

DIGISTAR LITE HARDWARE DESCRIPTION



DIGISTAR LITE HIGHLIGHTS

■ EXTREME PORTABILITY

Flight case depends on the type of projector used. All cases are built as "trolley" for easy transportation.

Digistar Lite generally has a single flight case (height 72cm, width 55cm, depth 49cm).

A two-case solution can be requested as option for Barco projector due to the size of F80. In this situation, simply remove the projector from the case and attach easily to the computer case to be start the projection.

■ READY TO USE

No special tools necessary. Just take out the top part and projector side plate, then plug in the video and 110-200 Volt power cords. The system boots in less than five minutes. Wi-Fi for iPad starts automatically. Easily adjust the height of the projector to match every condition. Just switch on the iPad (included) and you are ready to start.

■ DIGISTAR LITE

Digistar Lite is the most complete astronomical software for portable planetariums. The system includes custom pages designed to fully control the system from an iPad, iPad Pro, or any other tablet. Additionally, optional plugins are available to expand the capabilities of the system. Operating system is Windows 10 PRO 64 bit.

■ FISHEYE LENS

All Digistar Lite models use a high-quality, 180° fisheye lens directly connected to the projector. We don't use fisheye converters or a diagonal mirror with a fish eye lens as do many entry level systems from competitors. This assures the maximum optical quality and the highest light throughout. Our software also permits to adapt the vertical angle from 180° to 140° to match all projection needs and situations.

■ FULLY INTEGRATED COMPUTER AND AUDIO

All the parts of the computer are included in the flight case and are easily accessible for maintenance. External USB, HDMI, and LAN ports simplify the connections. The system is completely shockproof. A Samsung EVO 1Tb SSD is supplied to avoid a data crash during transport. Digistar Lite incorporates a 2.0 25W audio system with Ciare speakers and an analog amplifier all included in the chassis (high quality speakers and amplifiers made in Italy). A TRS plug permits you to connect a mic or connect an external audio system as well.



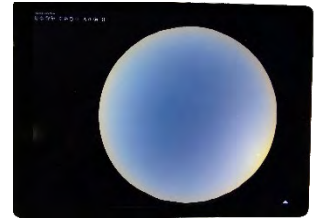
■ COMPLETE IPAD FUNCTIONALITY

Digistar Lite can be operated from just an iPad, iPad Pro, or any other tablet or laptop. Use your finger to explore your universe and use multiple windows to multi-task.

■ INTERACTIVE DOME VIEW

For the first time ever, the famous Digistar Interactive Dome View is accessible through an iPad! This gives you exceptional control over what it is happening on the dome.

Move the time, select a star or a constellation, move objects or models, and more, with just your finger! Thanks to the WiFi Direct connection, the iPad refresh rate is very quick, even during 60 fps movie playback.



■ DIGISTAR CONTROLLER

We have developed a new wireless 6-axis controller. The Digistar Controller will revolutionize your approach to space travel and planet flyovers. It also holds the iPad or iPad Pro 12.9" for simple access to the User interface.

Customizable buttons and a touch panel permit you to assign specific functions or go to commands (example: refresh the dome projection, assign a script, bookmark, etc, planets, deep-sky objects, etc.).

An illuminated different position knob permits you to change the time speed at different levels.

The Digistar Controller is optional with every Digistar Lite planetarium. The touch panel of the Controller shows the connection to the Digistar Lite and battery level.



■ ALL HARDWARE IN SAFE PLACES

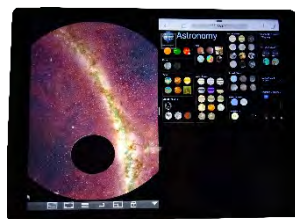
The flight case has key locks to keep the projector and lens not accessible to not authorized persons. The computer compartment uses a key lock as well. The controller with iPad is safely stored inside the Digistar Lite flight case.

The laser-cut foam used inside the Controller compartment will keep the Controller safe during transport. Moreover, the compartment is not accessible from the outside: you need to open the flight case key locks to have access to this compartment. Projector is foam-protected.



■ CUSTOMIZED CONTROL PAGES

While every User can customize the control panel pages, we have already created several pages to easily control every aspect of the portable planetarium quickly.



■ **USE AS A WORKSTATION**

Digistar Lite can be easily connected to an external HDMI monitor (not supplied) and used with a keyboard and mouse (not supplied), allowing you to use Digistar Lite as a Production workstation. You can write scripts, slice or render full dome shows, participate in software training, etc. The computer can be connected to Internet with a Lan cable or Wi-Fi.



■ **RED VISION**

You can fully control the iPad and Controller brightness. The iPad can work in color or you can set it in Red Vision.

■ **MULTILANGUAGE**

Digistar is fully Unicode compliant, allowing on-dome, real-time text to be displayed in virtually any language or character set. The language used for object labels is a preference setting. Digistar already includes labels for the most common languages. Creating label files for new languages is a relatively simple task. English, Italian, Spanish, French, German, and many others are already available.



■ **FULLDOME SHOWS INCLUDED**

The system includes some very recent fulldome movies with a perpetual license. Please see the titles in the List of Deliverables. Each show is provided with English narration while other languages when available (additional languages can be recorded locally by the customer). The Digistar Lite catalogue has a list of more than 150 optional fulldome shows, on different contents, and with different prices to match every customer's budget.

■ **BLUETOOTH AND WIFI**

A direct Wi-Fi connection between the planetarium chassis and iPad is used to show the complete Digistar User Interface on the iPad screen, including the interactive dome view and control panels. A Bluetooth connection between the planetarium chassis and the SkyTouch controller is used for all the other commands, such as button, joystick, and touch panel interactions. The Digistar Lite controller allows Internet connection and access to Digistar Cloud (a LAN port is available). This Internet connection permits also remote diagnosis and/or technical assistance from Skypoint Planetariums' technicians.

■ **PROJECTOR READY IN 3 SECONDS**

The time needed to move the projector from the transport position to the working position is a 3-second operation that requires no tools! This Skypoint solution is patent pending. During transport, the projector is safely stored, and it cannot move.

■ **FORGET CABLES**

A single power cable is needed to power on all the hardware: computer and projector. On one side of the flight case you can find a standard C14 plug. Internal wires then bring power to the computer, router, projector and all the rest of the hardware.

■ **EXTERNAL BACKUP**

With every Digistar Lite, the User receives an external HDD of 1Tb with the complete image of the Operating System and content installed in the planetarium.

Digistar Lite Specifications LAMP PROJECTORS		
	Digistar Lite 1200	Digistar Lite Digital Scaling 4K
Projector Type	Vivitek DU5671	NEC NP-PA653U
Brightness (lumens)	6.200	6.500
Contrast Ratio (manufacturer declared)	up to 2.000:1	up to 8.000:1
Maximum Projected Meridian Resolution (pixels)	1200px	Native 1200px; Increased image quality with NEC Digital 4K Scaling *1
Maximum Suggested Dome Size	9m	10m
Light source	Lamp (1)	Lamp (1)
Light source Life (hours)	2.000 (2.500 eco)	4.000 (5.000 eco)
Flight Case	Single	Single
Size	76 x 56,5 x 48,5 cm	76 x 56,5 x 48,5 cm
Weight	In Operation: 35 Kg During transport: 51 Kg	In Operation: 35 Kg During transport: 51 Kg
Notes		Long life lamp

*1: The NEC Digital 4K Scaling will accept a 4K input signal and will scale that down to the native resolution of 1920x1200. Inputting at a higher resolution and then downscaling, it permits to digitally process the image with algorithms that will increase the projected image quality, looking much better than a native 2K image.

Digistar Lite Specifications LASER-PHOSPHOR PROJECTORS

	Digistar Lite 1200 Laser-Phosphor	Digistar Lite 1600px Laser-Phosphor	Digistar Lite 4K Laser-Phosphor
Projector Type	Sony VPL-FH58/61/66	BARCO F80Q7/Q9/Q12	BARCO F80-4K7/9/12
Available Brightness (lumens)	4.200/5.100/6.100	7.000/9.000/12.000	7.000/9.000/12.000
Contrast Ratio (manufacturer declared)	up to 5.000:1	up to 10.000:1	up to 10.000:1
Maximum Projected Meridian Resolution (pixels)	1200px Entry level fisheye	1600px	2400px With Barco Pixel Shift *2
Maximum Suggested Dome Size	7m	15m	15m
Light source	Laser-phosphor	Laser-phosphor	Laser-phosphor
Light source Life (hours)	20.000	20.000	20.000
Flight Case	Single	Single (dual as option)	Single (dual as option)
Size	100 x 59 x 56 cm	Single Chassis: 100 x 59 x 56 cm Dual Chassis: 100 x 58,4 x 45 cm 35,4 x 55,4 x 27 cm	Single Chassis: 100 x 59 x 56 cm Dual Chassis: 100 x 58,4 x 45 cm 35,4 x 55,4 x 27 cm
Weight	In Operation: 35 Kg During transport: 51Kg	Single Chassis*: In Operation: 50 Kg During transport: 81Kg	Single Chassis*: In Operation: 50 Kg During transport: 81Kg
NOTE FOR SYSTEMS BASED ON BARCO F80	*The Single Chassis includes all parts inside one single flight case (81Kg: due to weight and dimensions two persons are required to move). <u>As option:</u> Dual Chassis , one case for computer (20Kg) plus one case for projector (63,5Kg). Add USD 500		

NEC DIGITAL 4K SCALING AND BARCO PIXEL SHIFT TECHNOLOGIES EXPLAINED

*2: The Barco 4K UHD (Ultra High Definition) is an affordable way to display a native 4K resolution image by making use of Texas Instruments' pixel shifting technology and Barco's unique Single Step Processing (SSP™) image processing technique to display the input image on the screen without any artefacts and with the lowest possible processing latency. This is today's best technology to produce 4K looking images while not using a 4K native resolution.

Complete information about Barco Pixel shift can be found at

<https://www.dropbox.com/s/hwguw5f418yvvul/Barco%20Pixel%20Shift.pdf?dl=0>

Digistar Lite Deliverables	
Deliverable	Details
Digistar Lite Supplied Hardware	<p>Flight case with fully integrated projector, lens, and PC Intel i7 latest generation; SSD 1Tb; nVidia RTX2080 8Gb DDR5; RAM 32Gb</p> <p>Audio system: 2.0 25W Ciare speakers 1x TRS 6.3" jack Input/output 2x HDMI/DisplayPort, 1x LAN RJ45, 3x USB 2.0, 1x USB 3.0 connections Integrated Bluetooth (for Controller connection) and Wi-Fi (for iPad connection) 220/110 Volt compatible (1x IEC C14 input, 1x IEC C13 output)</p>
Software	Digistar Lite permanent license
Supplied Shows Content <i>Shows are supplied with English audio track (or local language if available)</i>	<p>14 Movies included: The Sun , Our living star (2018, 25min.), Phantom of the Universe (2017, 27min.), Out There (2017, 30min.), The Future of Human Space Exploration (2014, 12 min.), From Earth to the Universe (2015, 31min.), Journey to the Centre of the Milky Way (2014, 7min.), The Hot and Energetic Universe (2016, 30 min.), Back to the Moon for good (2013, 25min.), Dark The movie (2012, 20min.), Dark Matter Mistery (2015, 38 min.), Two Small Pieces of Glass (23 min.), IBEX (27 min.), Distant worlds (52 min.)</p>
Digistar user group objects (DUG)	<p>The first year of registration is included. The DUG Library is an extensive resource of Digistar content: there were more than 10,000 models/scripts/shows in the DUG Library.</p>

DIGISTAR LITE OPTIONAL HARDWARE UPGRADES

■ IPAD PRO 12.9"

Instead of the iPad 10.2", the customer can choose the iPad Pro 12.9". The larger screen and increased hardware capabilities provide an even better Digistar experience including the advantage of multitasking windows. This is suggested especially for 4K models.

■ TILTED SETUP

As standard the Digistar Lite projects a 360° horizontal, 180° vertical half sphere, for a typical use under a portable dome. Optionally Digistar Lite can be manufactured with the projector tilted by 10° to better accommodate the projection inside tilted domes. This option must be requested at the time of purchase.

■ AUTOMATIC BACKUP

Optionally Digistar Lite can integrate a second SSD to back up the system automatically or with a simple command.

■ AUDIO OUTPUT 7.1/5.1

Optionally Digistar Lite can also have an additional 7.1/5.1 audio output to connect to an existing, or customer provided, 5.1/7.1 audio system.

■ MICS

An optional wired Shure or AKG microphone can be hooked into the speakers. The wired mic plugs directly into the audio amplifier through an external easy-access port. Wireless mic option can be also be requested as an additional quote.

■ LED LIGHTS

A 1600 lumen RGB LED strip and DMX controller can be integrated on top of Digistar Lite to provide simple, beautiful entrance and exit illumination or more elaborate lighting effects from Digistar Lite. LED strips are provided on both top sides of the flight case to provide the most uniform illumination possible.



- **IMMERSIVE AUDIO**

Realistic presentation of natural sounds matches the visualization of the scenes preserving the perspective of a complex soundscape.

- **ACCESSIBILITY AUDIO PACKAGE/ALS**

A new audio package with one transmitter plus ten personal ALS radio frequency receivers with personal induction loop necklace to transmit the movie narration for hearing impaired visitors. It can be also used for a second language or a simplified narration for children with learning disabilities.

- **DOUBLE CHASSIS**

The Digistar Lite is also available in the double chassis version.



- **DIGISTAR LITE PORTABLE IMAGE GENERATOR**

The Digistar Lite is also available as Image Generator for customers that already have a portable planetarium and want to keep the existing projector and lens. The Image Generator is supplied in a flight case, like the one supplied with complete Digistar Lite systems but smaller because it will just host the computer, hardware, and the Digistar Lite Controller.

The Image Generator has all the outputs to connect to the existing projectors and well as all the outputs included in the complete Digistar Lite systems (USB2, USB3, mic, etc). The 2.0 audio system is included as well.

The Image Generator supports projectors up to 2400 meridian pixels of resolution.