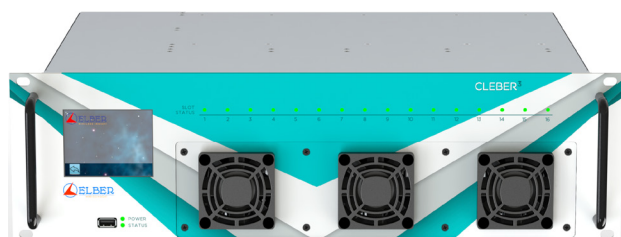
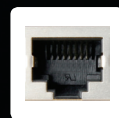


## CLEBER3 The Broadcast open Platform



CLEBER3 R2K16

### DESCRIPTION

Cleber3 offers a powerful, flexible and modular hardware and software platform for broadcasting and contribution networks, where customers can install up to sixteen boards with no limitations in terms of position or number.

Based on a Linux embedded OS, it detects the presence of the boards and shows the related control interface to the user, either through web GUI and Touchscreen TFT display. Power supply can be single (AC and/or DC) or dual (hot swappable for redundancy).

The high number of slots available minimize the Capex and Opex of customers, simplifying maintenance and management. In just one chassis, it is possible to feed up to 16 DVB-S2 transponders, or monitoring 32 satellite signals, with many redundancy combination at RF, L-Band, IF or baseband level.

Thus Cleber3 can host any combinations of boards, there are particular applications and use cases that can be considered and described separately. See next page to check available plug-in cards and related functions. A dedicated solution datasheet can be asked or find in our website [www.elber.com](http://www.elber.com).

### FEATURES

- Self-contained modular solution (3U RACK 19")
- 16 plug-in slot available, hot-swap
- TFT front panel control
- Embedded Linux OS
- Single or Dual Power supply (Hot Swappable)
- WEB interface, SNMP v2

### Applications

- DVB-S/S2 Modulator
- DVB-S/S2 Receiver
- DAB over Satellite Receiver
- Up-converter 70 MHz to L-Band
- ELBER SSPAs controller
- TS network adapter
- MPEG-2/H.264 HD/SD 1080p 4:2:0/4:2:2 Encoder
- MPEG-2/H.264 HD/SD 1080p 4:2:0/4:2:2 Decoder
- ASI switch (1 output pass-through)
- ASI aggregator and deaggregator
- ASI distributor (1 output pass-through)
- SMPTE310 switch and distributor
- E1 switch and distributor
- FM-MPX over ASI high quality transport
- AES-EBU over ASI high quality transport

## SPECIFICATIONS

### Control:

**TFT** touchscreen display 3.5"  
**Web browser** (embedded http server, no additional software needed)  
**SNMP v2**  
**WiFi Connection 802.11 b/g/n (optional)**  
**Firmware Upgrade:** USB, WEB, FTP

### Electrical:

**Supply:** **Dual Redundant Hot-swap**  
100-240 V~ 50/60 Hz IEC 320  
22 ÷ 65 Vdc 2 pins plug  
**Consumption:** < 320 W

### Mechanical:

**Chassis:** 3U Rack 19"  
**Dimensions:**  
Width: 482.5 mm  
Height: 130.95 mm  
Depth: 348 mm (without handles and connectors)  
**Weight:** up to 8 Kg (depending on number of slots)

### Environmental:

**Temperature Range:** -10 ÷ 55°C  
**Relative humidity:** 0 ÷ 95% non condensing

### Plug-in cards:

#### Modulators:

**MS1:** DVB-S/S2 modulator card 2 x ASI in L-Band out  
**MS2/A:** DVB-S/S2 modulator card 2 x ASI in L-Band & IF out  
**MS2/B:** DVB-S/S2 modulator card 2 x ASI in IF out  
**MT2:** DVB-T/T2 modulator card 2 x ASI / IP in VHF/UHF out

#### Receivers:

**XS4:** DVB-S/S2 receiver card L-Band in 4 x ASI out  
**XS2:** DVB-S/S2 receiver card with CAM module  
L-Band in, 4 x ASI, Ethernet & E1 out  
**XS22:** DVB-S/S2 dual receiver card 2 x L -Band in  
2 x ASI & Ethernet out  
**XS2-DAB:** DVB-S/S2 receiver card, ETI/EDI out

#### Demodulators:

**DS2:** DVB-S/S2 & DVB-T/T2 demodulator card UHF in 2 x ASI out

#### Upconverters:

**UPC-01:** 70 MHz to L-Band upconverter

#### Redundancy switches:

**RFSW-04-A:** RF switch DC-18GHz SMA in  
**RFSW-04-B:** RF switch DC-18GHz SMA in coaxial relay  
**RFSW-04-C:** RF switch DC-L Band SMA in, input detection  
**RFSW-04-D1:** RF switch DC-L Band BNC in, input detection  
**RFSW-04-D2:** RF switch DC-18 GHz BNC in, coaxial relay

#### TS switches:

**AS-03:** ASI Switch 3 inputs, 2 outputs with pass-through  
**AS-13:** ASI Switch 3 inputs, 7 outputs with pass-through

**AS-23:** Dual ASI Switch 3 inputs, 7 outputs with pass-through

#### TS aggregators:

**RMX-04:** 4 channels ASI aggregator over ASI  
**RMX-14:** up to 9 channels ASI aggregator over ASI  
**DMX-04:** ASI disaggregator 4 channels  
**DMX-14:** ASI disaggregator up to 9 channels

#### TS distributors:

**AD-03:** ASI Distributor 1 input, 4 outputs with pass-through  
**AD-13:** ASI Distributor 1 input, 9 outputs with pass-through  
**AD-23:** Dual ASI Distributor 1 input, 4 outputs with pass-through

#### Encoders:

**EHD:** MPEG-2/H.264 1080i 4:2:2/4:2:0 encoder  
CVBS/SDI video in, analogue/AES-EBU/SDI 4 channels audio in, ASI out

#### Decoders:

**DHD/A:** MPEG-2/H.264 1080i 4:2:2/4:2:0 decoder  
ASI/TSolP in, CVBS/SDI video out, analogue/AES-EBU/SDI 4 channels audio out. HD downscaling on CVBS out

**DHD/B:** MPEG-2/H.264 1080i 4:2:2/4:2:0 decoder  
ASI in, CVBS/SDI video out, analogue/AES-EBU/SDI 4 channels audio out with Genlock. HD downscaling on CVBS out

#### FM gateways:

**SRS-06:** 4 channels FM MPX and 88-108 MHz to ASI converter  
**SRS-07:** 4 channels ASI to FM MPX and 88-108 MHz converter

#### AES-EBU gateways:

**SRS-03:** 4 channels AES-EBU to ASI converter  
**SRS-04:** 4 channels ASI to AES-EBU converter  
**SRS-05:** 4 channels AES-EBU to ASI and ASI to AES-EBU converter

#### SMPTE310 Processing:

**310M-SW:** SMPTE310 switch 2 inputs, 10 outputs  
**310M- D:** SMPTE310 distributor 1 input, 11 outputs

#### E1 Processing:

**E1-SW:** E1 switch 2 inputs, 5 outputs  
**E1- D:** E1 distributor 1 input, 5 outputs

#### Super HD:

**GAIA:** SDI video filter for H.264 HD improvement



*\*Elber reserves the right to make changes to specifications of products described in this datasheet at any time without notice and without obligation to notify any person of such changes.*

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