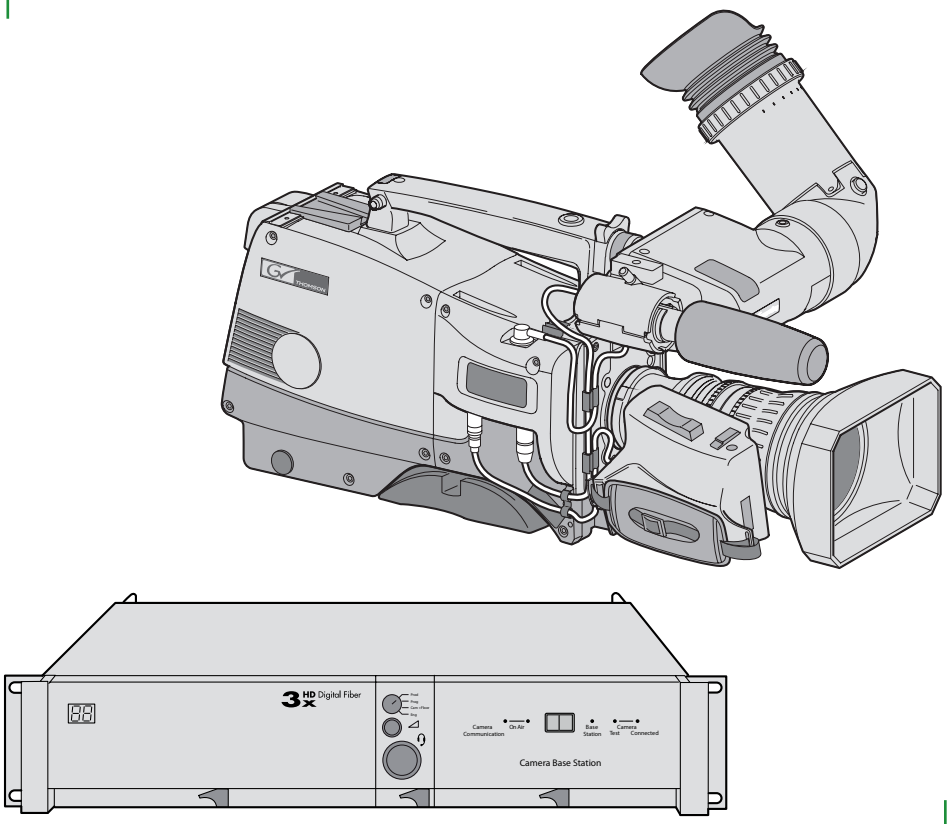
grass valley

Service Manual

3922 496 31021 V2.0 October 2009



LDK8300

HDTV High-speed camera system

Declaration of Conformity

We, Grass Valley Nederland B.V., Kapittelweg 10, 4827 HG Breda, The Netherlands, declare under our sole responsibility that this product is in compliance with the following standards:

- EN60065 : Safety

- EN55103-1: EMC (Emission)

- EN55103-2: EMC (Immunity)

following the provisions of:

a. the Low Voltage directive 2006/95/EC

b. the EMC directive 2004/108/EC

FCC Class A Statement

This product generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause interference to radio communications.

It has been tested and found to comply with the limits for a class A digital device pursuant to part 15 of the FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

Operation of this product in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Copyright

Trademarks

Website

Visit the Grass Valley public website to download the latest user's guide updates and additional information about your broadcast product:

www.grassvalley.com

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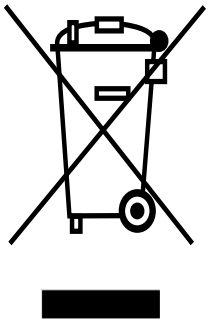
End-of-life product recycling



Grass Valley's innovation and excellence in product design also extends to the programs we've established to manage the recycling of our products. Grass Valley has developed a comprehensive end-of-life product take back program for recycle or disposal of end-of-life products. Our program meets the requirements of the European Union's WEEE Directive and in the United States from the Environmental Protection Agency, individual state or local agencies.

Grass Valley's end-of-life product take back program assures proper disposal by use of Best Available Technology. This program accepts any Grass Valley branded equipment. Upon request, a Certificate of Recycling or a Certificate of Destruction, depending on the ultimate disposition of the product, can be sent to the requester.

Grass Valley will be responsible for all costs associated with recycling and disposal, including freight, however you are responsible for the removal of the equipment from your facility and packing the equipment ready for pickup.

For further information on the Grass Valley product take back system please contact Grass Valley at + 800 80 80 20 20 or +33 1 48 25 20 20 from most other countries. In the US and Canada please call 800-547-8949 or 530-478-4148. Ask to be connected to the EH&S Department.

In addition, information concerning the program can be found at:

www.grassvalley.com/environment

Safety Summary

This information is intended as a guide for trained and qualified personnel who are aware of the dangers involved in handling potentially hazardous electrical / electronic equipment. It is not intended to contain a complete list of all safety precautions which should be observed by personnel in using this or other electronic equipment.

The installation, maintenance and service of this equipment involves risks both to personnel and equipment and must be preformed only by qualified personnel exercising due care.

Personnel engaged in the installation, operation, maintenance or servicing of this equip ment are urged to become familiar with First Aid theory and practises.

During installation and operation of this equipment, local building safety and fire protection standards must be observed.

Whenever it is likely that safe operation is impaired, the apparatus must be made inoperative and secured against any unintended operation. The appropriate servicing authority must then be informed. For example, safety is likely to be impaired if the apparatus fails to preform intended function or shows visible damage.

Cautions and Warnings

When preforming service, be sure to read and comply with the warning and caution notices appearing in the manuals. Warnings indicate danger that requires correct procedures or practices to prevent death or injury to personnel. Cautions indicate procedures or practices that should be followed to prevent damage or destruction to equipment to property.

WARNING

THE CURRENT AND VOLTAGES PRESENT IN THIS EQUIPMENT ARE DANGEROUS. ALL PERSONNEL MUST AT ALL TIMES FOLLOW THE SAFETY REGULATIONS.

ALWAYS DISCONNECT POWER BEFORE REMOVING COVERS OR PANELS.

ALWAYS DISCHARGE HIGH VOLTAGE POINTS BEFORE SERVICING.

NEVER MAKE INTERNAL ADJUSTMENTS, PERFORM MAINTENANCE OR SERVICE WHEN ALONE OR WHEN FATIGUED.

IN CASE OF AN EMERGENCY ENSURE THAT THE POWER IS DISCONNECTED.

ANY INTERRUPTION OF THE PROTECTION CONDUCTOR INSIDE OR OUTSIDE THE APPARATUS, OR DISCONNECTION OF THE PROTECTIVE EARTH TERMINAL, IS LIKELY TO MAKE THE APPARATUS DANGEROUS. INTENTIONAL INTERRUPTION IS PROHIBITED.

USE ONLY FUSES OF THE TYPE AND RATING SPECIFIED.

CAUTION

To prevent risk of overheating, ventilate the product correctly.

Fiber-optic transmission units

Laser safety statement (Europe)

Fiber-optic transmission units are classified as a “CLASS 1 Laser Product” according to EN 60825-1, Safety of Laser products. Class 1 laser products are considered safe and do not result in biological hazard if used according to the instructions.

Laser safety statement (US)

Fiber-optic transmission units are classified as a “CLASS 1 Laser Product” according to 21CFR 1040.10 of the US Food and Drug Administration (FDA) Center for Devices and Radiological Health.

WARNING

Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Cleaning fiber-optic connectors

WARNING

Always switch off power before cleaning the connectors.

WARNING

Never clean an optical connector attached to a fiber that is carrying light.

Particles of foreign matter on the tip of a ferrule can have a disabling effect transmission. Fiber-optic connectors need to be cleaned every time they unmated; it is essential that fiber-optic users develop the necessary discipline the connectors before they are mated.

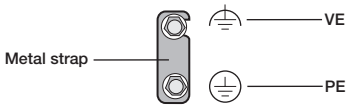
Use a commerially available cleaning kit specifically designed for fiber-optic follow the manufacturer's instructions carefully.

- The connector sections to be cleaned include the tips and sides of walls of alignment sleeves, and the interior and exterior of connector
- For plugs, the interior surfaces of alignment sleeves and the tips of cleaned with a cleaning stick treated with the appropriate fluid. (Cleaning lender design are available that allow alignment sleeves to be cleaned detach them.)
- For jacks, it is important to clean both the tips and sides of the completely ferrules.
- Both the male and female connector shells tend to attract dust and important to clean both the insides and outsides.
- The fiber end face and ferrule must be absolutely clean before it is transmitter or receiver.
- Mate the connector immediately! Don't let the connector lie around before mating.
- Air can be used to remove lint or loose dust from the port of a transmitter mated with the connector. Never insert any liquid into the ports.

Also see Chapter 7, paragraph 7.2, Fiber Optics Cleaning Procedure

Base Station Earthing

The rear of the unit has two separate screw terminals for protective earth ⏚ (PE) and video earth ⏚ (VE). These are normally connected by a metal strap.



The protective earth terminal is internally connected to the protective earth conductor of the power cable. In normal circumstances the connection between the protective earth and the video earth should not be broken. If required, the central earth connection wire of the studio can be connected to terminal PE in accordance with VDE regulation 0800/part2.

Only if the studio (or OB van) is equipped with separate protective and video earth systems may the metal strap be removed. Under these circumstances the video earth terminal must be connected to the central functional earth potential (video earth) of the studio. This earth potential should have functional protective and noiseless earth (FPE) qualities as stated in the VDE regulation 0800/part2. A low impedance interconnection of both earth conductors must be provided at the central studio earthing point.

Mains lead wiring for UK users

The wires in the mains lead are coloured in accordance with the following code:

GREEN and YELLOW- EARTH

BLUE- NEUTRAL

BROWN- LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

- The wire coloured GREEN AND YELLOW must be connected to the terminal on the plug marked with the letter E or by the safety earth symbol or coloured GREEN or GREEN and YELLOW.
- The wire coloured BROWN must be connected to the terminal marked with the let ter L or coloured RED.
- The wire coloured BLUE must be connected to the terminal marked with the letter N or coloured BLACK.

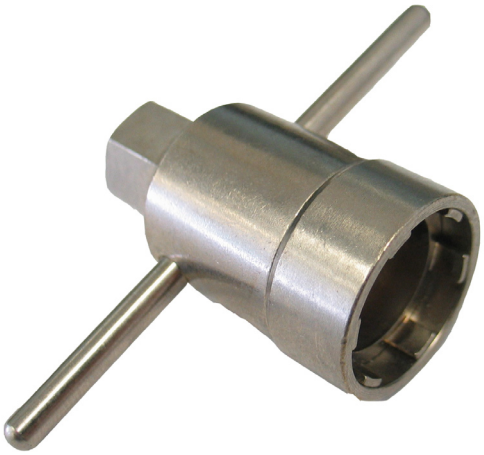
Ensure that your equipment is connected correctly - if you are in any doubt consult a qualified electrician.

Special tools

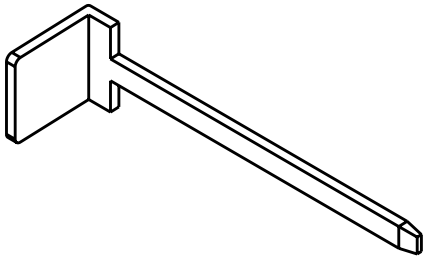
3922 407 29681 Fisher Removal tool
Nutsize M12x1

3922 407 29691 BNC Removal tool

3922 496 48581 Fisher Removal tool
Nutsize M15x1



3922 404 40321 XLR Clip Removal tool



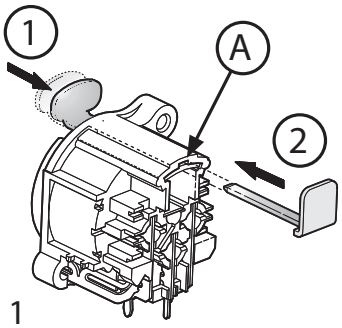


figure 1

To remove the Push button from this receptacle with the Removal Tool access to the front and the rear of the receptable is necessary.

Depress the Push button fully as shown in Figure 1, and hold it in his position.

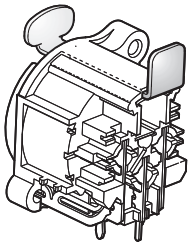


figure 2

Now insert the Removal Tool shaft into the removal slot located on the rear of the receptable (label A) until it rests completely inside the receptacle as shown in Figure 2.

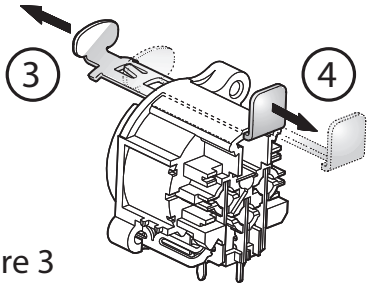


figure 3

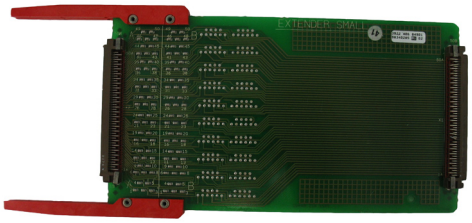
Finally, pull out the Push button from the receptacle and withdrawn the Removal Tool as indicated in Figure 3.

8122 407 01251 Coax removal tool

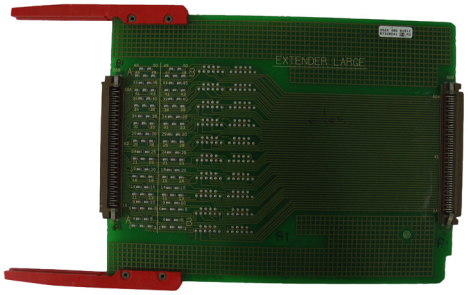
Extenders

8926 582 00101 Extender set LDK8300 Head and Adaptor

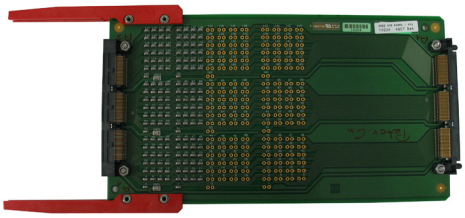
3922 406 84901 Extender Small



3922 406 84911 Extender Large

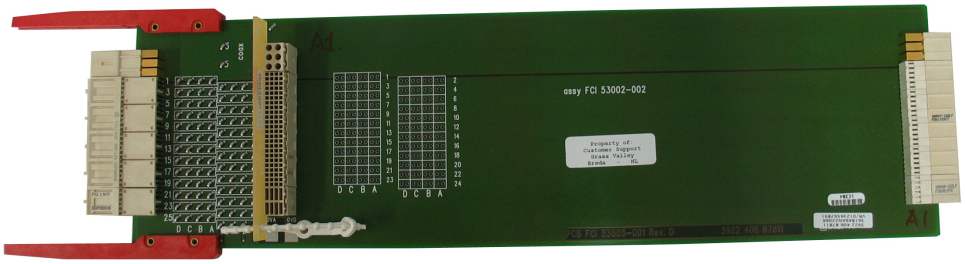


3922 406 84901 Extender Small 150p



8926 457 01001 Set Extenders LDK4500SL

3922 406 87811 Extender BS 1



3922 406 89081 Extender BS 2

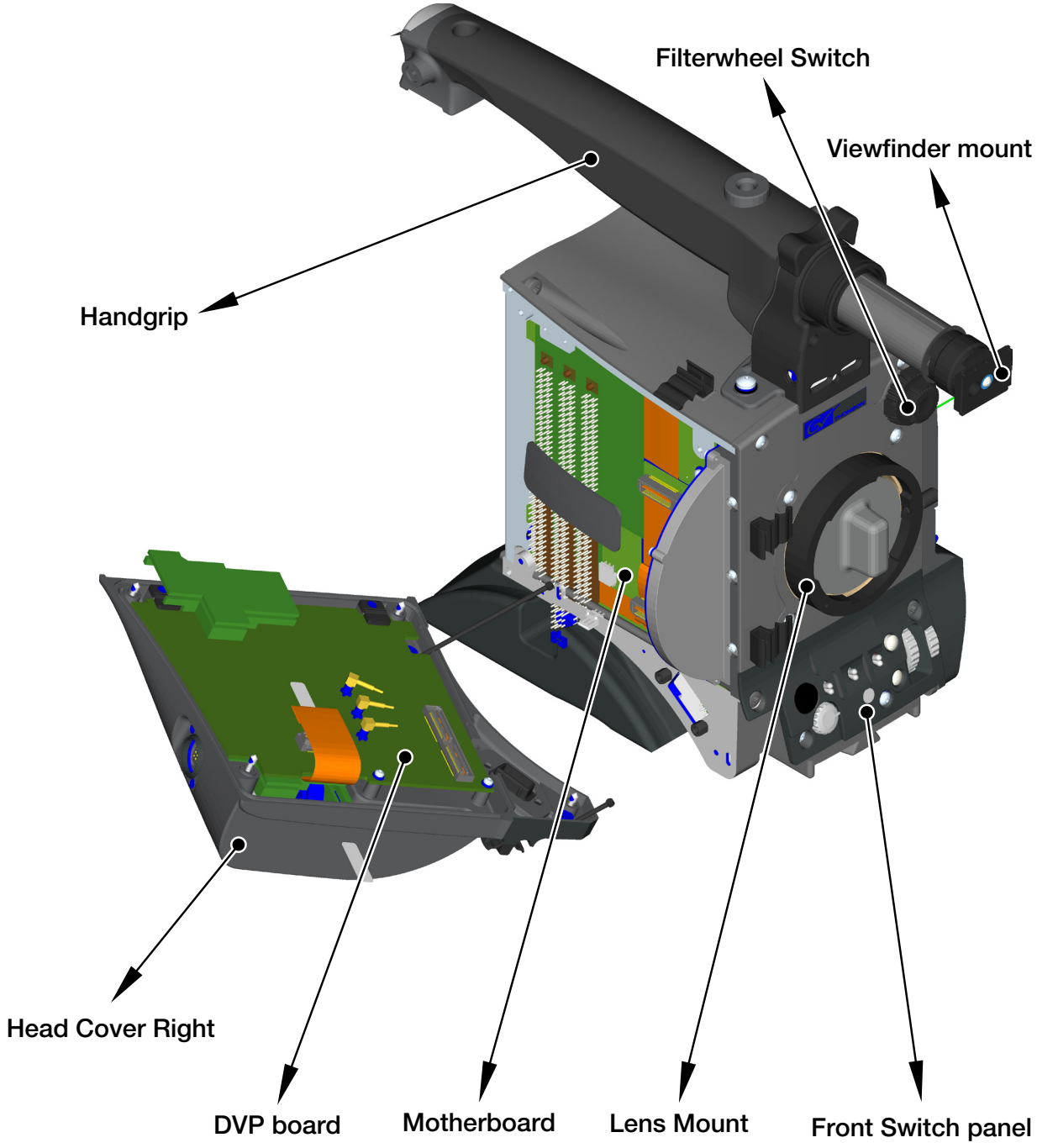
3922 406 89091 Extender BS 3

3922 406 89101 Extender BS 4

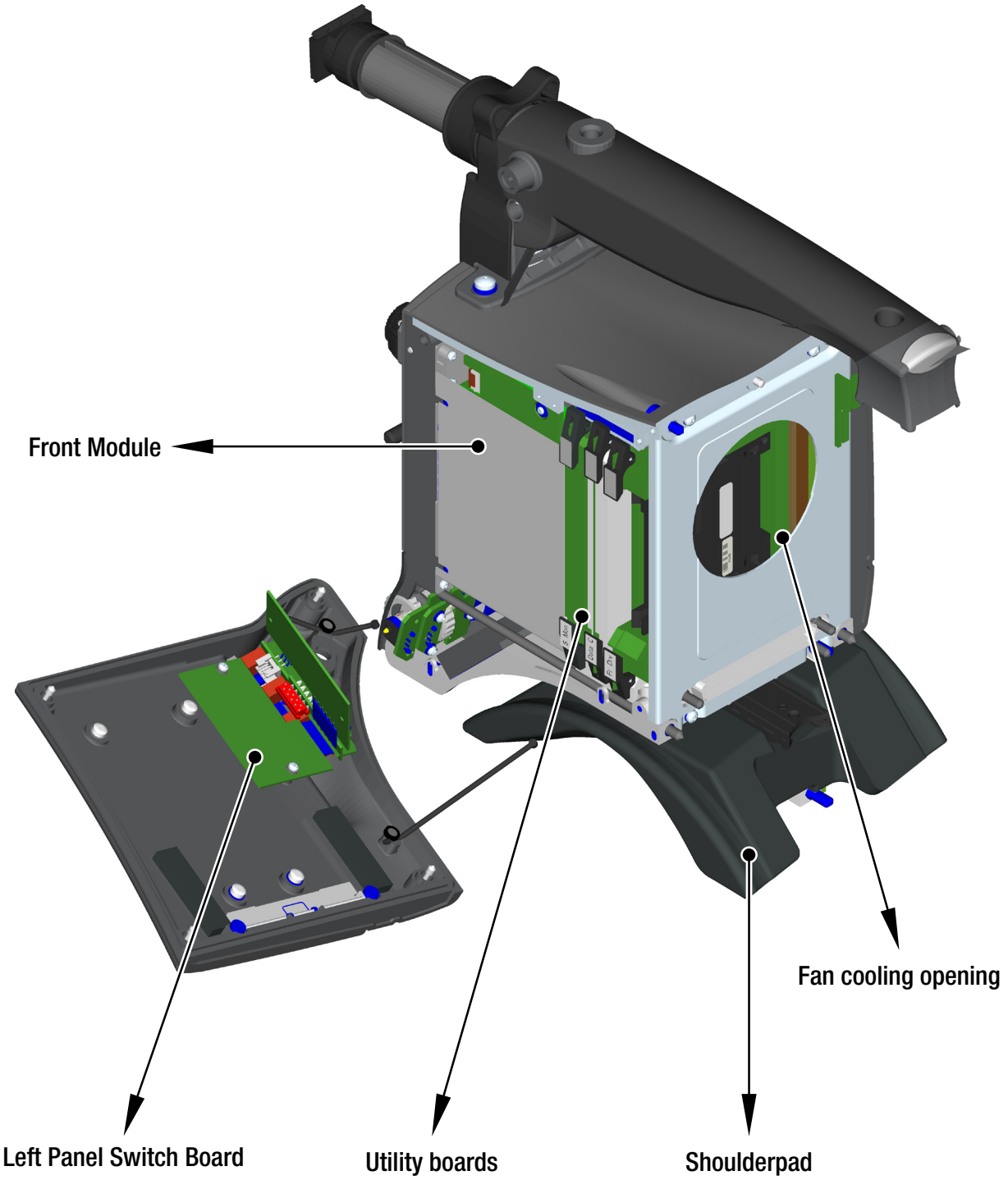
Chapter 2

Exploded Views:

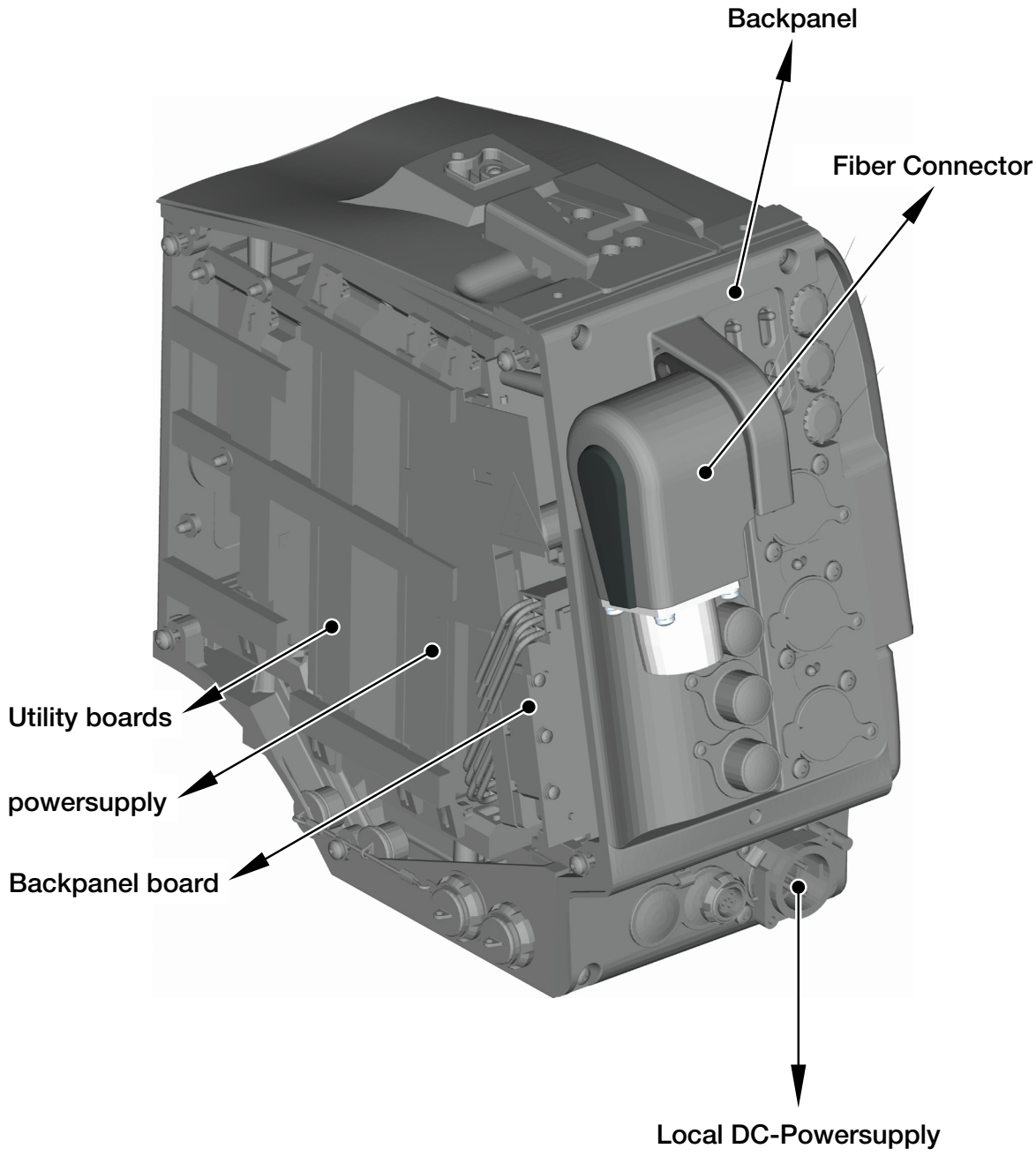
2.1 LDK8300 Head - Front side



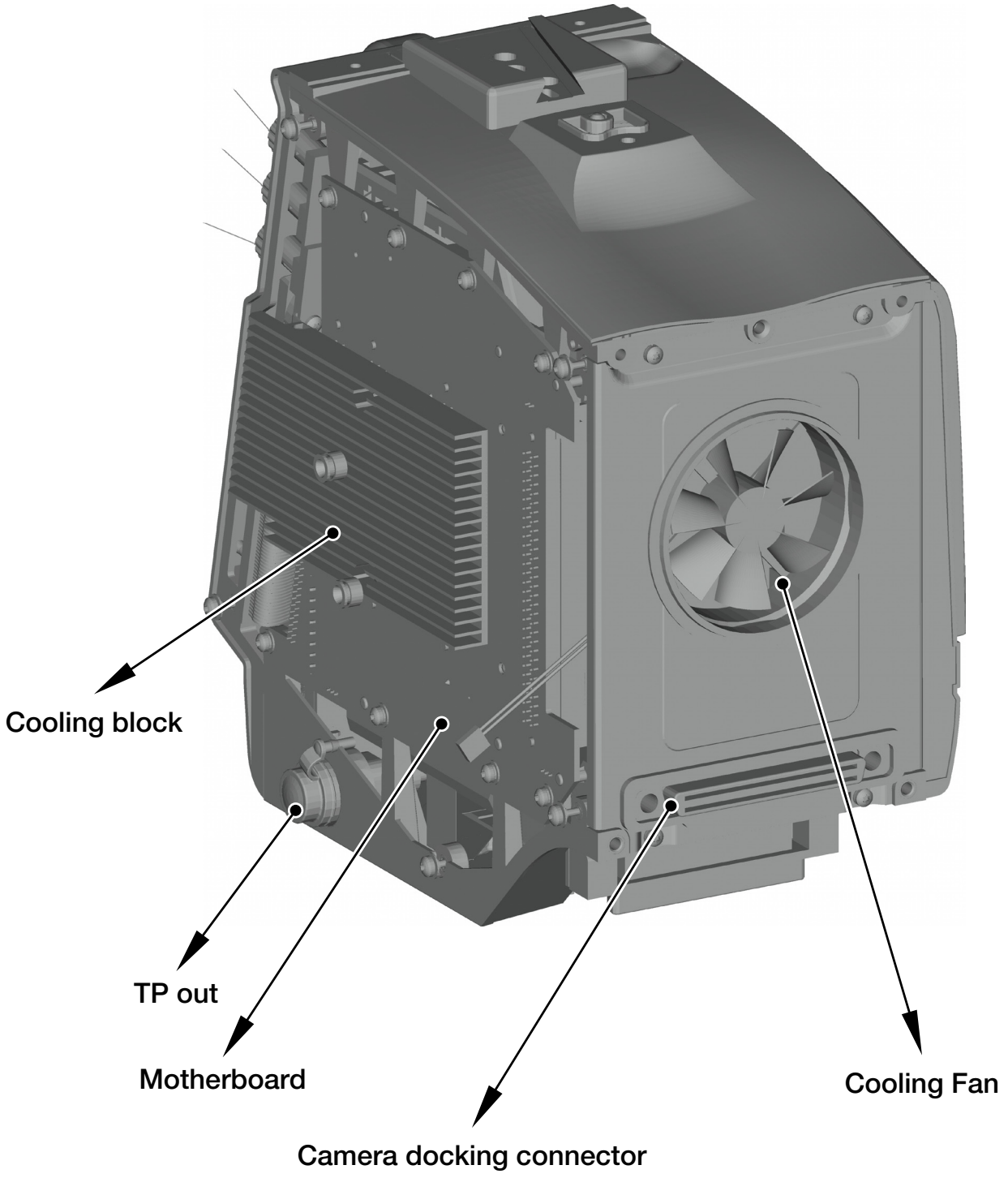
LDK8300 Head - Back side



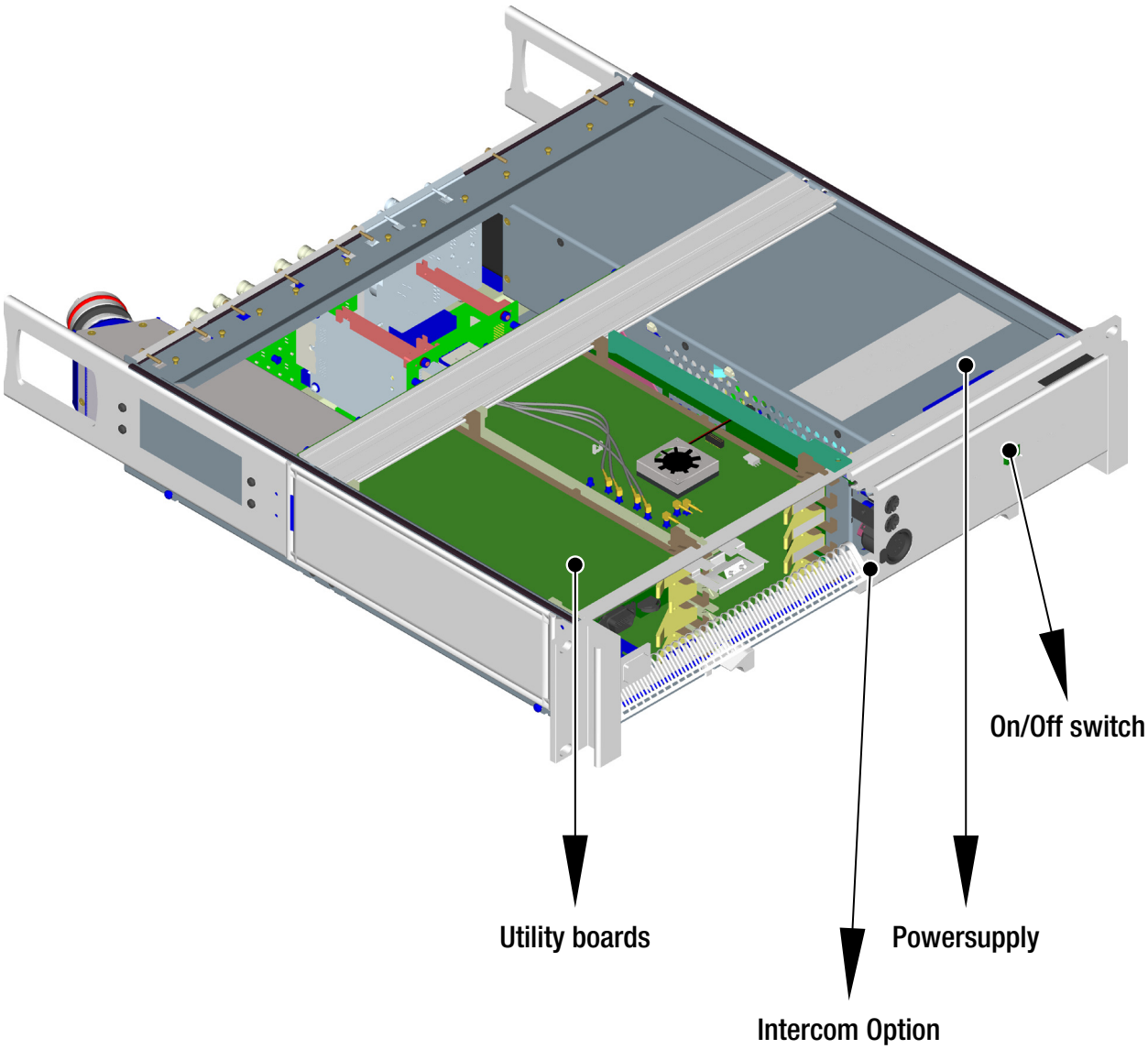
LDK5880 Adapter -Back side



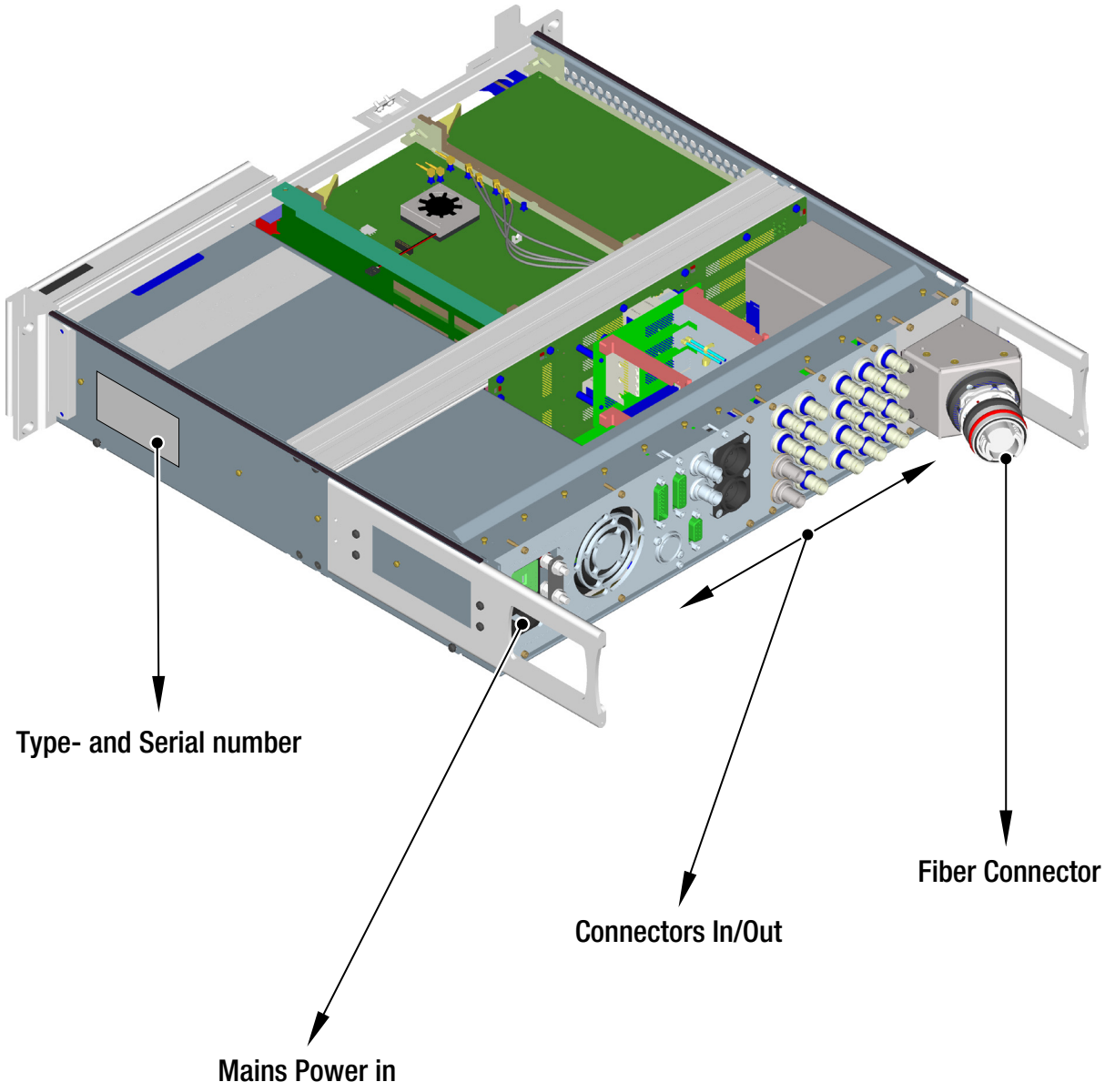
LDK5880 Adapter -Front side



LDK4583 Base station - Front side



LDK4583 Base station - Back - side



Chapter 3

Replacement section:

3.1 How to use:

The replacement section is divided in three parts:
3.2 Camera Head
3.3 Adapter
3.4 Basestation

Each part is preceded by a flowchart.

On this flowchart, locate the part that has to be replaced.

Start at the central top section and follow the arrows.
Disassemble the unit part by part, till you reach the part to be replaced.

After replacement, assemble the unit in reverse order.

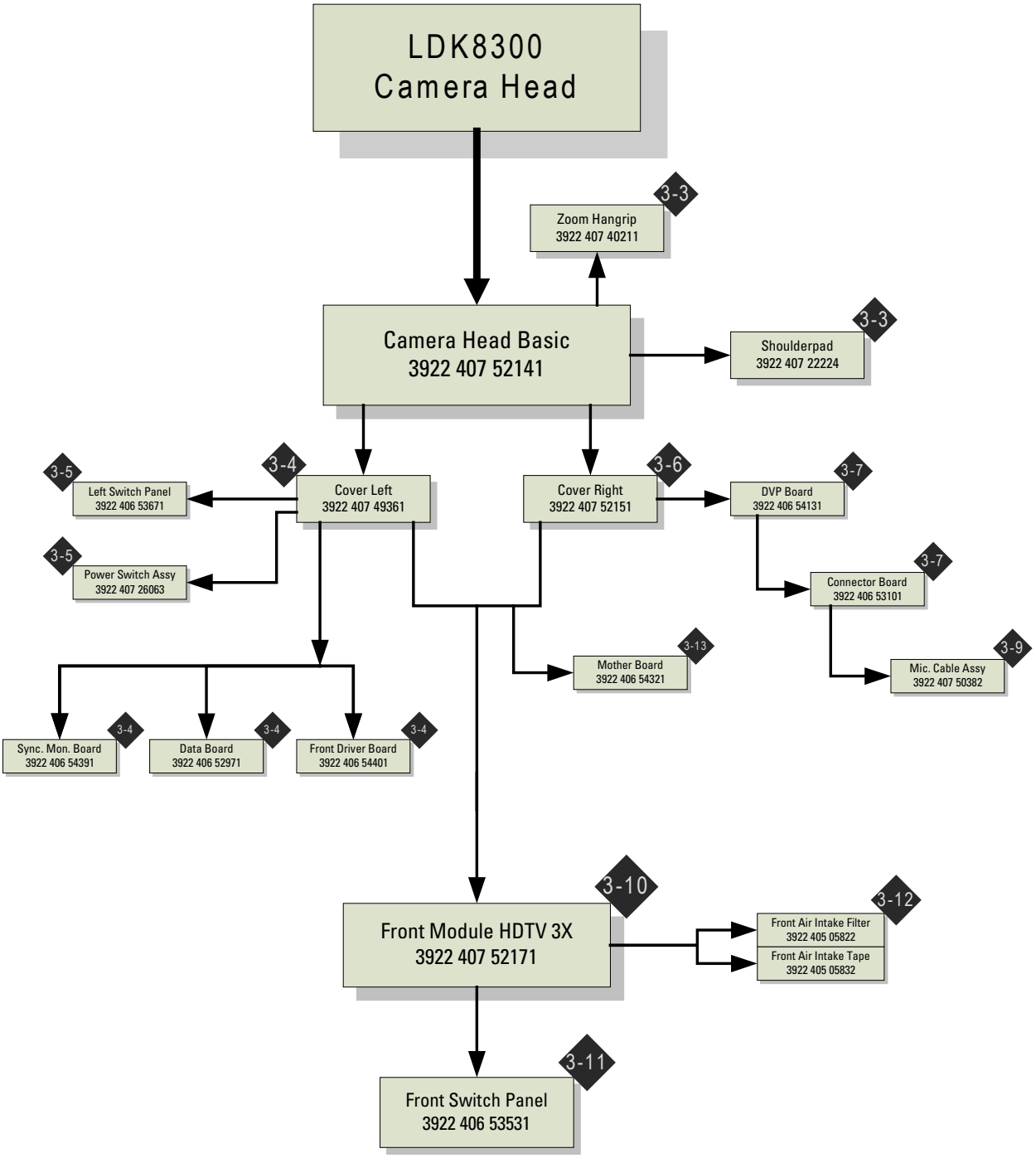
This number refers to the dismantling page

This number refers to the Spare Parts section Chapter 4.

In section 4 there are a few Spare Parts which are not in the exploded view section. This can be because the Spare Part is easily replaced from outside (caps f.e.) or the Spare Part is expected not to be exchanged regularly.

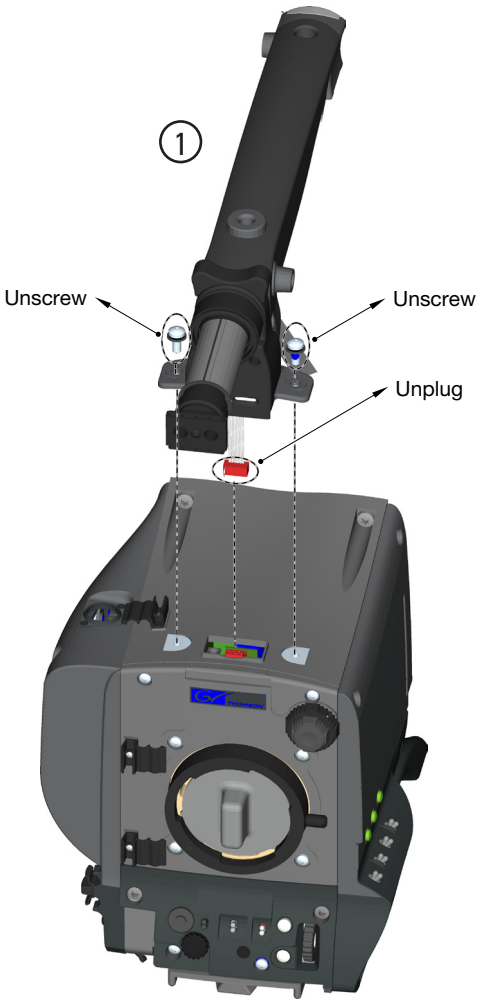
Items not mentioned in Chapter 4, or items which are not preceded with a 12NC number, are not a Spare Part.

3.2 LDK8300 Camera Head:

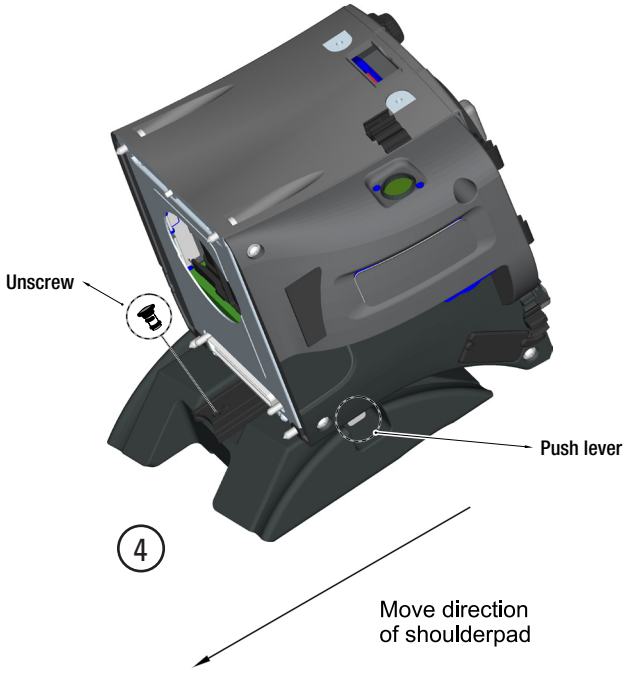


Zoom Handgrip:

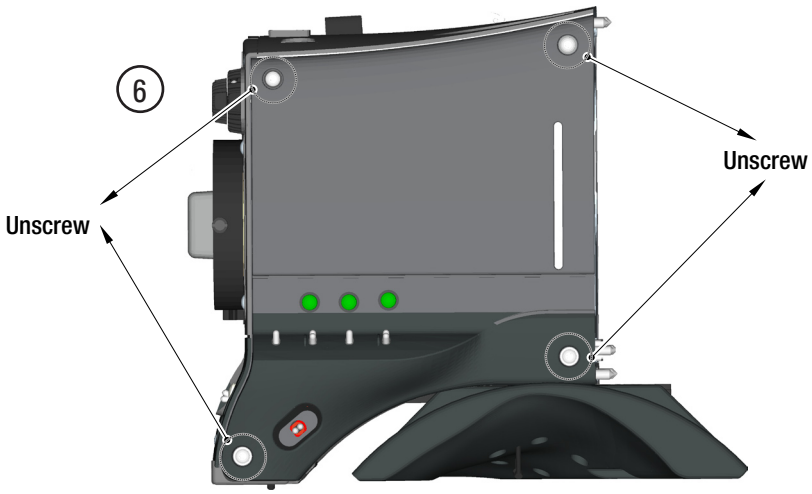
Unplug the Zoom-connector with a pair of tweezers or a pair of pliers



Shoulderpad

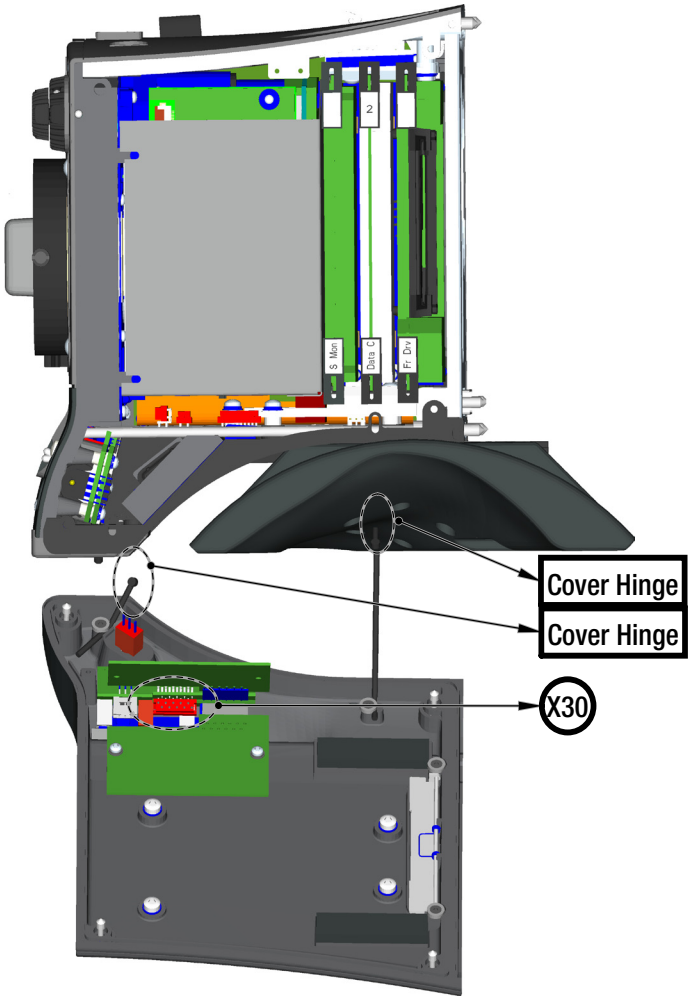


Cover Left:



You now can remove the boards:
Sync.Mon.board 1.
Data C. board 2.
Front Driver board 3.

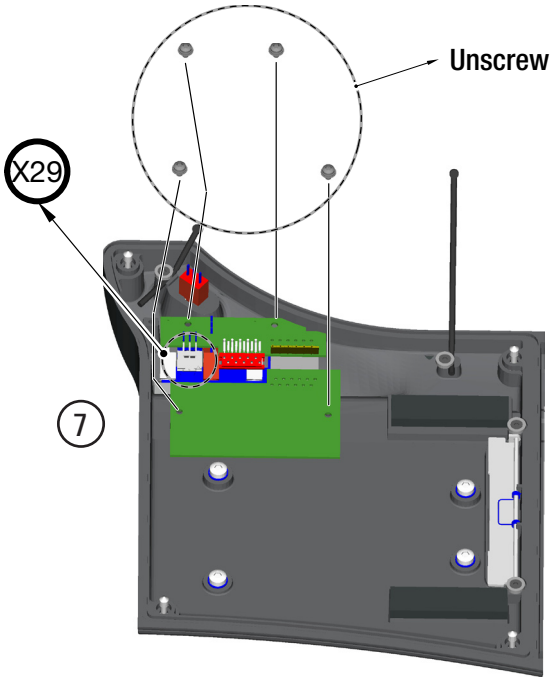
9 10 11



Unplug X30.

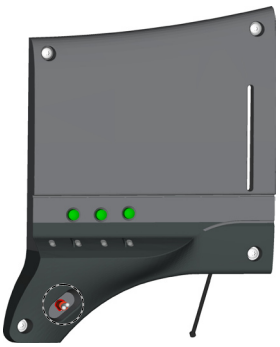
Twist the two Cover Hinges and pull to release them from camerahead

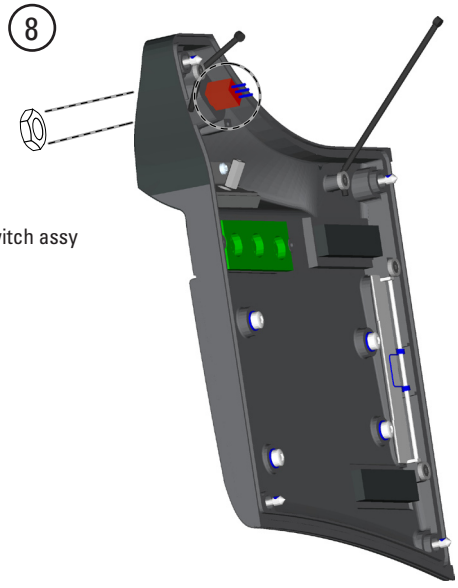
Left Switch panel:



Unplug X29
unscrew the four torxscrews,
and remove Left Switch panel

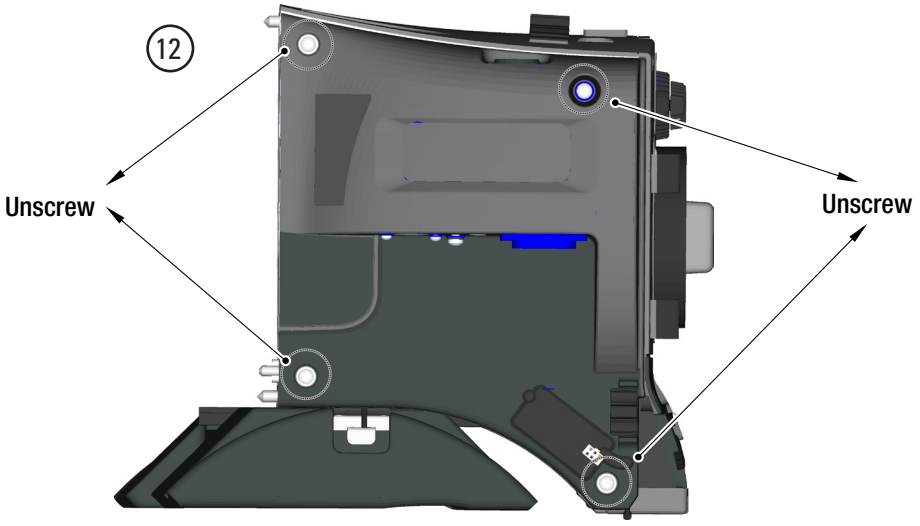
Power Switch assy:





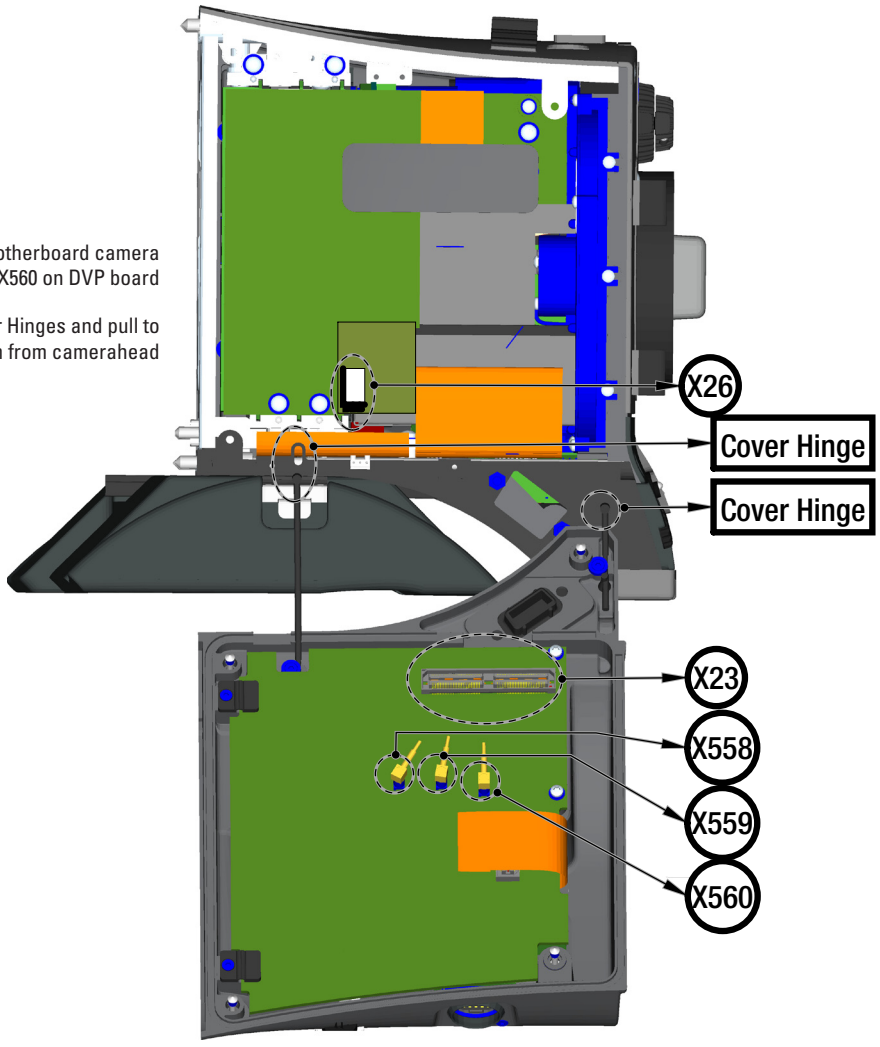
Unscrew nut to remove Power Switch assy

Cover right:

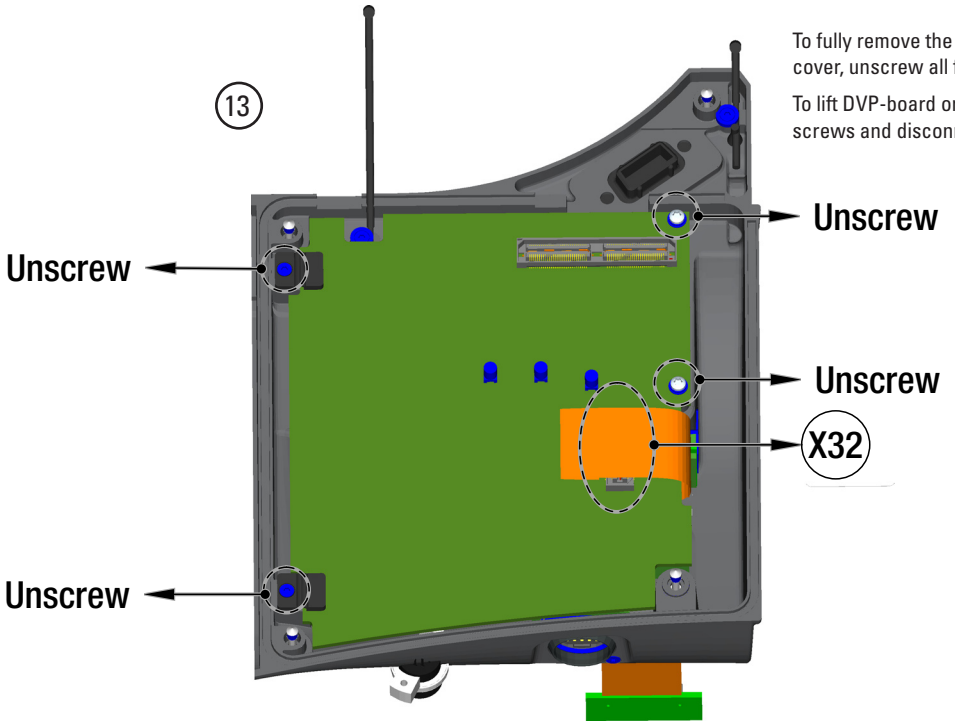


Unplug X26 on the Motherboard camera
Unplug X23, X558, X559 and X560 on DVP board

Twist the two Cover Hinges and pull to release them from camerahead



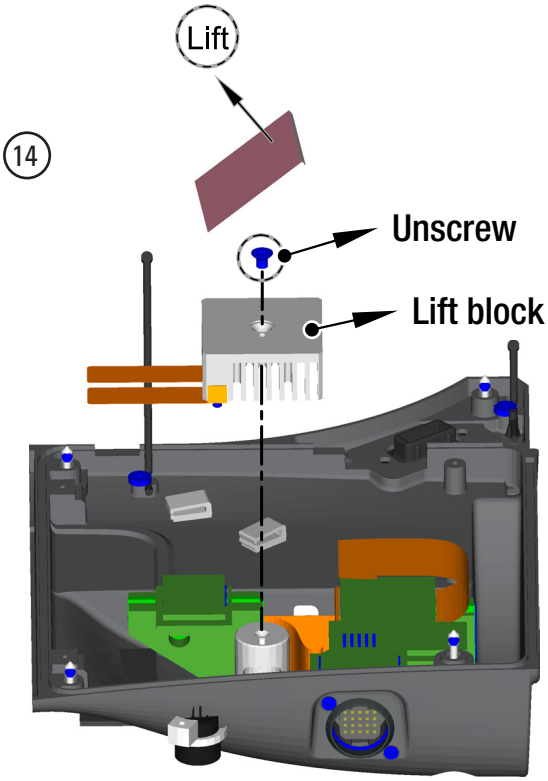
DVP board:



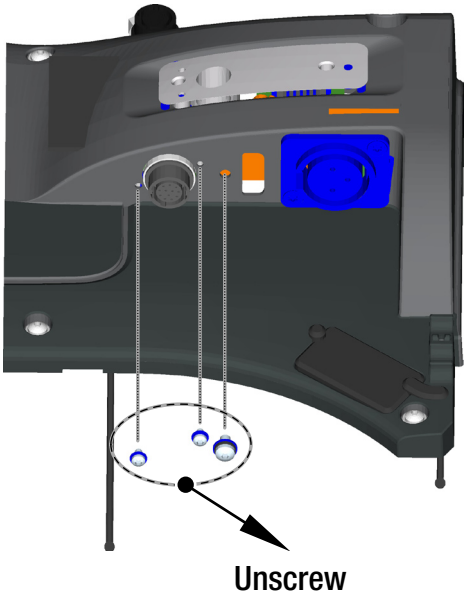
To fully remove the DVP-board from the Right cover, unscrew all four screws and disconnect X32.

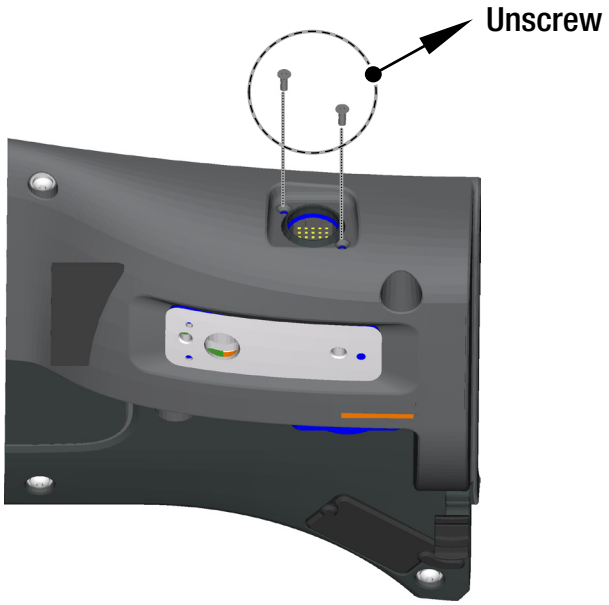
To lift DVP-board only, unscrew the right side screws and disconnect the X32.

Connector board right cover:

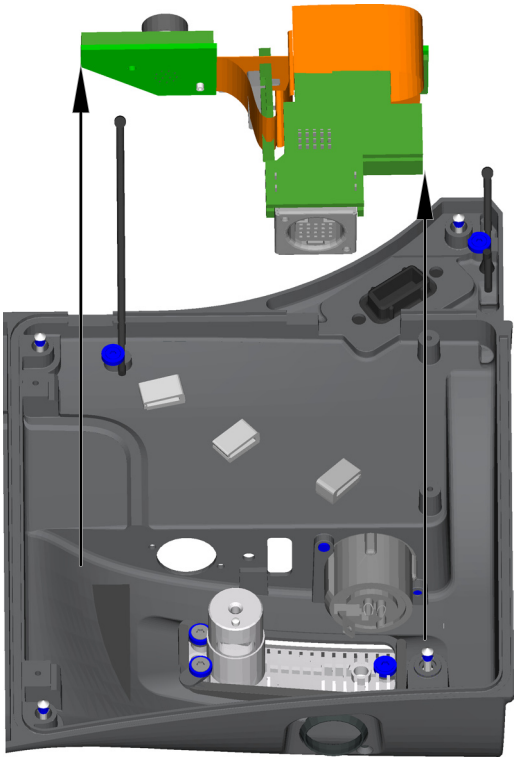


First:
Too remove the cooling block, lift the isulating plate and unscrew to pull of the block.

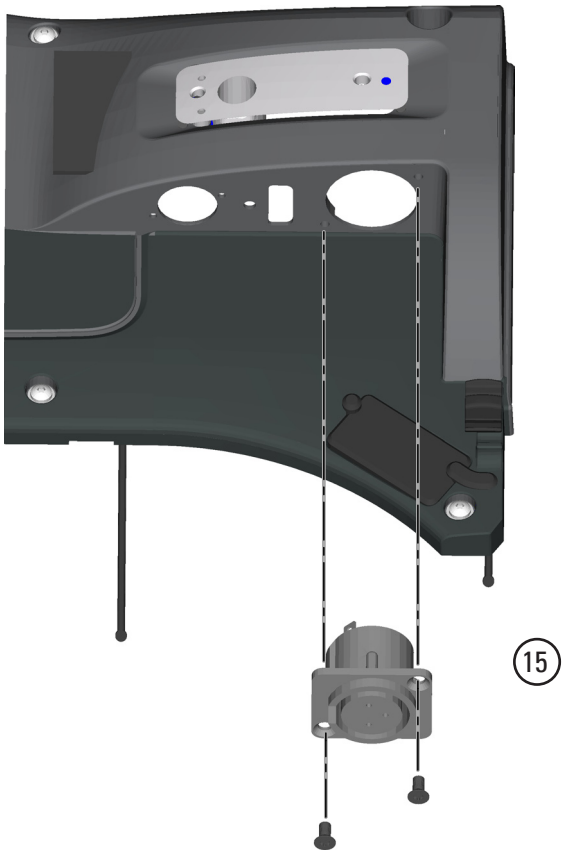




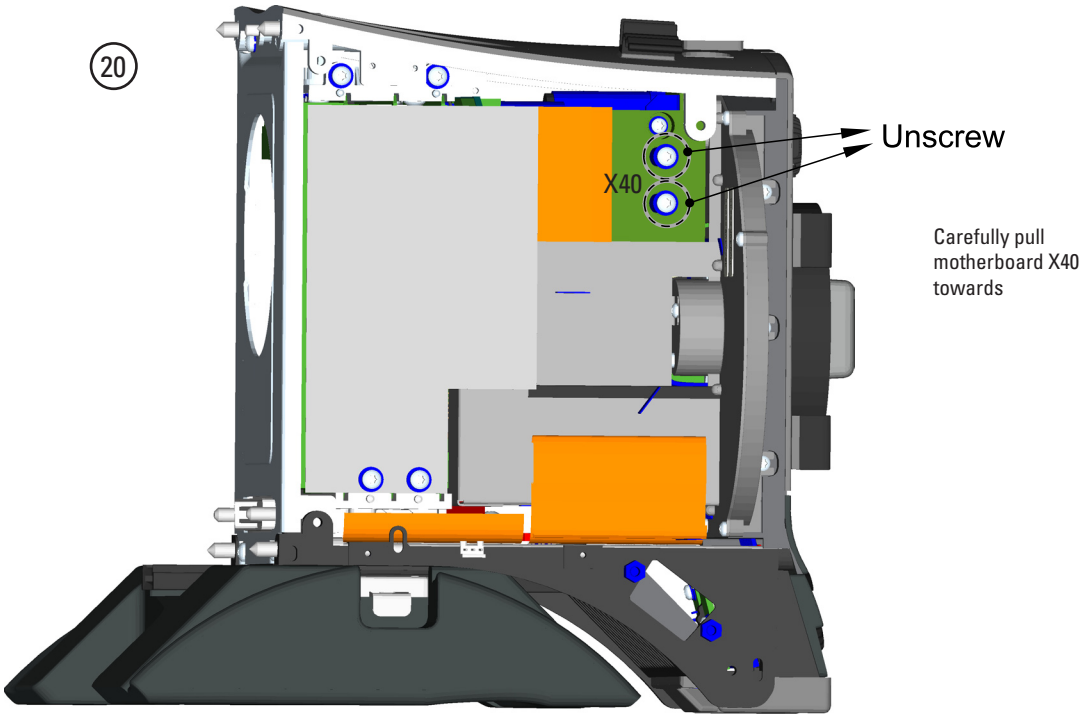
Pull out the Connector Board Right Cover straight upwards

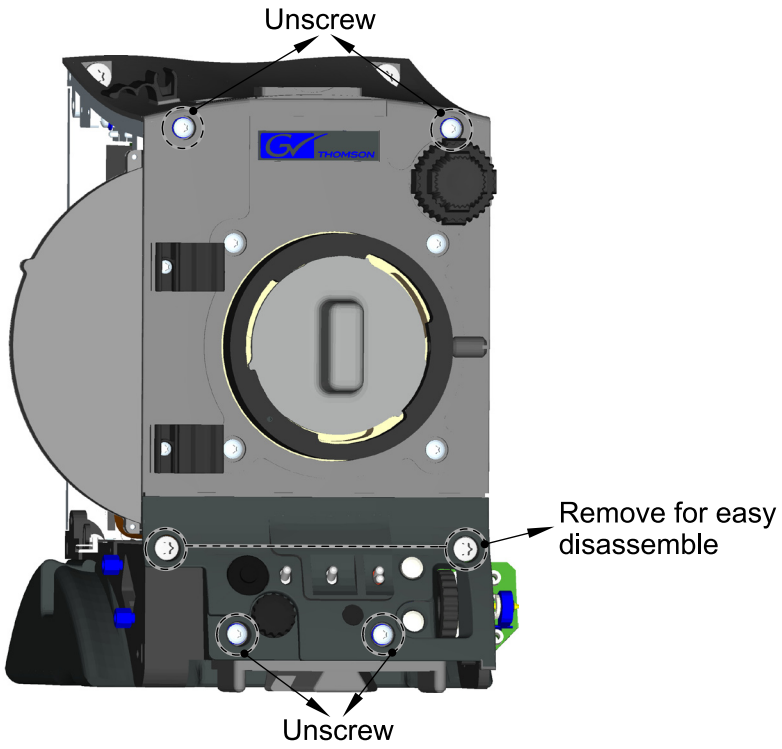


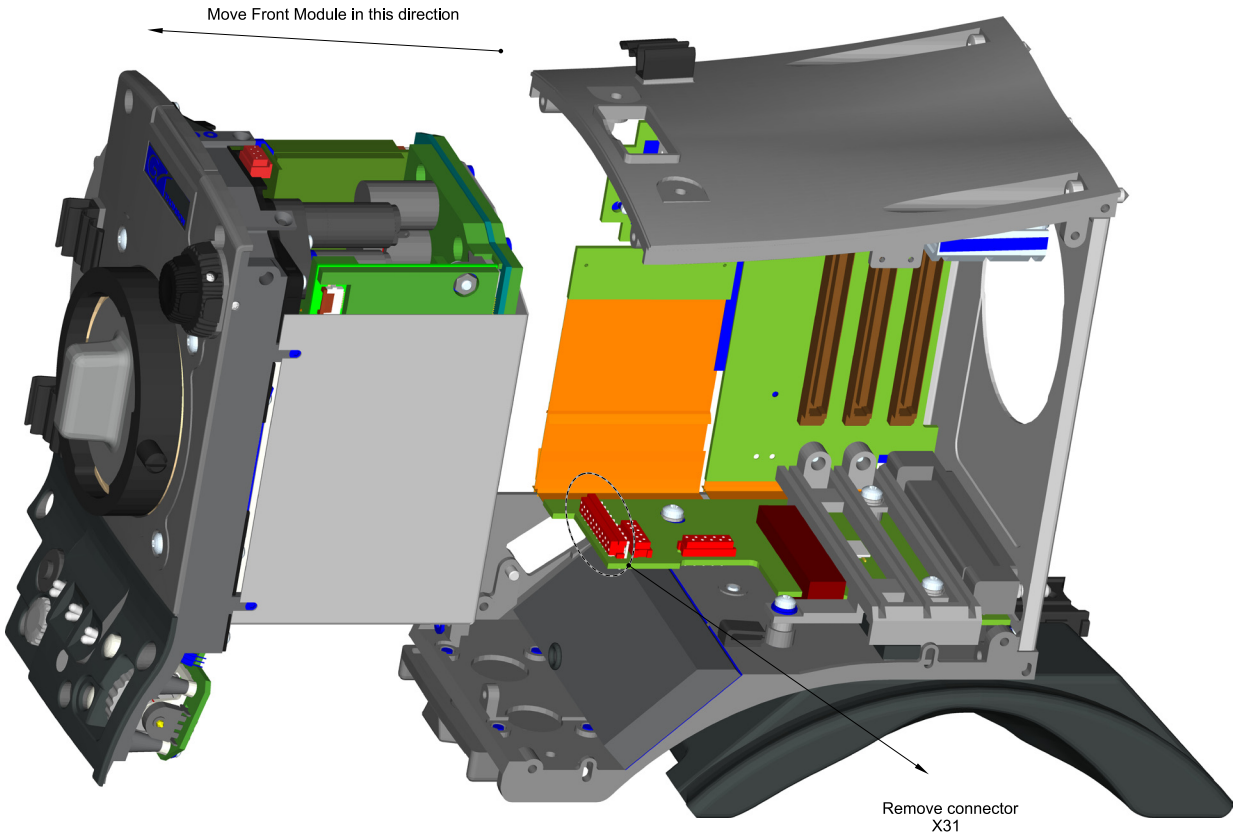
Mic cable Assy:



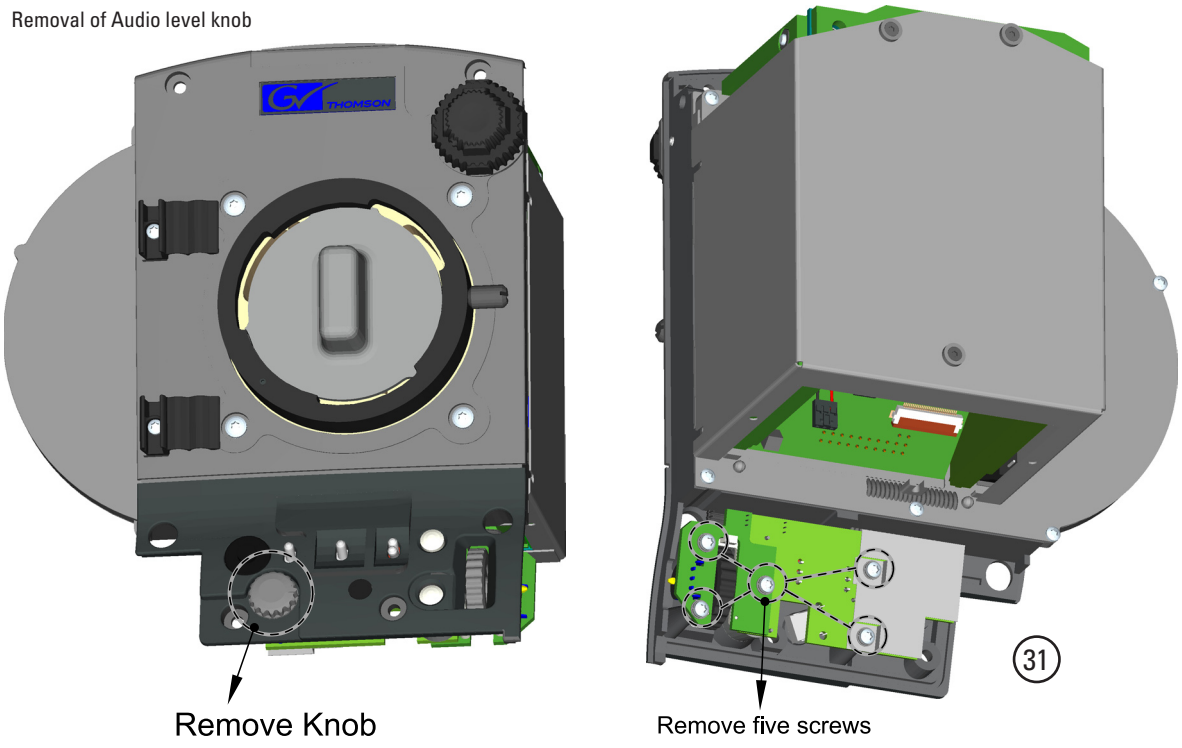
Front Module HDTV:



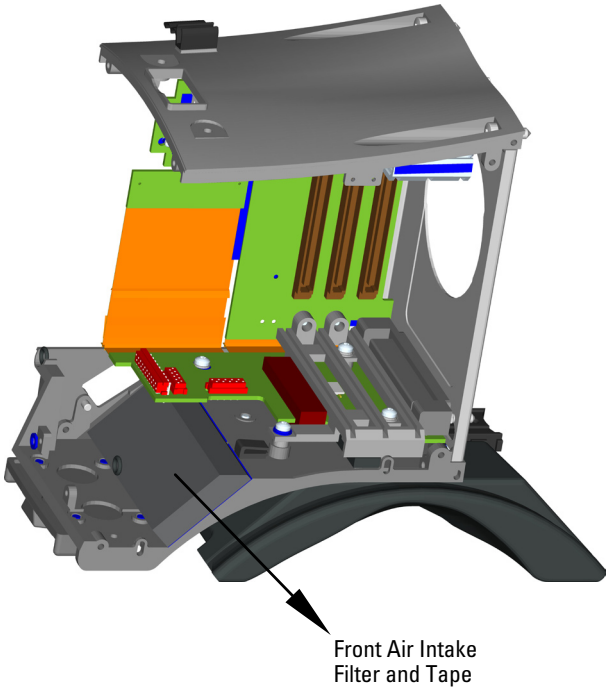


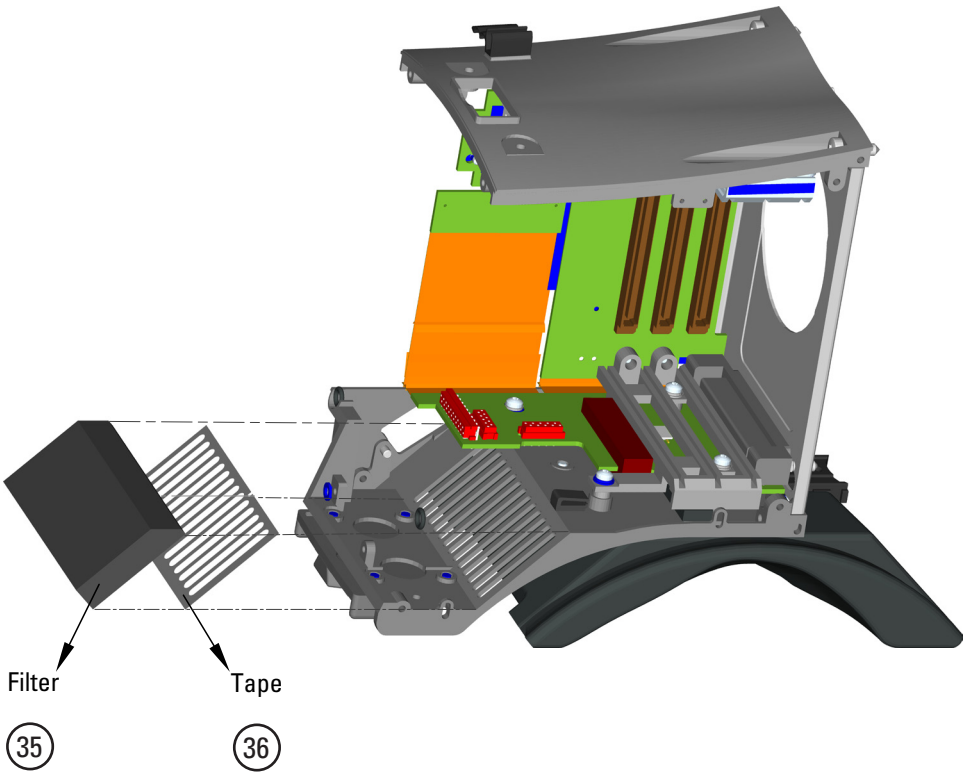


Front Switch panel:

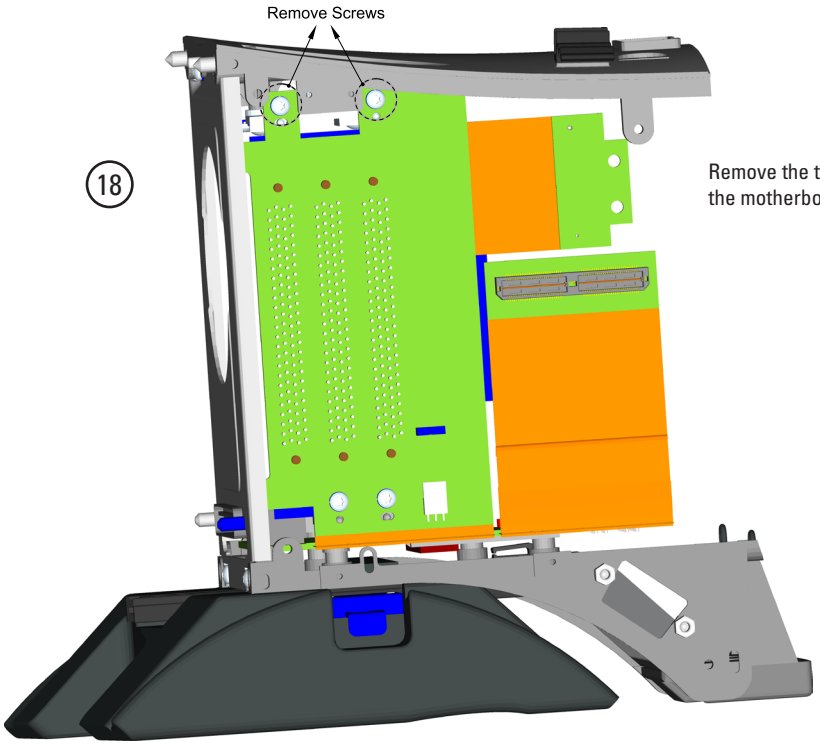


Front Air Intake Filter & Tape:



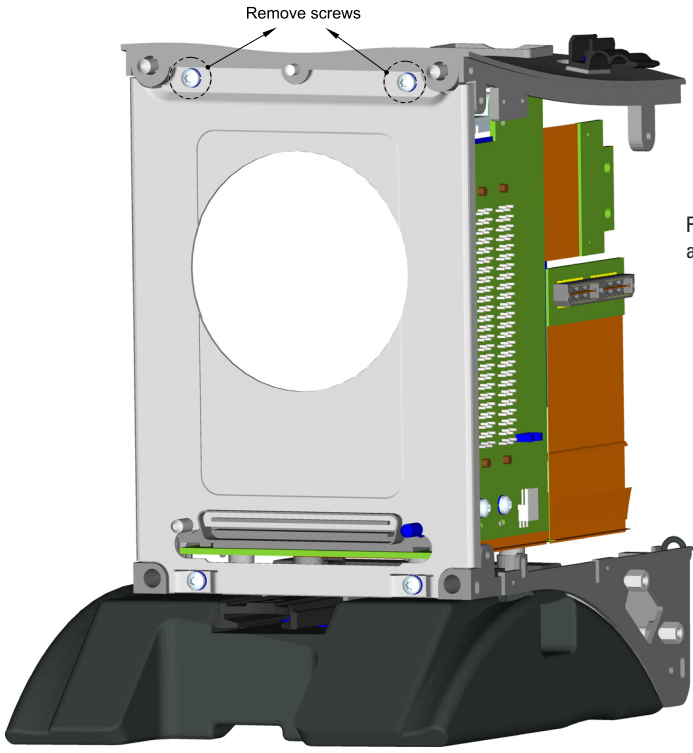


Motherboard:

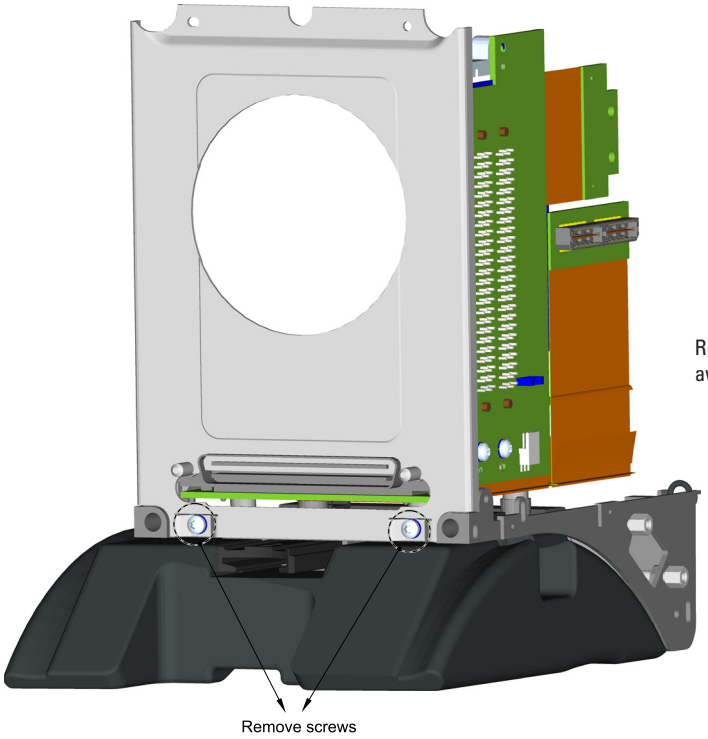


18

Remove the two screws to release the motherboard from the top printrail

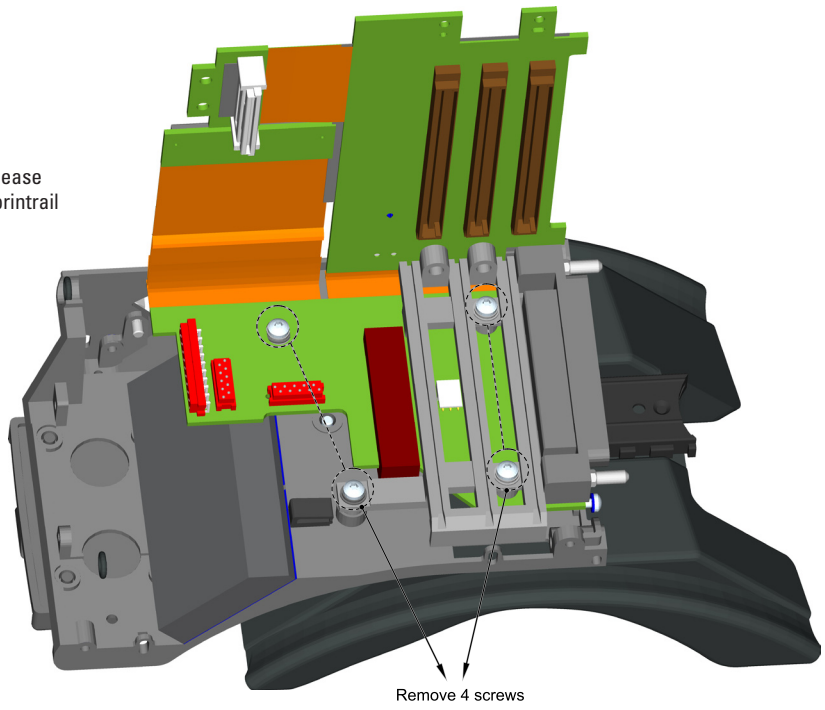


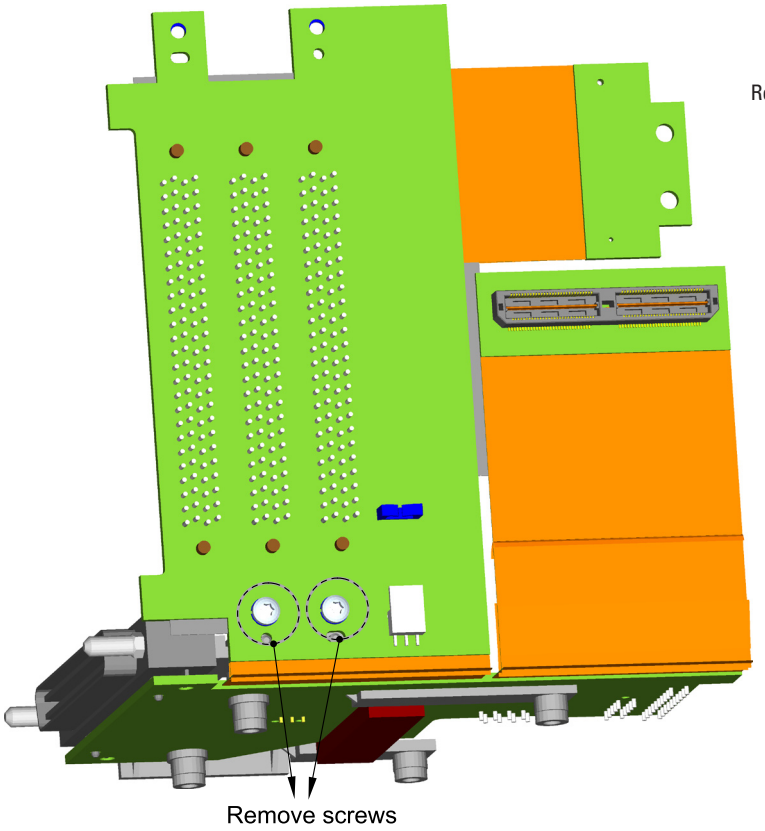
Remove the two screws and disassemble the Top.



Remove the two screws and take away dockplate camera head

Remove four screws to release motherboard and bottom printrail

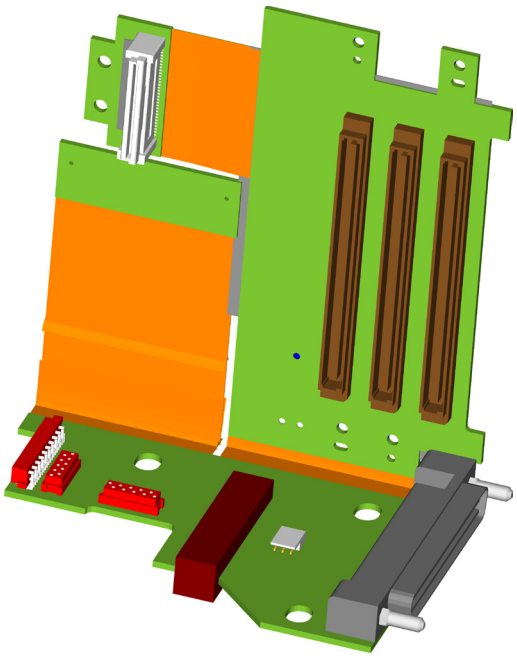




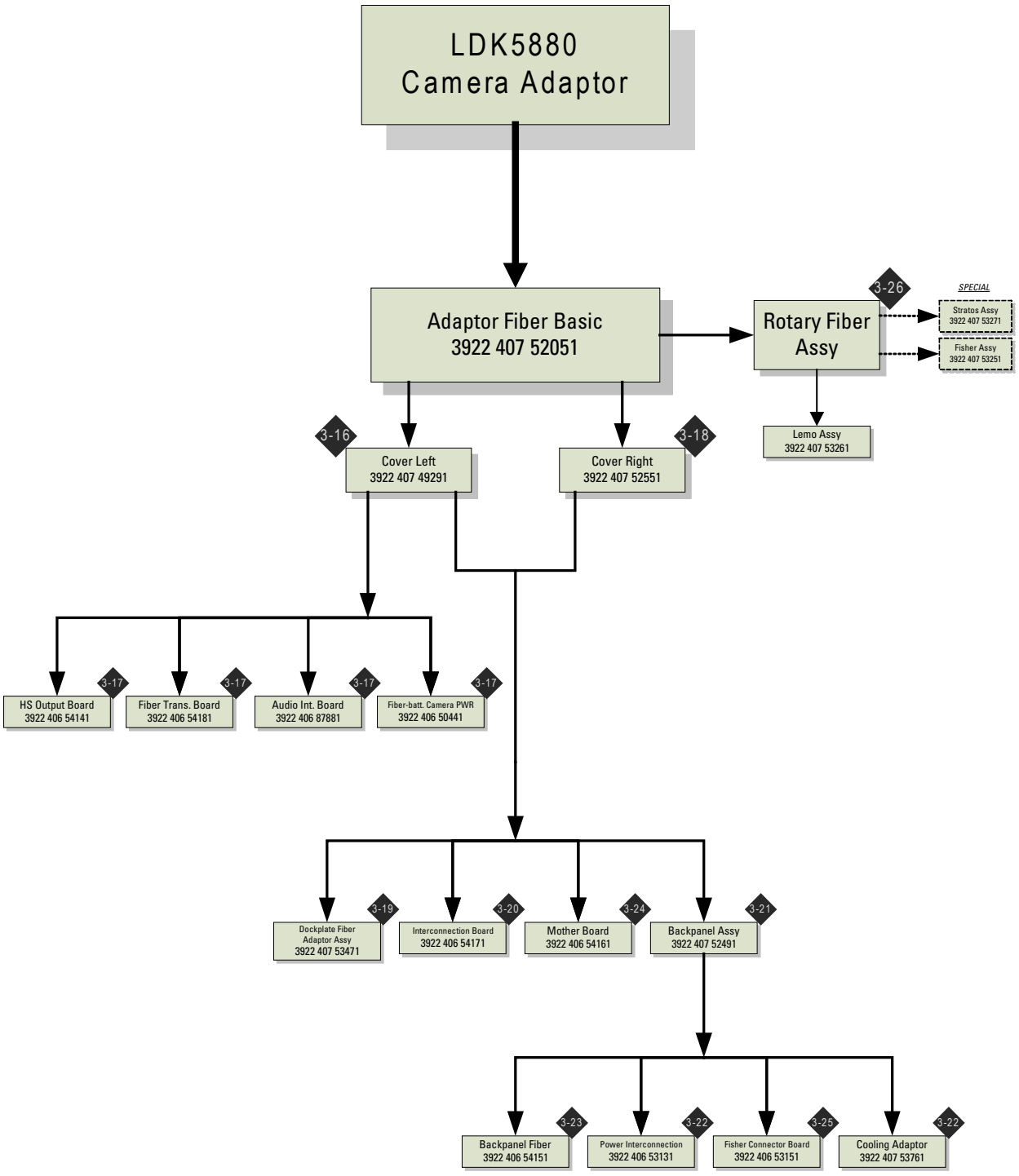
Remove the bottom rail.

18

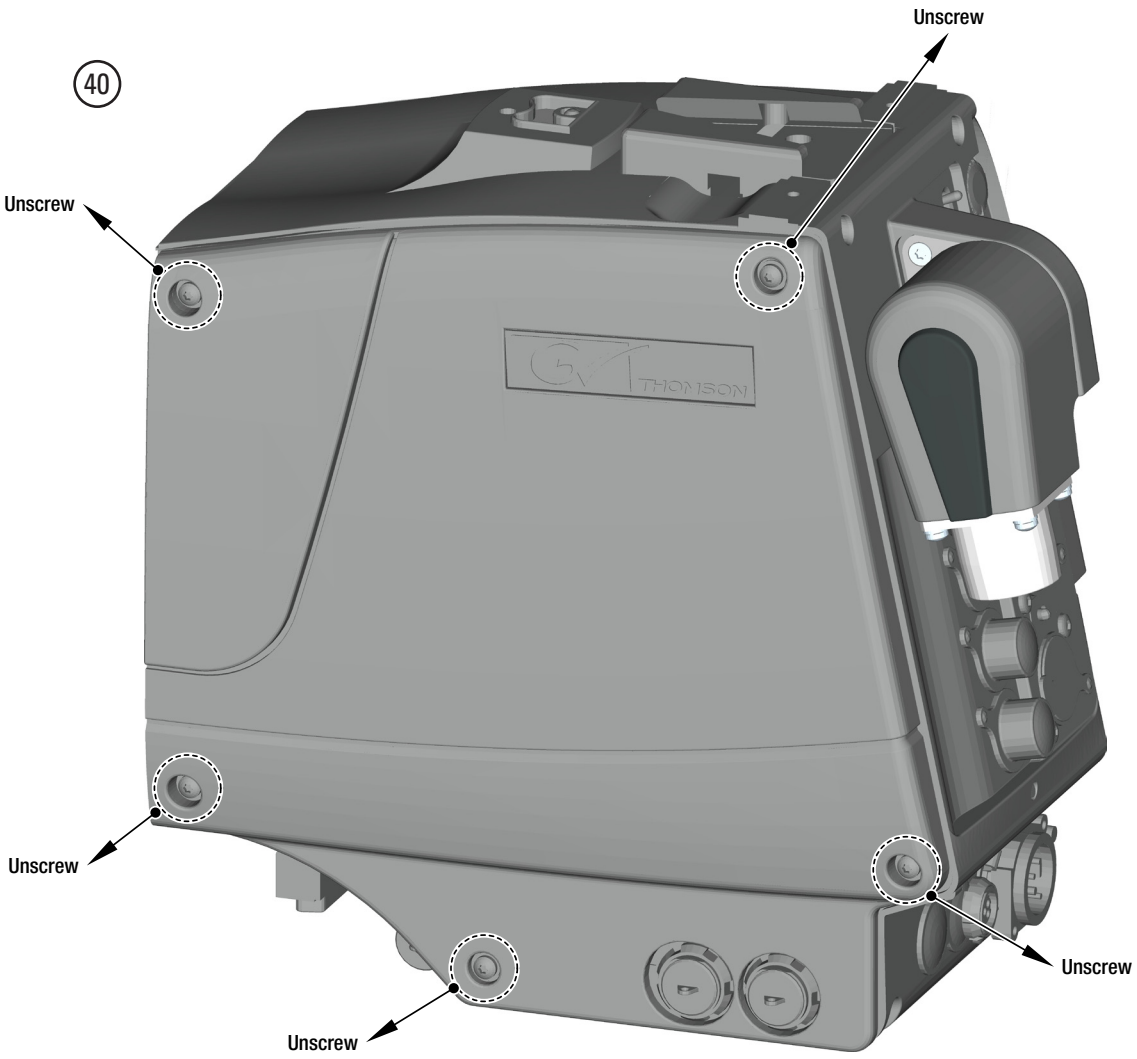
The LDK8300 motherboard.
3922 406 54321



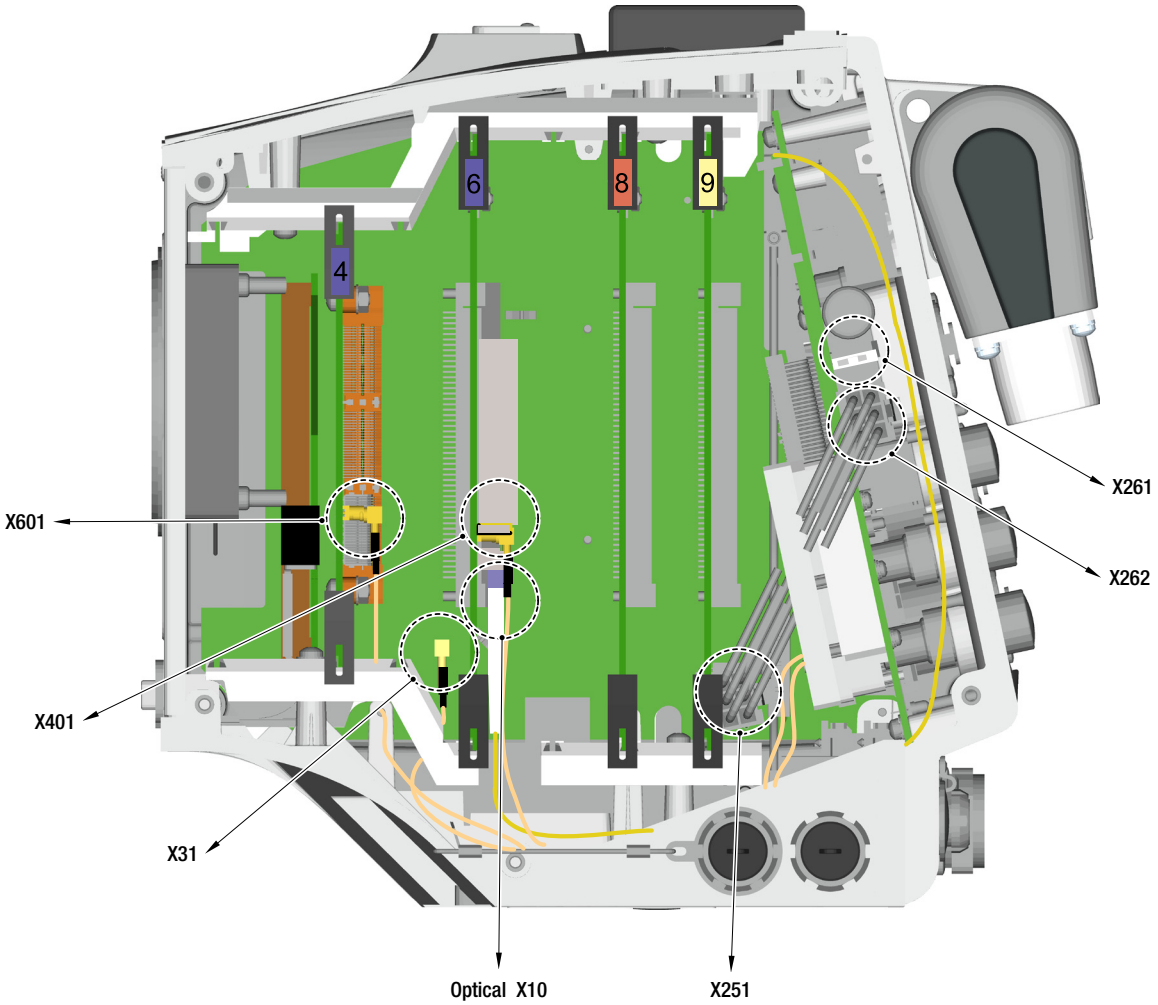
3.3 LDK5880 Fiber Adaptor:



Cover Left:



Utility boards:



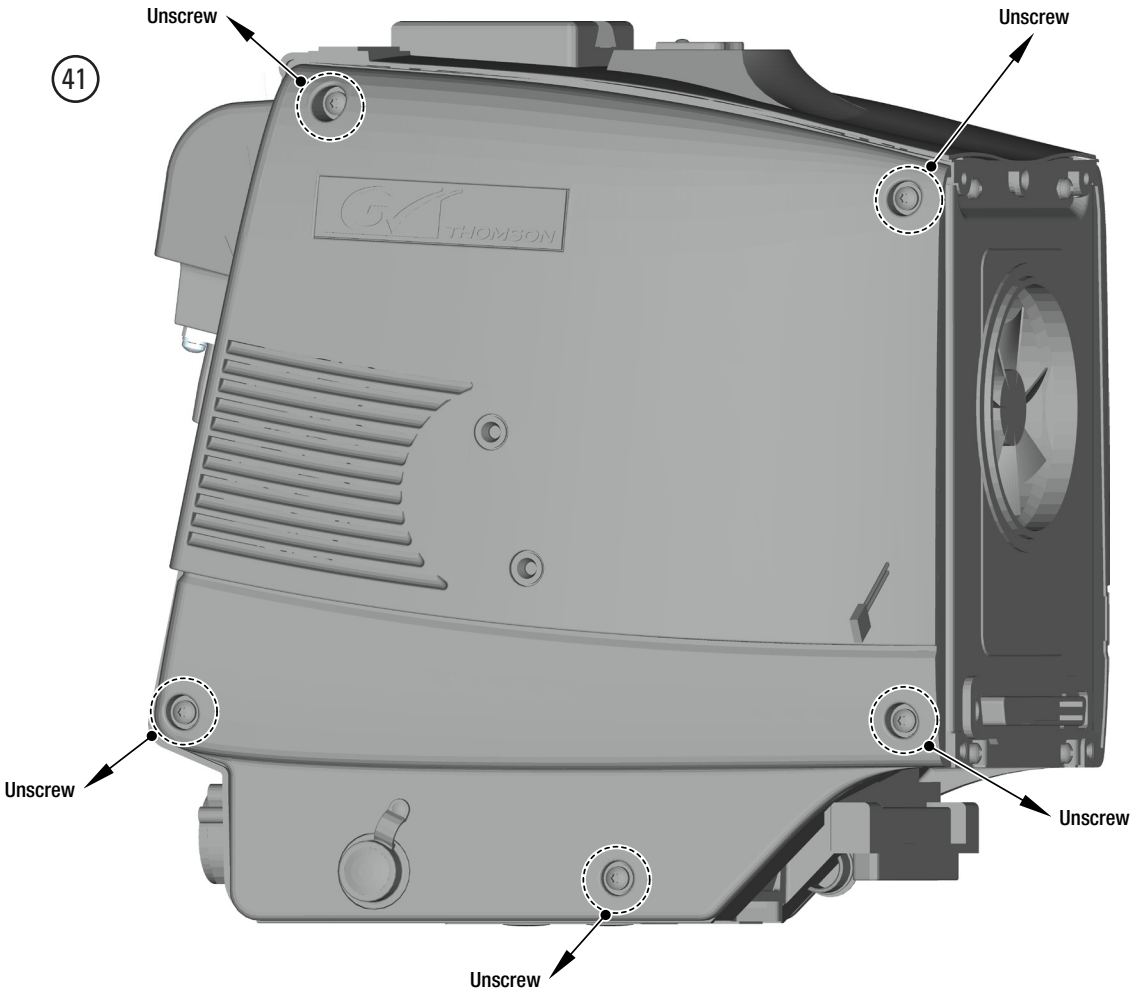
42 4: HS Output board:
remove coax X601 when pulling out the board

43 6: Fiber Transmission camera:
first remove the coaxconnector X401
then remove the two fiber connectors X10 bij pressing the lever on the blue part, and pulling out only by the blue connectorpart, never pull the yellow fibers or the sleeve.

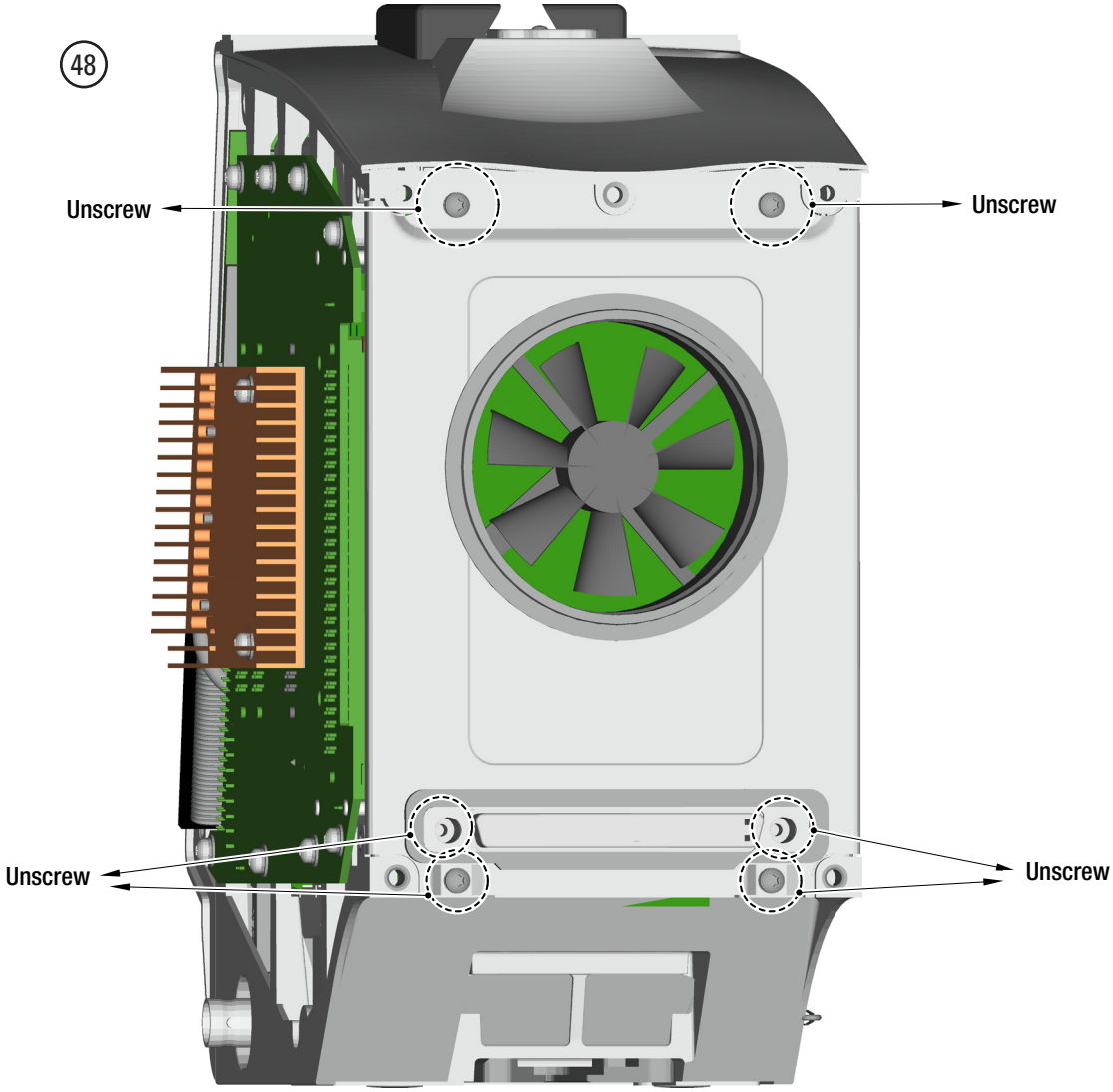
44 8. Audio Intercom board:
no connector need to be unplugged

45 9. Fiber-batt. camera power:
Unplug X251 and pull out the board

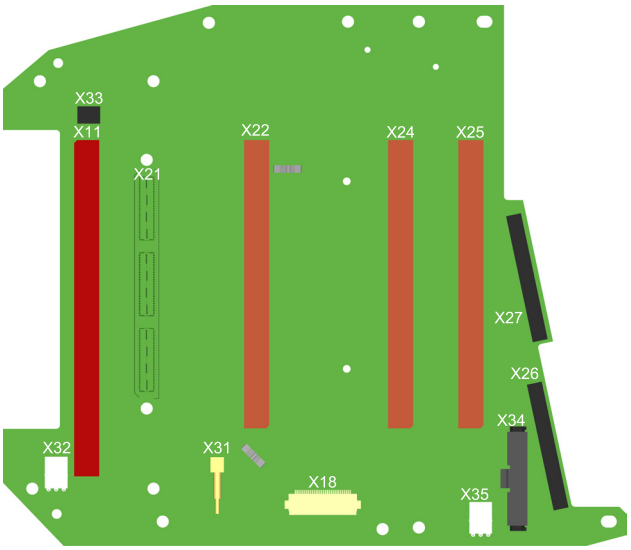
Cover Right:



Dockplate Fiber:



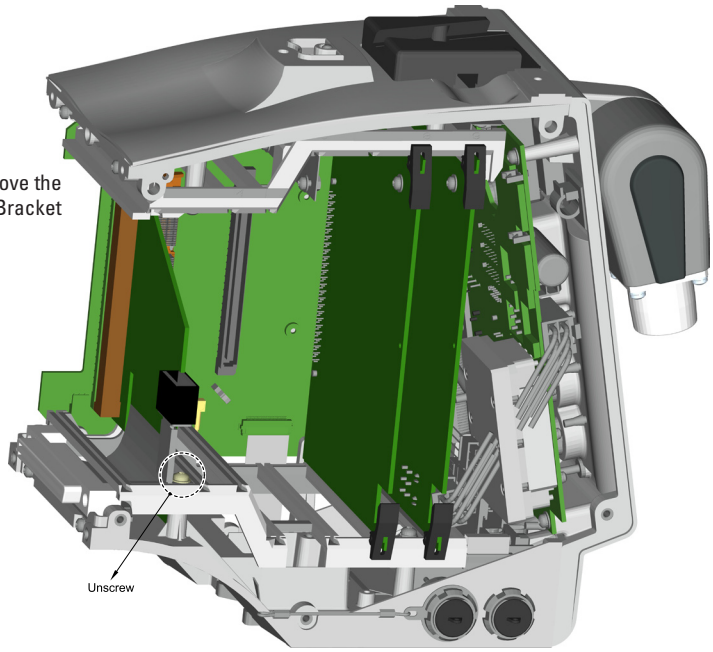
When releasing the docking plate, remove X32 (Fan-cable) on the motherboard

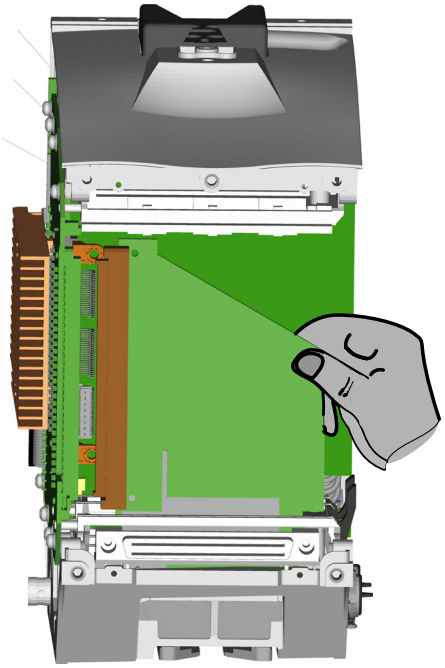


Interconnection board:

46

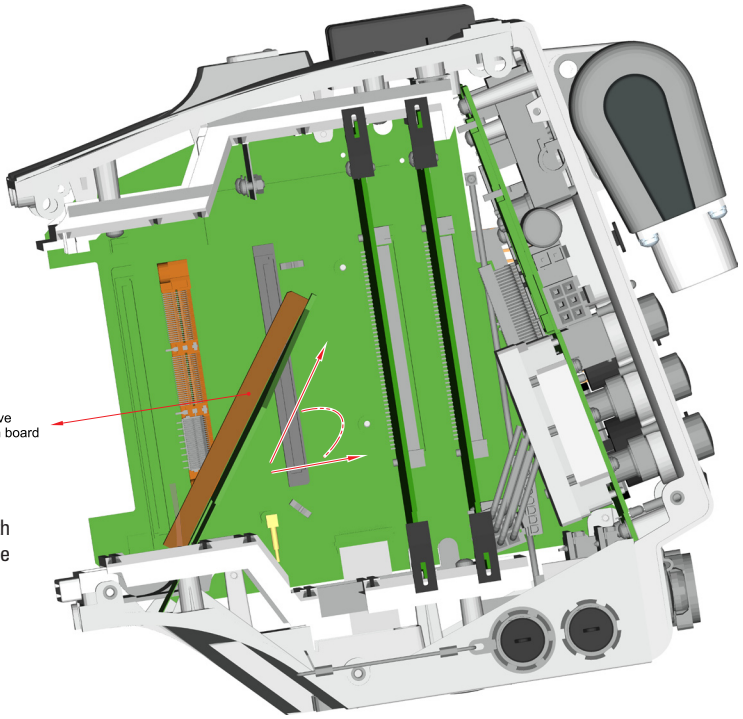
Unscrew to remove the
Interconnection Flex Bracket





Pull out of connector

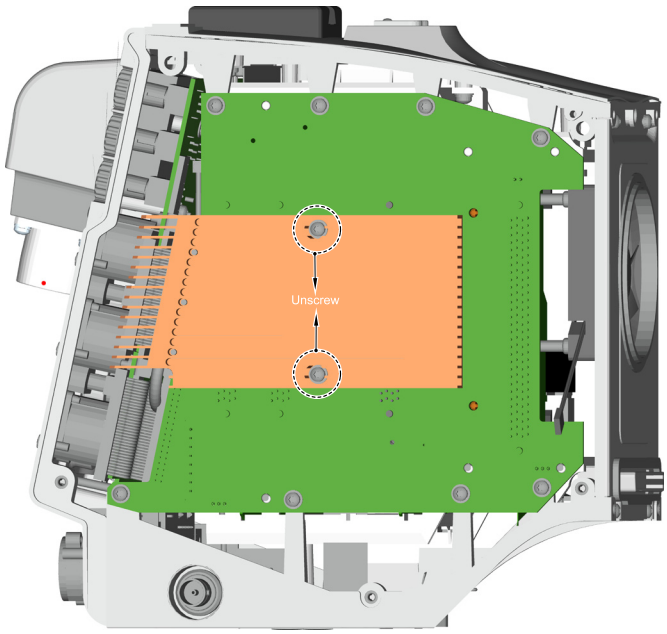
Carefully pull the interconnection board
just out of the connector



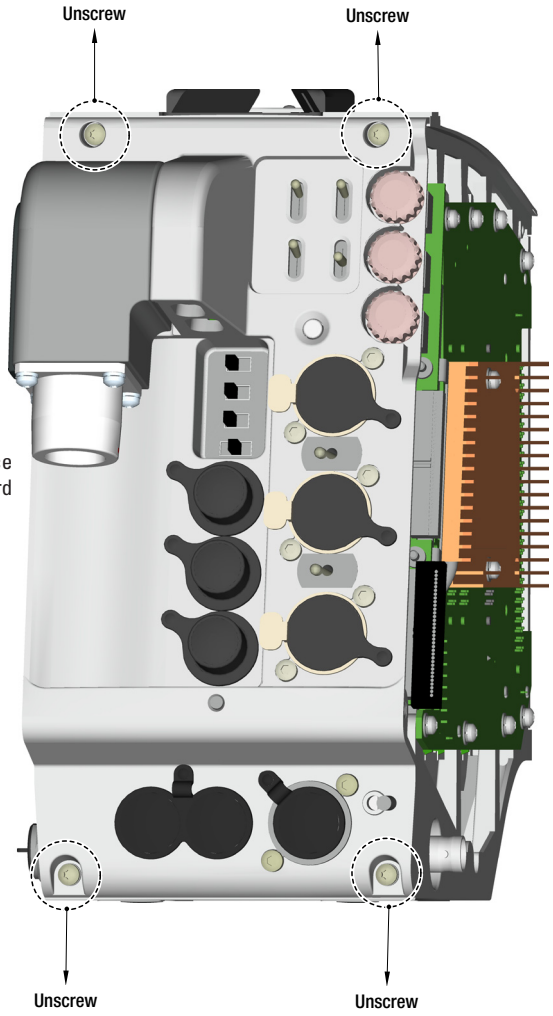
Remove the interconnection board with
docking connector as shown in the picture

Backpanel assy:

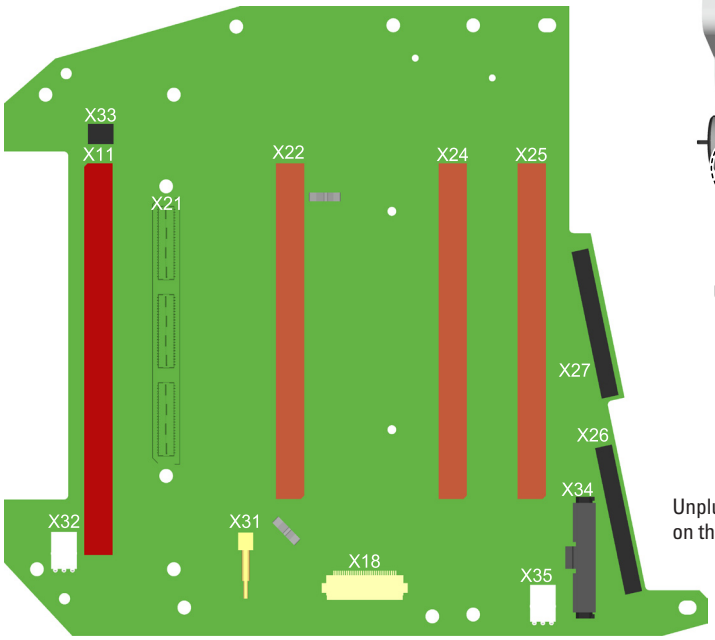
49



remove the two screws
on the cooling adaptor

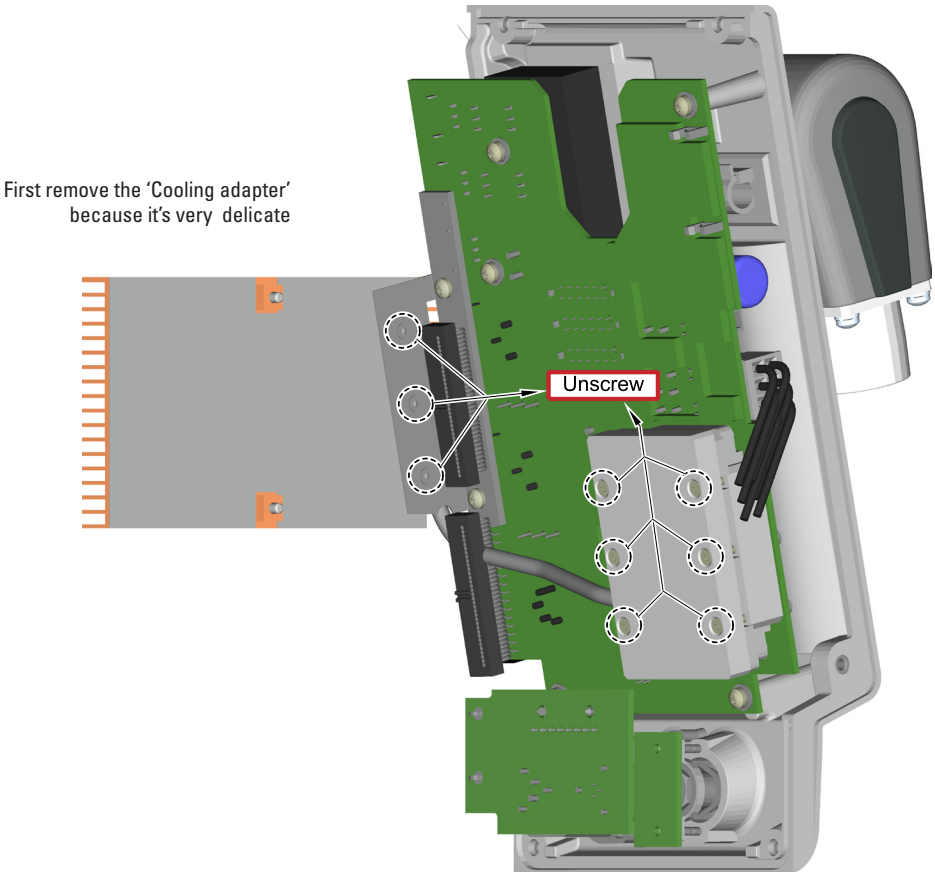


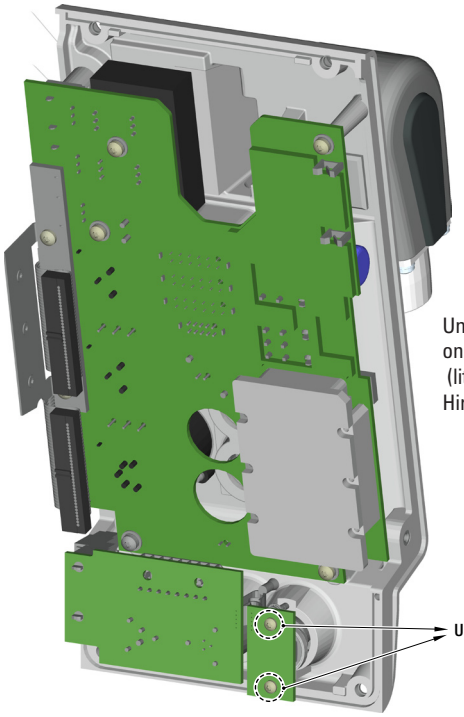
After uncrewing the Backpanel, there's space
to unplug the connectors on the motherboard

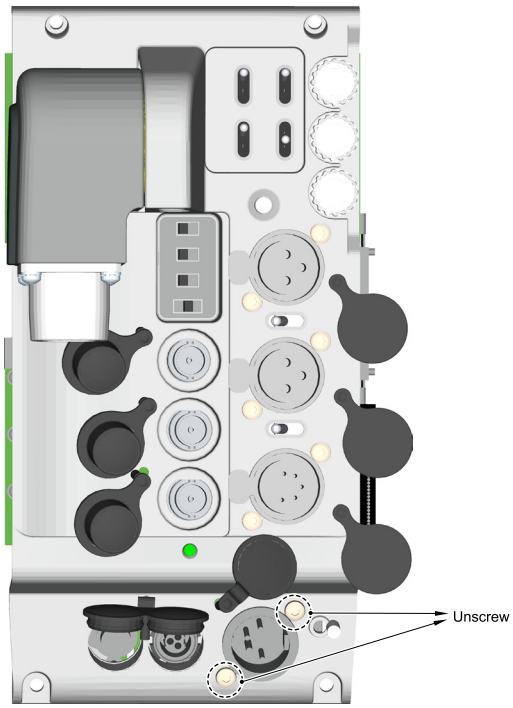


Unplug the connectors X26, X27 and X34
on the motherboard

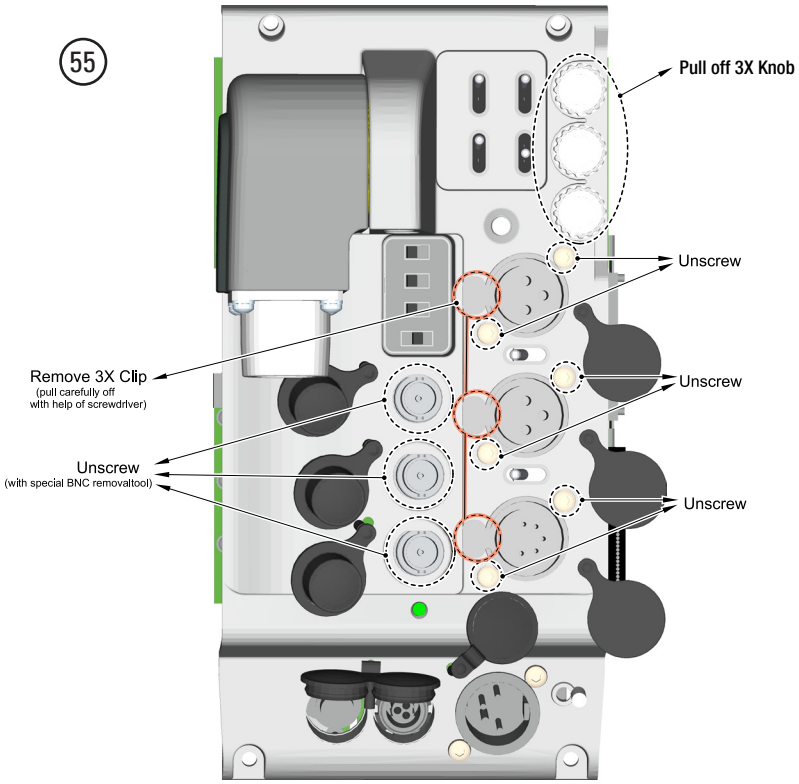
Power-interconnection board:

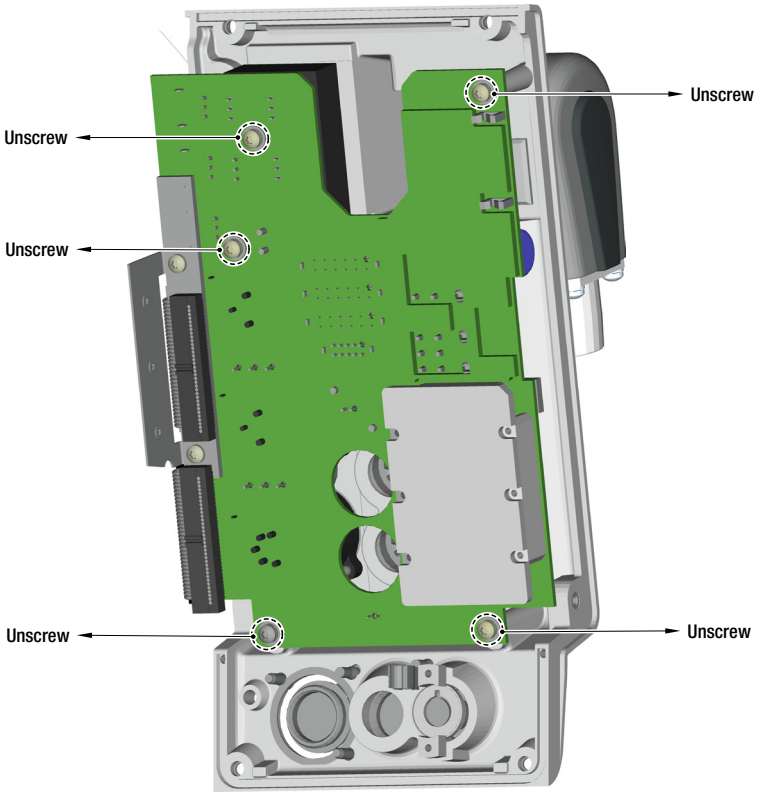




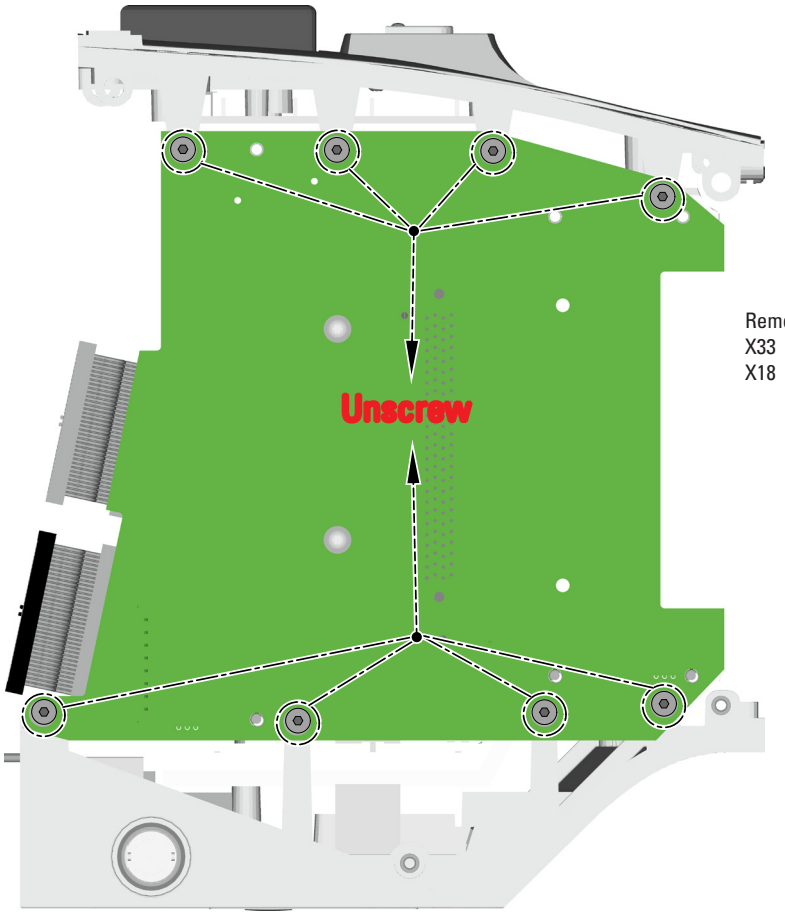


Backpanel Fiber board:



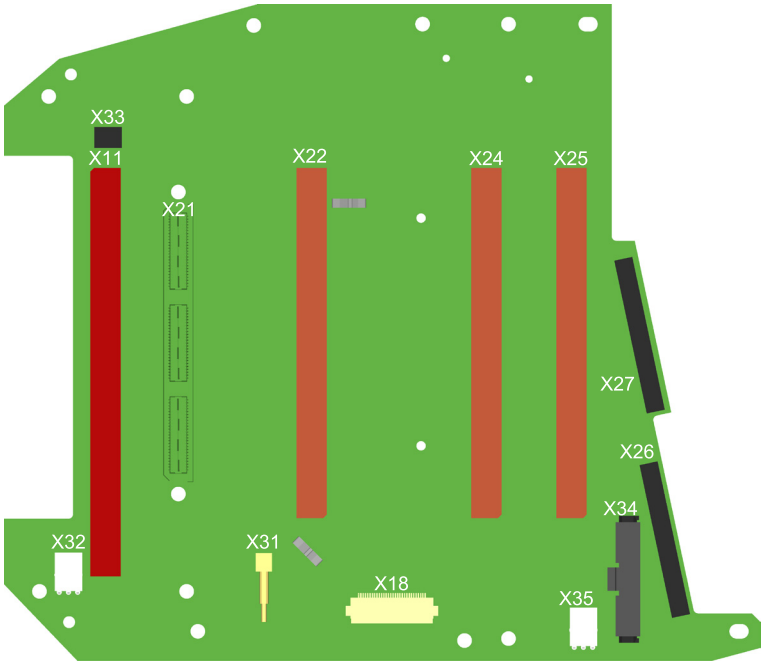


Motherboard:



Remove first:
X33
X18

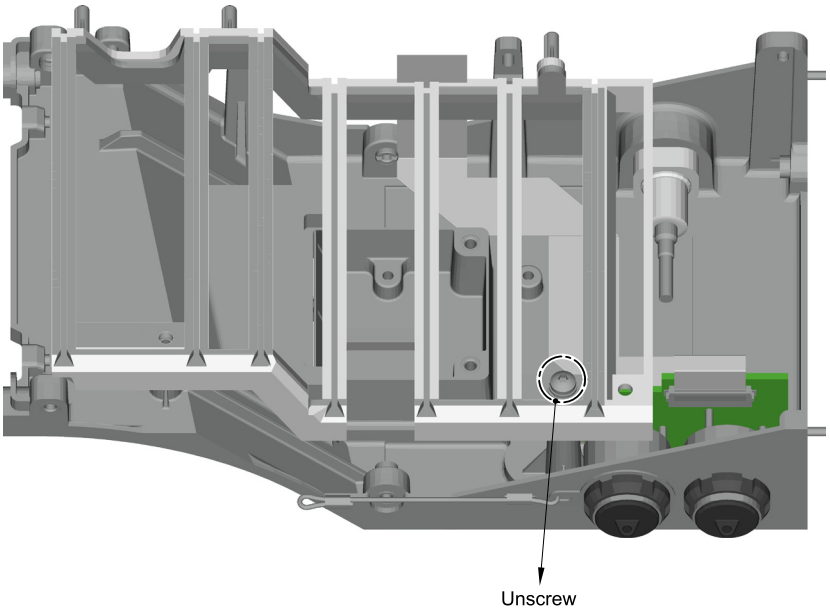
47



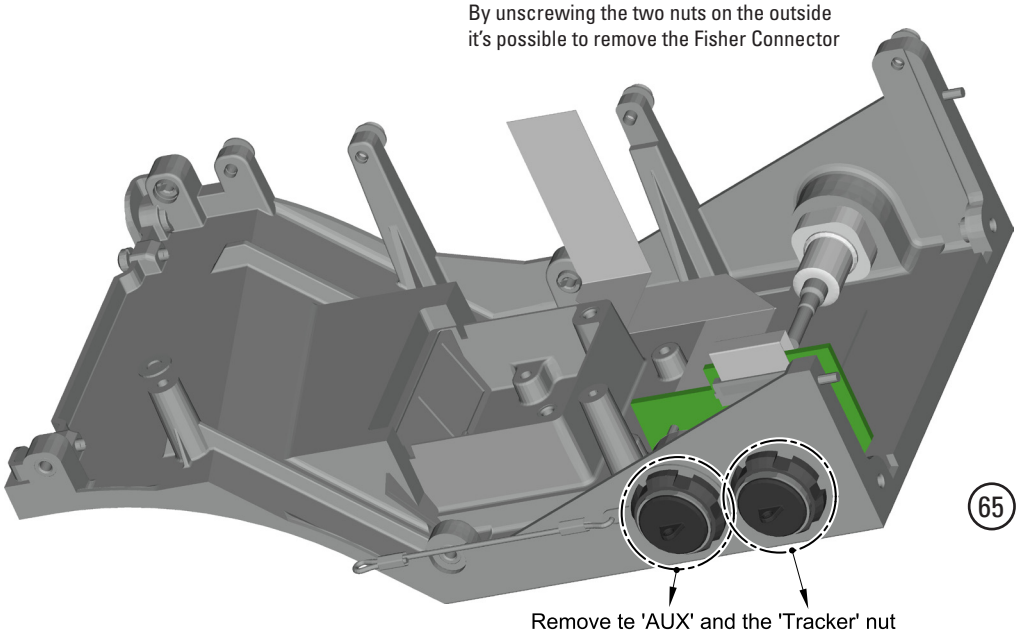
Interconnection board X11
Fisher Connector board (for tracker and aux) X18
HS output board X21
Fiber Transmission board X22
Audio Intercom LF board X24
Fiber-Battery Camera Power board X25
Backpanel Fiber board (1) X26
Backpanel Fiber board (2) X27
EXT_RefTP coax connector X31
Fan assy connector X32
Tally connector X33
PowerInterconnection board X34
Not Used X35

Fisher Connector board: (Aux and Tracker connector)

Remove the screw from the Print Rail Bottom and lift this rail out



By unscrewing the two nuts on the outside it's possible to remove the Fisher Connector

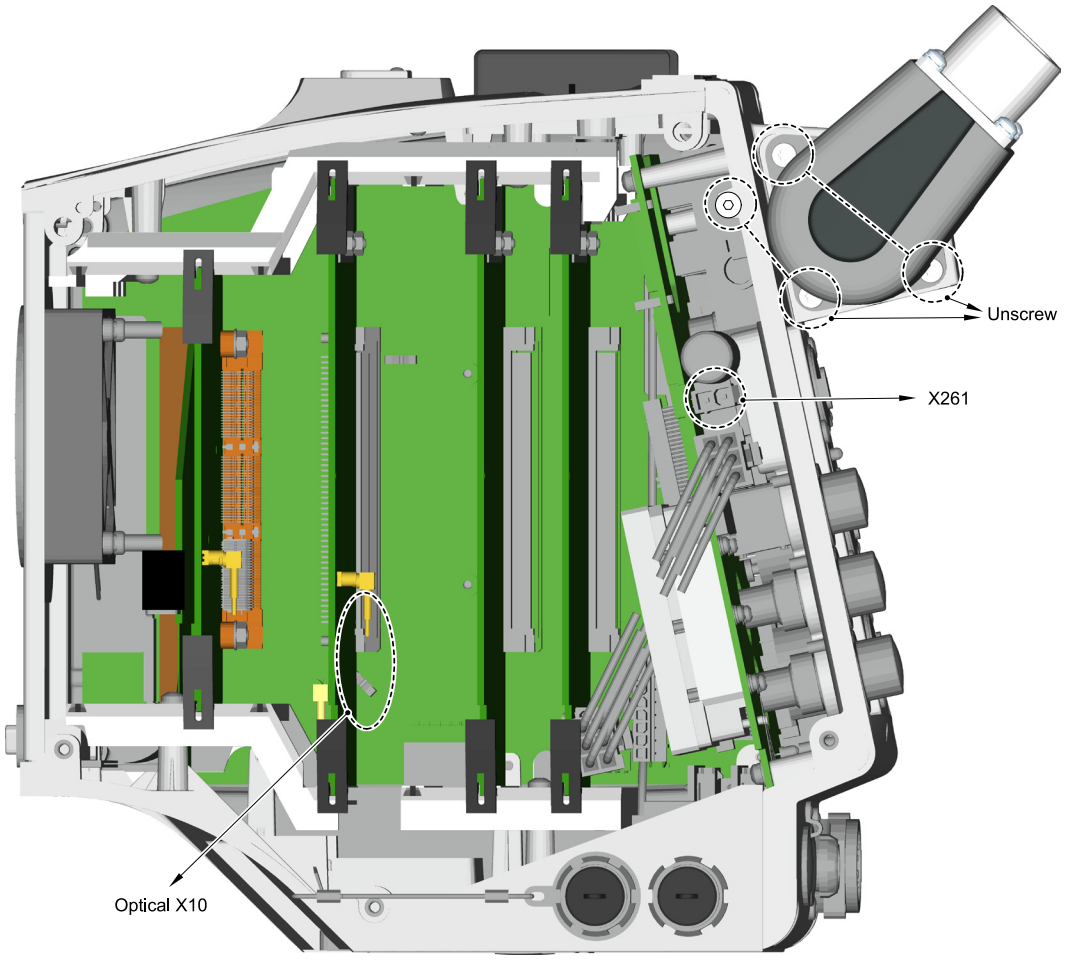


Rotary Fiber Assy:

To remove the Rotary Fiber adapter, unscrew three screws from the Assy.
Unplug X261 and unscrew the 'Ground' lead on the inside.

On the Fiber Transmission board:
Remove the two fiber connectors X10 bij pressing the lever on the blue part, and pulling out only by the blue connectorpart, never pull the yellow fibers or the sleeve.

Carefully remove the assy with the Fibercables and powercable.
Guide the Fibercables through the adapter not bending them!



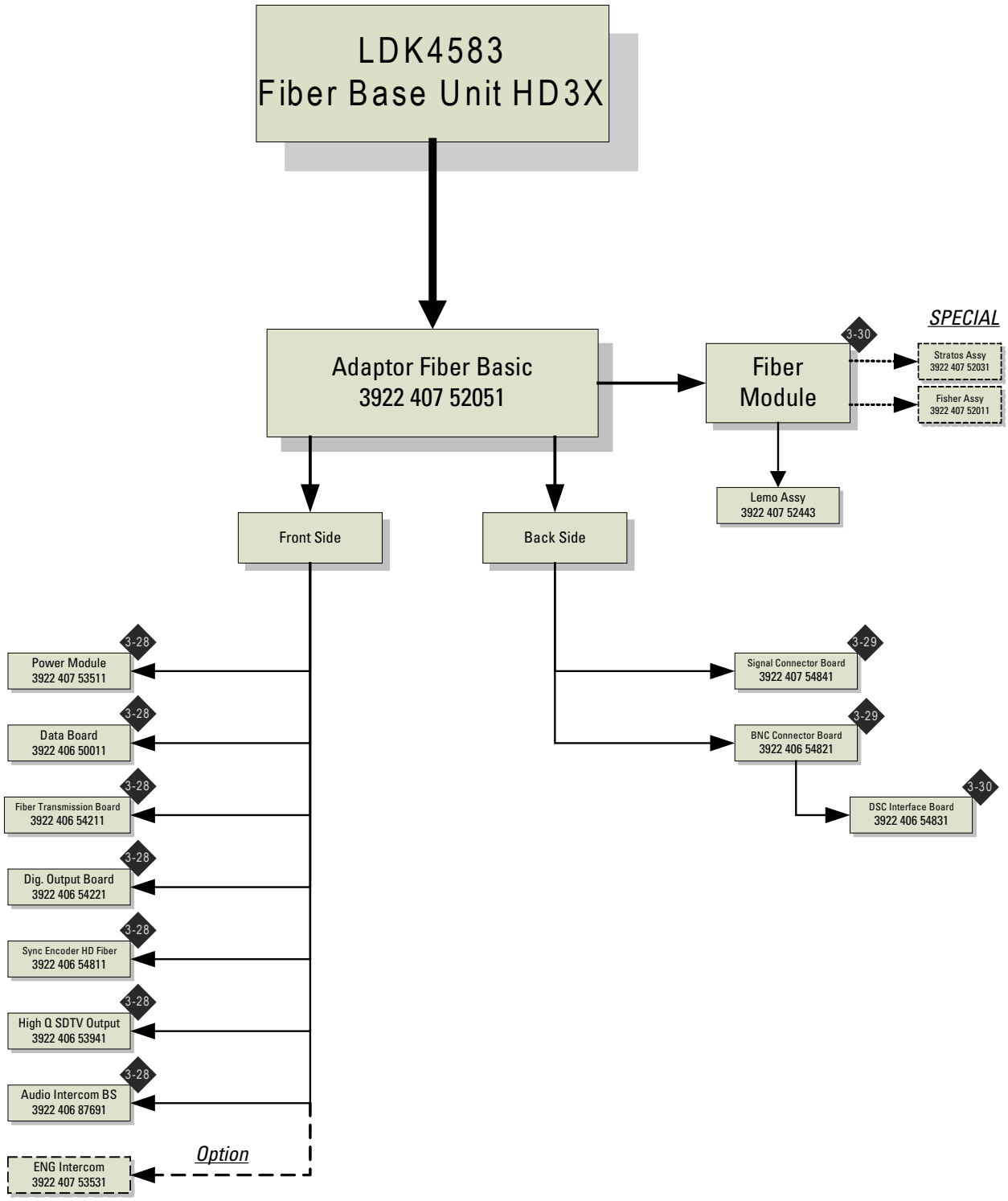
(70) Rotary Fiber Lemo Assy

Specials:

(71) Rotary Fiber Fisher Assy

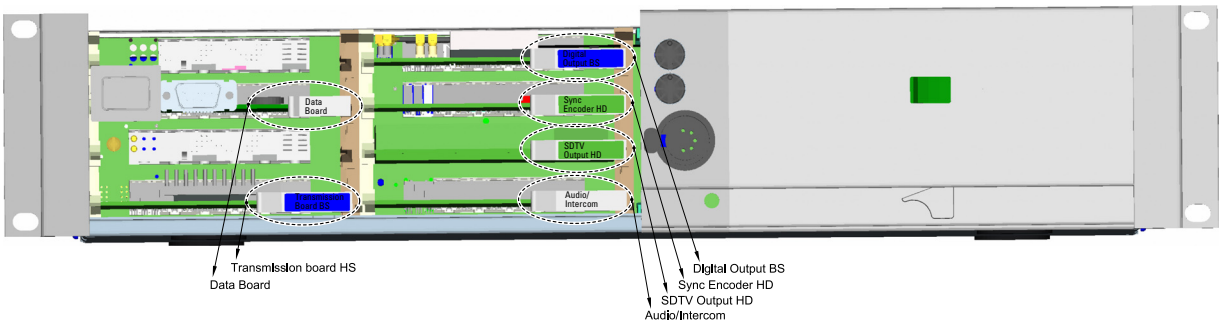
(72) Rotary Fiber Stratos Assy

3.4 LDK4583 Fiber Base Unit HD3X:

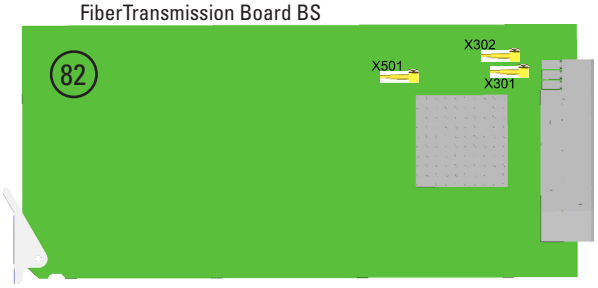


Utility boards

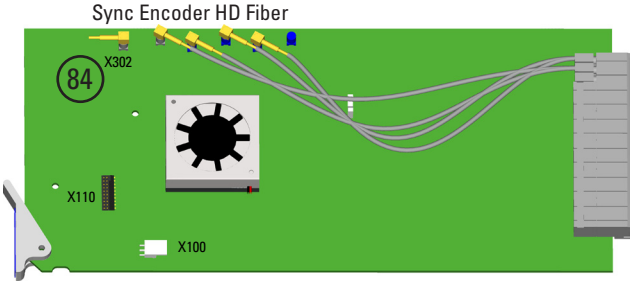
Location of the boards.
Remove them by pressing down leftside Card_Holder and pull the rightside Card_Ejector.
Remove connectors if applicable, see board drawings.
For Coax plug use the Coax Uncoupler tool.



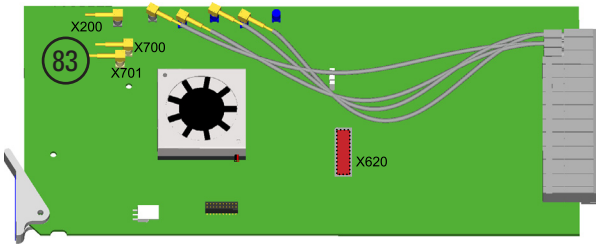
FiberTransmission Board BS



Sync Encoder HD Fiber

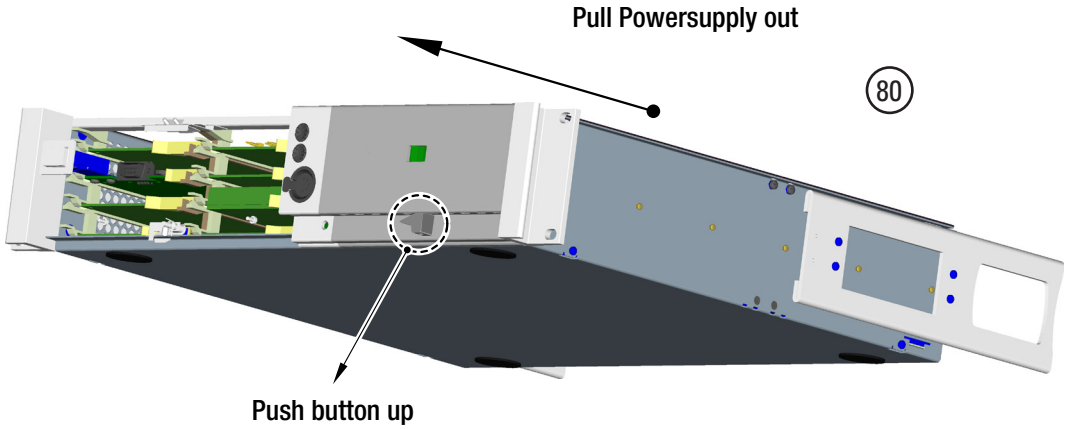


Digital Output BS

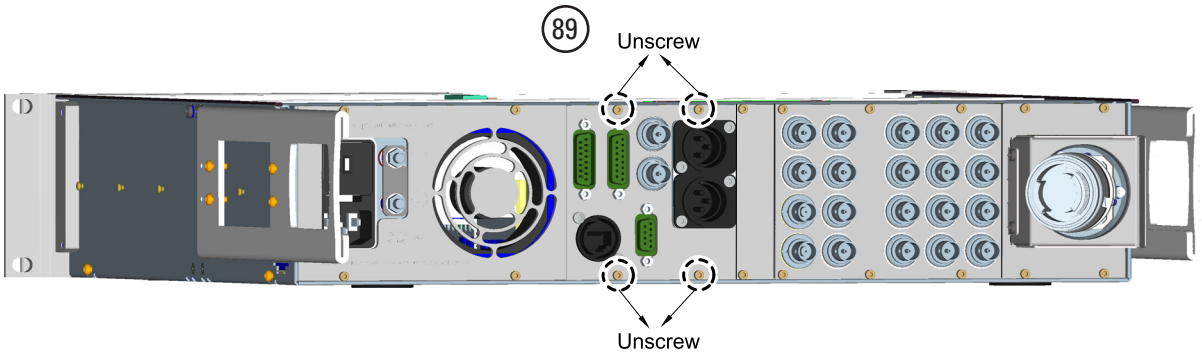


Power Supply

Push the button on the front up, and pull the Power Supply towards you.
Support the Power Supply on the underside with one hand as it's quite heavy.

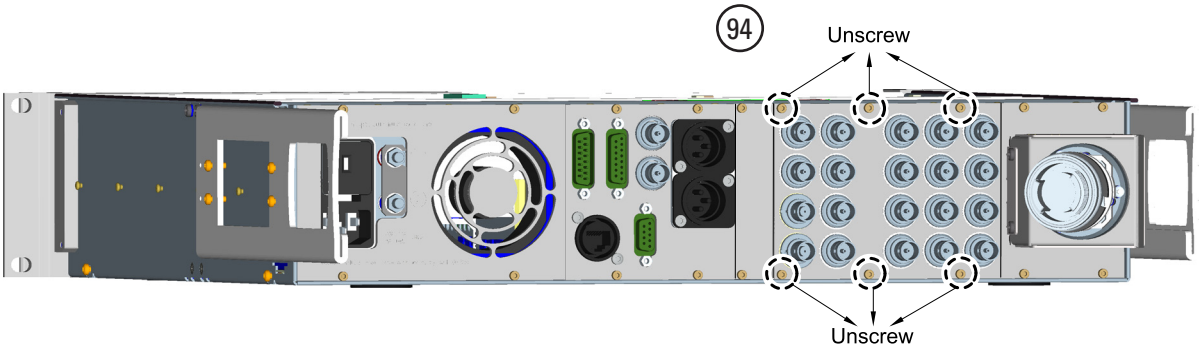


Signal Connector Board:

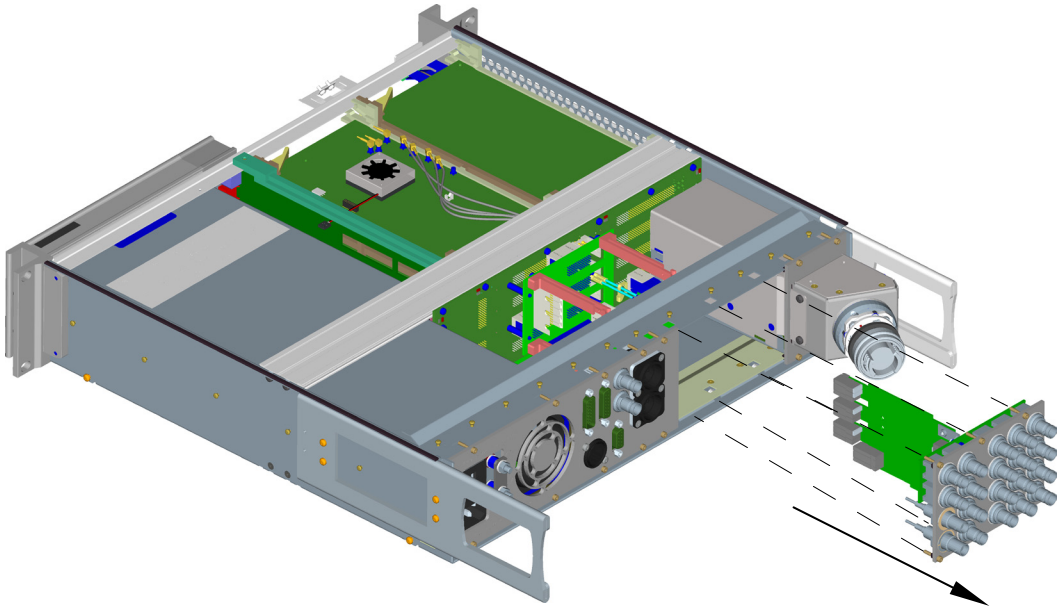


Unscrew the four screws, and pull the Signal Connector Board out.

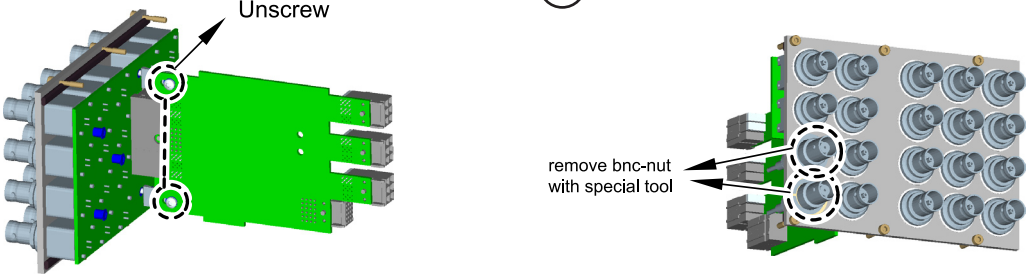
BNC Connector Board:



Unscrew the six screws, and pull the BNC Connector board out.
be aware you also pull the DSC Interface board HD, connected to this board, out also.



DSC Interface Board:



To remove the DSC Inteface board from the BNC Connector board, unscrew the two screws on the inside and remove the two BNC-nuts on the outside.

Fiber Module:

Unscrew the four screws and pull the Fiber Module out.

(100) Lemo Fiber Module BS

Specials:

(101) Fisher Fiber Module BS

(102) Stratos Fiber Module BS

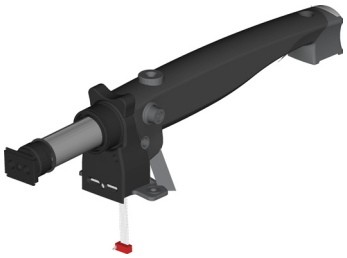
Chapter 4

Spare parts

4.1 LDK8300 Camera Head Spareparts

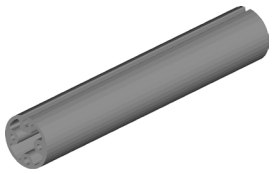
Camera Head Basic:

(1) 3922 407 40211 Digital Zoom Handgrip

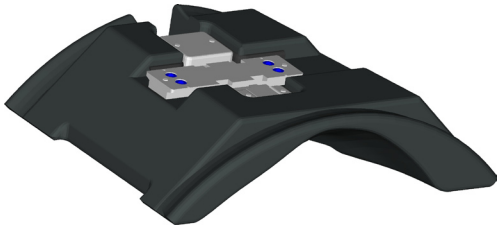


(2) 3922 407 39502 Zoomcontrol

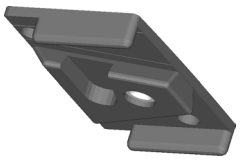
(3) 3922 407 32581 VF Pipe



(4) 3922 407 22224 Shoulderpad



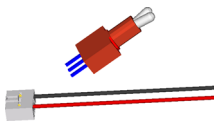
(5) 3922 402 03752 V-block



(6) 3922 407 49361 Cover Left

(7) 3922 406 53671 Left Switch Panel

(8) 3922 407 26063 Power Switch Assy



(9) 3922 406 54391 Sync. Mon Board

(10) 3922 406 52971 Data C. Board

(11) 3922 406 54401 Front Driver HS board

(12) 3922 407 52151 Cover Right

(13) 3922 406 54131 DVP Board

(14) 3922 406 53101 Connector Board Right Cover

(15) 3922 407 50382 Mic. Cable Assy

(16) 3922 400 09031 Raincover RS232 connector

(17) 3922 400 10051 Cable Clamp

(18) 3922 406 54321 Mother Board

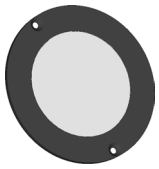
(19) 3922 407 52162 Cooling Logo Cover 8300

(20) 3922 407 52171 Front Module HD 3X

(21) Optical Module HD 3X

(22) HD Lensplate Wedge

(23) 3922 407 34512 Filter Assy ¼ labda



(24) 3922 404 23632 Bajonetring

(25) 2522 043 02017 Screw for Bajonetring

(26) 3922 404 17414 Bajonetring Handle

(27) 3922 400 07891 Dustcap

(28) 3922 407 39951 Knob Effect Filter

(29) 3922 400 09761 Knob ND Filter

(30) 2522 043 18226 Screw for Effect & ND Filter

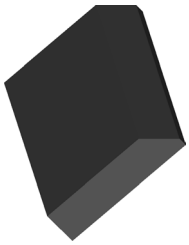
(31) 3922 406 53531 Front Switch Panel

(32) 3922 400 10041 Cable Clamp

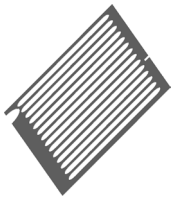
(33) 3922 400 08513 Audio Level Knob

(34) 3922 400 09931 Switch Rubber

(35) 3922 405 05822 Front Air Intake Filter



(36) 3922 405 05832 Front Air Intake Tape



4.2 LDK5880 Fiber Adaptor Spareparts

Fiber Adapter Basic:

(40) 3922 407 49291 Cover Left

(41) 3922 407 52551 Cover Right

(42) 3922 406 54141 HS Output Board

(43) 3922 406 54181 Fiber Transmission Board

(44) 3922 406 87881 Audio Intercom LF Board

(45) 3922 406 50441 Fiber-Batt Camera Power

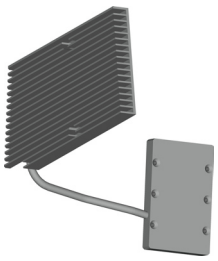
(46) 3922 406 54171 Interconnection Board

(47) 3922 406 54161 Mother Board

(48) 3922 407 53471 Dockplate Fiber Adaptor

(49) 3922 407 52491 Backpanel Assy

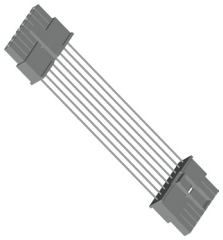
(50) 3922 407 53761 Cooling Adaptor



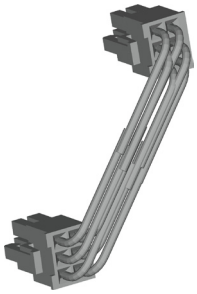
(51) 3922 405 05901 Protection Sheet

(52) 3922 404 40681 Vicor Heatsink Mountingplate

(53) 3922 407 50371 8P Wiring Power Interconnection Brd.



(54) 3922 407 53491 Wire Assy Power



(55) 3922 406 54151 Backpanel Fiber Board

(56) 3922 400 08412 Long Knob

(57) 3922 400 09173 Dustcover BNC

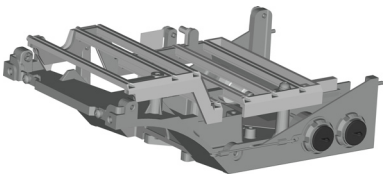
(58) 3922 400 08661 Dustcover XLR3 Female

(59) 3922 406 53131 Power Interconnection Board

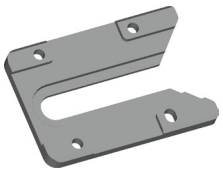
(60) 3922 400 10881 Double Cover Fisherplug

(61) 3922 400 09231 Dustcover Fisher/XLR3-M

(62) 3922 407 52521 Adapter Bottom Assy

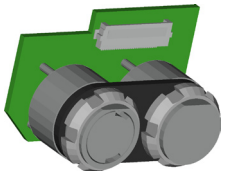


(63) 3922 404 23993 V Bracket Long



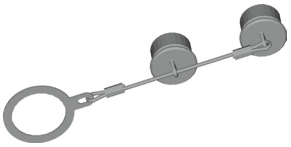
(64) 3922 407 49972 BNC Wired

(65) 3922 406 53151 Fisher Connector Board

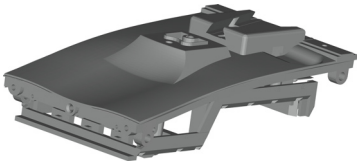


(66) 3922 205 00065 Sumitomo Flex 30P L=210mm

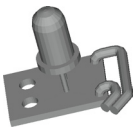
(67) 3922 040 03143 Cap Fisher 11P



(68) 3922 407 53601 Topplate Fiber Assy

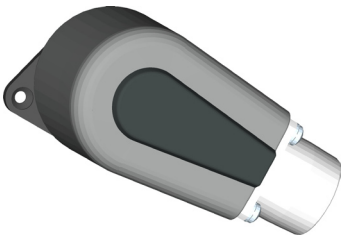


(69) 3922 407 24641 Tally Light Assy



Rotary Fiber Assy:

(70) 3922 407 53261 Rotary Fiber Lemo Assy



Specials:

(71) 3922 407 53251 Rotary Fiber Fisher Assy

(72) 3922 407 53271 Rotary Fiber Stratos Assy

4.3 LDK4583 Fiber Base Unit HD3X

Fiber Base Unit Basic:

(80) 3922 407 53511 Power Module

(81) 3922 406 50011 Data Board

(82) 3922 406 54211 Fiber Transmission Board

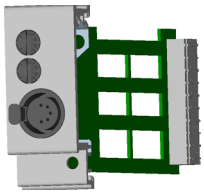
(83) 3922 406 54221 Digital Output Board

(84) 3922 406 54811 Sync Encoder HD Fiber

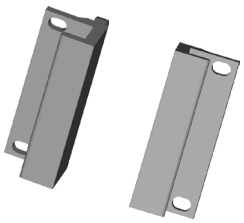
(85) 3922 406 53941 High Q SDTV Output Board

(86) 3922 406 87691 Audio Intercom BS

(87) 3922 407 53531 ENG Intercom (option)

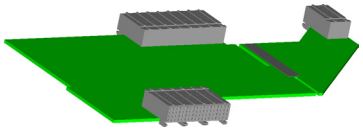


(88) 3922 407 33841 Set Brackets Front

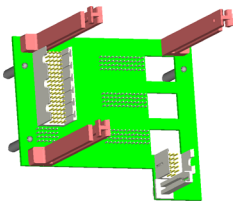


(89) 3922 406 54841 Signal Connector Board

(90) 3922 406 54851 Signal Interconnection Board



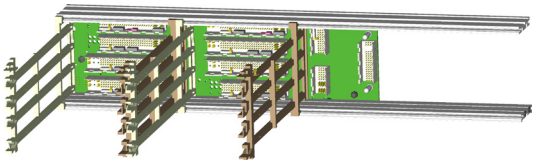
(91) 3922 406 54861 Sub Board



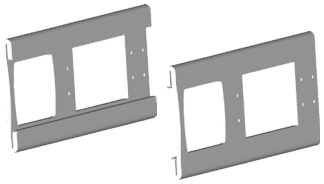
(92) 3922 406 54821 BNC Connector Board

(93) 3922 406 54831 DSC Interface Board HD

(94) 3922 407 35472 Motherboard Service Assy HDTV

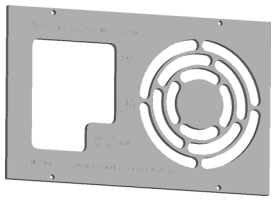


(95) 3922 407 33551 Protection Brackets Back

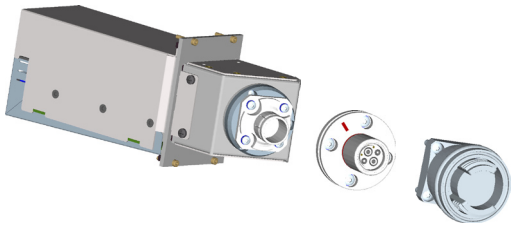


(96) 3922 407 33321 Backplate Blind

(97) 3922 407 35602 Backplate Fan Basestation



(100) 3922 407 53551 Lemo Fiber Module BS



Specials:

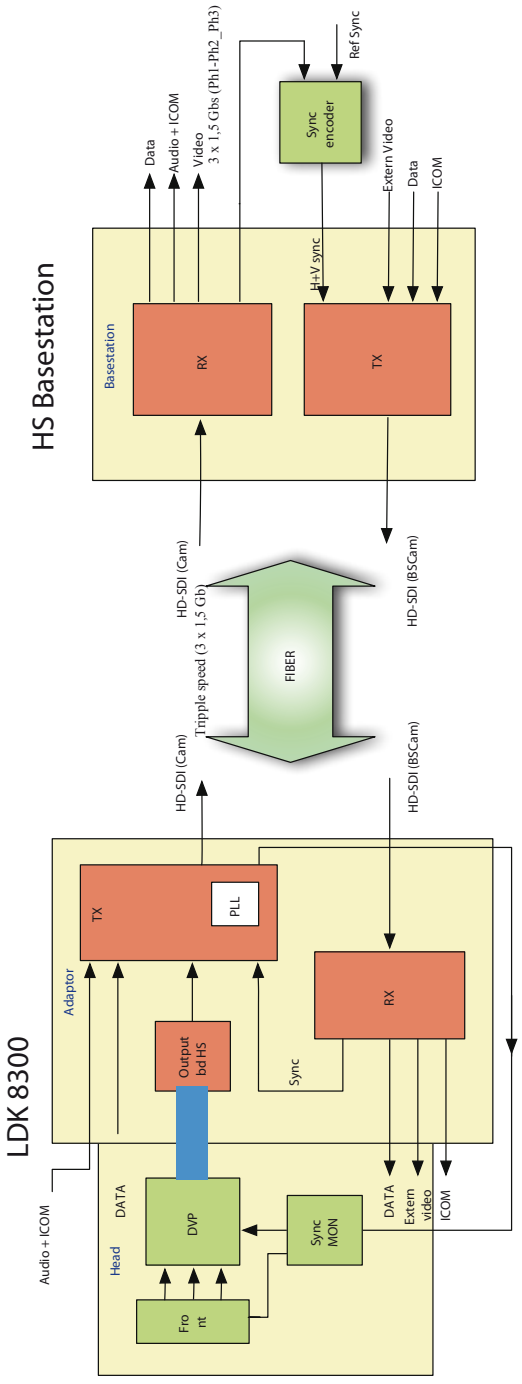
(101) 3922 407 53541 Fisher Fiber Module BS

(102) 3922 407 53561 Stratos Fiber Module BS

Chapter 5

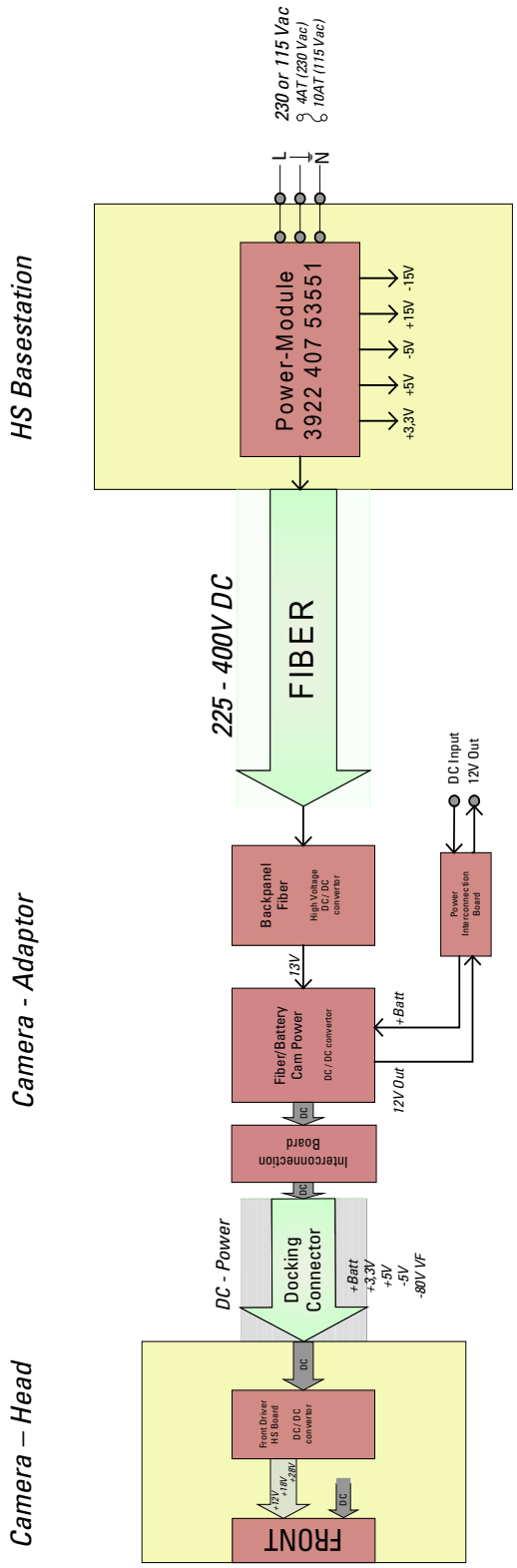
Schematic and Block diagrams:

5.1 LDK8300 System Overview

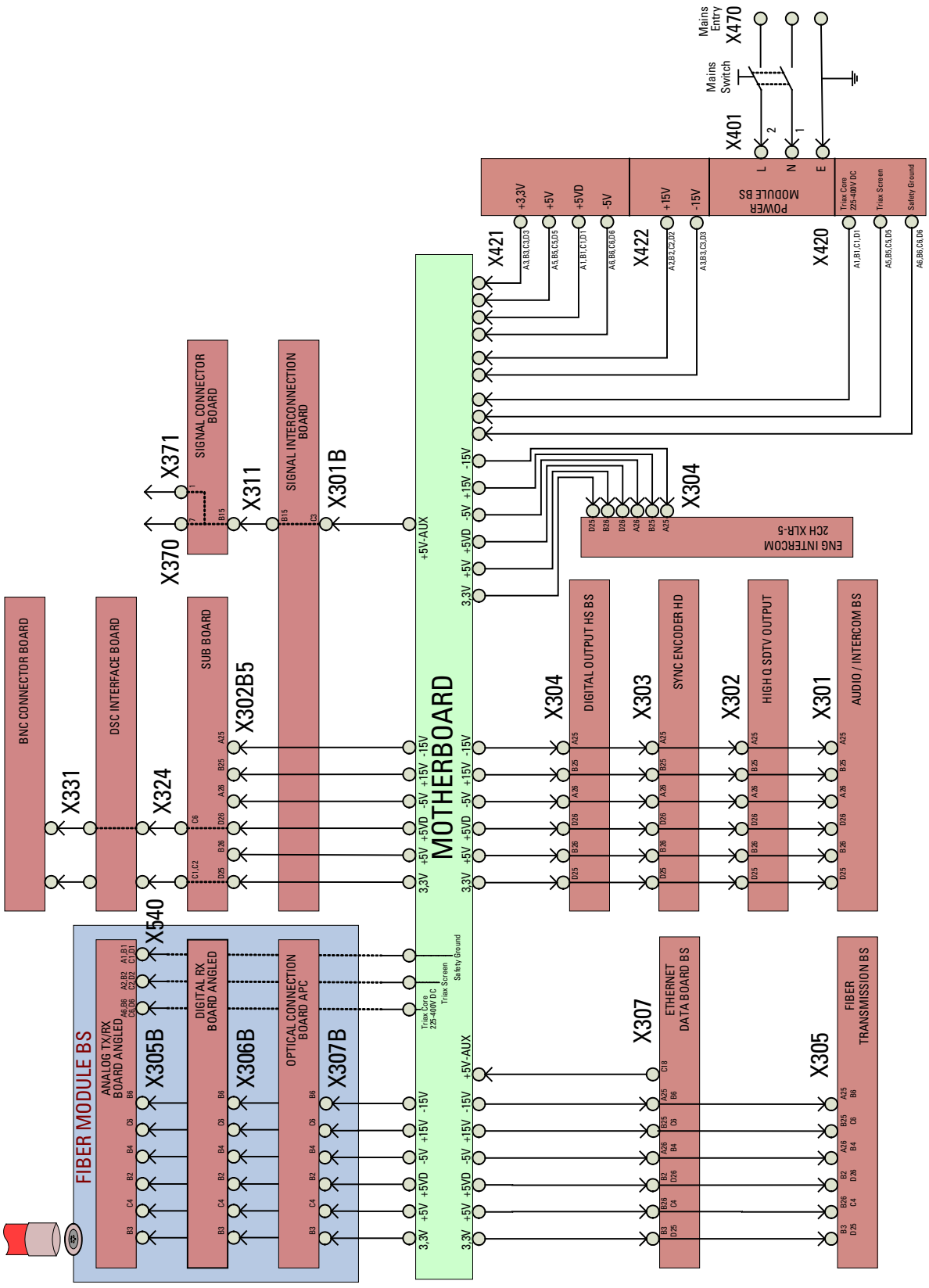


5.2 Power

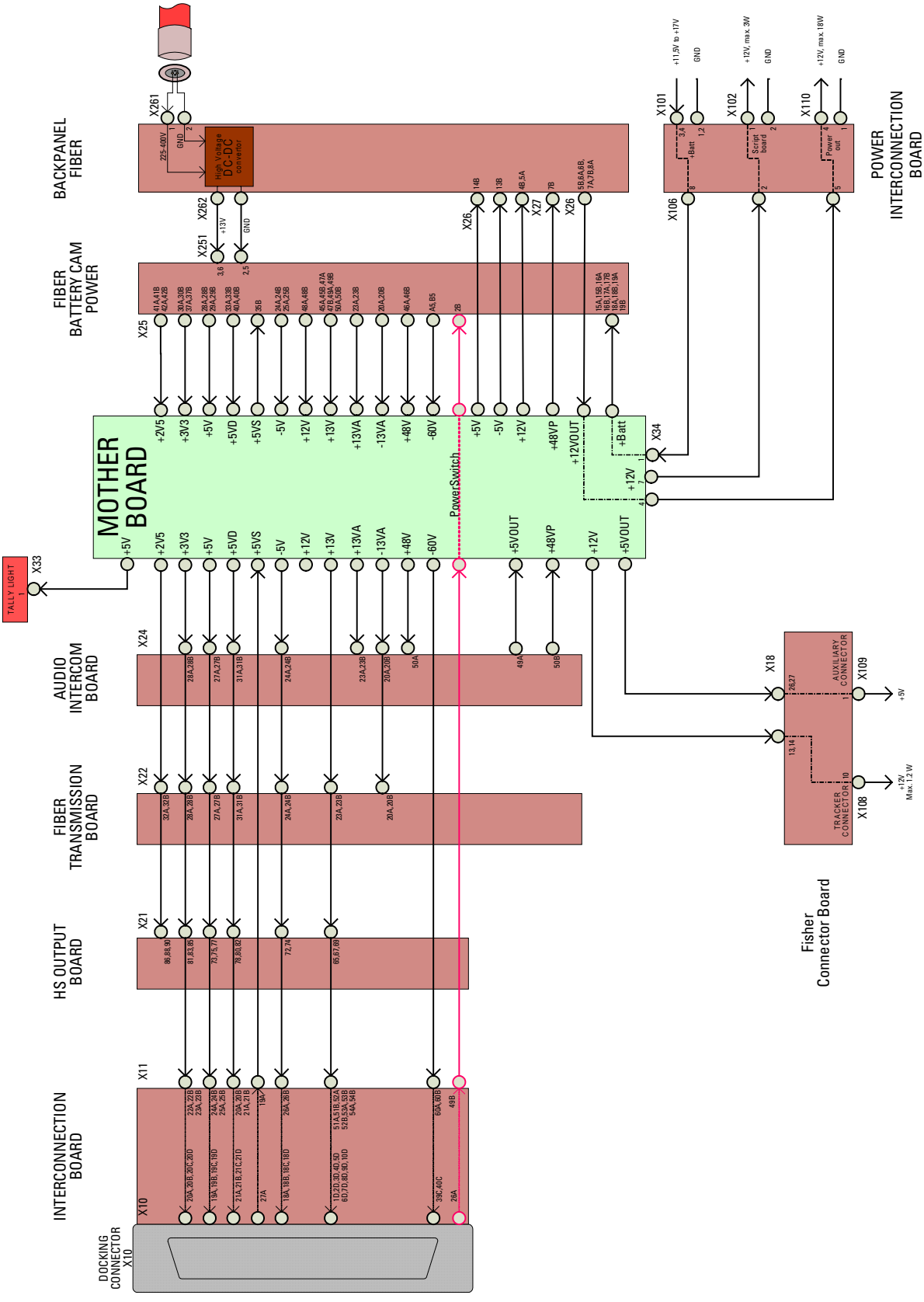
LDK8300 Power Overall



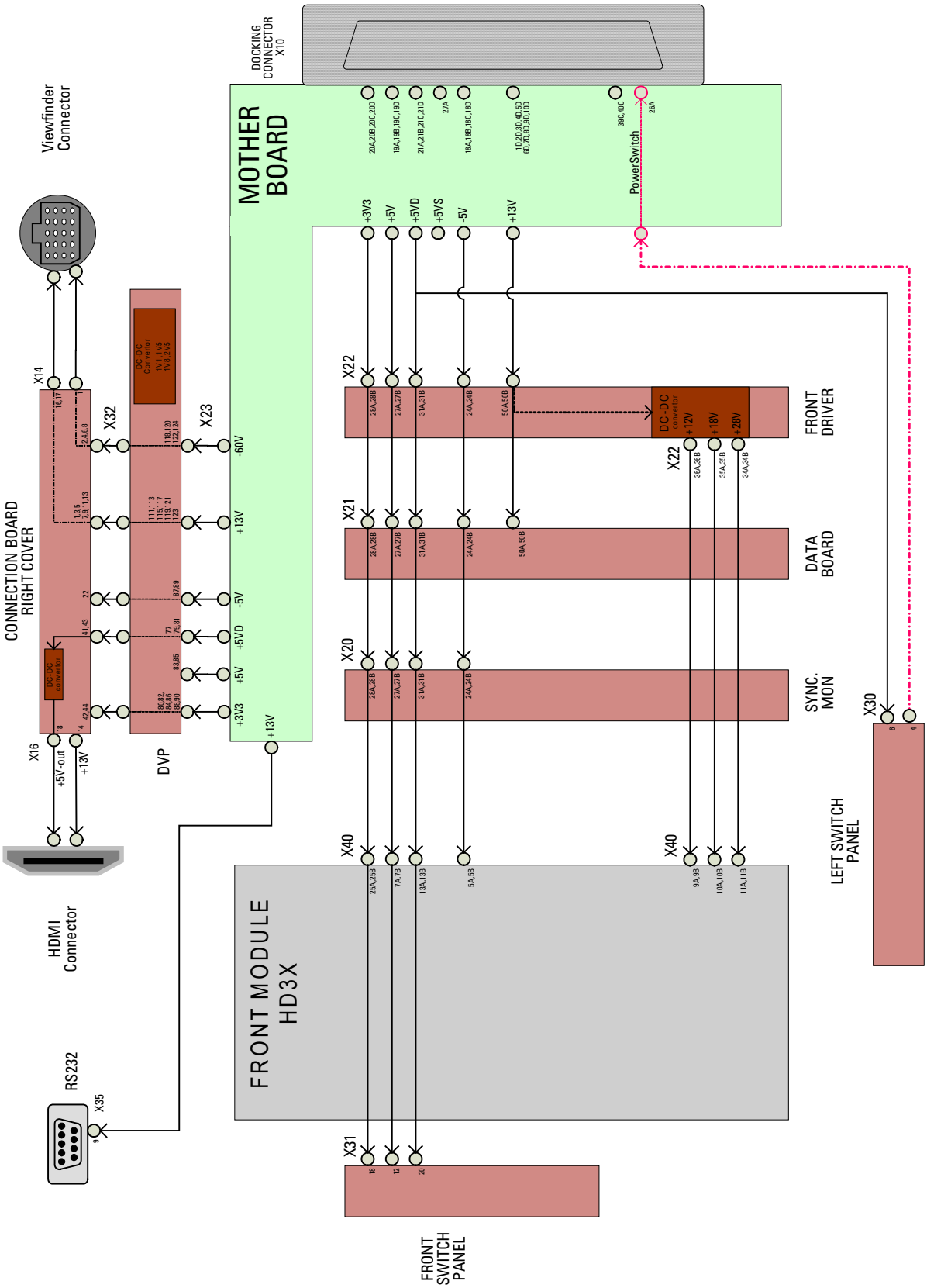
LDK8300 Power Basestation



LDK8300 Power Adaptor

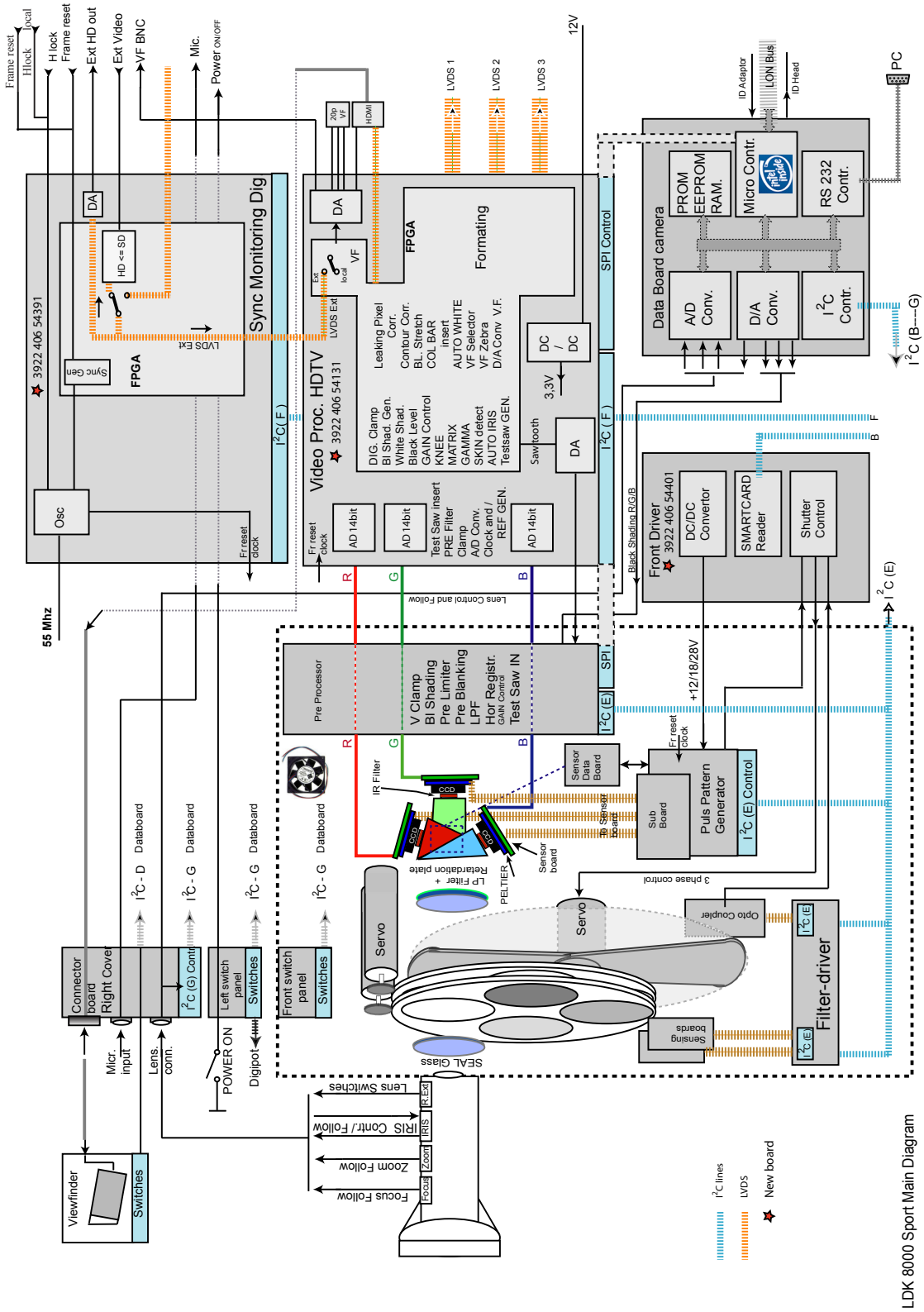


LDK8300 Power Camerahead

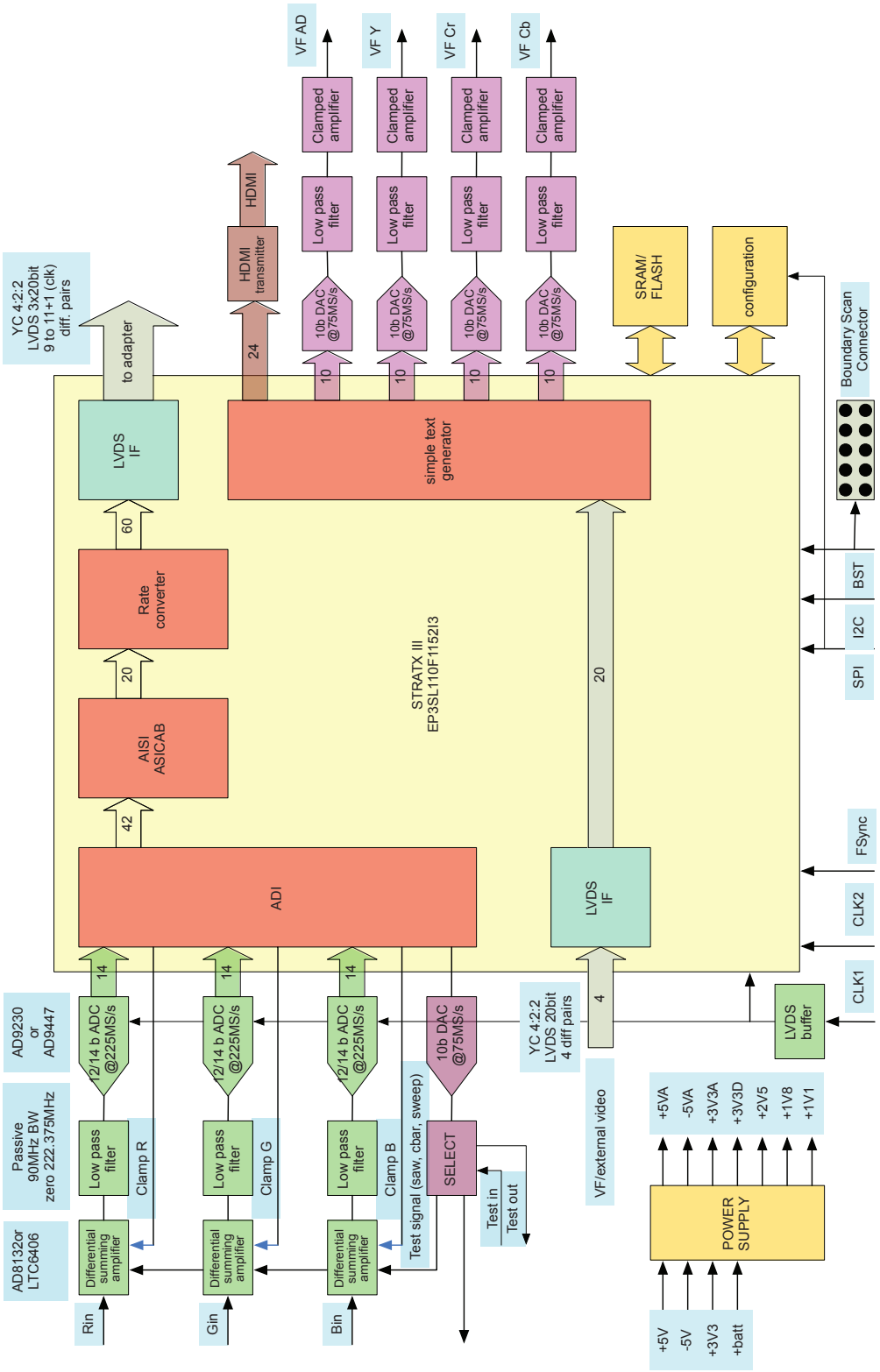


5.3 LDK8300 Camera Head

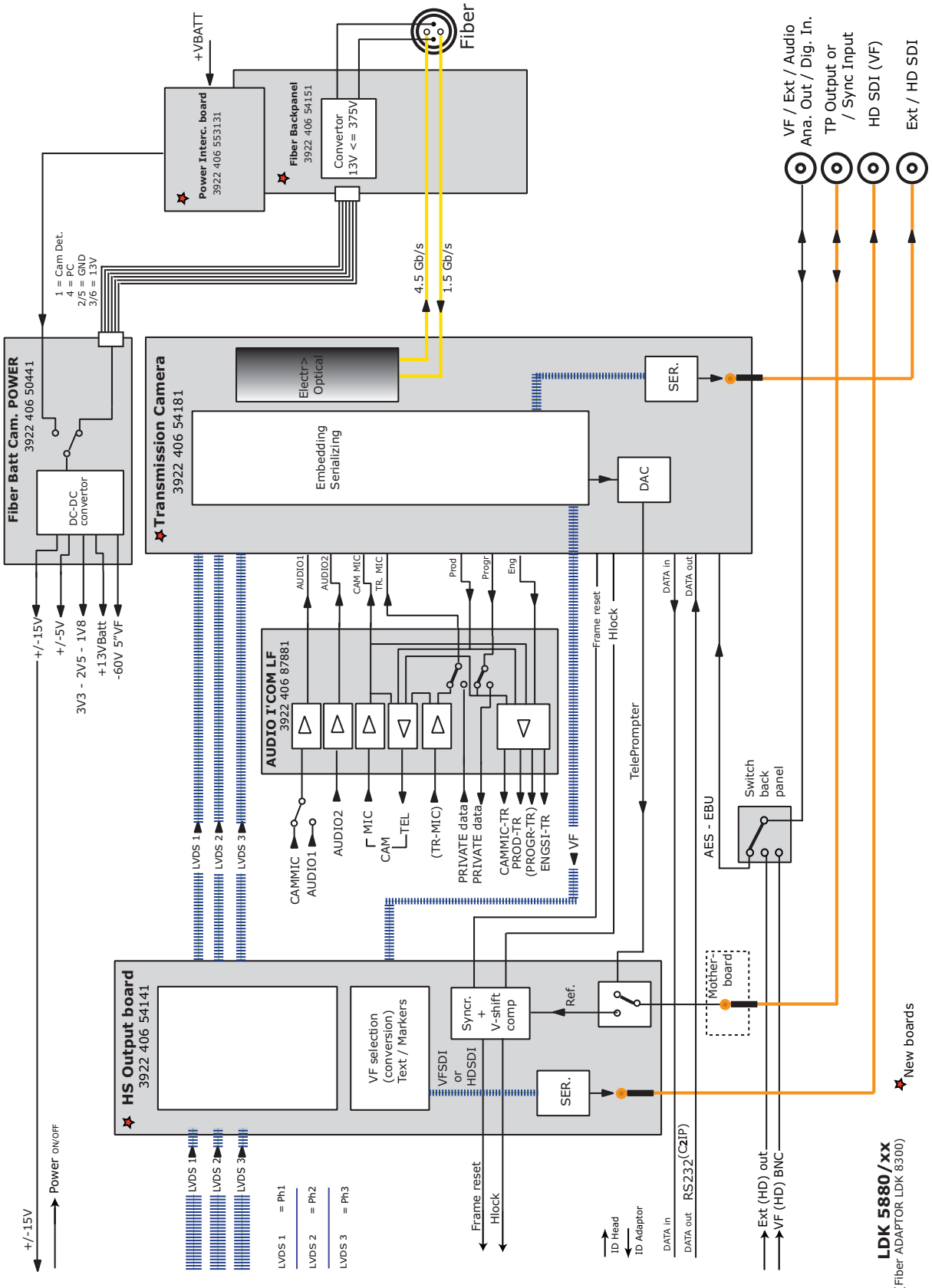
Overall:



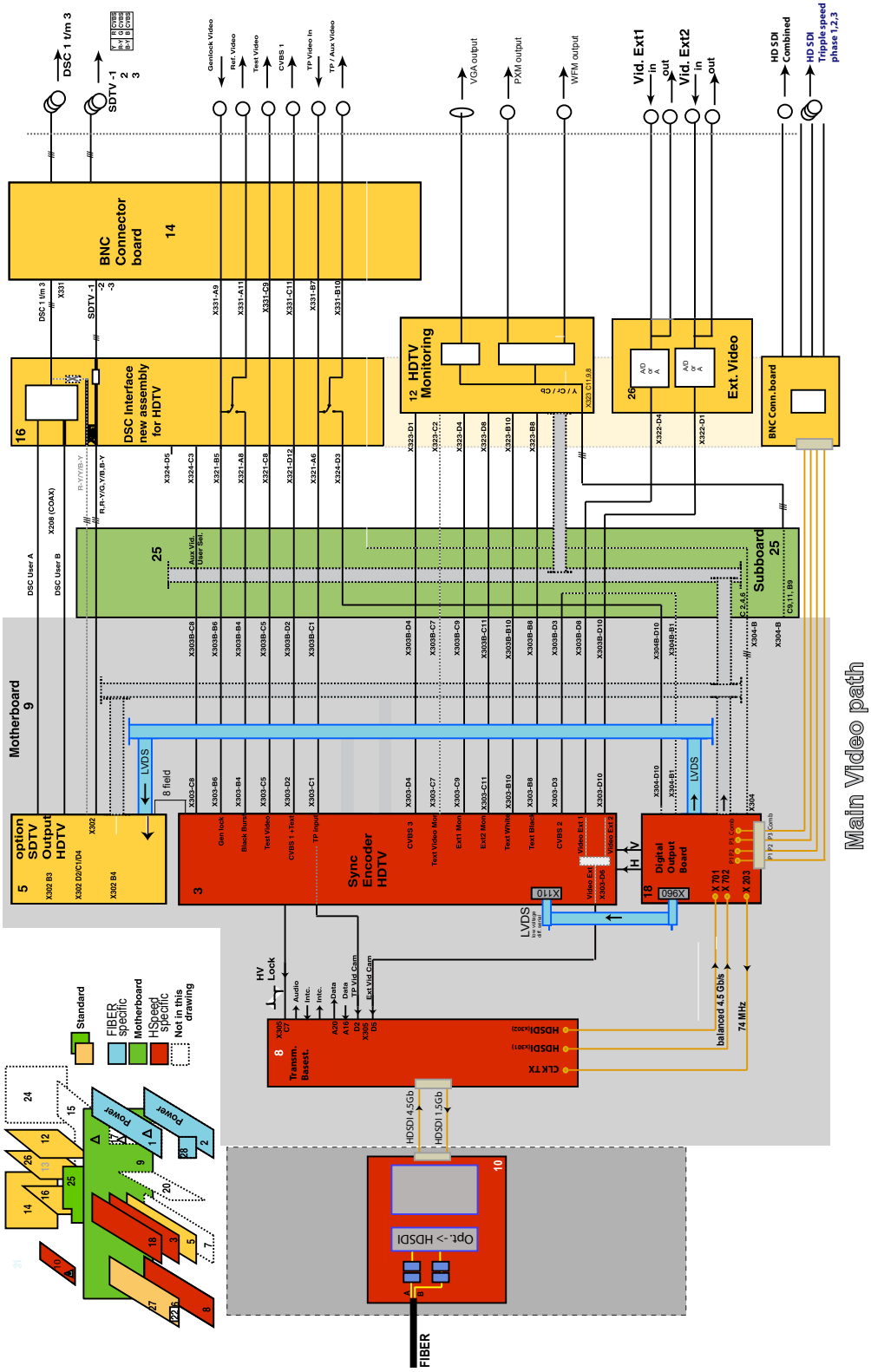
LDK8300 DVP board blockdiagram



5.4 LDK5880 Adapter block diagram



5.5 LDK4583 Basestation block diagram



Chapter 6

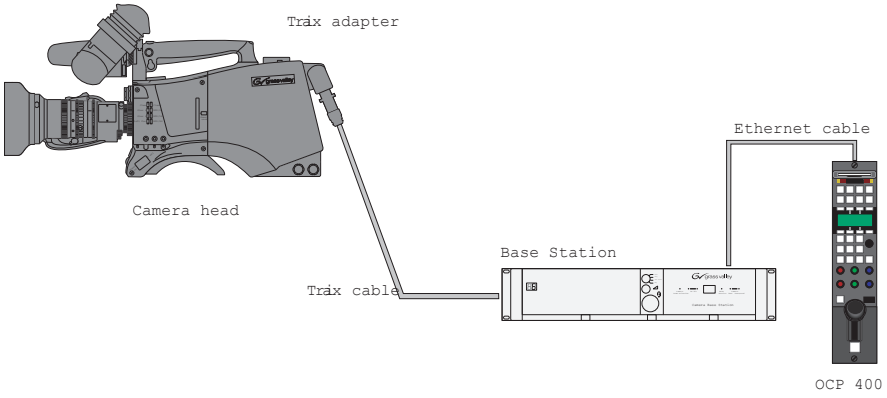
Diagnostics:

6.1 Introduction

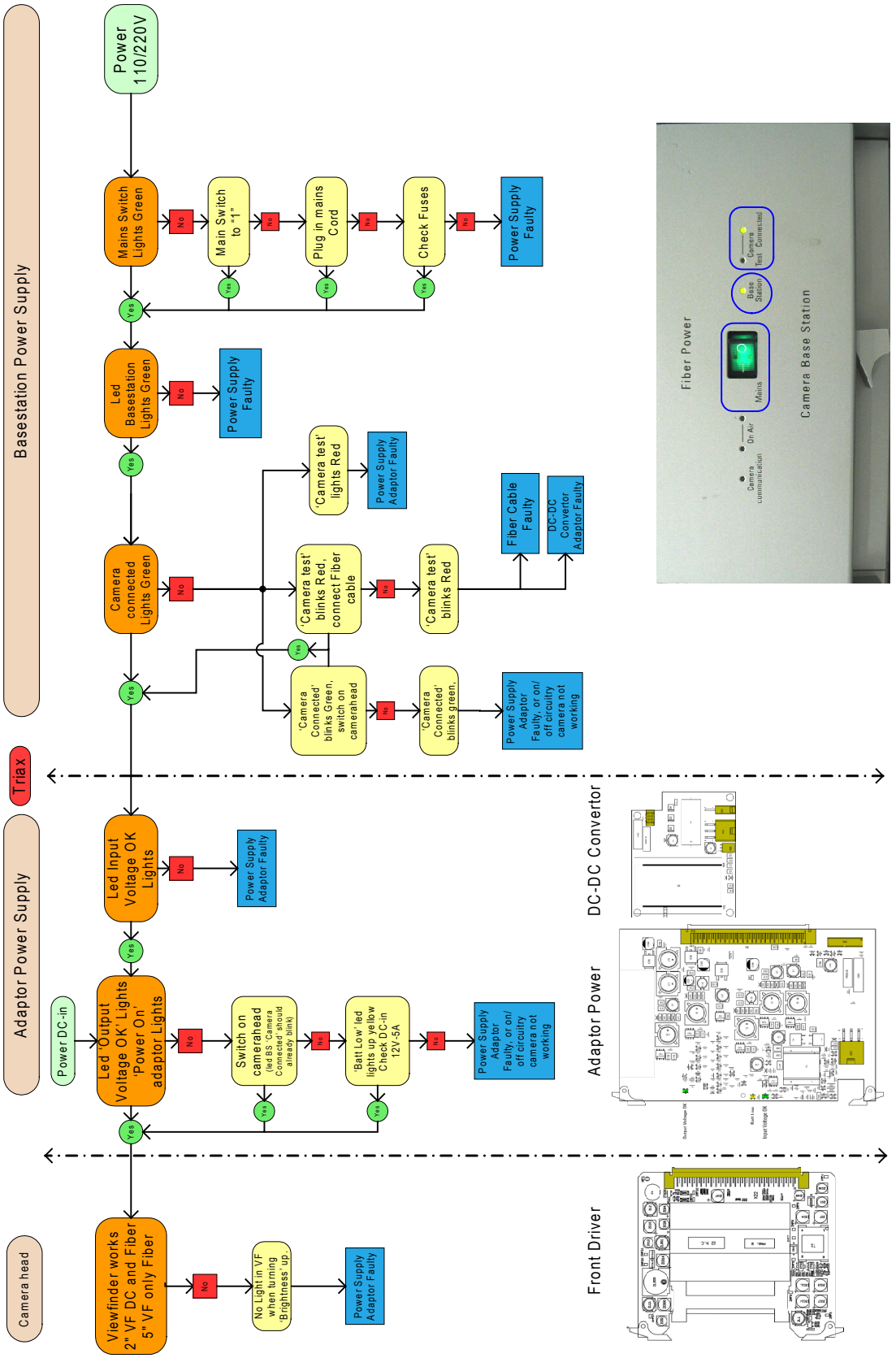
The Diagnostics diagrams in the next paragraphs are drawn out the perspective of the Block diagrams from chapter 5.

This means that they should be read from right (basestation side, in/output connectors) to the left (Camera Head).

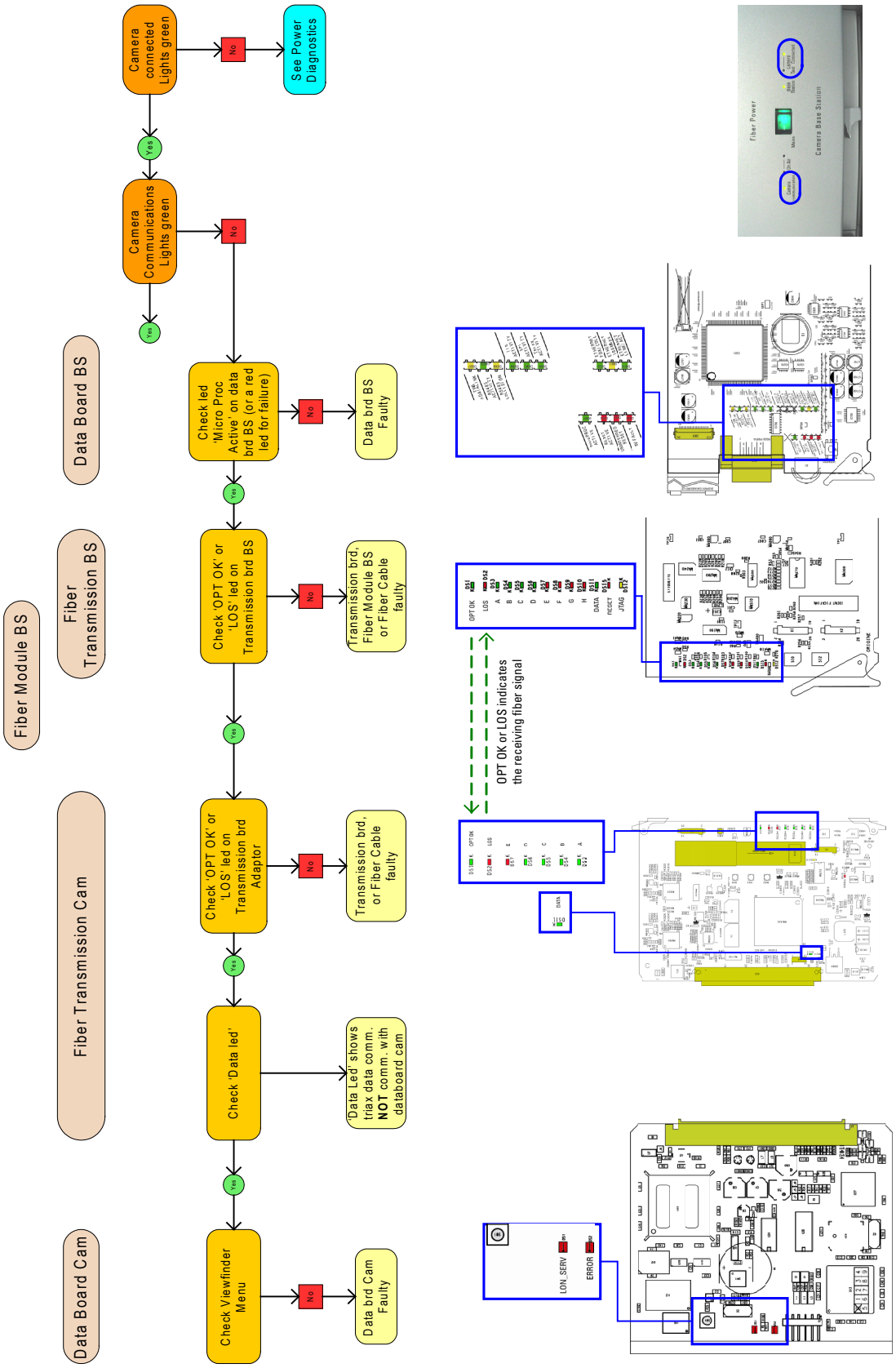
The origin has to be related to the fact that a camera-chain reproduction is drawn in the same way.



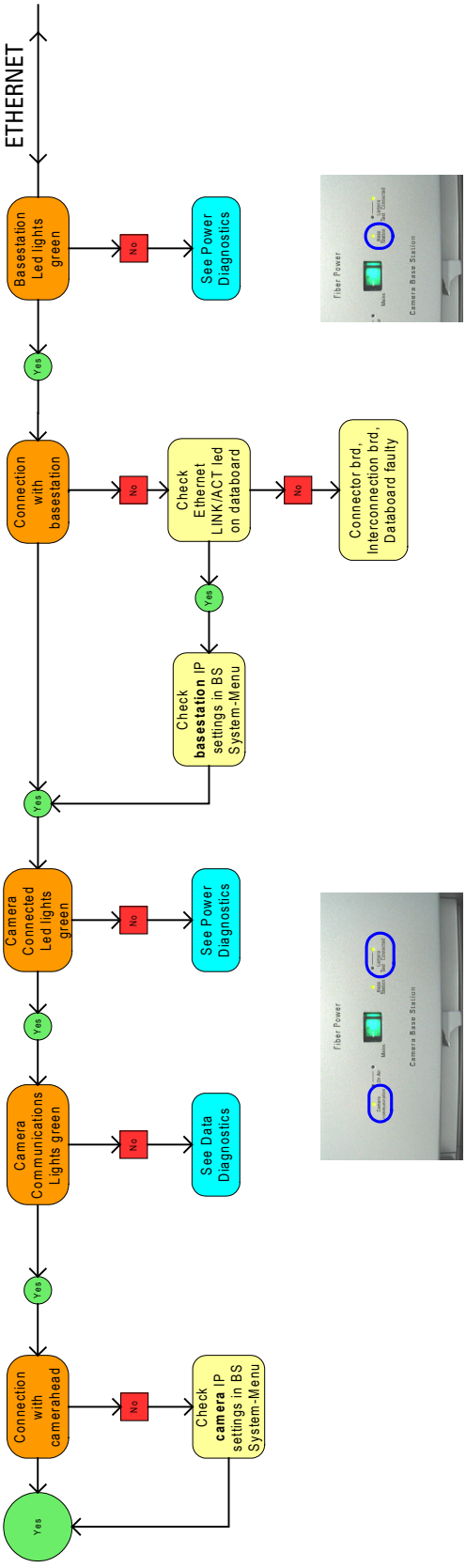
6.2 Power Diagnostics

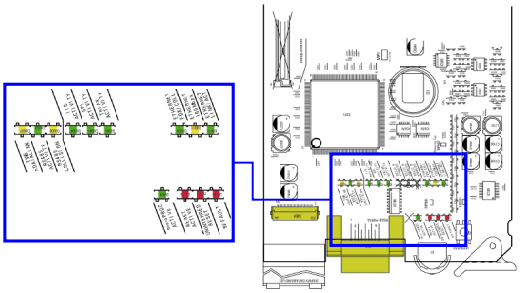


6.3 Data Diagnostics

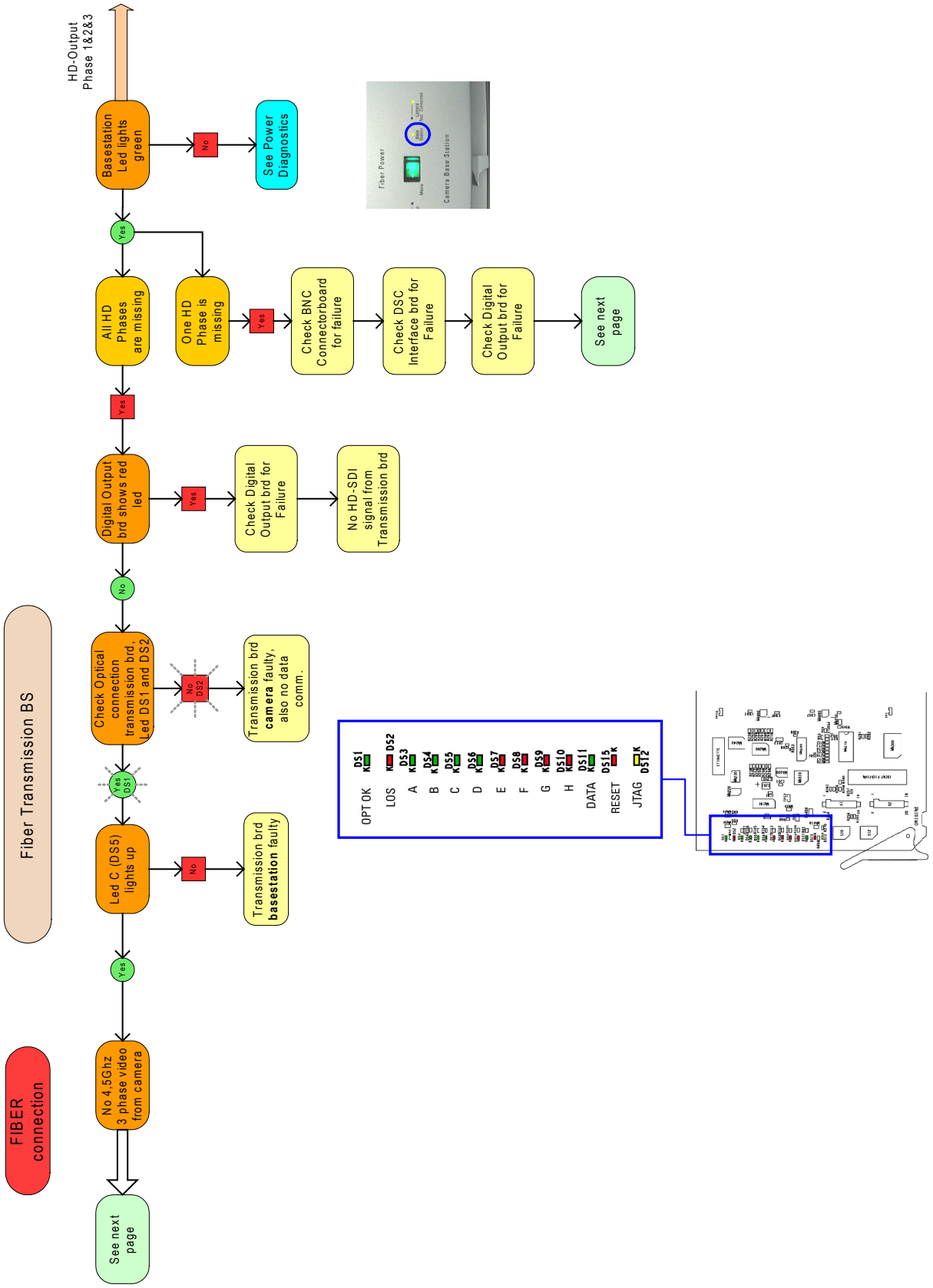


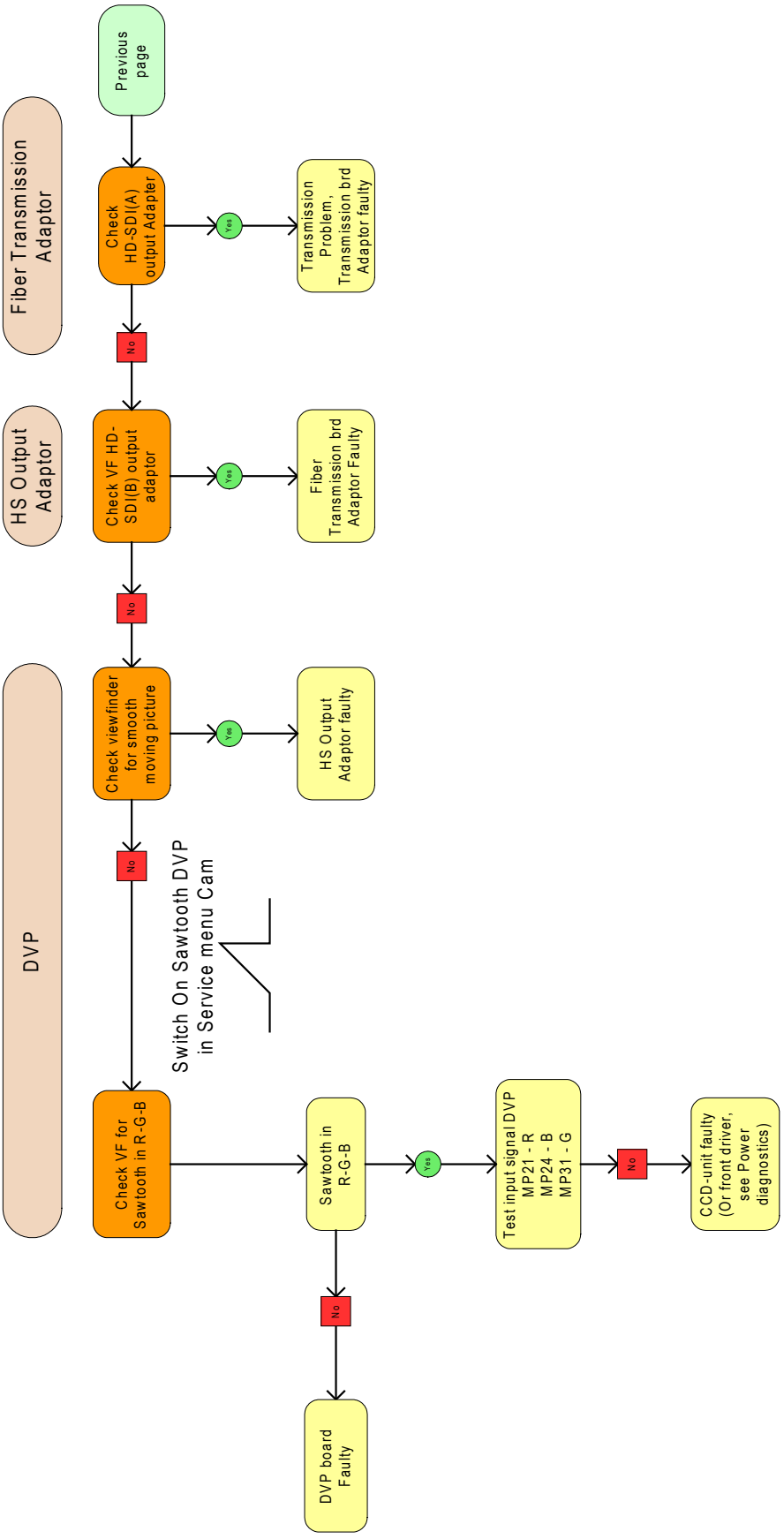
6.4 Data Flow Diagnostics





6.5 Video Phase 1&2&3 Diagnostics




Fiber Transmission Adaptor
HS Output Adaptor
DVP
Previous page
Check HD-SDI(A) output Adapter
Yes
Transmission Problem, Transmission brd Adaptor faulty
No
Check VF HD-SDI(B) output adaptor
Yes
Fiber Transmission brd Adaptor Faulty
No
Check viewfinder for smooth moving picture
Yes
HS Output Adaptor faulty
No
Switch On Sawtooth DVP in Service menu Cam
Check VF for Sawtooth in R-G-B
Sawtooth in R-G-B
Yes
Test input signal DVP MP21 - R MP24 - B MP31 - G
No
CCD-unit faulty (Or front driver, see Power diagnostics)
No
DVP board Faulty

Chapter 7

Maintenance

7.1 Adjustments

In the LDK8300 camera-system there are no Customer related adjustments.

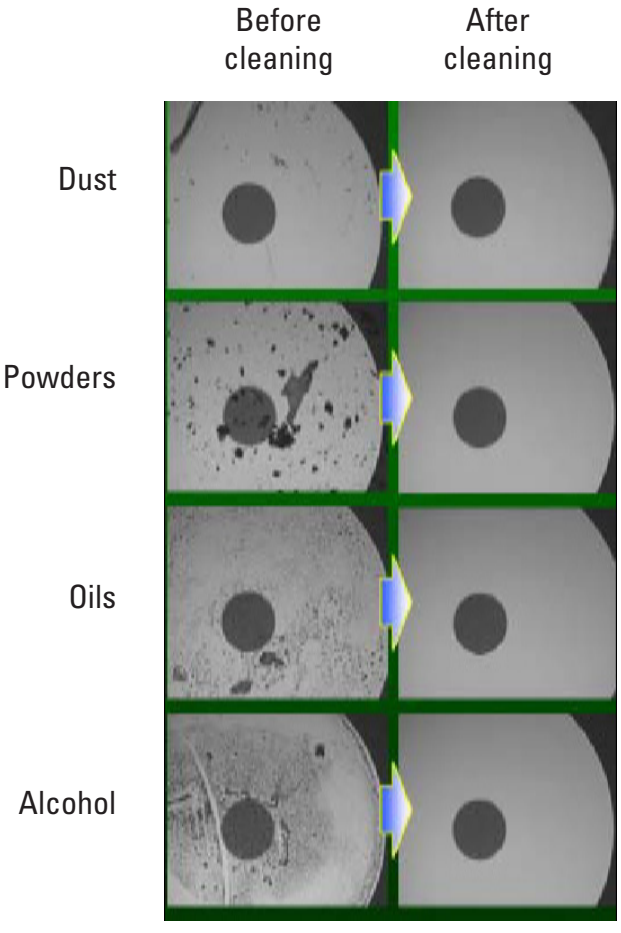
Specified adjustments can only be done by skilled engineers from Grass Valley. Special tools like HD-Testchart, HD-Waveform measurement equipment and calibrated Objective are needed.
These adjustments can be related to ambient temperature and sensor temperature.

7.2 Fiber Optics Cleaning Procedure

Fiber Optics can cause problems when there is a contamination with dust or liquids, which can cause Return Loss as much as 25dB.

There are special tools to clean the Fiber Optics.

Some examples which can cause problems with the Fiber Optics connection:



Tools:

Fiber Microscoop
Westover Scientific
FM-C200

Fiber Connector Cleaner
Micro Care
MCC-FCC2

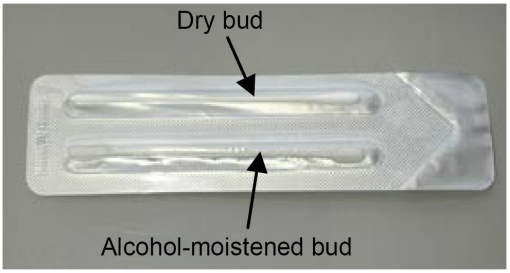
Fiber Wipes
Micro Care
MCC-WFW

Fiber Cleaning Sticks
Micro Care

Green: MCC-S12

Orange: MCC-S16
Yellow: MCC-P25

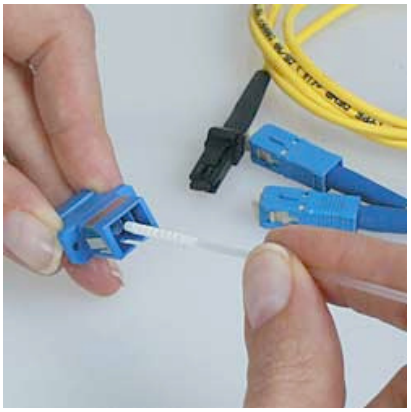
Fiber Cleaning Sticks
Field Kit
Lemo
WST KI 125 34



Cleaning Procedure:

Fiber Adaptor with Cleaning Sticks:

Take a Cleaning Stick S12 out of the green labelled bag.
Moisten it with the Cleaner fluid, not to much, than a saturated Tip cannot absorb the contaminants.
Insert the stick into the adaptor.
Turn the stick ten times in the **SAME** direction while gently pumping the pressure on the end-face.
Remove the cleaning stick at the end of the last turn and discard

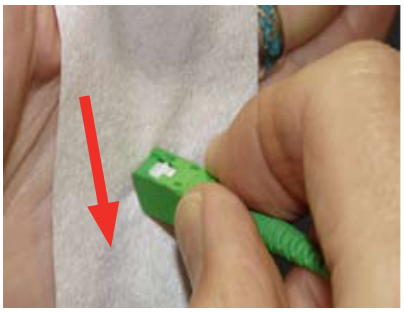


Fiber Jumper with Fiber Wipes:

Take a new Clean Fiber Wipe from the plastic tub.
Place the wipe on top of the open solvent container.
Push down to dampen it once.

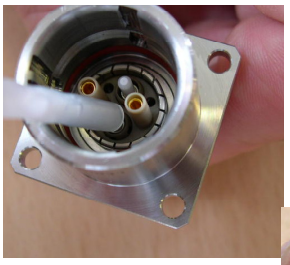
Place the connector on the damp spot on the wipe.

Drag the connector through the damp spot down to the dry area. Dispose the wipe.

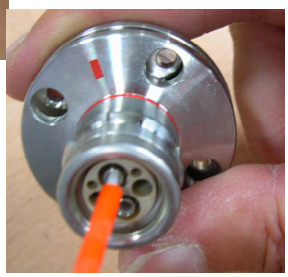


Triax Fiber Connectors with Cleaning Sticks:

For LEMO connectors use:

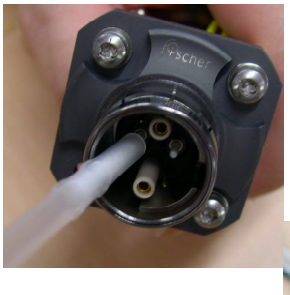


Male: P25 stick (yellow bag)

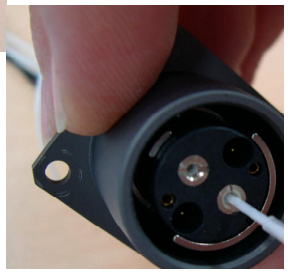


Female: S16 stick (orange bag)

For FISHER connectors use:



Male: P25 stick (yellow bag)



Female: S12 stick (green bag)

Procedure:
Moisten the stick with the Cleaner fluid, not to much, than a saturated Tip cannot absorb the contaminants.
Insert the stick into the connector.
Turn the stick ten times in the **SAME** direction while gently pumping the pressure on the end-face.
Remove the cleaning stick at the end of the last turn and discard.