

Designed and made in Denmark

# SKAARHOJ

Universal Broadcast Controllers





## Hello Friends!

Our passion is to make it easier for you to run your live event productions!

With our products you will feel the control at your fingertips. You can simplify.

You can control multiple devices, even from different brands - all from the same surface. You will save precious rack space. You will have less wires, less boxes and more control. And you will be able to reconfigure and expand your controller every day, week, month and year to work with your new camera, new switcher, and new router.

We honestly believe we make the best universal broadcast controllers on the planet and we would love to make your professional life easier with them.

**Kasper Skårhøj**

CEO, Founder and Chief Designer





## PTZ CONTROL



## VISION MIXING



## RCP



## UTILITY

## REPLAY



## AUDIO



# Control Anything and Everything...

All our controllers can talk to the same devices since they run the same software OS, UniSketch. Simply choose your form factor based on what is most appropriate. Install the device cores required to talk to your broadcast hardware. Through UniSketch you map buttons to commands. Integrate control of multiple brands of broadcast devices to bridge hardware ecosystems.





# Supported Hardware

We call them *device cores* and they are like “apps” you install on your controller. We write new device cores all the time! So every day your controller becomes more and more valuable and flexible because new device cores are just a click away.



Here are some of the brands and products in the broadcast and AV industry that we support already or are in the process of supporting.

*How does UniSketch and Device Cores work? Check out the last pages in this booklet.*



\*) The displayed trademarks and logos are not owned by SKAARHOJ ApS and they are used for identification only. They do not imply endorsement of SKAARHOJ by the trademark owners. They are intended to convey SKAARHOJ's current or future integration with solutions from the displayed brands.

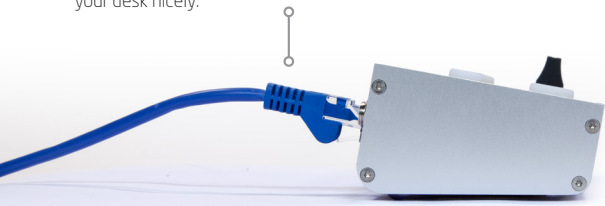
# Signature Technologies

**Graphical OLED displays** to support buttons, knobs and faders with dynamic labels. They combine large, bold labels with unprecedented levels of detail using titles, icons and scales to enrich the main content. They automatically draw information from the connected devices or you can type in your own labels or upload graphics. Found everywhere in many sizes and dimensions on SKAARHOJ controllers.



**UniSketch OS** connects a button press with a command sent to any of the supported broadcast devices, simply speaking. You can typically operate 8 devices simultaneously and UniSketch binds it all together into a seamless and user friendly experience. You won't find a more impressive engine for integrated control in a standalone controller surface.

**100% IP & PoE:** One cable carries power and the signals for as many devices as you control. Your switcher, video router, recording deck, your cameras even. The future is IP while legacy serial systems can typically be supported by end-point converters which is often more convenient anyway. And active Power over Ethernet (IEEE802.3af) unclutters your desk nicely.



SKAARHOJ

Options you will encounter in this booklet:

+ **NKK**  
+600€

Add best-in-class NKK buttons with sculptured caps to the lower bus row and ME section for old-school luxury.

+ **SDI**  
+250€

The SDI option adds a Blackmagic Arduino shield on the controller for reading and writing Camera Control data.

+ **GPI**  
+250€

Add general purpose opto-isolated inputs and relay outputs, 2x8 In/Out.

+ **JOY**  
+350€

Upgrade to an industrial precision Hall Effect joystick for increased ergonomic comfort and motion precision.

**RGB backlight and LED bars** is not just impressive and soothing. It's also super practical to color code sections based on their assigned functionality. This provides the operator with instinctive clues which can be the critical difference between success and failure. Colors can be assigned manually and SKAARHOJ panels are dimmable.

**Four-way buttons** - custom molded tactile elastomer buttons, that detect whether a button is pressed on the left, right, lower or upper edge. This allows the button to adjust values up and down like an encoder when pressing opposing edges. It could even work as a simple joystick. Or it can be just a button. Innovative, insanely flexible and perfect for a universal controller.

**Renown Industrial Design** - for years we have diligently designed and fine-tuned our custom elastomers, aluminum extrusions and front panels to become unique, beautiful and strong components worthy of the superbly flexible and modular electronics and software that make up our wonderful broadcast and AV controllers.

# PTZ CONTROL

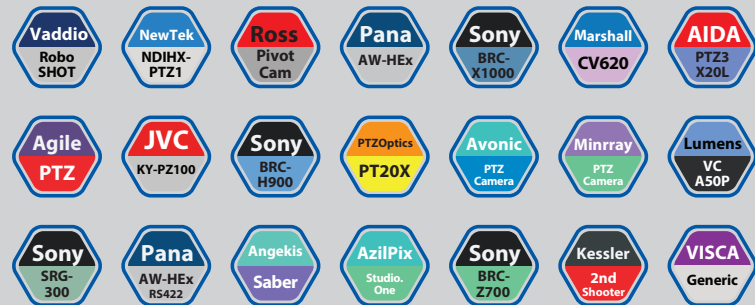
“

*OMG your stuff is the cleverest  
coolest kit I've ever come across*

”



*Operate robotic systems from Panasonic, NewTek, Ross, Lumens, PTZOptics,  
AIDA, Sony, JVC, Vaddio, Marshall, Agile, Avonic, and more...*



*(planned)*



# PTZ Wiz

New!

Pressure sensitive  
elastomer zoom rocker

Set camera focus, exposure and other  
settings with backlit high quality knobs

Pressure and direction sensitive  
elastomer joystick pad

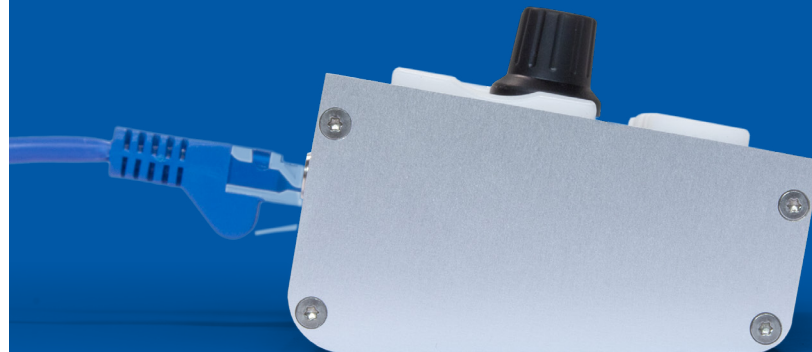


Multi function keys for  
presets, camera selection, and  
live switching

PTZ CONTROL

SKAARHOJ

1:1



**PTZ Wiz** - the new version of the super compact  
IP based PTZ controller and switcher surface in one!



**869€ / 1049 \$**

Full freedom, all cameras, all switchers

# PTZ Fly

High-quality backlit encoders with widescreen OLED displays

Optional SDI In/Out for Blackmagic Camera Control

3-axis joystick (Optionally Hall Effect)

Programmable four-way buttons with bright OLED displays

Multi function keys for pre-sets and camera selection

Order with Hall Effect joystick for increased precision and ergonomics of operation

Ethernet with PoE

Slim, ergonomic console form factor

PTZ CONTROL

SKAARHOJ



**PTZ Fly** has a very compact form factor while featuring a full size three-axis joystick. Pan, tilt and rotate the handle to control your cameras. The superb OLED displays clearly show what camera settings you control and which preset you recall. With UniSketch, everything is possible. Customize it with a Hall Effect joystick or an SDI output for Blackmagic Micro Studio Camera control on a pan-tilt head.



**1249€ / 1499\$**

Full freedom, all cameras

+ JOY  
+350€

+ SDI  
+ 250€

# PTZ Pro

Encoders for settings in large menu display

Dedicated focus knob

Numbered keys for camera or preset selection

3-axis joystick (Optionally Hall Effect)



Menu selector keys with user banks

Camera selection or labeled preset with RGB backlit keys

Navigation keys for paging

PTZ CONTROL

SKAARHOJ



**PTZ Pro** is a full featured PTZ controller for robotic cameras. With dedicated buttons and knobs for all settings and actions, it's easy and quick to use. You will enjoy all the same benefits as found on PTZ Fly while having a larger hand rest and faster, direct access. SKAARHOJ makes the worlds most comprehensive universal VISCA controllers - thanks to UniSketch and our dedication to quality integration.



**1749€ / 2099\$**

Full freedom, all cameras

+ **JOY**  
+350€

+ **SDI**  
+250€



# PTZ Extreme



3399€ / 3999\$

Full freedom, all cameras and more

SKAARHOJ

**PTZ Extreme** is the ultimate controller for multi axis robotic systems. Created with absolute freedom in mind: OLED labeled knobs and buttons, Fine-tuned ergonomics, Hall Effect joystick, custom zoom rocker and focus wheel.

Auxiliary keys for iris/focus options

Four-way buttons with legends for menu

Freely assignable encoders with OLED

Custom designed aluminum zoom rocker. Use it for zoom - or drive a dolly track!

Large assignable iris encoder

Stepless, friction balanced focus wheel

3-axis Hall Effect Joystick

Hand rest

Labeled presets and tally LED bar

Camera selector



PTZ CONTROL

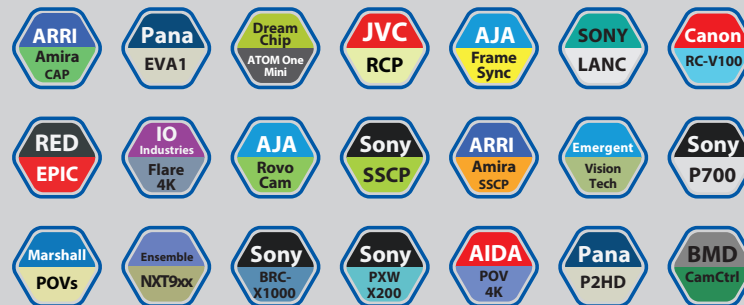
# CAMERA SHADING



*Can I just say how impressed I  
am with your level of customer  
service, it is exceptional*



*Shade cameras and gear made by Arri, Sony, Panasonic, JVC, AJA, Ross, Marshall, RED, Blackmagic Design, DreamChip, Canon, Ensemble Designs, and many more!*



# Color Fly

Programmable four-way buttons with OLED legends and tally bars

RGB backlit encoders with crisp widescreen OLED legends

Optional SDI I/O for Blackmagic Design Camera Control



Camera selection and multi level shift key  
- control 5, 10 or even more cameras

RGB LED bar for level or  
position indication

4 motorized faders for  
multi camera iris control

CAMERA SHADING



**Color Fly** is your uncompromising multi camera RCP bringing you innovative iris control with motorized faders. You get the tactile position feedback of the classic iris joystick but can easily manage 5, 10 or more cameras from the same compact panel.

## One RCP to rule them all



**3149€ / 3699\$**

Full freedom, any and all cameras

+ SDI  
+250€

+ GPI  
+250€



# RCPv2

Super crisp OLED window with large display tiles for settings

Utility buttons for file store or camera selection

Eight detented encoders with RGB backlight for function identification

Programmable pressure and direction sensitive elastomer joystick pad

Four-way buttons with OLED legends for dynamic labeling

Camera ID display with OLED technology and RGB tally bar

Master black knob with dedicated OLED display

Classic iris joystick, motorized fader, or encoder wheel with display and LED bar

Even more buttons with OLEDs

Preview button can trigger GPI or control video router

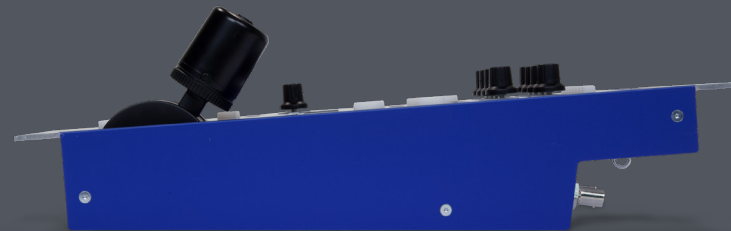
Camera selector DIP, GPI, SDI I/O (optional) on back

Ethernet with PoE

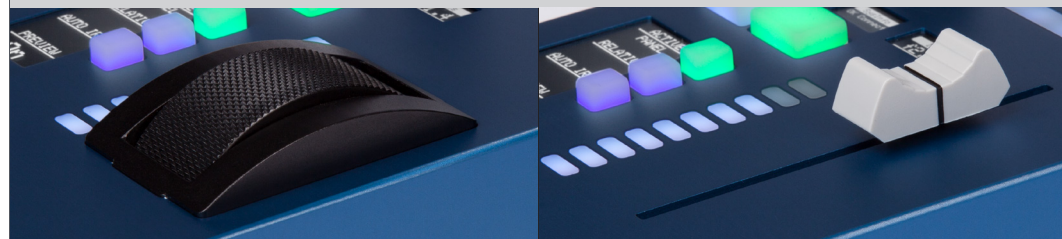
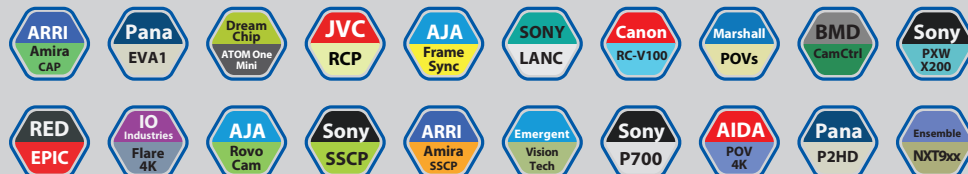


## CAMERA SHADING

SKAARHOJ



**RCPv2** - the world's most flexible RCP. Fits into your existing bay or sits console style on a table top. Use this universal RCP regardless of which camera brand you shade! With the roller wheel or motorized fader option you have the perfect multi camera RCP. Dedicated to scalability and a positive, unified user experience.



**2349€ / 2799\$**

Any and all cameras

+ **WHEEL**  
+250€

+ **FADER**  
+250€

+ **SDI**  
+250€

# VISION MIXING



*I love your products and the way you  
are making live production easier!*



*Control switcher and automation solutions from Blackmagic Design, NewTek, Vimeo, vMix, Roland, Ross, CuePilot, EVS, Epiphan, AzilPix, Telestream, and vizrt*



*(planned)*



*(planned)*



*(planned)*



*(planned)*

# Mini Fly

RGB multi level metering LEDs for VU, tally or step indication

Programmable four-way buttons with crisp OLED displays

Multi level shift key with step indicator

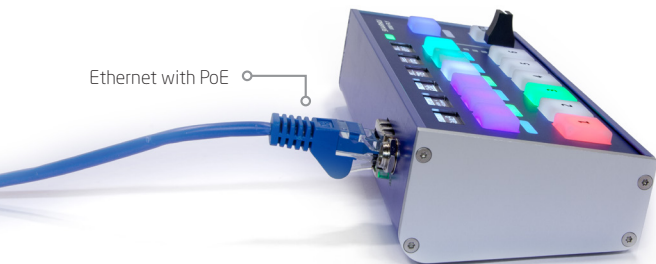


Custom molded RGB backlit keys

LED bar for transition position and VU metering

Smooth transition fader and Cut/Auto button

Ethernet with PoE



Slim, ergonomic console form factor

VISION MIXING

SKAARHOJ controllers excel in live switching. The **Mini Fly** is your **Swiss Army knife**. It's super compact and yet super flexible, perfect for small live productions with 6 cameras, audio monitoring and transitions. And the six four-way buttons with OLED displays extend its power beyond imagination. Don't get us started...

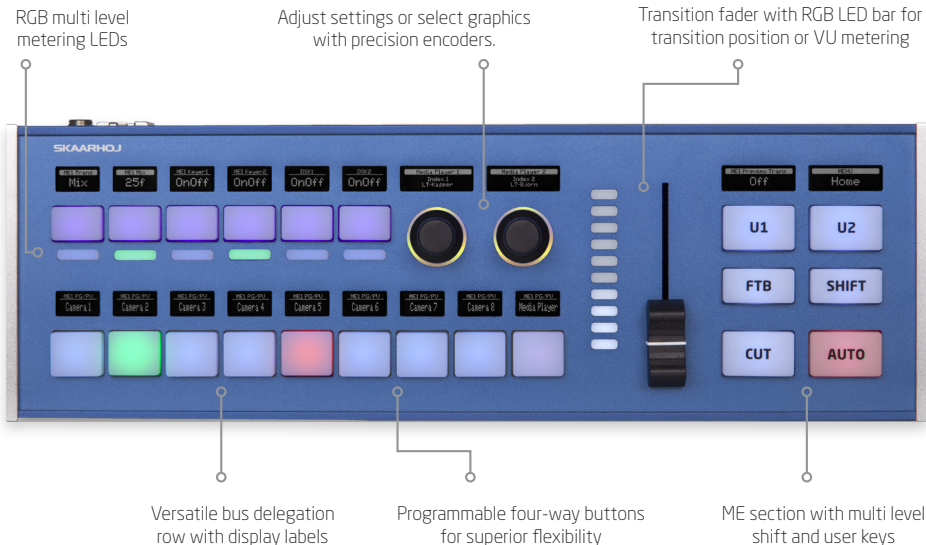


**869€ / 1049\$**

Full freedom, all devices cores



# Live Fly



Slim, ergonomic console form factor



**Live Fly** is a professional midsize controller for 8-camera productions, that easily extends beyond when paired with **XPoint 24**, **Inline 10** or **PTZ Fly**. For that über-pro feel, you can add classic broadcast buttons from NKK as an option.



**1299€ / 1549\$**

Full freedom, all devices cores



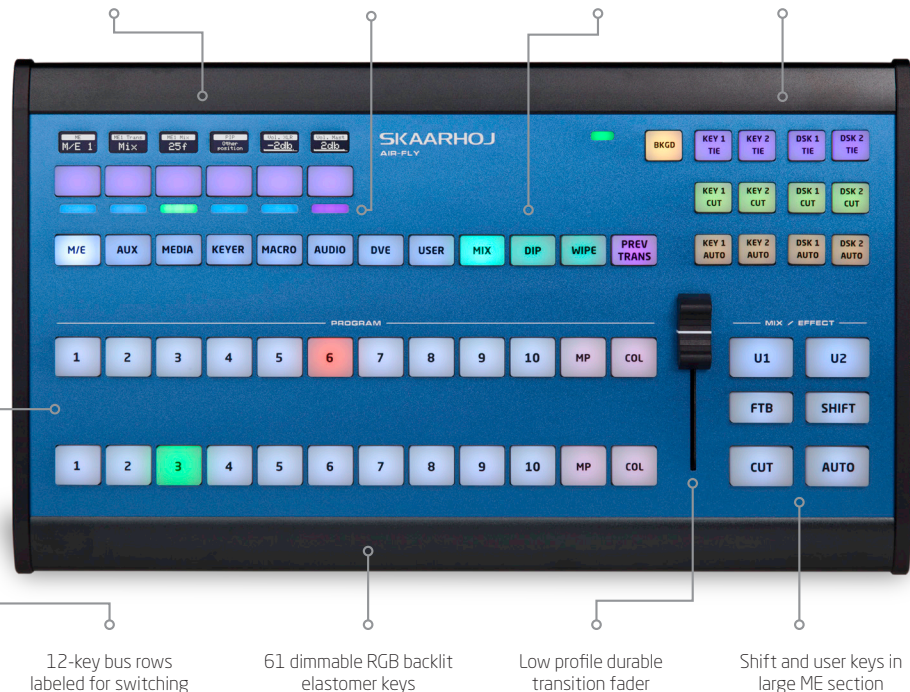
# Air Fly

Programmable four-way buttons with OLED displays

RGB multi level metering LEDs

Function selector row

Keyer section with all essentials



With **Air Fly** you have a full featured desktop controller for live switching with **Tricaster**, **ATEM** or **vMix** systems at a very competitive price point. Works out of the box! Nevertheless you can still customize its function through the UniSketch OS. Strong industrial design.



**1299€ / 1549\$**

Any variant, all devices cores, no limits

ATEM, TriCaster and vMix variants have unique key labels designed for the features of each system

# Air Fly Pro

Revised design -  
Total freedom

Auxiliary four-way  
buttons

Backlit encoders with crisp  
graphical OLED displays

Pressure sensitive elastomer  
zoom rocker and joystick pad

Keyer section with incredible  
reconfiguration flexibility



RGB multi level metering  
LEDs for VU, state indica-  
tion and tally

12-key bus rows with  
four-way buttons and OLED  
legends

Hall Effect T-bar and  
RGB LED bar

ME section with multi level  
shift and user keys

VISION MIXING

SKAARHOJ

For those who require **the ultimate** there  
is no way around the **Air Fly Pro** which  
brings you an impressive amount of  
four-way buttons, OLED displays, PTZ  
control, professional T-bar transitions  
and therefore the ultimate ...

# Freedom



2799€ / 3399\$

Full freedom, no strings attached

+ NKK  
+600€



# Rack Fusion Live

Hello Robot! **Rack Fusion Live** adds PTZ control to your live switching surface in a phenomenally compact controller perfect for your fly-away kit.



VISION MIXING



**2149€ / 2599\$**

Full freedom, all devices cores

+ JOY  
+350€

+ NKK  
+600€



# Master Key Series

Sculptured cap RGB broadcast buttons - NKK japanese quality, best of the best

Subdivided into easily color coded sections

Four-way buttons and encoders with RGB backlight and OLED displays

*Master Key 36 and Master Key One are truly exceptional control panels. They feature a powerful blend of industry standard NKK buttons and SKAARHOJ's innovative custom molded elastomer four-way buttons along with an uncompromising use of OLED displays to create a 100% flexible, and universal switcher surface for high end studios and OB trucks.*



Master Key 36



Master Key One

Section titles

Large, crisp graphical OLED windows for labels and section titles

Graphical mini legends for top buttons

VISION MIXING



2599€ / 3099\$

Master Key 36 (left)



4399€ / 5299\$

Master Key One (right)

# BROADCAST AUDIO

Audio control is not always a separate concern to the video producer. SKAARHOJ controllers generally give you access to audio adjustments and monitoring through encoders and four-way buttons and by means of multi level LED bars. If that doesn't cut it, Wave Board is to the rescue with eight motorized faders, full color LED bars, a four button control section per channel and global function keys to multiply it all at your will. Exceptional.



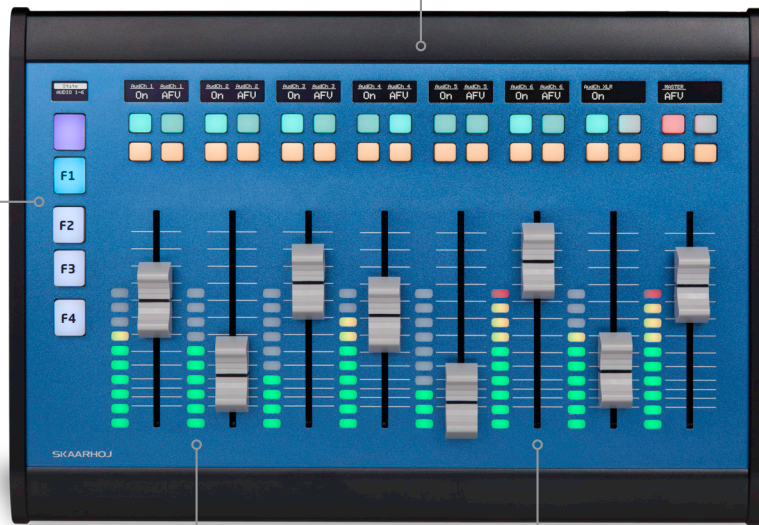
**2199€ / 2599\$**

Full freedom, all device cores

# Wave Board

Expand beyond 8 channels with sophisticated meta control section

2x2 auxiliary button matrix with crisp OLED legends for muting, solo, up/down action



Monitor audio levels with the RGB LED bars

8 channels of motorized faders for parameter and volume control



# REPLAY

A replay controller with speed control and IP connectivity. The **XC8** interfaces with modern replay solutions such as m:replay from Softron, the built-in engine in vMix, and 3Play from NewTek.



(planned)



**1679€ / 1999\$**

Full freedom, all device cores

## XC8

Custom designed  
jog/shuttle wheel

Copy/paste section  
for clip banks

Monitor timecode and system  
info with crisp OLED display

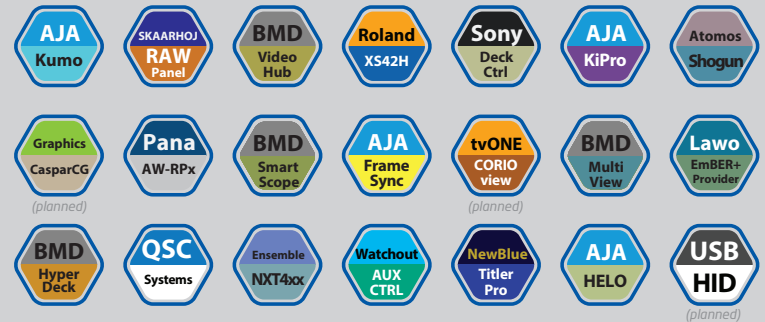


# ROUTING & UTILITY

*We ran two shows with your controllers last week - it's truly a pleasure to work with them*



Control video routers, window processors, multiviewers, monitors, software, recording decks and streaming devices from brands such as AJA, Blackmagic Design, tvONE, Watchout, Ensemble Designs, QSC, NewBlue FX, CasparCG, Sony, Roland, Panasonic, and Atomos.



# Rack Fly Series

**Rack Fly Uno and Duo** are raw muscle. All programmable four-way buttons. All RGB color coded. Far from all too much though - you deserve this for your universal control needs whether it's a video router, your VSM system or an AUX bus.



Rack unit or desktop model?  
You decide!



Unparalleled flexibility with four-way buttons and OLED displays



**1899€ / 2299€**

Full freedom - all device cores



**1299€ / 1599€**

Full freedom - all device cores

**ROUTING & UTILITY**



# Rack Fusion II

Programmable four-way buttons with OLED legends



RGB multilevel metering leds

Rack unit or desk model?  
You decide!



Probably the world's most flexible rack controller! **Rack Fusion II** has 18 awesome four-way buttons and 4 backlit encoders- all with RGB coloring and crisp, graphical OLED displays for function legends. Fits perfectly in your rack. Sits perfectly on your table! Amazing.

High-quality encoders with crisp graphical OLED legends



**1429€ / 1699\$**

Full freedom, all device cores

# Quick Bar



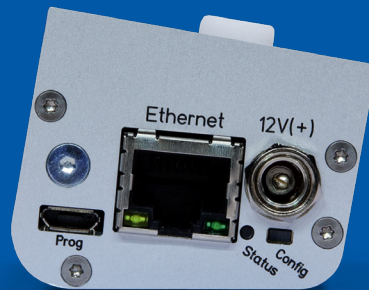
# Micro Fly



ROUTING & UTILITY

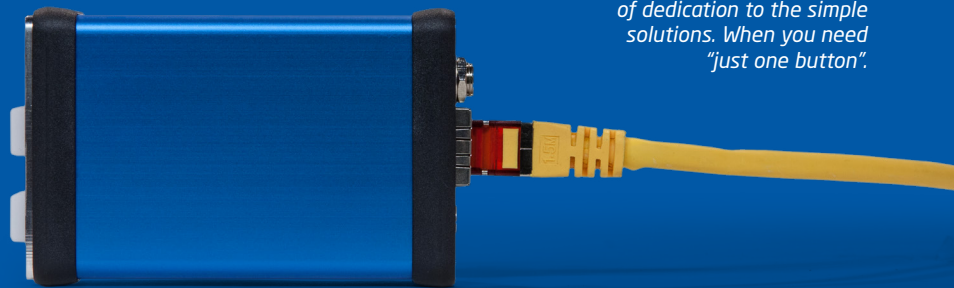
SKAARHOJ

1:1



**Quick Bar** - your go-to auxiliary panel for an aux bus, audio settings, keyers - whatever UniSketch lets you do.

Slightly angled for ergonomic operation



**Micro Fly** - a statement of dedication to the simple solutions. When you need "just one button".



619€ / 739\$

Quick Bar - all device cores



379€ / 449\$

Micro Fly - all device cores

# Jacks of all Trades

*So far, most of the panels presented in this book was designed with a particular purpose in mind. In the true spirit of flexibility you can not only reconfigure them with UniSketch, but you can also supplement them with a number of general purpose panels. The **Inline** and **XPoint** series offer you that wingman!*



 **Inline 10**  
869€ / 1049\$



 **XPoint 24**  
1229€ / 1499\$




 **XPoint 48**  
2149€ / 2599\$



 **Inline 22**  
1499€ / 1799\$



 **XC7**  
599€ / 749\$





# CONNECTING THE DOTS

“ I want to thank you and your team  
for going the extra mile for us ”

## Link IO

The Link IO series are boxes which typically perform an IO or conversion task of some sort. Use them to move signals forth and back over Ethernet, SDI and binary I/O wires.

### ETH-GPI Link

Ethernet to General Purpose Interface with UniSketch OS. Connects relays and opto-isolated inputs with network events. Use it to switch or route a source, start/stop recording, turn on tally lamps etc. 2x8 Inputs/Outputs with option for additional 2x8 I/O.



🛒 479€ / 589\$  
Dual option: 749€ / 899\$

### ETH-SDI Link

Receives “UDP Camera Control” information over Ethernet and forwards it on the SDI out connector. A number of alternative firmwares exist for this device to address various use cases.



🛒 549€ / 649\$

### ETH-LANC Link

Converts data to and from ethernet for use with SKAARHOJ controllers, for instance to enable Sony LANC and Canon RC-V100.



🛒 379€ / 469\$

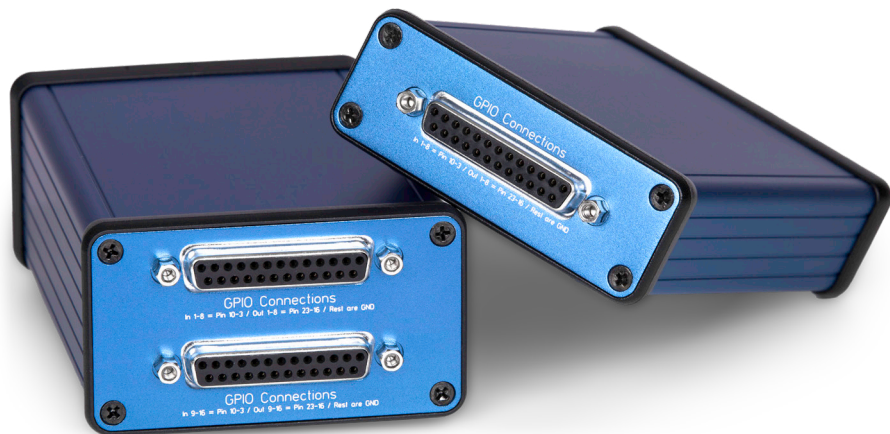


### SDI-GPI Link

Converts 16 digital inputs to tally data on the SDI out connector. Supports Blackmagic Design URSA Series and Studio cameras. Additionally 2x8 inputs/outputs can be added. Routing is configurable via UniSketch OS.



🛒 899€ / 1089\$



### ATEM-TCP Link

This device is a network point that will bridge your TCP control applications to Blackmagic Design ATEM switchers. This is the solution for Crestron, Extron and similar AV systems that typically lets you set up a TCP connection. Most ATEM commands are systematically implemented for two-way data exchange.



🛒 429€ / 529\$



### ETH-TALLY Link

Connects multiple SKAARHOJ Tally Lamps using CAT5e or better cable. Lamps can be connected in a star-topology (every lamp connects to ETH-TALLY Link) or you can daisy chain up to three lamps on a single wire. ETH-TALLY Link is fully UniSketch capable so you can create tally for any device core you wish - like ATEM Switchers, vMix etc.

🛒 549€ / 649\$

### SKAARHOJ Tally Lamp

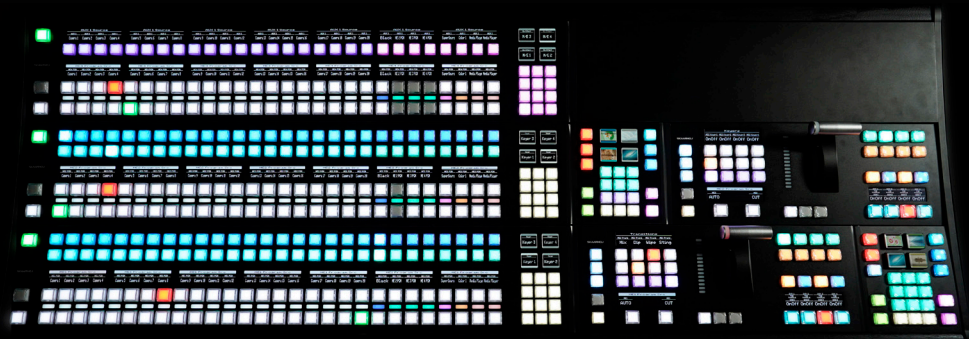
🛒 169€ / 199\$

(Discounted bundles exist)





# Mega Panel!



Build your own panel from 1 M/E to 4 M/E. Design your hardware control surface using the high end modules available and bring them together in a nice frame. Mega panel is designed for video switchers such as ATEM Constellation Tricaster, VMix etc. and new ST2110 IP software switchers from other manufacturers through open Raw Panel API from SKAARHOJ.

*Price and technical features to be shared under NDA. Contact us for further information.*

**MK48**  
ME Block



**MKA4**  
Shotbox Module



**MKT1A**  
Transition Block



**MKT1B**  
Transition Block



**MKA1**  
Multi Function

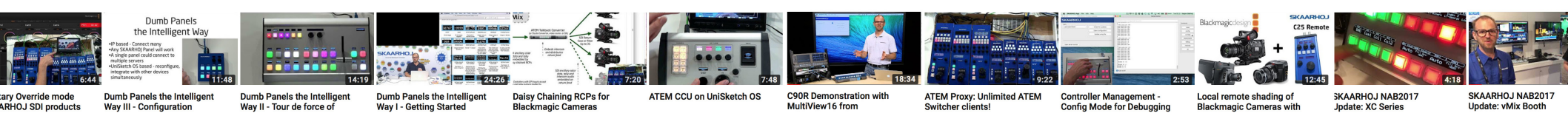


**MKA2**  
Joystick Module



**MKA3**  
Fader Module





[www.youtube.com/c/SKAARHOJ](https://www.youtube.com/c/SKAARHOJ)

**Subscribe to us on YouTube**

- that's the number one way to stay updated and learn essential details about our products.

...and hey, you wanna see it work, right?



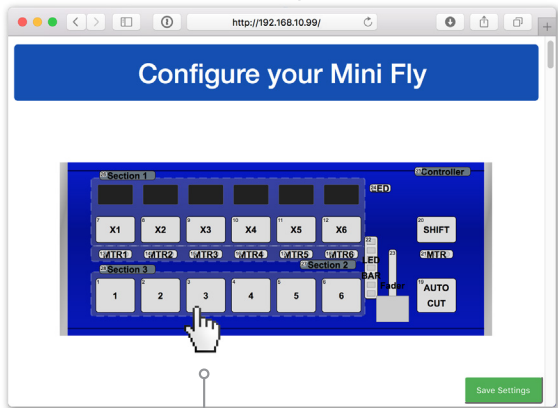
We are also on Instagram, Facebook and Twitter



# UniSketch OS

UniSketch OS is our software that connects a button press to your live show. It works by routing actions and state values between the interface components on the controller and your video switchers, recording decks and cameras on the set. You may never need to change the defaults, but if you do - it's really easy!

Point a web browser to the IP address of the controller



Bring your controller into  
"config mode"

Click the icon of a hardware component



BMD HyperDeck #4: Next Clip  
BMD HyperDeck #4: Prev Clip  
BMD HyperDeck #4: Fast Forward  
BMD HyperDeck #4: Reverse  
BMD HyperDeck #4: Jog  
BMD HyperDeck #4: Slot select  
BMD HyperDeck #4: Input  
BMD SmartScope: Brightness  
BMD SmartScope: Contrast  
BMD SmartScope: Saturation  
BMD SmartScope: Scope  
BMD SmartScope: Border  
BMD SmartScope #2: Brightness  
BMD SmartScope #2: Contrast  
BMD SmartScope #2: Saturation  
BMD SmartScope #2: Scope  
BMD SmartScope #2: Border  
BMD SmartScope #3: Brightness  
BMD SmartScope #3: Contrast  
BMD SmartScope #3: Saturation  
BMD SmartScope #3: Scope  
BMD SmartScope #3: Border  
BMD VideoHub: Route Input to Output  
BMD VideoHub: Store preset  
AJA KUMO: Route Input to Output  
AJA KUMO: Store preset  
AJA KUMO: Recall preset

VMix: Active Src



Each action will typically provide additional parameters

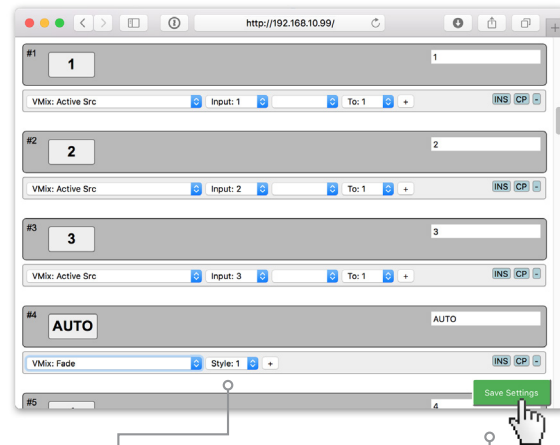


When you're done, click "Save Settings" and the changes are instantly effective

All installed device cores will show up in the dropdown with the actions they provide



That was cool!  
And easy





# cores.skaarhoj.com

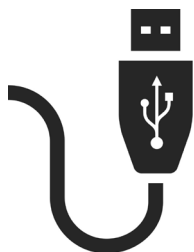


UniSketch OS goes hand in hand with our online repo, cores.skaarhoj.com. Here we store UniSketch OS, the newest device cores and your unique controller configuration. From cores.skaarhoj.com, you receive a uniquely created firmware with exactly the features you asked for.



"Check for Updates" will generate a new firmware with the changes made online

"Online Configuration" will take you to cores.skaarhoj.com



Connect your SKAARHOJ controller to your computer with USB

Open the SKAARHOJ firmware application. It will recognize your SKAARHOJ controller



Add or remove device support with a mouse click

Create any number of configurations for your controller. Easy to change between them any time

Edit button labels, manage options and modules, add text and graphics for the OLED displays



## Before you buy

... you can actually configure your future SKAARHOJ controller online! At this stage it's possible to add hardware options like GPI and SDI In/Out. You can also define label legends. When you press the "Order" button, these choices define how your controller is delivered.

## After you buy

... the configuration you previously made at cores.skaarhoj.com is now linked to the controller you purchased. The hardware options are fixed, but you can manage device cores, manage modules, and create any amount of configurations you like. For free.



**store.skaarhoj.com**

- ✓ Direct sales
- ✓ World wide delivery
- ✓ Advice from the engineers

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