The encoder product line includes 33 different SKUs; many that support USB functionality.

The decoder product line includes 25 different SKUs; many that support USB functionality.

This document will detail the various USB options/features and the the interoperability between these various options.



# ZyPer4K Family Options with USB (Encoders)



ZyPer4K “Classic” models. Sometimes referred to as the “white boxes”. In these models USB is an **optional add-in** for all versions. Identified by the letter “U” at the end of the part number.

## Example Part Numbers:

Z4KENCC3U	(Icron USB)
Z4KENCF3U	(Icron USB)
Z4K12GSDIENCF3U	(Icron USB)
Z4KDPENCC3U	(Icron USB)



## USB Implementation and Functionality:

These units if USB equipped have the Icron USB chipset installed and support full USB 2.0 functionality including HID and USB Camera support.

# ZyPer4K Family Options with USB (Encoders)



ZyPer4K-XS and XR models. Sometimes referred to as the “black boxes”. In these models USB is **included** for all versions.

## Example Part Numbers:

Z4KENCF3XS	(Semtech USB)
Z4KENCC3XS	(Semtech USB)
Z4KENCFSXR	(Semtech USB)
Z4KENCFSXR	(Semtech USB)

## USB Implementation and Functionality:

These units have the Semtech USB chipset and support USB HID functionality only.



# ZyPer4K Family Options with USB (Encoders)

ZyPer4K-XSE models. In these models USB is ***included*** for all versions.

## Example Part Numbers:

- Z4KC2XS-E (Semtech USB)
- Z4KC2XS-EAU (Semtech and Icron USB)
- Z4KF2XS-E (Semtech USB)
- Z4KF2XS-EAU (Semtech and Icron USB)

## USB Implementation and Functionality:

These units always have the Semtech USB and optionally could have the Icron USB chipset as well. (Icron is Identified by “U” at end of part number)

Note that Icron USB function can be disabled by the API to allow Semtech functionality.



# ZyPer4K Family Options with USB (Encoders)



ZyPer4K Wall Plate models. In these models USB is ***included*** for all versions.

## Example Part Numbers:

Z4KENCC3XS-WPUS	(Semtech USB)
Z4KENCC3XS-WPUS-I	(Icron USB)

## USB Implementation and Functionality:

These units have the Semtech USB or the Icron USB chipset. Icron is identified by the “I” at the end of the part number.



# ZyPer4K Family Options with USB (Decoders)



ZyPer4K “Classic” models. Sometimes referred to as the “white boxes”. In these models USB is an **optional add-in** for all versions. Identified by the letter “U” at the end of the part number.

## Example Part Numbers:

Z4KDECC3U	(Icron USB)
Z4KDECF3U	(Icron USB)
Z4KDPDECC3U	(Icron USB)

## USB Implementation and Functionality:

These units if USB equipped have the Icron USB chipset install and support full USB 2.0 functionality including HID and USB Camera support.

# ZyPer4K Family Options with USB (Decoders)



ZyPer4K-XS and XR models. Sometimes referred to as the “black boxes”. In these models USB is *included* for all versions.

## Example Part Numbers:

- Z4KDECF3XS (Semtech USB)
- Z4KDECC3XS (Semtech USB)
- Z4KDECF3XR (Semtech USB)
- Z4KDECF3LXR (Semtech USB)

## USB Implementation and Functionality:

These units have the Semtech USB chipset and support USB HID functionality only.



# ZyPer4K Family Options with USB (Decoders)



ZyPer4K-XSE models. In these models USB is *included* for all versions.

## Example Part Numbers:

Z4KCXS-D	(Semtech USB)
Z4KCXS-DAU	(Semtech and Icron USB)
Z4KFXS-D	(Semtech USB)
Z4KFXS-DAU	(Semtech and Icron USB)

## USB Implementation and Functionality:

These units always have the Semtech USB and optionally could have the Icron USB chipset as well. (Icron is Identified by “U” at end of part number)

Note that Icron USB function can be disabled by the API to allow Semtech functionality.

# ZyPer4K Family Options with USB (Decoders)



ZyPer4K Wall Plate models. In these models USB is ***included*** for all versions.

## Example Part Numbers:

Z4KDECC3XS-WPUS	(Semtech USB)
Z4KDECC3XS-WPUS-I	(Icron USB)

## USB Implementation and Functionality:

These units have the Semtech USB or the Icron USB chipset. Icron is identified by the “I” at the end of the part number.

# ZyPer4K Family USB Functionality

The Semtech and Icron USB options have different functionality and are not compatible with each other.

## Semtech Functionality

USB HID only. This includes keyboards, mice and touch panels.



## Icron Functionality

Full USB 2.0 support. This includes keyboards, mice, touch panels, memory sticks, hard drives, USB cameras.



# ZyPer4K Family USB Interoperability

The chart below details USB interoperability between ZyPer4K USB enabled endpoints. Please note that the ZyPer4K-XSE units can disable Icron function if desired.

		Decoders						
USB Routing		Z4K-XS	Z4K-XR	XS-WallPlate	XS-WallPlate Icron	Z4K-Icron	Z4K-XSE	Z4K-XSE Dante+Icron
Encoders	Z4K-XS	Yes	Yes	Yes	No	No	Yes	Yes <small>(Disable Icron)</small>
	Z4K-XR	Yes	Yes	Yes	No	No	Yes	Yes <small>(Disable Icron)</small>
	Z4K-WallPlate	Yes	Yes	Yes	No	No	Yes	Yes <small>(Disable Icron)</small>
	Z4K-WallPlate-Icron	No	No	No	Yes	Yes	No	Yes
	Z4K-Icron	No	No	No	Yes	Yes	No	Yes
	Z4K-XSE	Yes	Yes	Yes	No	No	Yes	Yes <small>(Disable Icron)</small>
	Z4K-XSE Dante+Icron	Yes <small>(Disable Icron)</small>	Yes <small>(Disable Icron)</small>	Yes <small>(Disable Icron)</small>	Yes	Yes	Yes <small>(Disable Icron)</small>	Yes

Red = USB Not Supported between devices

Yellow = USB HID Supported between devices (May require Icron to be disabled on XSE unit)

Green = Full USB 2.0 Supported between devices

# Important Note on ZyPer4K-XSE Decoders



ZyPer4K-XSE models with Icron has a limitation when used with the Icron chipset implemented in non-XS ZyPer4K units. This impacts the following part numbers.

## Part Numbers:

Z4KCXS-DAU	(Semtech and Icron USB)
Z4KFXS-DAU	(Semtech and Icron USB)

## USB Limitation:

When the Encoder is a ZyPer4K “white box” or “Wall plate”; the decoder will only work with USB 2.0 devices connected to it. Decoder will not function with USB 1.0 or USB 1.1 devices. Devices such as keyboards and mice.

**Workaround:** Connect an external USB HUB to the ZyPer4K-XSE Decoder. This will allow any USB 1.0, 1.1 or 2.0 device to function properly. ZeeVee will add an internal USB Hub in an upcoming revision of the ZyPer4K-XSE hardware.

**Note:** Connection of external USB HUB should only be done while the ZyPer4K unit is powered off. Do not hot plug USB HUB into ZyPer4K.

# Important Note on Wall Plate Encoders



Wall Plate models with Icron has a limitation when used USB 3.0 Host Devices. This impacts the following part numbers.

## Part Numbers:

Z4KENCC3XS-WPUS-I	(Icron USB)
Z4KENCC3XS-WPEU-I	(Icron USB)

## USB Limitation:

When the Encoder “Wall plate”; the encoder does not properly recognize Host PC’s if the Wall plate is plugged into a USB 3.0 port. (Blue port).

**Workaround:** Connect an external USB HUB to the ZyPer4K Wall Plate Encoder. Plug the Host PC into the USB Hub.