No.	Question	Answer
1	Which receiving card can work with MX40Pro?	Armor series cards, now we have tested A4S/A5S plus/A7S/A8S/A10S Pro.
2	Do the receiving cards needs a new firmware?	Yes, official website you can download the latest firmware
3	The A10S Pro can only work with the MX40Pro?	The A10S Pro can work with all the conroller, but not have the function of full grayscale calibration and dynamic booster and Shutter Fit without the MX40Pro,
4	Will VX4s and VX1000 work with A10S Pro receiving card	Yes, the A10s Pro will work with older controllers. But some new features will not be available, such as dynamic booster, etc.
5	Can we still use nova LCT with A10S pro	yes, Armor series receiving cards can work with both LCT platorm controller and new VMP platform controller, but some functions are exclusive with MX controller.
6	Low latency mode <1 frame (when driver IC has built-in RAM). Does the low latency mode impact on pixel load capacity? Does it have any other mutually exclusive functions or prerequisite (such as cabling top down, etc)?	Low latency mode <1 frame is just discribe the latency of the MX40 Pro itseltf, not including the recieving card and the driving IC, the receiving card + the IC will 2 frame delay. Low latency in MX40 Pro is no impact on loading capacity, it is only required cable running direction, each port loading area shall be Top-aligned
7	What's the advantage of using the A10s Pro receiving card compare with A8s?	Higher loading capacity 512-512, more function, like Full grayscale calibtation, Shutter Fit and dynamic booster. but need work with MX40Pro, support 240HZ, and no rectangle limitation for each port.
8	Is output capacity is still 650k for 8bit and 320k for 10/12bit?	MX40Pro+A10Spro, at 10bit will be 480K, 12bit 320K, with the other receiving card, like A4S/A5SPlus/A7S/A8S, at 10bit and 12 bit will be 320K.
9	is using a10s receiving cards is needed to use all mx processors capabilities?	A10S will not have the function for full grayscale calibration, shutter fit and dynamic booster. but you can get a better experience with the new software VMP
10	Can it control ROE tiles?	Yes, if there is NovaStar receiving card in it.
11	What is the loading capacity of MX40 Pro when the video source is 10bit?	Each port loading capacity will be 480,000.
12	Is the frame multiplication function the same in MCTRL4K+A8s and the MX40Pro+A10s Pro ?	the function is same

13	Does MX40Pro have a built-in router module?	Yes, each device has a built-in small routing module for cascading control between devices and wireless control of multiple devices through a router.
14	will the new mx series be better suited for xr applications?	Yes, with our MX40Pro, we can support better image quality with the funciton image booster and dynamic booster. we have the function like Genlock phase offset and shutter fit to solve the issue of black line and scan line. and we also have the functions like color replace, 14CH color correction, curve and 3D lut for your flexible adjustment of the color. If you have this kind of project, plz contact with us, we will talk with more details and provide a whole xR solution.
15	Please confirm if the color correction presets are stored on the A10sPro or in the MX40Pro.	The color presets are stored in MX40 Pro Processor.
16	what about high frame rate shooting workflow? whats the maximum fps can we achieve with the virtual production package?	MX40Pro can support high frame rate up to 240HZ, and also support the decimal frame rate for all the frame rate plz check as below: 23.98/24/25/29.97/30/47.95/48/50/59.94/60/71.93/72/75/100/119.88/120/143.86/144/240Hz
17	4k Resolution UHD or DCI? 60Hz for HDMI 2.0?	The MX40Pro is 4K DCI (4096*2160 @60hz)
18	Does the MX40Pro controller support the scaling/zoom function?	No， Currently Not. But we have the plan on it, shall be the middle of 2 022, we will support it by upgrade a firmware without loss any other functions
19	For the VMP software, will it work with any other older controller? Or just MX40 Pro?	Cannot work with the LCT platform controllers. For improve user experience and bring more value for users, VMP was designed through a new structure which is totally different with LCT platform, and VMP software is strong rely on the hardware support of MX series controller. But we also know that LCT platform controller is various for users to select for different LED scene, in VMP platform, we already have the plan to cover most kinds of the main LED using senario, from 2k to 4k, even 8k solution. MX40 Pro is a leading launch product in 4K resolution, the whole series product will coming soon.
20	Does VMP software support auto mapping function?	No, currently it supports quick smart mapping. When you click on the Ethernet port, the screen displays the mapping information. According to the Mapping information, you need to manually do the screen connection.

21	The VMP software reads and displays cabinet information. Do I need to use the VMP software to manually load the configuration file, or can I select it directly from the built-in configuration file database?	It is necessary to obtain the configuration file and load it manually. In the future, it is planned to support the built-in database, and choose to load the corresponding file or firmware according to the panel model.
22	Is there a function to select if the HDMI input is a Full range (0-255) signal, or a reduced / limited range (16-235).	Yes, VMP software provides you a way to change the quantization range from limited to full.
23	How soon is the software available for download?	We can provide you later, please contact our technician
24	When will the Mac OS version of VMP software be ready? Even the Linux version.	Mac OS will be availabled at middle of 2022.
25	Where is the clock settings in the software	VMP software do not support to adjust the receiving card parameters, we will release another software to cover it，will coming soon.
26	Do I need to prepare a 3DLUT file to use the 3DLUT function?	Yes, VMP software supports 3DLUT file loading and intensity adjustment. But please be aware that the file shall be 17*17*17 grid and .cube file
27	Are there hidden administrative areas	No, there is no hidden menu. You will find all parameters in software interface.
28	Will the software show real time monitoring of cabinets such as voltage, temp, run time, error, etc?	Yes, realtime monitor for system running status coming soon.
29	Is it be possible to get a user manual and data sheets for the MX40 and VMP software?	yes, please contact our technician
30	Can we add in a full blown color monitoring section to the software that has vectorscopes , histograms, rgb parade so we can monitor the inputs in real time and use these tools for color correction from within the software?	We have plan for video oscilloscopes, including vector oscilloscopes, histograms, component graphs, etc. First came the histogram. and also we will provide the API of VMP for our customers's customized applications.
31	Will NovaStar be supporting APIs in VMP software for integration with external systems for control of some settings (brightness, color presets, etc)?	Yes, we have plan to open it in the future.
32	What framework is this built on same at smart lct?	No, it's completely different for old platform(LCT and Smart LCT). the API will be the standard URL, no dependance on any framework.

33	Would be nice to ditch all the install SW and just have web server API SW control. Then I can talk from anything I want.	Will release APIs/protocols for third party device/webpage to control.
34	When will the API be available	In the middle of 2022
35	Why the frame multiplication and Genlock function could remove the scanning issue through the digital camera?	The Frame Multiplication is a kind of technology which convert low frame frequency content to high frame frequency, Shutter Fit is for solve scan line, Phase offset is for sove the black line. When the camera shutter and screen content not match, there will cause 3 issues, inconsistent start time, inconsistent frequency, and inconsistent duration. These are the 3 basic elements reason caused scan line and black line.
36	What kind of the LED panel is more suitable for XR project?	PWM IC, and Module less than 1/16 scan suggested
37	Can MX40 Pro be used with CVT4KS to achieve long-distance transmission?	No, due to the limitation of developement platform, we recommend using it with CVT10.
38	Using the A10s Pro, I would assume that the frame replace/multiplexing will depend on driving IC abilities. Are there any other features that are dependant on Driving IC capabilities?	Yes, it is. Better to use the high performace drive chips. the features depends on Driving IC are shutterfit, HFR, precise grayscale and the frame multiplexing
39	Does A10s Pro have compatibility issues with commonly used chips?	No, there are no incompatibility issues.
40	What do we need to do if we want to have dynamic booster function	1. MX40 Pro and A10s Pro hardware is needed 2. Must be sure there already did Image Booster in your LED manufacturer, acturally you can also require your supplier to do it before your LED ship out
41	Which of the new features require a special level of calibration at the LED manufacturer factory to be supported? For example, in the past, the LED Image Booster function required additional calibration with a Caliris CCD camera	1. C3200 profesiional calibration tools required 2. before do full gray scale calibration, be sure that your screen already did image booster by colorimeter
42	which kind of camera do we need for full grayscale calibration?	C3200
43	Is VMP compatible with existing calibration software(NovaCLB)?	Need our new calibration software CalCube
44	With new calibration software CalCub we can still use our old classic photocamera dongle key calibration system?	No，Calcube can not support classic photocamera,it only can support industrial camera-C3200.

45	For the multi-level calibration, how many levels need to be measured and how long does this take	Now we can do maximum 8 level, and calibration time is depend on the screen resolution and calibration mode setting, Normally for an 1080P screen, for 8 level, it will takes 8 times brightness calibration and 1 time multi-bin calibration.
46	You mention calibration values for each grey scale level….so LED module would have to hold 10 calibration coefficients? That would take 10 min to let a tile boot up.	No, there is only one calibration database, it will be divided to multiple sections for multiple level calibration. After the screen calibration is completed, all coefficients will be automatically uploaded and saved to the receiving card. And the coefficient transfer rate of the new system has been greatly improved, so it won't take long. When screen get the coefficients, depent on the content it display, will auto performance the best effect in screen.
47	HDR10. I can see the pixel load capacity is not halved (but is lowest for 10bit), a clear improvement. In the past HDR10 and pixel level calibration were "mutually exclusive functions". E.g if you run HDR10, you lose calibration. Is this still the case?	In MX40 Pro, HDR10 is no impact on any other functions
48	have you guys developed any color calibration workflow exclusive for cinema cameras?	Yes, our standard calibration system support Canon Digital camera like Canon 7D, Canon Mark 2
49	Do we need to use additional equipment for the image booster or grayscale calibration?	Yes, an extra colorimeter is needed, Konica CA410 is recommended for Image booster. while C3200 for Full grayscale calibration. But these equipment only be used once for calibrating the parameters of the display.
50	can you send different color calibration to a single wall in order to match panels from different LED batches ?	Yes, select the specific part screen and upload coresponding calibration files
51	Is the calibration data static, or dynamic and adjustable by the end user?	It's static, after camera calibration, you will get an encrypted coefficients database, which can not be adjusted by the end user.
52	The MX40 Pro flyer states support for " 4k@60Hz 10bit 4:4:4". Is this correct? I ask because in the specification document there only appears to be support for 4K@30Hz 10bit 4:4:4. To my knowledge with HDMI2.0 standard this cannot support 4k60Hz 10bit 4:4:4 as the data rate is too high? Please can NovaStar clarify?	yes, you are right, 4k@60Hz 10 bit 444 is required HDMI2.1, here what we want to present is the whole solution for 4k@60Hz 10 bit 444, MX40 Pro is a part of the solution, in front of MX40 Pro, we have a 8K video spliter, which is 1 HDMI2.1 input and 4 HDMI2.0 output, together with MX40 Pro to realize the 4k@60Hz 10 bit 444

53	Does Nova currently have an 8K controller?	Yes, the 8K controller is currently under development and is expected to be released in the middle of 2022.
54	For the frame multiplexing feature, is it supported to select different sources?	Currently it supports you mix maximum 6 content with 1 sourse, then frame multiplexing in different parts of the single source, and output multiple different content
55	How does the LED screen display when frame multiplexing is enabled?	It will flicker because multiple different signals are composed in one and displayed at the same time.
56	The MX40 Pro flyer states 3x HDMI2.0 inputs, but the specification document states 2x HDMI2.0 (and only 2x inputs are shown in the image of the rear of the processor). Which is correct?	follow the flyer, 3*HDMI 2.0, we will update the final version specification soon
57	Is 1080i supported on the HDMI input?	No, interlace signals are not supported. actually now we do not support the i signal for all the input.
58	Will there be multiple videos layers or a single 4k scaler?	Yes, we plan to support 3 layers in MX40 Pro.
59	when we are using the higher frame at 240hz does it affect the pixel capacity of the processor? do we need to increase the number of processors as we increase the fps or hz?	Yes, indeed it will affected
60	whats the pixel capacity of the processor? whats the maximum output we can send to led walls is ot 4096X2160?	so far, 8.8 million, we have plan to add scaling feature in the middle of this year. Just firmware update, no need to change the hardware. and no impact on any other functions
61	Is there any limitations on optic ports, like there was 10 Ethernet port on CVT10 but optics can only support 8 Ethernet port. Is there similar limitation?	No limitation. when the CVT10 works with the MX40Pro, all the 10 ethernet ports can work
62	Do you have following sessions to demo your features like frame multiplexing and shutter fit?	We will make several demo video of these function like frame multiplexing and shutter fit, to show how that set and work. After the video ready, we will put it online, you can find it in our offical Youtobe Chanel or website.
63	Is the Main/Backup Processing (different Processors) also possible over Ethernet?	yes

64	Can several users work on several screens at the same time?	If several user online at same time, they work with several different controllers at same time, but for 1 same controller, one time only allow 1 user to operate it, when this user work on it, the controller will show locked status for other online users, they can only avalavle to control it after that user finished work
65	Dynamic Booster feature. Is this feature supported when grouping multiple MX40 Pro display controllers? E.g if we show a video across multiple MX40 Pro, are Novastar able to apply the image processing evenly across the combined video canvases?	coz some tech obstacle，Not support now, need to enable the dynamic booster funciton one by one from the VMP software .but we will try our best
66	Is there an Phone App version planned for control elements?	No plan now
67	Can we use CVT 10 and CVT 4K-s fibre convertors?	CVT 10 is recommended, but CVT 4K is not currently, but it's on plan
68	Does 4k need 20 output ports?	No，4096x2160 mathematically only need 14 ports. we provide 20 output ports just for your convenience for mapping the cabinets.
69	Will you recomment A10S pro instead of A8 card for a new 2,6mm indoor screen if we buy a new screen ? and is there anything the manufacturer have to do differently ?	Yes，A10 Pro can support 2 core functions exclusively on image quality improvement, Dynamic Booster, Full grayscale calibration, these 2 the manufacturer have to finished in the factory
70	how much pixel output each port min and max?	Up to 650k pixels 8bit@60Hz, 480K pixels 10bit@60Hz(A10s Pro supported)
71	Provided that the hardware can support all functionality, what level of monitoring can you offer?	Controller level, cabinet level, module level. Including temperature, voltage, fan speed, signal status, smoke, power status or voltage, etc.
72	Does the MX40 have the capabilities of the HDR Master built in?	Yes, Dynamic Booster is the function to make a SDR source like a HDR effect
73	can we select the color space to the output and input ? what are the color spaces we can choose like rec2020, dcip3 rec709	Yes, original color space, Rec709, BT2020 , DCI-P3 , NTSC, etc are optional for you to select, also we support the customer color space for the professional users.
74	What type of the genlock signal new procesors use? Is it blackburst? Or maybe we can use tri-level sync?	black burst,Bi Level and Tri Level

75	if I have a 16bit input can I set output to 8 bit in order not to decrease load capacity ?	1. you cannot input a 16bit per channel RGB data to the MX40 Pro, it support 8/10/12bit 2. no matter the input bit depth , the output bit depth is only depend on your choice. when the input is 12bit, you can choose 8bit output for decreasing the load capacity
76	If a wall is calibrated in VMP software, do these settings (such as a display wall, project, etc) stay stored in the controller, or the PC that calibrates it?	All settings are saved in controller and receiving cards, the PC can save backup config files as well.
77	What about ghost framing	We have frame multiplexing feature which is for the same senario as what ghostframe does, multiple feeds with multiple camera output
78	Do we have color measuring ..	Yes，In our color management, supplyed an color measuring function. For color measuring, an extra colorimeter is needed
79	is the controller HDCP compliant?	Yes, HDCP2.2 and downward compatible for HDMI, and HDCP1.3 for DP.
80	What about ghost framing and direction of input selection	Currently it supports you mix maximum 6 content with 1 sourse, then frame multiplexing in different parts of the single source, and output multiple different content.
81	When mapping a rectangular video wall…if we connect our first data port to the entire fist row of cabinets…then stop halfway through the 2nd row of cabinets…does it still include the pixel load of the remaining tiles in the 2nd row of cabinets?	Not any more, the new MX40 Pro calculte loading capacity based on actual connected panels, no rectanglular limitation any more.
82	Do the A10s pro require much redesign from the LED manufacturer	It have the same connector as A8S, just with lager size, so if the space inside panels is enough, would be a easy update.
83	Will the new H series support this new product line? A lot of us just spent a LOT of $$ on the new H series line, and I'd love for the H series to work with the new product line.	Thanks for your suggestion, will evaluate your requirement and let you know the result.
84	Can the VMP work with controllers via USB connection or does it have to be IP controlled?	Jusr IP control. There are two 1G Ethernet ports for control，TCP/IP Protocal

85	Are you able to adjust blocks and frequency Phase clock and frequency control?	We have the Auto adpitive frequency, which can read the frequency from input automaticaly, and also have function like frame multiplication to manually change the frame frequency
86	Are controllers linked (or daisy chained) together on a network switch, or are there direct connections from controller to controller such as UAT?	There are two Ethernet control ports for direct and daisy-chain connections. You connect all the controllers to a network switch, or daisy-chain them together.
87	Rectangular limitation is no longer an issue regardless to receiving card model?	using MX40 Pro +A10s Pro to get rid of the rectangular limitation.
88	Will all of the rconfix files from various manufactuers be stored on the cloud somewhere so we can search for our panels and grab rconfig files that way from within the software (especially if we rent from others and don't have those files on hand).	Yes, we have plan on this job.
89	Will you make a new H series style product line for the new hardware? If so, is there an eta?	No, there is no such plan.
90	Ignore if already answered in presentation, but does the MX40 have full scaling capability?	Yes, so far it's a controller only but we will support scaling and layers function in short time.
91	So if the cabinet has the space for a receiving card swap. are there any special requrements for this hardware such as specific IC drivers, or will just swapping out the receiving card be all we need to do?	If you need all the features of the A10s Pro, then yes, full grayscale calibration，image booster requires the PWM IC to achieve. So before swap the card, please contact us and provide the detailed info of your LED module. We will help you to figure it out.
92	Does the manufacturer also use the VMP software for configuration of module settings and low level controls currently found in LCT	No, VMP is just for advanced control. We will release another software for manufacturer and Nova Engineer to use for creating config file.
93	What Arron syncing, What about strobe syncing	not supported
94	So rectangular limitation is still an issue with A4S, A5S…	Yes, correct. Using MX40 Pro +A10s Pro to get rid of the rectangular limitation.
95	Its sad to see VMP not able to support H series. I think you should do everything you can to support at least H series processing	Thank you for your suggestion, will evaluate your requirement.
96	Do you have a feature that link the Main controller and the back-up one	yes，all the parameters which is setted on the main controller will automaticlly sync to the backup one

97	Is there visual tile issue monitor that refreshes in real time for identification	Yes, you can monitor each tile working status and real time alarm.
98	is there any of these features compatibles with A8S cards ?	In addition to the dynamic booster, full grayscale calibration, shutter fit, free from rectangle and 240Hz HFR, other functions are compatible with A8s receiving card.
99	If a wall is calibrated in VMP software, do these settings (such as a display wall, project, etc) stay stored in the controller, or the PC that calibrates it?	All settings are saved in controller and receiving cards, the PC can save backup config files as well.
100	the life circle of 4K, UHD Jr and Vx Series?	so far the plan of 4K Jr and VX series are still going on, parallel with MX40 Pro and VMP
101	As the platform shifts, does that mean VMP will completely replace NovaLCT?	NovaLCT will still be reserved for professional customers to use with traditional controllers to configure the screen. For end customers, we will guide customers to use VMP, and we will have a series of new product plans to work with VMP.
102	When will MX40 Pro be available for sale?	It has been released in China and has been used in certain projects. Oversea will be sale after our online conference
103	What is the price of the new controller?	Please let us know your contact, our sales will email you asap.
104	When will the MX40 be available for sale?	It has been released in China and has been used in certain projects. Oversea will be sale after our online conference can place oder by now, usually will have 30 days, but due to Chinese Spring Festival in Febrary, we will give goods shipping at end of Febrary
105	Can you send the full Q&A sheet in the chat, once the session is over so we can download it?	Yes