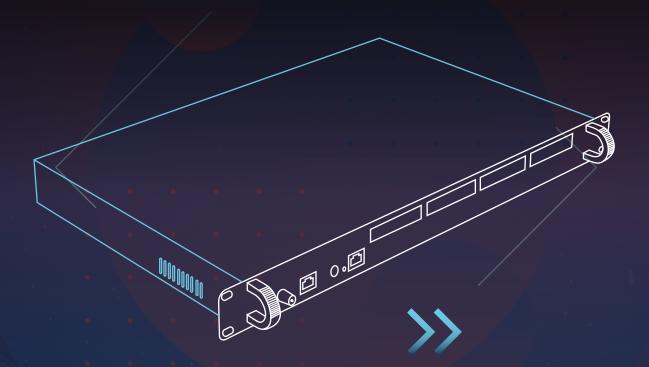


Unbeatable professional-grade performance



# Efficient Broadcasting Made Easy

DVB-S/S2/S2X/T/T2/C/HDMI | IP IN / OUT | Powerful TS multiplexer 1U Rack design | Dual hot-swap power supplies | Fleex Embedded inside



www.lemco.gr

Introducing the world-class Lemco Pro Line - the ultimate headend solution that offers unbeatable professional-grade performance for businesses of all sizes.



This comprehensive and advanced product is the epitome of innovation, with a wide range of applications that cover all industry standards (including DVB-S/S2/S2X/T/T2/C/HDMI/IP) and a truly versatile solution that can deliver signals over DVB-T/C and IP simultaneously, making it the perfect choice for the hospitality industry.

At the heart of the Lemco Pro Line is its advanced signal processing capabilities. With its powerful TS multiplexer and 16x inputs and outputs, the Lemco Pro Line is a true industry leader that can process large volumes of data and TV/Radio programs in a single unit, rendering it an exceptional and unparalleled solution for all your signal processing needs. Moreover, the compact 1U Rack mount design is space-saving and efficient, thanks to its cutting-edge design and advanced cooling technology.





The Lemco Pro Line is also designed to host Fleex Embedded, a state-of-the-art IPTV middleware that enables businesses to easily create and manage their own IPTV networks without the need for an external server, an advanced feature which is unique to the Lemco Pro Line. And with its dual external power supplies that are hot-pluggable, you can enjoy added convenience, making the Lemco Pro Line an ideal solution for businesses that require reliability, high-performance and increased effectiveness.



bringing the future of information & media



To top it off, the Lemco Pro Line comes with a 5-year warranty, providing you with peace of mind and protection. So if you're looking for a reliable, cutting-edge, and versatile headend system that can meet all your signal processing and delivery needs, look no further than the Lemco Pro Line. Invest in the best and take your business to the next level with this exceptional product.

# Highlights



### **Multi-standard**

Experience ultimate versatility with our Multi-standard headend solution, designed to accommodate a wide range of broadcasting requirements and industry standards. This innovative system seamlessly integrates various signal formats, including DVB-S/S2/S2X, DVB-T/T2, DVB-C, HDMI, and IP, making it the perfect choice for cable TV companies, IPTV providers, hotels, hospitals, and other similar installations.



### Powerful TS multiplexer

One of the most state-of-the-art TS multiplexer is responsible of providing the "pool" technology feature as well as to offer a variety of different features such as custom NIT/SDT creation, EPG over RF and IP, LCN and more...



### **IPTV** reception

IPTV reception mechanism in Pro Line allows for seamless reception and conversion of TV/Radio programs over IP with incredible efficiency. With support for up to  $128 \times SPTS / 16 \times MPTS$ , our solution empowers businesses to effortlessly convert these programs to RF technology DVB-T/C, providing a comprehensive and versatile approach to signal processing and delivery.



### **IPTV** streaming

The powerful IPTV streamer enables the delivery of TV and radio programming over both IP and RF channels simultaneously, with support for up to 128 x SPTS / 16 x MPTS streams.



### Fleex Embedded support

Enhanced guest experience with Fleex Embedded IPTV middleware enabling control of TVs from major brands such as LG, Samsung, and Philips, and offering basic middleware functionality directly from the headend without the need for external servers



### **Dual power supplies**

Pro Line's dual hot-pluggable external power supplies provide businesses with convenient and redundant power, ensuring uninterrupted operation and added peace of mind.



### 5-year warranty

Our solutions are backed by a comprehensive 5-year warranty, providing customers with the confidence that their investment is protected against defects and malfunctions. The warranty underscores our commitment to delivering reliable, high-quality products and services that meet the diverse needs of businesses across various industries.





Pro Line - Free-To-Air (FTA) series

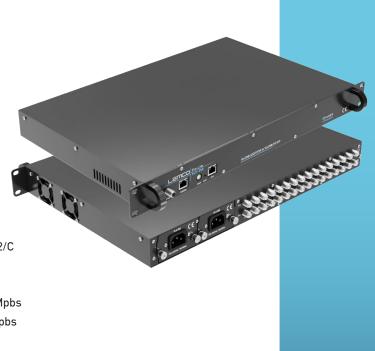
The PLF series is a part of the Pro Line headends product line that provides Free-To-Air (FTA) models with advanced flexibility. These models offer two options - RF+IP or IP Only - for seamless integration with a wide range of applications. This feature-rich series is designed to meet the evolving needs of the broadcasting industry and offer a superior viewing experience to the end-users.

### **PLF-300**

16 x DVB-S/S2/T/T2/C to 16 x DVB-T/C & IP

### **Features**

- 16 x independent multi-standard inputs DVB-S/S2/T/T2/C
- 16 x RF output DVB-T/C (software selectable)
- MER value > 45dB
- IPTV streaming (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- IPTV reception (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- SAP/SDP support
- "Pool" technology
- PID Filtering
- Custom NIT/SDT support
- PCR re-stamping, Correction
- EPG over RF and IP
- Very friendly user interface
- Fleex Embedded support (IPTV middleware)
- 1U Rack size
- Dual "Hot pluggable" power supplies
- 5 year warranty



The PLF-300 headend from the Pro Line series is an all-in-one solution that is highly advanced and versatile, designed to meet the changing needs of the broadcasting industry. With the capability to receive up to 16 independent satellite (DVB-S/S2), terrestrial (DVB-T/T2), or cable (DVB-C) signals, the device can convert them into 16 DVB-T/C RF output channels while providing 1x Gbit IPTV simultaneously streaming for distributing FTA TV and Radio programs.

For IPTV reception applications, the device can receive up to 128x SPTS or 16x MPTS and convert them to 16 DVB-T/C RF output channels with an extra license. The PLF-300 offers unmatched flexibility with its "pool" technology, enabling users to select any program from any of the  $16 \times 10^{-5}$  x inputs and assign it to any of the  $16 \times 10^{-5}$  RF + IP outputs.

The PLF-300 is equipped with a powerful CPU (Quad core @ 1.8GHz / 2GB RAM), responsible for controlling the device using Linux OS while providing a friendly and incredibly fast user interface. It can be remotely or locally controlled via Ethernet, adding to the device's ease of use.

The compact 1U rack size of the PLF-300, combined with its advanced features, ensures that the device consumes the minimal rack space while it has the ability to accept dual "hot-pluggable" power supplies, adding an extra level of reliability and redundancy to ensure the device remains operational even in case of a power supply failure.

The PLF-300 can host an IPTV middleware (Fleex Embedded) without the need for any external server, enabling users to control all TV monitors in an installation, including LG, Samsung, Philips, and custom STBs, while offering a wide range of features such as Live TV, Live Radio, Info channels, Cast, Weather, Alarm, EPG, and many more.

Overall, the PLF-300 headend is an innovative and powerful device that provides advanced features and flexibility to deliver high-quality TV distribution. It's a great choice for cable TV companies, IPTV providers, hotels, hospitals, and other similar installations.



### **PLF-300**

16 x DVB-S/S2/T/T2/C to 16 x DVB-T/C & IP





| Input                           |  | RF Output                   |   |
|---------------------------------|--|-----------------------------|---|
| Туре                            | 16 x DVB-S/S2/T/T2/C                                     | Туре                        | 16 x DVB-T or 16 x DVB-C RF channels        |
| Frequencies                     | 9502150 MHz DVB-S/S2                                     | •                           | 2 groups of 8 adjacent channels in DVB-T    |
| •                               | 118900MHz DVB-T/T2/C                                     |                             | 8 groups of 2 adjacent channels in DVB-C    |
| Connector                       | 75Ω - F. female  | Output Frequencies          | 110900 MHz (10 KHz step)                    |
| Loop-through connector          | No   | Output Level                | 90dBµV                                      |
| LNB                             |  | Connector                   | 75Ω - F, female                             |
| Voltage                         | OFF / 13V / 18V  | Output Attenuator           | 030dB                                       |
| Current                         | Less than 400mA (per input)                              | DVB-T (OUT)                 | 5 5545                                      |
| 22 kHz signal                   | ON / OFF   | Bandwidth                   | 5, 6, 7, 8 MHz                              |
| 22 kHz signal - Voltage         | $0.65V \pm 0.35V$  | Mode                        | 2K, 8K                                      |
| 22 kHz signal - Frequency       | 22 KHz ± 4Hz   | Constellation               | QPSK, 16QAM, 64QAM                          |
| 22 kHz signal - DiSEqC          | 1.0 (Port A, B, C, D)                                    | Guard interval              | 1/4, 1/8, 1/16, 1/32                        |
| DVB-S (IN)                      | 1.0 (1 017 A, B, O, B)                                   | Code rate                   | 1/2, 2/3, 3/4, 5/6, 7/8                     |
| Symbol rate                     | 1 - 45 MBaud   | MER                         | More than 42dB @ Full Band                  |
| Roll off factor                 | 0.35   | DVB-C (OUT)                 | More than 4200 @ Full band                  |
| Code rate                       | 1/2, 2/3, 3/4, 5/6, 7/8 (Automatic)                      | Constellation               | 16QAM, 32QAM, 64QAM, 128QAM, 256QAM         |
|                                 |  |                             | 2.5-8.4 Ms/s                                |
| Spectral inversion  DVB-S2 (IN) | Reverse, Non-reverse (Automatic)                         | Symbol rate<br>Channel step | 310MHz                                      |
|                                 | ODCI/ ODCI/ (A.tti-)                                     | · ·                         |   |
| Constellation<br>Symbol rate    | QPSK, 8PSK (Automatic)                                   | MER                         | More than 40dB @ Full Band                  |
| .,                              | 1 - 45 MBaud (QPSK) - 1 - 30 MBaud (8PSK)                | IP Streaming (OUT)          | W   |
| Roll off factor                 | 0.2 / 0.35 (Automatic)                                   | IP TS Out                   | Yes   |
| Code rate                       | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 8/10 (QPSK-Automatic) | Protocol                    | UDP / RTP (Multicast/Unicast)               |
|                                 | 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 (8PSK-Automatic)           | Speed                       | 1 Gbit (800 Mbps in IP only mode)           |
| Spectral inversion              | Reverse, Non-reverse (Automatic)                         | Туре                        | Up to 128 x SPTS or 16 x MPTS               |
| DVB-T (IN)                      |  | SDP/SAP Support             | Yes   |
| Bandwidth                       | 6, 7, 8 MHz  | IP Streaming (IN)           |   |
| Mode                            | 2K, 8K   | Optional                    | Requires extra license                      |
| Constellation                   | QPSK, 16QAM, 64QAM                                       | IP TS In                    | Yes   |
| Guard interval                  | 1/4, 1/8, 1/16, 1/32                                     | Protocol                    | UDP / RTP (Multicast/Unicast)               |
| Code rate                       | 1/2, 2/3, 3/4, 5/6, 7/8                                  | Speed                       | 1 Gbit (800 Mbps)                           |
| DVB-T2 (IN)                     |  | Type                        | Up to 128 x SPTS or 16 x MPTS               |
| Bandwidth                       | 5, 6, 7, 8 MHz   | IGMP snooping               | Yes, v2 and v3                              |
| Mode                            | 1K, 2K, 4K, 8K, 16K, 32K (Included extended mode)        | Programming Interface       |   |
| Constellation                   | QPSK, 16QAM, 64QAM, 256QAM                               | Operating system            | Linux 0S                                    |
| Code rate                       | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6                             | Ethernet webserver          | Yes, embedded webserver                     |
| Multi PLP support               | Yes  | Speed                       | 100/1000 Mbps                               |
| DVB-C (Annex A,B,C)             |  | Connector                   | RJ45  |
| Bandwidth                       | 5, 6, 7, 8 MHz   | Browser compatibility       | Chrome, Firefox, Safari, Opera, Edge et al. |
| Mode                            | Automatic modulation detection                           | EAN-13                      |   |
| Constellation                   | 16QAM, 32QAM, 64QAM, 128QAM, 256QAM                      | Code                        | 5213009761864                               |
| Transport Stream Processing     |  | General                     |   |
| Pool technology support         | Yes  | Power supply                | 115230 VAC                                  |
| Services                        | User selection by service names or Service ID            | Frequency range             | 4763Hz                                      |
| Automatic regeneration          | PAT, CAT, SDT, PMTs, EITs tables                         | Number of power supplies    | Up to two(2)                                |
| NIT                             | Pass-through, custom, automatic                          | Hot-swap technology         | Yes   |
| Custom NIT/SDT creation         | Yes  | Power supply consumption    | ~60VA                                       |
| PCR                             | Re-stamping  | Operating temperature       | 0 °C to 40 °C                               |
| PCR correction                  | Yes  | Storage temperature         | -10 °C to +70 °C                            |
| LCN support                     | Yes  | Humidity                    | Up to 90%                                   |
| PID filtering                   | Yes  | Dimensions                  | 480 x 295 x 43.5mm                          |
| EPG information                 | Yes over RF and IP                                       | Mounting                    | 1U rack                                     |
|                                 |  | Weight                      | 4.45 Kg                                     |
|                                 |  | TTCIGIT                     | 7.40 Ng                                     |

### **PLF-301**

16 x DVB-S/S2/S2X to 16 x DVB-T/C & IP

#### **Features**

- 16 x independent multi-standard inputs DVB-S/S2/S2X
- · Multi-Stream and Multi-PLP support
- 16 x RF output DVB-T/C (software selectable)
- MER value > 45dB
- IPTV streaming (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- IPTV reception (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- SAP/SDP support
- "Pool" technology
- PID Filtering
- Custom NIT/SDT support
- PCR re-stamping, Correction
- EPG over RF and IP
- Very friendly user interface
- Fleex Embedded support (IPTV middleware)
- 1U Rack size
- Dual "Hot pluggable" power supplies
- 5 year warranty



The PLF-301 headend from the Pro Line series is an all-in-one solution that is highly advanced and versatile, designed to meet the changing needs of the broadcasting industry. With the capability to receive up to 16 independent satellite (DVB-S/S2/S2X) signals while supporting multi-stream reception, the device can convert them into 16 DVB-T/C RF output channels while providing 1x Gbit IPTV simultaneously streaming for distributing FTA TV and Radio programs.

For IPTV reception applications, the device can receive up to 128x SPTS or 16x MPTS and convert them to 16 DVB-T/C RF output channels with an extra license. The PLF-300 offers unmatched flexibility with its "pool" technology, enabling users to select any program from any of the  $16 \times 10^{-5}$  x inputs and assign it to any of the  $16 \times 10^{-5}$  RF + IP outputs.

The PLF-301 is equipped with a powerful CPU (Quad core @ 1.8GHz / 2GB RAM), responsible for controlling the device using Linux OS while providing a friendly and incredibly fast user interface. It can be remotely or locally controlled via Ethernet, adding to the device's ease of use.

The compact 1U rack size of the PLF-301, combined with its advanced features, ensures that the device consumes the minimal rack space while it has the ability to accept dual "hot-pluggable" power supplies, adding an extra level of reliability and redundancy to ensure the device remains operational even in case of a power supply failure.

The PLF-301 can host an IPTV middleware (Fleex Embedded) without the need for any external server, enabling users to control all TV monitors in an installation, including LG, Samsung, Philips, and custom STBs, while offering a wide range of features such as Live TV, Live Radio, Info channels, Cast, Weather, Alarm, EPG, and many more.

Overall, the PLF-301 headend is an innovative and powerful device that provides advanced features and flexibility to deliver high-quality TV distribution. It's a great choice for cable TV companies, IPTV providers, hotels, hospitals, and other similar installations.



**PLF-301** 

16 x DVB-S/S2/S2X to 16 x DVB-T/C & IP





| Input                          |   |
|--------------------------------|---|
| Туре                           | 16 x DVB-S/S2/S2X   |
| Frequencies                    | 9502150 MHz   |
|                                |   |
| Connector                      | 75Ω - F, female   |
| Loop-through connector         | Yes   |
| LNB                            |   |
| Voltage                        | OFF / 13V / 18V   |
| Current                        | Less than 400mA (per input)                               |
| 22 kHz signal                  | ON / OFF  |
| 22 kHz signal - Voltage        | $0.65V \pm 0.35V$   |
| 22 kHz signal - Frequency      | 22 KHz ± 4Hz  |
| 22 kHz signal - DiSEqC         | 1.0 (Port A, B, C, D)                                     |
| DVB-S (IN)                     |   |
| Symbol rate                    | 1 - 45 MBaud  |
| Roll off factor                | 0.35  |
| Code rate                      | 1/2, 2/3, 3/4, 5/6, 7/8 (Automatic)                       |
| Spectral inversion             | Reverse, Non-reverse (Automatic)                          |
| DVB-S2 (IN)                    |   |
| Constellation                  | QPSK, 8PSK (Automatic)                                    |
| Symbol rate                    | 1 - 45 MBaud (QPSK) - 1 - 30 MBaud (8PSK)                 |
| Roll off factor                | 0.2 / 0.35 (Automatic)                                    |
| Code rate                      | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 8/10 (QPSK-Automatic)  |
|                                | 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 (8PSK-Automatic)            |
| Spectral inversion             | Reverse, Non-reverse (Automatic)                          |
| DVB-S2X (IN)                   |   |
| Standard                       | EN302 307-1 V1.4.1  |
| Constellation                  | QPSK, 8PSK (automatic)                                    |
| Symbol rate                    | 1 - 45 MBaud (QPSK) / 1 - 30 MBaud (8PSK)                 |
| Roll off factor                | Апо́ 0.05 to 0.35 (automatic)                             |
| Code rate                      | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 8/10 (QPSK- automatic) |
|                                | 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 (8PSK- automatic)           |
| Multi-stream support           | Yes   |
| T2MI MPLP (multiple PLP) signa | Yes   |
| Transport Stream Processing    |   |
| Pool technology support        | Yes   |
| Services                       | User selection by service names or Service ID             |
| Automatic regeneration         | PAT, CAT, SDT, PMTs, EITs tables                          |
| NIT                            | Pass-through, custom, automatic                           |
| Custom NIT/SDT creation        | Yes   |
| PCR                            | Re-stamping   |
| PCR correction                 | Yes   |
| LCN support                    | Yes   |
| PID filtering                  | Yes   |
| PID IIIIering                  | 1.22  |

| RF Output                |   |
|--------------------------|---|
| Туре                     | 16 x DVB-T or 16 x DVB-C RF channels        |
|                          | 2 groups of 8 adjacent channels in DVB-T    |
|                          | 8 groups of 2 adjacent channels in DVB-C    |
| Output Frequencies       | 110900 MHz (10 KHz step)                    |
| Output Level             | 90dBµV                                      |
| Connector                | 75Ω - F, female                             |
| Output Attenuator        | 030dB                                       |
| DVB-T (OUT)              |   |
| Bandwidth                | 5, 6, 7, 8 MHz                              |
| Mode                     | 2K, 8K                                      |
| Constellation            | QPSK, 16QAM, 64QAM                          |
| Guard interval           | 1/4, 1/8, 1/16, 1/32                        |
| Code rate                | 1/2, 2/3, 3/4, 5/6, 7/8                     |
| MER                      | More than 42dB @ Full Band                  |
| DVB-C (OUT)              |   |
| Constellation            | 16QAM, 32QAM, 64QAM, 128QAM, 256QAM         |
| Symbol rate              | 2.5-8.4 Ms/s                                |
| Channel step             | 310MHz                                      |
| MER                      | More than 40dB @ Full Band                  |
| IP Streaming (OUT)       |   |
| IP TS Out                | Yes   |
| Protocol                 | UDP / RTP (Multicast/Unicast)               |
| Speed                    | 1 Gbit (800 Mbps in IP only mode)           |
| Туре                     | Up to 128 x SPTS or 16 x MPTS               |
| SDP/SAP Support          | Yes   |
| IP Streaming (IN)        |   |
| Optional                 | Requires extra license                      |
| IP TS In                 | Yes   |
| Protocol                 | UDP / RTP (Multicast/Unicast)               |
| Speed                    | 1 Gbit (800 Mbps)                           |
| Туре                     | Up to 128 x SPTS or 16 x MPTS               |
| IGMP snooping            | Yes, v2 and v3                              |
| Programming Interface    | 105, 12 and 15                              |
| Operating system         | Linux 0S                                    |
| Ethernet webserver       | Yes, embedded webserver                     |
| Speed                    | 100/1000 Mbps                               |
| Connector                | RJ45  |
| Browser compatibility    | Chrome, Firefox, Safari, Opera, Edge et al. |
| EAN-13                   | onionic, inclox, Salari, opera, Lage et al. |
| Code                     | 5213009761871                               |
| General                  | 02.13307/01071                              |
| Power supply             | 115230 VAC                                  |
| Frequency range          | 4763Hz                                      |
| Number of power supplies | Up to two(2)                                |
|                          | Yes   |
| Hot-swap technology      | ~60VA                                       |
| Power supply consumption |   |
| Operating temperature    | 0 °C to 40 °C                               |
| Storage temperature      | -10 °C to +70 °C                            |
| Humidity                 | Up to 90%                                   |
| Dimensions               | 480 x 295 x 43.5mm                          |
| Mounting                 | 1U rack                                     |
| Weight                   | 4.45 Kg                                     |

### **PLF-200**

16 x DVB-S/S2/T/T2/C to IP



### **Features**

- 16 x independent multi-standard inputs DVB-S/S2/T/T2/C
- IPTV streaming (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- IPTV reception (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- SAP/SDP support
- "Pool" technology
- PID Filtering
- · PCR re-stamping, Correction
- EPG over IP
- Very friendly user interface
- Fleex Embedded support (IPTV middleware)
- 1U Rack size
- Dual "Hot pluggable" power supplies
- 5 year warranty



The PLF-200 headend from the Pro Line series is an all-in-one solution that is highly advanced and versatile, designed to meet the changing needs of the broadcasting industry. With the capability to receive up to 16 independent satellite (DVB-S/S2), terrestrial (DVB-T/T2), or cable (DVB-C) signals, the device can convert them into 1x Gbit IPTV streaming for distributing FTA TV and Radio programs.

For IPTV reception applications, the device can receive up to 128x SPTS or 16x MPTS and convert them to 16 DVB-T/C RF output channels with an extra license. The PLF-200 offers unmatched flexibility with its "pool" technology, enabling users to select any program from any of the 16 x inputs and assign it to any of the IP outputs.

The PLF-200 is equipped with a powerful CPU (Quad core @ 1.8GHz / 2GB RAM), responsible for controlling the device using Linux OS while providing a friendly and incredibly fast user interface. It can be remotely or locally controlled via Ethernet, adding to the device's ease of use.

The compact 1U rack size of the PLF-200, combined with its advanced features, ensures that the device consumes the minimal rack space while it has the ability to accept dual "hot-pluggable" power supplies, adding an extra level of reliability and redundancy to ensure the device remains operational even in case of a power supply failure.

The PLF-200 can host an IPTV middleware (Fleex Embedded) without the need for any external server, enabling users to control all TV monitors in an installation, including LG, Samsung, Philips, and custom STBs, while offering a wide range of features such as Live TV, Live Radio, Info channels, Cast, Weather, Alarm, EPG, and many more.

Overall, the PLF-200 headend is an innovative and powerful device that provides advanced features and flexibility to deliver high-quality TV distribution. It's a great choice for cable TV companies, IPTV providers, hotels, hospitals, and other similar installations.



### **PLF-200**

16 x DVB-S/S2/T/T2/C to IP





| Input                       |  |
|-----------------------------|--|
| Type                        | 16 x DVB-S/S2/T/T2/C                                     |
| Frequencies                 | 9502150 MHz DVB-S/S2                                     |
|                             | 118900MHz DVB-T/T2/C                                     |
| Connector                   | $75\Omega$ - F, female                                   |
| Loop-through connector      | No   |
| LNB                         |  |
| Voltage                     | OFF / 13V / 18V  |
| Current                     | Less than 400mA (per input)                              |
| 22 kHz signal               | ON / OFF   |
| 22 kHz signal - Voltage     | $0.65V \pm 0.35V$  |
| 22 kHz signal - Frequency   | 22 KHz ± 4Hz   |
| 22 kHz signal - DiSEqC      | 1.0 (Port A, B, C, D)                                    |
| DVB-S (IN)                  |  |
| Symbol rate                 | 1 - 45 MBaud   |
| Roll off factor             | 0.35   |
| Code rate                   | 1/2, 2/3, 3/4, 5/6, 7/8 (Automatic)                      |
| Spectral inversion          | Reverse, Non-reverse (Automatic)                         |
| DVB-S2 (IN)                 | ,  |
| Constellation               | QPSK, 8PSK (Automatic)                                   |
| Symbol rate                 | 1 - 45 MBaud (QPSK) - 1 - 30 MBaud (8PSK)                |
| Roll off factor             | 0.2 / 0.35 (Automatic)                                   |
| Code rate                   | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 8/10 (QPSK-Automatic) |
| 5545 74.6                   | 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 (8PSK-Automatic)           |
| Spectral inversion          | Reverse, Non-reverse (Automatic)                         |
| DVB-T (IN)                  | reverse, Non-reverse (Automatic)                         |
| Bandwidth                   | 6, 7, 8 MHz  |
| Mode                        | 2K, 8K   |
| Constellation               | QPSK, 16QAM, 64QAM                                       |
| Guard interval              | 1/4, 1/8, 1/16, 1/32                                     |
| Code rate                   | 1/2, 2/3, 3/4, 5/6, 7/8                                  |
| DVB-T2 (IN)                 | 1/2, 2/3, 3/4, 3/6, 7/6                                  |
| Bandwidth                   | 5. 6. 7. 8 MHz   |
| Mode                        |  |
| Constellation               | 1K, 2K, 4K, 8K, 16K, 32K (Included extended mode)        |
|                             | QPSK, 16QAM, 64QAM, 256QAM                               |
| Code rate                   | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6                             |
| Multi PLP support           | Yes  |
| DVB-C (Annex A,B,C)         | F / 7 0 MIL-   |
| Bandwidth                   | 5, 6, 7, 8 MHz   |
| Mode                        | Automatic modulation detection                           |
| Constellation               | 16QAM, 32QAM, 64QAM, 128QAM, 256QAM                      |
| Transport Stream Processing | V.   |
| Pool technology support     | Yes  |
| Services                    | User selection by service names or Service ID            |
| Automatic regeneration      | PAT, CAT, SDT, PMTs, EITs tables                         |
| NIT                         | Pass-through, custom, automatic                          |
| Custom NIT/SDT creation     | Yes  |
| PCR                         | Re-stamping  |
| PCR correction              | Yes  |
| LCN support                 | Yes  |
| PID filtering               | Yes  |
| EPG information             | Yes over RF and IP                                       |
|                             |  |

| IP Streaming (OUT)       |   |
|--------------------------|---|
| IP TS Out                | Yes   |
| Protocol                 | UDP / RTP (Multicast/Unicast)               |
| Speed                    | 1 Gbit (800 Mbps in IP only mode)           |
| Туре                     | Up to 128 x SPTS or 16 x MPTS               |
| SDP/SAP Support          | Yes   |
| IP Streaming (IN)        |   |
| Optional                 | Requires extra license                      |
| IP TS In                 | Yes   |
| Protocol                 | UDP / RTP (Multicast/Unicast)               |
| Speed                    | 1 Gbit (800 Mbps)                           |
| Туре                     | Up to 128 x SPTS or 16 x MPTS               |
| IGMP snooping            | Yes, v2 and v3                              |
| Programming Interface    |   |
| Operating system         | Linux OS                                    |
| Ethernet webserver       | Yes, embedded webserver                     |
| Speed                    | 100/1000 Mbps                               |
| Connector                | RJ45  |
| Browser compatibility    | Chrome, Firefox, Safari, Opera, Edge et al. |
| EAN-13                   |   |
| Code                     | 5213009761819                               |
| General                  |   |
| Power supply             | 115230 VAC                                  |
| Frequency range          | 4763Hz                                      |
| Number of power supplies | Up to two(2)                                |
| Hot-swap technology      | Yes   |
| Power supply consumption | ~60VA                                       |
| Operating temperature    | 0 °C to 40 °C                               |
| Storage temperature      | -10 °C to +70 °C                            |
| Humidity                 | Up to 90%                                   |
| Dimensions               | 480 x 295 x 43.5mm                          |
| Mounting                 | 1U rack                                     |
| Weight                   | 4.35 Kg                                     |

### **PLF-201**

16 x DVB-S/S2/S2X to IP



### **Features**

- 16 x independent multi-standard inputs DVB-S/S2/S2X
- Multi-Stream and Multi-PLP support
- IPTV streaming (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- IPTV reception (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- SAP/SDP support
- "Pool" technology
- PID Filtering
- · PCR re-stamping, Correction
- EPG over IP
- Very friendly user interface
- Fleex Embedded support (IPTV middleware)
- 1U Rack size
- Dual "Hot pluggable" power supplies
- 5 year warranty

The PLF-201 headend from the Pro Line series is an all-in-one solution that is highly advanced and versatile, designed to meet the changing needs of the broadcasting industry. With the capability to receive up to 16 independent satellite (DVB-S/S2/S2X) signals while supporting multi-stream reception, the device can convert them into 1x Gbit IPTV streaming for distributing FTA TV and Radio programs.

For IPTV reception applications, the device can receive up to 128x SPTS or 16x MPTS and convert them to 16 DVB-T/C RF output channels with an extra license. The PLF-201 offers unmatched flexibility with its "pool" technology, enabling users to select any program from any of the 16 x inputs and assign it to any of the IP outputs.

The PLF-201 is equipped with a powerful CPU (Quad core @ 1.8GHz / 2GB RAM), responsible for controlling the device using Linux OS while providing a friendly and incredibly fast user interface. It can be remotely or locally controlled via Ethernet, adding to the device's ease of use.

The compact 1U rack size of the PLF-201, combined with its advanced features, ensures that the device consumes the minimal rack space while it has the ability to accept dual "hot-pluggable" power supplies, adding an extra level of reliability and redundancy to ensure the device remains operational even in case of a power supply failure.

The PLF-201 can host an IPTV middleware (Fleex Embedded) without the need for any external server, enabling users to control all TV monitors in an installation, including LG, Samsung, Philips, and custom STBs, while offering a wide range of features such as Live TV, Live Radio, Info channels, Cast, Weather, Alarm, EPG, and many more.

Overall, the PLF-201 headend is an innovative and powerful device that provides advanced features and flexibility to deliver high-quality TV distribution. It's a great choice for cable TV companies, IPTV providers, hotels, hospitals, and other similar installations.



### **PLF-201**

16 x DVB-S/S2/S2X to IP





| Input                          |   |
|--------------------------------|---|
| Type                           | 16 x DVB-S/S2/S2X   |
| Frequencies                    | 9502150 MHz   |
|                                |   |
| Connector                      | $75\Omega$ - F, female                                    |
| Loop-through connector         | Yes   |
| LNB                            |   |
| Voltage                        | OFF / 13V / 18V   |
| Current                        | Less than 400mA (per input)                               |
| 22 kHz signal                  | ON / OFF  |
| 22 kHz signal - Voltage        | $0.65V \pm 0.35V$   |
| 22 kHz signal - Frequency      | 22 KHz ± 4Hz  |
| 22 kHz signal - DiSEqC         | 1.0 (Port A, B, C, D)                                     |
| DVB-S (IN)                     |   |
| Symbol rate                    | 1 - 45 MBaud  |
| Roll off factor                | 0.35  |
| Code rate                      | 1/2, 2/3, 3/4, 5/6, 7/8 (Automatic)                       |
| Spectral inversion             | Reverse, Non-reverse (Automatic)                          |
| DVB-S2 (IN)                    |   |
| Constellation                  | QPSK, 8PSK (Automatic)                                    |
| Symbol rate                    | 1 - 45 MBaud (QPSK) - 1 - 30 MBaud (8PSK)                 |
| Roll off factor                | 0.2 / 0.35 (Automatic)                                    |
| Code rate                      | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 8/10 (QPSK-Automatic)  |
|                                | 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 (8PSK-Automatic)            |
| Spectral inversion             | Reverse, Non-reverse (Automatic)                          |
| DVB-S2X (IN)                   |   |
| Standard                       | EN302 307-1 V1.4.1  |
| Constellation                  | QPSK, 8PSK (automatic)                                    |
| Symbol rate                    | 1 - 45 MBaud (QPSK) / 1 - 30 MBaud (8PSK)                 |
| Roll off factor                | Апо́ 0.05 to 0.35 (automatic)                             |
| Code rate                      | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 8/10 (QPSK- automatic) |
|                                | 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 (8PSK- automatic)           |
| Multi-stream support           | Yes   |
| T2MI MPLP (multiple PLP) signa | Yes   |
| Transport Stream Processing    |   |
| Pool technology support        | Yes   |
| Services                       | User selection by service names or Service ID             |
| Automatic regeneration         | PAT, CAT, SDT, PMTs, EITs tables                          |
| NIT                            | Pass-through, custom, automatic                           |
| Custom NIT/SDT creation        | Yes   |
| PCR                            | Re-stamping   |
| PCR correction                 | Yes   |
| LCN support                    | Yes   |
| PID filtering                  | Yes   |
| EPG information                | Yes over RF and IP  |
|                                |   |

| IP Streaming (OUT)       |   |
|--------------------------|---|
| IP TS Out                | Yes   |
| Protocol                 | UDP / RTP (Multicast/Unicast)               |
| Speed                    | 1 Gbit (800 Mbps in IP only mode)           |
| Туре                     | Up to 128 x SPTS or 16 x MPTS               |
| SDP/SAP Support          | Yes   |
| IP Streaming (IN)        |   |
| Optional                 | Requires extra license                      |
| IP TS In                 | Yes   |
| Protocol                 | UDP / RTP (Multicast/Unicast)               |
| Speed                    | 1 Gbit (800 Mbps)                           |
| Type                     | Up to 128 x SPTS or 16 x MPTS               |
| IGMP snooping            | Yes, v2 and v3                              |
| Programming Interface    |   |
| Operating system         | Linux 0S                                    |
| Ethernet webserver       | Yes, embedded webserver                     |
| Speed                    | 100/1000 Mbps                               |
| Connector                | RJ45  |
| Browser compatibility    | Chrome, Firefox, Safari, Opera, Edge et al. |
| EAN-13                   |   |
| Code                     | 5213009761826                               |
| General                  |   |
| Power supply             | 115230 VAC                                  |
| Frequency range          | 4763Hz                                      |
| Number of power supplies | Up to two(2)                                |
| Hot-swap technology      | Yes   |
| Power supply consumption | ~60VA                                       |
| Operating temperature    | 0 °C to 40 °C                               |
| Storage temperature      | -10 °C to +70 °C                            |
| Humidity                 | Up to 90%                                   |
| Dimensions               | 480 x 295 x 43.5mm                          |
| Mounting                 | 1U rack                                     |
| Weight                   | 4.35 Kg                                     |



# **PLC**series

Pro Line - Common Interface (CI) series

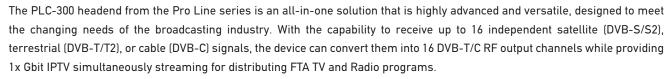
The PLC series is a part of the Pro Line headends product line that provides models with advanced flexibility and Common Interface support with FlexCAM technology. These models offer two options - RF+IP or IP Only - for seamless integration with a wide range of applications. This feature-rich series is designed to meet the evolving needs of the broadcasting industry and offer a superior viewing experience to the end-users.

### **PLC-300**

16 x DVB-S/S2/T/T2/C + 8 x FlexCAM to 16 x DVB-T/C & IP

### **Features**

- 16 x independent multi-standard inputs DVB-S/S2/T/T2/C
- 16 x RF output DVB-T/C (software selectable)
- 8x Common Interfaces (FlexCAM technology)
- 16 x RF output DVB-T/C (software selectable)
- MER value > 45dB
- IPTV streaming (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- IPTV reception (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- SAP/SDP support
- "Pool" technology
- PID Filtering
- Custom NIT/SDT support
- PCR re-stamping, Correction
- EPG over RF and IP
- Very friendly user interface
- Fleex Embedded support (IPTV middleware)
- 1U Rack size
- Dual "Hot pluggable" power supplies
- 5 year warranty



The PLC-300 offers unparalleled flexibility in descrambling capabilities. It supports up to 8x Common Interfaces (CI) using the advanced FlexCAM technology, which allows users to connect them to either the inputs or outputs of the multiplexer. This innovative technology provides advanced descrambling flexibility, enabling the user to customize their broadcasting services to meet the unique needs of their audience.

For IPTV reception applications, the device can receive up to 128x SPTS or 16x MPTS and convert them to 16 DVB-T/C RF output channels with an extra license. The PLC-300 offers unmatched flexibility with its "pool" technology, enabling users to select any program from any of the  $16 \times 10^{-5}$  x inputs and assign it to any of the  $16 \times 10^{-5}$  RF + IP outputs.

The PLC-300 is equipped with a powerful CPU (Quad core @ 1.8GHz / 2GB RAM), responsible for controlling the device using Linux OS while providing a friendly and incredibly fast user interface. It can be remotely or locally controlled via Ethernet, adding to the device's ease of use.

The compact 1U rack size of the PLC-300, combined with its advanced features, ensures that the device consumes the minimal rack space while it has the ability to accept dual "hot-pluggable" power supplies, adding an extra level of reliability and redundancy to ensure the device remains operational even in case of a power supply failure.

The PLC-300 can host an IPTV middleware (Fleex Embedded) without the need for any external server, enabling users to control all TV monitors in an installation, including LG, Samsung, Philips, and custom STBs, while offering a wide range of features such as Live TV, Live Radio, Info channels, Cast, Weather, Alarm, EPG, and many more.

Overall, the PLC-300 headend is an innovative and powerful device that provides advanced features and flexibility to deliver high-quality TV distribution. It's a great choice for cable TV companies, IPTV providers, hotels, hospitals, and other similar installations.





**PLC-300** 

16 x DVB-S/S2/T/T2/C + 8 x FlexCAM to 16 x DVB-T/C & IP





| Input                       |   |
|-----------------------------|---|
| Type                        | 16 x DVB-S/S2/T/T2/C                                    |
| Frequencies                 | 9502150 MHz DVB-S/S2                                    |
|                             | 118900MHz DVB-T/T2/C                                    |
| Connector                   | 75Ω - F, female   |
| Loop-through connector      | No  |
| LNB                         |   |
| Voltage                     | OFF / 13V / 18V   |
| Current                     | Less than 400mA (per input)                             |
| 22 kHz signal               | ON / OFF  |
| 22 kHz signal – Voltage     | $0.65V \pm 0.35V$                                       |
| 22 kHz signal - Frequency   | 22 KHz ± 4Hz  |
| 22 kHz signal - DiSEqC      | 1.0 (Port A, B, C, D)                                   |
| DVB-S (IN)                  |   |
| Symbol rate                 | 1 - 45 MBaud  |
| Roll off factor             | 0.35  |
| Code rate                   | 1/2, 2/3, 3/4, 5/6, 7/8 (Automatic)                     |
| Spectral inversion          | Reverse, Non-reverse (Automatic)                        |
| DVB-S2 (IN)                 | ,   |
| Constellation               | QPSK, 8PSK (Automatic)                                  |
| Symbol rate                 | 1 - 45 MBaud (QPSK) - 1 - 30 MBaud (8PSK)               |
| Roll off factor             | 0.2 / 0.35 (Automatic)                                  |
| Code rate                   | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 8/10 (QPSK-Automatic |
| oode rate                   | 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 (8PSK-Automatic)          |
| Spectral inversion          | Reverse, Non-reverse (Automatic)                        |
| CI Interface                | reverse, from reverse (Automatic)                       |
| Number of Common Interfaces | 8x (in total)   |
| FlexCAM technology          | Yes   |
| Connectror                  | PCMCIA (front access)                                   |
| Max. Frequency              | 77MHz   |
| DVB-T (IN)                  | 77141112  |
| Bandwidth                   | 6, 7, 8 MHz   |
| Mode                        | 2K, 8K  |
| Constellation               | QPSK, 16QAM, 64QAM                                      |
| Guard interval              |   |
|                             | 1/4, 1/8, 1/16, 1/32                                    |
| Code rate  DVB-T2 (IN)      | 1/2, 2/3, 3/4, 5/6, 7/8                                 |
| , ,                         | F / 7 0 MIL-  |
| Bandwidth                   | 5, 6, 7, 8 MHz  |
| Mode                        | 1K, 2K, 4K, 8K, 16K, 32K (Included extended mode)       |
| Constellation               | QPSK, 16QAM, 64QAM, 256QAM                              |
| Code rate                   | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6                            |
| Multi PLP support           | Yes   |
| DVB-C (Annex A,B,C)         | 5 / 7 OMIL-   |
| Bandwidth                   | 5, 6, 7, 8 MHz  |
| Mode                        | Automatic modulation detection                          |
| Constellation               | 16QAM, 32QAM, 64QAM, 128QAM, 256QAM                     |
| Transport Stream Processing | V   |
| Pool technology support     | Yes   |
| Services                    | User selection by service names or Service ID           |
| Automatic regeneration      | PAT, CAT, SDT, PMTs, EITs tables                        |
| NIT                         | Pass-through, custom, automatic                         |
| Custom NIT/SDT creation     | Yes   |
| PCR                         | Re-stamping   |
| PCR correction              | Yes   |
| LCN support                 | Yes   |
| PID filtering               | Yes   |
|                             |   |

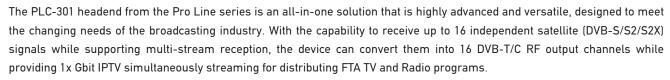
| RF Output                |   |
|--------------------------|---|
| Туре                     | 16 x DVB-T or 16 x DVB-C RF channels        |
| ~                        | 2 groups of 8 adjacent channels in DVB-T    |
|                          | 8 groups of 2 adjacent channels in DVB-C    |
| Output Frequencies       | 110900 MHz (10 KHz step)                    |
| Output Level             | 90dBµV                                      |
| Connector                | 75Ω - F. female                             |
| Output Attenuator        | 030dB                                       |
| DVB-T (OUT)              |   |
| Bandwidth                | 5, 6, 7, 8 MHz                              |
| Mode                     | 2K, 8K                                      |
| Constellation            | QPSK, 16QAM, 64QAM                          |
| Guard interval           | 1/4, 1/8, 1/16, 1/32                        |
| Code rate                | 1/2, 2/3, 3/4, 5/6, 7/8                     |
| MER                      | More than 42dB @ Full Band                  |
| DVB-C (OUT)              | India man azab e rambana                    |
| Constellation            | 16QAM, 32QAM, 64QAM, 128QAM, 256QAM         |
| Symbol rate              | 2.5-8.4 Ms/s                                |
| Channel step             | 310MHz                                      |
| MER                      | More than 40dB @ Full Band                  |
| IP Streaming (OUT)       | The chart found of the build                |
| IP TS Out                | Yes   |
| Protocol                 | UDP / RTP (Multicast/Unicast)               |
| Speed                    | 1 Gbit (800 Mbps in IP only mode)           |
| Туре                     | Up to 128 x SPTS or 16 x MPTS               |
| SDP/SAP Support          | Yes   |
| IP Streaming (IN)        |   |
| Optional                 | Requires extra license                      |
| IP TS In                 | Yes   |
| Protocol                 | UDP / RTP (Multicast/Unicast)               |
| Speed                    | 1 Gbit (800 Mbps)                           |
| Туре                     | Up to 128 x SPTS or 16 x MPTS               |
| IGMP snooping            | Yes, v2 and v3                              |
| Programming Interface    | 163, 42 and 43                              |
| Operating system         | Linux 0S                                    |
| Ethernet webserver       | Yes, embedded webserver                     |
| Speed                    | 100/1000 Mbps                               |
| Connector                | RJ45  |
| Browser compatibility    | Chrome, Firefox, Safari, Opera, Edge et al. |
| EAN-13                   | on one, inclox, salan, opera, Eage et al.   |
| Code                     | 5213009761888                               |
| General                  | 0210007701000                               |
| Power supply             | 115230 VAC                                  |
| Frequency range          | 4763Hz                                      |
| Number of power supplies | Up to two(2)                                |
| Hot-swap technology      | Yes   |
| Power supply consumption | ~65VA                                       |
| Operating temperature    | 0 °C to 40 °C                               |
| Storage temperature      | -10 °C to +70 °C                            |
| Humidity                 | Up to 90%                                   |
| Dimensions               | 480 x 295 x 43.5mm                          |
| Mounting                 | 1U rack                                     |
| •                        | 4.65 Kg                                     |
| Weight                   |   |

### **PLC-301**

16 x DVB-S/S2/S2X + 8 x FlexCAM to 16 x DVB-T/C & IP

#### **Features**

- 16 x independent multi-standard inputs DVB-S/S2/S2X
- Multi-Stream and Multi-PLP support
- 8x Common Interfaces (FlexCAM technology)
- 16 x RF output DVB-T/C (software selectable)
- MER value > 45dB
- IPTV streaming (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- IPTV reception (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- SAP/SDP support
- "Pool" technology
- PID Filtering
- Custom NIT/SDT support
- PCR re-stamping, Correction
- EPG over RF and IP
- Very friendly user interface
- Fleex Embedded support (IPTV middleware)
- 1U Rack size
- Dual "Hot pluggable" power supplies
- 5 year warranty



The PLC-301 offers unparalleled flexibility in descrambling capabilities. It supports up to 8x Common Interfaces (CI) using the advanced FlexCAM technology, which allows users to connect them to either the inputs or outputs of the multiplexer. This innovative technology provides advanced descrambling flexibility, enabling the user to customize their broadcasting services to meet the unique needs of their audience.

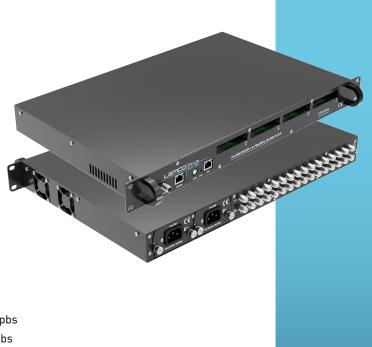
For IPTV reception applications, the device can receive up to 128x SPTS or 16x MPTS and convert them to 16 DVB-T/C RF output channels with an extra license. The PLC-301 offers unmatched flexibility with its "pool" technology, enabling users to select any program from any of the 16 x inputs and assign it to any of the 16 x RF + IP outputs.

The PLC-301 is equipped with a powerful CPU (Quad core @ 1.8GHz / 2GB RAM), responsible for controlling the device using Linux OS while providing a friendly and incredibly fast user interface. It can be remotely or locally controlled via Ethernet, adding to the device's ease of use.

The compact 1U rack size of the PLC-301, combined with its advanced features, ensures that the device consumes the minimal rack space while it has the ability to accept dual "hot-pluggable" power supplies, adding an extra level of reliability and redundancy to ensure the device remains operational even in case of a power supply failure.

The PLC-301 can host an IPTV middleware (Fleex Embedded) without the need for any external server, enabling users to control all TV monitors in an installation, including LG, Samsung, Philips, and custom STBs, while offering a wide range of features such as Live TV, Live Radio, Info channels, Cast, Weather, Alarm, EPG, and many more.

Overall, the PLC-301 headend is an innovative and powerful device that provides advanced features and flexibility to deliver high-quality TV distribution. It's a great choice for cable TV companies, IPTV providers, hotels, hospitals, and other similar installations.





**PLC-301** 

16 x DVB-S/S2/S2X + 8 x FlexCAM to 16 x DVB-T/C & IP





| Input                           |  |
|---------------------------------|--|
| Туре                            | 16 x DVB-S/S2/S2X  |
| Frequencies                     | 9502150 MHz  |
| ·                               |  |
| Connector                       | 75Ω - F, female  |
| Loop-through connector          | Yes  |
| LNB                             |  |
| Voltage                         | OFF / 13V / 18V  |
| Current                         | Less than 400mA (per input)                              |
| 22 kHz signal                   | ON / OFF   |
| 22 kHz signal - Voltage         | 0.65V ± 0.35V  |
| 22 kHz signal - Frequency       | 22 KHz ± 4Hz   |
| 22 kHz signal - DiSEqC          | 1.0 (Port A, B, C, D)                                    |
| DVB-S (IN)                      | 1.0 (1 01 CA, D, O, D)                                   |
| Symbol rate                     | 1 - 45 MBaud   |
| Roll off factor                 | 0.35   |
| Code rate                       | 1/2, 2/3, 3/4, 5/6, 7/8 (Automatic)                      |
|                                 |  |
| Spectral inversion  DVB-S2 (IN) | Reverse, Non-reverse (Automatic)                         |
|                                 | ODCI/ ODCI/ (Automotic)                                  |
| Constellation                   | QPSK, 8PSK (Automatic)                                   |
| Symbol rate                     | 1 - 45 MBaud (QPSK) - 1 - 30 MBaud (8PSK)                |
| Roll off factor                 | 0.2 / 0.35 (Automatic)                                   |
| Code rate                       | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 8/10 (QPSK-Automatic  |
|                                 | 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 (8PSK-Automatic)           |
| Spectral inversion              | Reverse, Non-reverse (Automatic)                         |
| DVB-S2X (IN)                    |  |
| Standard                        | EN302 307-1 V1.4.1                                       |
| Constellation                   | QPSK, 8PSK (automatic)                                   |
| Symbol rate                     | 1 - 45 MBaud (QPSK) / 1 - 30 MBaud (8PSK)                |
| Roll off factor                 | Апо́ 0.05 to 0.35 (automatic)                            |
| Code rate                       | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 8/10 (QPSK- automatic |
|                                 | 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 (8PSK- automatic)          |
| Multi-stream support            | Yes  |
| T2MI MPLP (multiple PLP) signa  | Yes  |
| CI Interface                    |  |
| Number of Common Interfaces     | 8x (in total)  |
| FlexCAM technology              | Yes  |
| Connectror                      | PCMCIA (front access)                                    |
| Max. Frequency                  | 77MHz  |
| Transport Stream Processing     |  |
| Pool technology support         | Yes  |
| Services                        | User selection by service names or Service ID            |
| Automatic regeneration          | PAT, CAT, SDT, PMTs, EITs tables                         |
| NIT                             | Pass-through, custom, automatic                          |
| Custom NIT/SDT creation         | Yes  |
| PCR                             | Re-stamping  |
| PCR correction                  | Yes  |
| LCN support                     | Yes  |
| PID filtering                   | Yes  |
| EPG information                 | Yes over RF and IP                                       |
| Li o imorriación                | 100 Of CLINI GIIU II                                     |

| RF Output                |   |
|--------------------------|---|
| Туре                     | 16 x DVB-T or 16 x DVB-C RF channels        |
|                          | 2 groups of 8 adjacent channels in DVB-T    |
|                          | 8 groups of 2 adjacent channels in DVB-C    |
| Output Frequencies       | 110900 MHz (10 KHz step)                    |
| Output Level             | 90dBµV                                      |
| Connector                | 75Ω - F, female                             |
| Output Attenuator        | 030dB                                       |
| DVB-T (OUT)              |   |
| Bandwidth                | 5, 6, 7, 8 MHz                              |
| Mode                     | 2K, 8K                                      |
| Constellation            | QPSK, 16QAM, 64QAM                          |
| Guard interval           | 1/4, 1/8, 1/16, 1/32                        |
| Code rate                | 1/2, 2/3, 3/4, 5/6, 7/8                     |
| MER                      | More than 42dB @ Full Band                  |
| DVB-C (OUT)              |   |
| Constellation            | 16QAM, 32QAM, 64QAM, 128QAM, 256QAM         |
| Symbol rate              | 2.5-8.4 Ms/s                                |
| Channel step             | 310MHz                                      |
| MER                      | More than 40dB @ Full Band                  |
| IP Streaming (OUT)       | nord than 4000 G I att build                |
| IP TS Out                | Yes   |
| Protocol                 | UDP / RTP (Multicast/Unicast)               |
| Speed                    | 1 Gbit (800 Mbps in IP only mode)           |
| Туре                     | Up to 128 x SPTS or 16 x MPTS               |
| SDP/SAP Support          | Yes   |
| IP Streaming (IN)        | 165   |
| •                        | Requires extra license                      |
| Optional In TC In        | Yes   |
| IP TS In                 |   |
| Protocol                 | UDP / RTP (Multicast/Unicast)               |
| Speed                    | 1 Gbit (800 Mbps)                           |
| Туре                     | Up to 128 x SPTS or 16 x MPTS               |
| IGMP snooping            | Yes, v2 and v3                              |
| Programming Interface    |   |
| Operating system         | Linux OS                                    |
| Ethernet webserver       | Yes, embedded webserver                     |
| Speed                    | 100/1000 Mbps                               |
| Connector                | RJ45  |
| Browser compatibility    | Chrome, Firefox, Safari, Opera, Edge et al. |
| EAN-13                   |   |
| Code                     | 5213009761895                               |
| General                  |   |
| Power supply             | 115230 VAC                                  |
| Frequency range          | 4763Hz                                      |
| Number of power supplies | Up to two(2)                                |
| Hot-swap technology      | Yes   |
| Power supply consumption | ~65VA                                       |
| Operating temperature    | 0 °C to 40 °C                               |
| Storage temperature      | -10 °C to +70 °C                            |
| Humidity                 | Up to 90%                                   |
| Dimensions               | 480 x 295 x 43.5mm                          |
| Mounting                 | 1U rack                                     |
| Weight                   | 4.65 Kg                                     |

### **PLC-200**

16 x DVB-S/S2/T/T2/C + 8 x FlexCAM to IP

### **Features**

- 16 x independent multi-standard inputs DVB-S/S2/T/T2/C
- 8x Common Interfaces (FlexCAM technology)
- IPTV streaming (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- IPTV reception (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- SAP/SDP support
- "Pool" technology
- PID Filtering
- PCR re-stamping, Correction
- EPG over IP
- Very friendly user interface
- Fleex Embedded support (IPTV middleware)
- 1U Rack size
- Dual "Hot pluggable" power supplies
- 5 year warranty



The PLC-200 headend from the Pro Line series is an all-in-one solution that is highly advanced and versatile, designed to meet the changing needs of the broadcasting industry. With the capability to receive up to 16 independent satellite (DVB-S/S2), terrestrial (DVB-T/T2), or cable (DVB-C) signals, the device can convert them into 1x Gbit IPTV streaming for distributing FTA TV and Radio programs.

The PLC-200 offers unparalleled flexibility in descrambling capabilities. It supports up to 8x Common Interfaces (CI) using the advanced FlexCAM technology, which allows users to connect them to either the inputs or outputs of the multiplexer. This innovative technology provides advanced descrambling flexibility, enabling the user to customize their broadcasting services to meet the unique needs of their audience.

For IPTV reception applications, the device can receive up to 128x SPTS or 16x MPTS and convert them to 16 DVB-T/C RF output channels with an extra license. The PLC-200 offers unmatched flexibility with its "pool" technology, enabling users to select any program from any of the 16 x inputs and assign it to any of the IP outputs.

The PLC-200 is equipped with a powerful CPU (Quad core @ 1.8GHz / 2GB RAM), responsible for controlling the device using Linux OS while providing a friendly and incredibly fast user interface. It can be remotely or locally controlled via Ethernet, adding to the device's ease of use.

The compact 1U rack size of the PLC-200, combined with its advanced features, ensures that the device consumes the minimal rack space while it has the ability to accept dual "hot-pluggable" power supplies, adding an extra level of reliability and redundancy to ensure the device remains operational even in case of a power supply failure.

The PLC-200 can host an IPTV middleware (Fleex Embedded) without the need for any external server, enabling users to control all TV monitors in an installation, including LG, Samsung, Philips, and custom STBs, while offering a wide range of features such as Live TV, Live Radio, Info channels, Cast, Weather, Alarm, EPG, and many more.

Overall, the PLC-200 headend is an innovative and powerful device that provides advanced features and flexibility to deliver high-quality TV distribution. It's a great choice for cable TV companies, IPTV providers, hotels, hospitals, and other similar installations.



### **PLC-200**

16 x DVB-S/S2/T/T2/C + 8 x FlexCAM to IP





| Input   |   |
|---|---|
| Туре  | 16 x DVB-S/S2/T/T2/C  |
| Frequencies   | 9502150 MHz DVB-S/S2  |
|   | 118900MHz DVB-T/T2/C  |
| Connector   | 75Ω - F, female   |
| Loop-through connector  | No  |
| LNB   |   |
| Voltage   | OFF / 13V / 18V   |
| Current   | Less than 400mA (per input)   |
| 22 kHz signal   | ON / OFF  |
| 22 kHz signal - Voltage   | 0.65V ± 0.35V   |
| 22 kHz signal - Frequency   | 22 KHz ± 4Hz  |
| 22 kHz signal - DiSEgC  | 1.0 (Port A, B, C, D)   |
| DVB-S (IN)  |   |
| Symbol rate   | 1 - 45 MBaud  |
| Roll off factor   | 0.35  |
| Code rate   | 1/2, 2/3, 3/4, 5/6, 7/8 (Automatic)   |
| Spectral inversion  | Reverse, Non-reverse (Automatic)  |
| DVB-S2 (IN)   |   |
| Constellation   | QPSK, 8PSK (Automatic)  |
| Symbol rate   | 1 - 45 MBaud (QPSK) - 1 - 30 MBaud (8PSK)   |
| Roll off factor   | 0.2 / 0.35 (Automatic)  |
| Code rate   | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 8/10 (QPSK-Automatic)  |
|   | 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 (8PSK-Automatic)  |
| Spectral inversion  | Reverse, Non-reverse (Automatic)  |
| CI Interface  | ,   |
| Number of Common Interfaces   | 8x (in total)   |
| FlexCAM technology  | Yes   |
| Connectror  | PCMCIA (front access)   |
| Max. Frequency  | 77MHz   |
| DVB-T (IN)  |   |
| Bandwidth   | 6, 7, 8 MHz   |
| Mode  | 2K, 8K  |
| Constellation   | QPSK, 16QAM, 64QAM  |
| Guard interval  | 1/4, 1/8, 1/16, 1/32  |
| Code rate   | 1/2, 2/3, 3/4, 5/6, 7/8   |
| DVB-T2 (IN)   |   |
| Bandwidth   | 5, 6, 7, 8 MHz  |
| Mode  | 1K, 2K, 4K, 8K, 16K, 32K (Included extended mode)   |
|   |   |
| Constellation   | QPSK, 16QAM, 64QAM, 256QAM  |
| Constellation Code rate   | · · · · · ·   |
| Code rate   | QPSK, 16QAM, 64QAM, 256QAM<br>1/2, 3/5, 2/3, 3/4, 4/5, 5/6<br>Yes   |
| Code rate<br>Multi PLP support  | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6  |
| Code rate   | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6  |
| Code rate Multi PLP support DVB-C (Annex A,B,C)   | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6<br>Yes   |
| Code rate Multi PLP support  DVB-C (Annex A,B,C) Bandwidth  | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6<br>Yes<br>5, 6, 7, 8 MHz<br>Automatic modulation detection   |
| Code rate Multi PLP support  DVB-C (Annex A,B,C)  Bandwidth  Mode  Constellation  | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6<br>Yes<br>5, 6, 7, 8 MHz   |
| Code rate Multi PLP support DVB-C (Annex A,B,C) Bandwidth Mode Constellation Transport Stream Processing  | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6<br>Yes<br>5, 6, 7, 8 MHz<br>Automatic modulation detection<br>16QAM, 32QAM, 64QAM, 128QAM, 256QAM  |
| Code rate Multi PLP support  DVB-C (Annex A,B,C)  Bandwidth  Mode  Constellation  | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6<br>Yes<br>5, 6, 7, 8 MHz<br>Automatic modulation detection   |
| Code rate Multi PLP support DVB-C (Annex A,B,C) Bandwidth Mode Constellation Transport Stream Processing Pool technology support Services   | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 Yes  5, 6, 7, 8 MHz Automatic modulation detection 16QAM, 32QAM, 64QAM, 128QAM, 256QAM Yes   |
| Code rate Multi PLP support DVB-C (Annex A,B,C) Bandwidth Mode Constellation Transport Stream Processing Pool technology support  | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 Yes  5, 6, 7, 8 MHz Automatic modulation detection 16QAM, 32QAM, 64QAM, 128QAM, 256QAM  Yes User selection by service names or Service ID PAT, CAT, SDT, PMTs, EITs tables   |
| Code rate Multi PLP support DVB-C (Annex A,B,C) Bandwidth Mode Constellation Transport Stream Processing Pool technology support Services Automatic regeneration  | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 Yes  5, 6, 7, 8 MHz Automatic modulation detection 16QAM, 32QAM, 64QAM, 128QAM, 256QAM  Yes User selection by service names or Service ID  |
| Code rate Multi PLP support  DVB-C (Annex A,B,C)  Bandwidth Mode Constellation Transport Stream Processing Pool technology support Services Automatic regeneration NIT  | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 Yes  5, 6, 7, 8 MHz Automatic modulation detection 16QAM, 32QAM, 64QAM, 128QAM, 256QAM  Yes User selection by service names or Service ID PAT, CAT, SDT, PMTs, EITs tables Pass-through, custom, automatic Yes                     |
| Code rate Multi PLP support DVB-C (Annex A,B,C) Bandwidth Mode Constellation Transport Stream Processing Pool technology support Services Automatic regeneration NIT Custom NIT/SDT creation                                  | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 Yes  5, 6, 7, 8 MHz Automatic modulation detection 16QAM, 32QAM, 64QAM, 128QAM, 256QAM  Yes User selection by service names or Service ID PAT, CAT, SDT, PMTs, EITs tables Pass-through, custom, automatic                         |
| Code rate Multi PLP support DVB-C (Annex A,B,C) Bandwidth Mode Constellation Transport Stream Processing Pool technology support Services Automatic regeneration NIT Custom NIT/SDT creation PCR PCR correction               | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 Yes  5, 6, 7, 8 MHz Automatic modulation detection 16QAM, 32QAM, 64QAM, 128QAM, 256QAM  Yes User selection by service names or Service ID PAT, CAT, SDT, PMTs, EITs tables Pass-through, custom, automatic Yes Re-stamping         |
| Code rate Multi PLP support  DVB-C (Annex A,B,C)  Bandwidth Mode Constellation Transport Stream Processing Pool technology support Services Automatic regeneration NIT Custom NIT/SDT creation PCR PCR correction LCN support | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 Yes  5, 6, 7, 8 MHz Automatic modulation detection 16QAM, 32QAM, 64QAM, 128QAM, 256QAM  Yes User selection by service names or Service ID PAT, CAT, SDT, PMTs, EITs tables Pass-through, custom, automatic Yes Re-stamping Yes     |
| Code rate Multi PLP support DVB-C (Annex A,B,C) Bandwidth Mode Constellation Transport Stream Processing Pool technology support Services Automatic regeneration NIT Custom NIT/SDT creation PCR PCR correction               | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6 Yes  5, 6, 7, 8 MHz Automatic modulation detection 16QAM, 32QAM, 64QAM, 128QAM, 256QAM  Yes User selection by service names or Service ID PAT, CAT, SDT, PMTs, EITs tables Pass-through, custom, automatic Yes Re-stamping Yes Yes |

| IP Streaming (OUT)       |   |
|--------------------------|---|
| IP TS Out                | Yes   |
| Protocol                 | UDP / RTP (Multicast/Unicast)               |
| Speed                    | 1 Gbit (800 Mbps in IP only mode)           |
| Type                     | Up to 128 x SPTS or 16 x MPTS               |
| SDP/SAP Support          | Yes   |
| IP Streaming (IN)        |   |
| Optional                 | Requires extra license                      |
| IP TS In                 | Yes   |
| Protocol                 | UDP / RTP (Multicast/Unicast)               |
| Speed                    | 1 Gbit (800 Mbps)                           |
| Type                     | Up to 128 x SPTS or 16 x MPTS               |
| IGMP snooping            | Yes, v2 and v3                              |
| Programming Interface    |   |
| Operating system         | Linux 0S                                    |
| Ethernet webserver       | Yes, embedded webserver                     |
| Speed                    | 100/1000 Mbps                               |
| Connector                | RJ45  |
| Browser compatibility    | Chrome, Firefox, Safari, Opera, Edge et al. |
| EAN-13                   |   |
| Code                     | 5213009761833                               |
| General                  |   |
| Power supply             | 115230 VAC                                  |
| Frequency range          | 4763Hz                                      |
| Number of power supplies | Up to two(2)                                |
| Hot-swap technology      | Yes   |
| Power supply consumption | ~60VA                                       |
| Operating temperature    | 0 °C to 40 °C                               |
| Storage temperature      | -10 °C to +70 °C                            |
| Humidity                 | Up to 90%                                   |
| Dimensions               | 480 x 295 x 43.5mm                          |
| Mounting                 | 1U rack                                     |
| Weight                   | 4.35 Kg                                     |

### **PLC-201**

16 x DVB-S/S2/S2X + 8 x FlexCAM to IP

### **Features**

- 16 x independent multi-standard inputs DVB-S/S2/S2X
- Multi-Stream and Multi-PLP support
- 8x Common Interfaces (FlexCAM technology)
- IPTV streaming (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- IPTV reception (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- SAP/SDP support
- "Pool" technology
- PID Filtering
- PCR re-stamping, Correction
- EPG over IP
- Very friendly user interface
- Fleex Embedded support (IPTV middleware)
- 1U Rack size
- Dual "Hot pluggable" power supplies
- 5 year warranty



The PLC-201 headend from the Pro Line series is an all-in-one solution that is highly advanced and versatile, designed to meet the changing needs of the broadcasting industry. With the capability to receive up to 16 independent satellite (DVB-S/S2/S2X) signals while supporting multi-stream reception, the device can convert them into 1x Gbit IPTV streaming for distributing FTA TV and Radio programs.

The PLC-201 offers unparalleled flexibility in descrambling capabilities. It supports up to 8x Common Interfaces (CI) using the advanced FlexCAM technology, which allows users to connect them to either the inputs or outputs of the multiplexer. This innovative technology provides advanced descrambling flexibility, enabling the user to customize their broadcasting services to meet the unique needs of their audience.

For IPTV reception applications, the device can receive up to 128x SPTS or 16x MPTS and convert them to 16 DVB-T/C RF output channels with an extra license. The PLC-201 offers unmatched flexibility with its "pool" technology, enabling users to select any program from any of the 16 x inputs and assign it to any of the IP outputs.

The PLC-201 is equipped with a powerful CPU (Quad core @ 1.8GHz / 2GB RAM), responsible for controlling the device using Linux OS while providing a friendly and incredibly fast user interface. It can be remotely or locally controlled via Ethernet, adding to the device's ease of use.

The compact 1U rack size of the PLC-201, combined with its advanced features, ensures that the device consumes the minimal rack space while it has the ability to accept dual "hot-pluggable" power supplies, adding an extra level of reliability and redundancy to ensure the device remains operational even in case of a power supply failure.

The PLC-201 can host an IPTV middleware (Fleex Embedded) without the need for any external server, enabling users to control all TV monitors in an installation, including LG, Samsung, Philips, and custom STBs, while offering a wide range of features such as Live TV, Live Radio, Info channels, Cast, Weather, Alarm, EPG, and many more.

Overall, the PLC-201 headend is an innovative and powerful device that provides advanced features and flexibility to deliver high-quality TV distribution. It's a great choice for cable TV companies, IPTV providers, hotels, hospitals, and other similar installations.



**PLC-201** 

16 x DVB-S/S2/S2X + 8 x FlexCAM





| Input                          |   |
|--------------------------------|---|
| Type                           | 16 x DVB-S/S2/S2X   |
| Frequencies                    | 9502150 MHz   |
|                                |   |
| Connector                      | 75Ω - F. female   |
| Loop-through connector         | Yes   |
| LNB                            |   |
| Voltage                        | OFF / 13V / 18V   |
| Current                        | Less than 400mA (per input)                               |
| 22 kHz signal                  | ON / OFF  |
| 22 kHz signal - Voltage        | 0.65V ± 0.35V   |
| 22 kHz signal - Frequency      | 22 KHz ± 4Hz  |
| 22 kHz signal - DiSEqC         | 1.0 (Port A, B, C, D)                                     |
| DVB-S (IN)                     | 1.0 (1 011 A, B, C, B)                                    |
| Symbol rate                    | 1 - 45 MBaud  |
| Roll off factor                | 0.35  |
| Code rate                      | 1/2, 2/3, 3/4, 5/6, 7/8 (Automatic)                       |
|                                |   |
| Spectral inversion             | Reverse, Non-reverse (Automatic)                          |
| DVB-S2 (IN) Constellation      | ODCI/ ODCI/ (Automostic)                                  |
|                                | QPSK, 8PSK (Automatic)                                    |
| Symbol rate                    | 1 - 45 MBaud (QPSK) - 1 - 30 MBaud (8PSK)                 |
| Roll off factor                | 0.2 / 0.35 (Automatic)                                    |
| Code rate                      | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 8/10 (QPSK-Automatic)  |
|                                | 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 (8PSK-Automatic)            |
| Spectral inversion             | Reverse, Non-reverse (Automatic)                          |
| DVB-S2X (IN)                   |   |
| Standard                       | EN302 307-1 V1.4.1  |
| Constellation                  | QPSK, 8PSK (automatic)                                    |
| Symbol rate                    | 1 - 45 MBaud (QPSK) / 1 - 30 MBaud (8PSK)                 |
| Roll off factor                | Апо́ 0.05 to 0.35 (automatic)                             |
| Code rate                      | 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 8/10 (QPSK- automatic) |
|                                | 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 (8PSK- automatic)           |
| Multi-stream support           | Yes   |
| T2MI MPLP (multiple PLP) signa | Yes   |
| CI Interface                   |   |
| Number of Common Interfaces    | 8x (in total)   |
| FlexCAM technology             | Yes   |
| Connectror                     | PCMCIA (front access)                                     |
| Max. Frequency                 | 77MHz   |
| Transport Stream Processing    |   |
| Pool technology support        | Yes   |
| Services                       | User selection by service names or Service ID             |
| Automatic regeneration         | PAT, CAT, SDT, PMTs, EITs tables                          |
| NIT                            | Pass-through, custom, automatic                           |
| Custom NIT/SDT creation        | Yes   |
| PCR                            | Re-stamping   |
| PCR correction                 | Yes   |
| LCN support                    | Yes   |
| PID filtering                  | Yes   |
| EPG information                | Yes over RF and IP  |
|                                |   |

| IP Streaming (OUT)       |   |
|--------------------------|---|
| IPTS Out                 | Yes   |
| Protocol                 | UDP / RTP (Multicast/Unicast)               |
| Speed                    | 1 Gbit (800 Mbps in IP only mode)           |
| Туре                     | Up to 128 x SPTS or 16 x MPTS               |
| SDP/SAP Support          | Yes   |
| IP Streaming (IN)        |   |
| Optional                 | Requires extra license                      |
| IP TS In                 | Yes   |
| Protocol                 | UDP / RTP (Multicast/Unicast)               |
| Speed                    | 1 Gbit (800 Mbps)                           |
| Туре                     | Up to 128 x SPTS or 16 x MPTS               |
| IGMP snooping            | Yes, v2 and v3                              |
| Programming Interface    |   |
| Operating system         | Linux OS                                    |
| Ethernet webserver       | Yes, embedded webserver                     |
| Speed                    | 100/1000 Mbps                               |
| Connector                | RJ45  |
| Browser compatibility    | Chrome, Firefox, Safari, Opera, Edge et al. |
| EAN-13                   |   |
| Code                     | 5213009761840                               |
| General                  |   |
| Power supply             | 115230 VAC                                  |
| Frequency range          | 4763Hz                                      |
| Number of power supplies | Up to two(2)                                |
| Hot-swap technology      | Yes   |
| Power supply consumption | ~65VA                                       |
| Operating temperature    | 0 °C to 40 °C                               |
| Storage temperature      | -10 °C to +70 °C                            |
| Humidity                 | Up to 90%                                   |
| Dimensions               | 480 x 295 x 43.5mm                          |
| Mounting                 | 1U rack                                     |
| Weight                   | 4.55 Kg                                     |



# **PLH**series

Pro Line - HDMI series

The PLH series is a part of the Pro Line headends product line that provides models with advanced flexibility and HDMI interfaces. These models offer two options - RF+IP or IP Only - for seamless integration with a wide range of applications. This feature-rich series is designed to meet the evolving needs of the broadcasting industry and offer a superior viewing experience to the end-users.

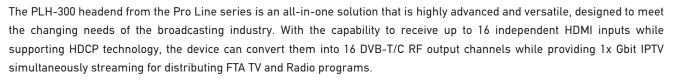
# **PLH-300**

#### 16 x HDMI to 16 x DVB-T/C & IP

### **Features**

- 16 x HDMI inputs
- Full HD H.264 encoding
- HDCP v1.4 support
- 16 x RF output DVB-T/C (software selectable)
- MER value > 45dB
- IPTV streaming (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- IPTV reception (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- SAP/SDP support
- "Pool" technology
- PID Filtering
- Custom NIT/SDT support
- Very friendly user interface
- Fleex Embedded support (IPTV middleware)
- 1U Rack size
- Dual "Hot pluggable" power supplies
- 5 year warranty





For IPTV reception applications, the device can receive up to 128x SPTS or 16x MPTS and convert them to 16 DVB-T/C RF output channels with an extra license. The PLH-300 offers unmatched flexibility with its "pool" technology, enabling users to select any program from any of the 16 x inputs and assign it to any of the 16 x RF + IP outputs.

The PLH-300 is equipped with a powerful CPU (Quad core @ 1.8GHz / 2GB RAM), responsible for controlling the device using Linux OS while providing a friendly and incredibly fast user interface. It can be remotely or locally controlled via Ethernet, adding to the device's ease of use.

The compact 1U rack size of the PLH-300, combined with its advanced features, ensures that the device consumes the minimal rack space while it has the ability to accept dual "hot-pluggable" power supplies, adding an extra level of reliability and redundancy to ensure the device remains operational even in case of a power supply failure.

The PLH-300 can host an IPTV middleware (Fleex Embedded) without the need for any external server, enabling users to control all TV monitors in an installation, including LG, Samsung, Philips, and custom STBs, while offering a wide range of features such as Live TV, Live Radio, Info channels, Cast, Weather, Alarm, EPG, and many more.

Overall, the PLH-300 headend is an innovative and powerful device that provides advanced features and flexibility to deliver high-quality TV distribution. It's a great choice for cable TV companies, IPTV providers, hotels, hospitals, and other similar installations.



PLH-300

16 x HDMI to 16 x DVB-T/C & IP





| Input                       |   |
|-----------------------------|---|
| Туре                        | 16 x HDMI                                     |
| Video                       |   |
| Video coding                | MPEG-4 AVC / H.264                            |
| Profile                     | High profile 4.0                              |
| Input resolution            | Up to 1920 1080 - 50/60 p & i                 |
| Output resolution           | Up to 1920 1080 - 30p                         |
| HDCP support                | Yes, v1.4                                     |
| Audio                       |   |
| Audio                       | HD  |
| Standard                    | MPEG-1 Layer II                               |
| Audio Bit Rate              | 64, 96, 128, 192, 256, 320 Kbps               |
| Format                      | MPEG2, AAC, AC3                               |
| H.264 encoder               |   |
| Standard                    | MPEG-4 AVC / H.264                            |
| Bit Rate                    | 1 – 19 Mbps adjustable                        |
| Configurable Parameters     | Service Name, Service ID                      |
| LCN processing              | Yes   |
| Transport Stream Processing |   |
| Pool technology support     | Yes   |
| Services                    | User selection by service names or Service ID |
| Automatic regeneration      | PAT, CAT, SDT, PMTs, EITs tables              |
| NIT                         | Pass-through, custom, automatic               |
| Custom NIT/SDT creation     | Yes   |
| LCN support                 | Yes   |
| PID filtering               | Yes   |
| RF Output                   |   |
| Type                        | 16 DVB-T or 16 x DVB-C RF channels            |
|                             | 2 groups of 8 adjacent channels in DVB-T      |
|                             | 8 groups of 2 adjacent channels in DVB-C      |
| Output Frequencies          | 110900 MHz (10 KHz step)                      |
| Output Level                | 90dBµV  |
| Connector                   | 75Ω - F, female                               |
| Output Attenuator           | 030dB   |
| DVB-T (OUT)                 |   |
| Bandwidth                   | 5, 6, 7, 8 MHz                                |
| Mode                        | 2K, 8K  |
| Constellation               | QPSK, 16QAM, 64QAM                            |
| Guard interval              | 1/4, 1/8, 1/16, 1/32                          |
| Code rate                   | 1/2, 2/3, 3/4, 5/6, 7/8                       |
| MER                         | More than 42dB @ Full Band                    |
| DVB-C (OUT)                 |   |
| Constellation               | 16QAM, 32QAM, 64QAM, 128QAM, 256QAM           |
| Symbol rate                 | 2.5-8.4 Ms/s                                  |
| Channel step                | 310MHz  |
| MER                         | More than 40dB @ Full Band                    |
|                             |   |

| IP Streaming (OUT)       |   |
|--------------------------|---|
| IP TS Out                | Yes   |
| Protocol                 | UDP / RTP (Multicast/Unicast)               |
| Speed                    | 1 Gbit (800 Mbps in IP only mode)           |
| Туре                     | Up to 16 x SPTS or 16 x MPTS                |
| SDP/SAP Support          | Yes   |
| IP Streaming (IN)        |   |
| Optional                 | Requires extra license                      |
| IP TS In                 | Yes   |
| Protocol                 | UDP / RTP (Multicast/Unicast)               |
| Speed                    | 1 Gbit (800 Mbps)                           |
| Туре                     | 128 x SPTS or 16 x MPTS                     |
| IGMP snooping            | Yes, v2 and v3                              |
| Programming Interface    |   |
| Operating system         | Linux 0S                                    |
| Ethernet webserver       | Yes, embedded webserver                     |
| Speed                    | 100/1000 Mbps                               |
| Connector                | RJ45  |
| Browser compatibility    | Chrome, Firefox, Safari, Opera, Edge et al. |
| EAN-13                   |   |
| Code                     | 5213009761901                               |
| General                  |   |
| Power supply             | 115230 VAC                                  |
| Frequency range          | 4763Hz                                      |
| Number of power supplies | Up to two(2)                                |
| Hot-swap technology      | Yes   |
| Power supply consumption | ~60VA                                       |
| Operating temperature    | 0 °C to 40 °C                               |
| Storage temperature      | -10 °C to +70 °C                            |
| Humidity                 | Up to 90%                                   |
| Dimensions               | 480 x 295 x 43.5mm                          |
| Mounting                 | 1U rack                                     |
| Weight                   | 4.20 Kg                                     |
|                          |   |

# **PLH-200**

#### 16 x HDMI to IP

### **Features**

- 16 x HDMI inputs
- Full HD H.264 encoding
- HDCP v1.4 support
- IPTV streaming (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- IPTV reception (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- SAP/SDP support
- "Pool" technology
- PID Filtering
- Very friendly user interface
- Fleex Embedded support (IPTV middleware)
- 1U Rack size
- Dual "Hot pluggable" power supplies
- 5 year warranty





The PLH-200 headend from the Pro Line series is an all-in-one solution that is highly advanced and versatile, designed to meet the changing needs of the broadcasting industry. With the capability to receive up to 16 independent HDMI inputs while supporting HDCP technology, the device can convert them into 1x Gbit IPTV streaming for distributing FTA TV and Radio programs.

For IPTV reception applications, the device can receive up to 128x SPTS or 16x MPTS and convert them to 16 DVB-T/C RF output channels with an extra license. The PLH-200 offers unmatched flexibility with its "pool" technology, enabling users to select any program from any of the 16 x inputs and assign it to any of the 16 x RF + IP outputs.

The PLH-200 is equipped with a powerful CPU (Quad core @ 1.8GHz / 2GB RAM), responsible for controlling the device using Linux OS while providing a friendly and incredibly fast user interface. It can be remotely or locally controlled via Ethernet, adding to the device's ease of use.

The compact 1U rack size of the PLH-200, combined with its advanced features, ensures that the device consumes the minimal rack space while it has the ability to accept dual "hot-pluggable" power supplies, adding an extra level of reliability and redundancy to ensure the device remains operational even in case of a power supply failure.

The PLH-200 can host an IPTV middleware (Fleex Embedded) without the need for any external server, enabling users to control all TV monitors in an installation, including LG, Samsung, Philips, and custom STBs, while offering a wide range of features such as Live TV, Live Radio, Info channels, Cast, Weather, Alarm, EPG, and many more.

Overall, the PLH-200 headend is an innovative and powerful device that provides advanced features and flexibility to deliver high-quality TV distribution. It's a great choice for cable TV companies, IPTV providers, hotels, hospitals, and other similar installations.



PLH-200

16 x HDMI to IP





| Input                       |   |
|-----------------------------|---|
| Туре                        | 16 x HDMI                                     |
| Video                       |   |
| Video coding                | MPEG-4 AVC / H.264                            |
| Profile                     | High profile 4.0                              |
| Input resolution            | Up to 1920 1080 - 50/60 p & i                 |
| Output resolution           | Up to 1920 1080 - 30p                         |
| HDCP support                | Yes, v1.4                                     |
| Audio                       |   |
| Audio                       | HD  |
| Standard                    | MPEG-1 Layer II                               |
| Audio Bit Rate              | 64, 96, 128, 192, 256, 320 Kbps               |
| Format                      | MPEG2, AAC, AC3                               |
| H.264 encoder               |   |
| Standard                    | MPEG-4 AVC / H.264                            |
| Bit Rate                    | 1 – 19 Mbps adjustable                        |
| Configurable Parameters     | Service Name, Service ID                      |
| LCN processing              | Yes   |
| Transport Stream Processing |   |
| Pool technology support     | Yes   |
| Services                    | User selection by service names or Service ID |
| Automatic regeneration      | PAT, CAT, SDT, PMTs, EITs tables              |
| NIT                         | Pass-through, custom, automatic               |
| Custom NIT/SDT creation     | Yes   |
| LCN support                 | Yes   |
| PID filtering               | Yes   |
| IP Streaming (OUT)          |   |
| IP TS Out                   | Yes   |
| Protocol                    | UDP / RTP (Multicast/Unicast)                 |
| Speed                       | 1 Gbit (800 Mbps in IP only mode)             |
| Туре                        | Up to 16 x SPTS or 16 x MPTS                  |
| SDP/SAP Support             | Yes   |

| IP Streaming (IN)        |   |
|--------------------------|---|
| Optional                 | Requires extra license                      |
| IP TS In                 | Yes   |
| Protocol                 | UDP / RTP (Multicast/Unicast)               |
| Speed                    | 1 Gbit (480 Mbps)                           |
| Type                     | 128 x SPTS or 16 x MPTS                     |
| IGMP snooping            | Yes, v2 and v3                              |
| Programming Interface    |   |
| Operating system         | Linux 0S                                    |
| Ethernet webserver       | Yes, embedded webserver                     |
| Speed                    | 100/1000 Mbps                               |
| Connector                | RJ45  |
| Browser compatibility    | Chrome, Firefox, Safari, Opera, Edge et al. |
| EAN-13                   |   |
| Code                     | 5213009761857                               |
| General                  |   |
| Power supply             | 115230 VAC                                  |
| Frequency range          | 4763Hz                                      |
| Number of power supplies | Up to two(2)                                |
| Hot-swap technology      | Yes   |
| Power supply consumption | ~60VA                                       |
| Operating temperature    | 0 °C to 40 °C                               |
| Storage temperature      | -10 °C to +70 °C                            |
| Humidity                 | Up to 90%                                   |
| Dimensions               | 480 x 295 x 43.5mm                          |
| Mounting                 | 1U rack                                     |
| Weight                   | 4.10 Kg                                     |





Pro Line - IP series

The PLI series is a part of the Pro Line headends product line that provides models with advanced flexibility and IP input only capabilities. The provided model offers two options - RF+IP or IP Output Only - for seamless integration with a wide range of applications. This feature-rich series is designed to meet the evolving needs of the broadcasting industry and offer a superior viewing experience to the end-users.

## **PLI-400**

#### IP 128SPTS (UDP/RTP) to 16 x DVB-T/C

### **Features**

- IPTV reception (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- 16 x RF output DVB-T/C (software selectable)
- MER value > 45dB
- IPTV streaming (up to 128 x SPTS / 16 x MPTS) @ 800Mpbs
- SAP/SDP support
- "Pool" technology
- PID Filtering
- Custom NIT/SDT support
- PCR re-stamping, Correction
- EPG over RF and IP
- Very friendly user interface
- Fleex Embedded support (IPTV middleware)
- 1U Rack size
- Dual "Hot pluggable" power supplies
- 5 year warranty

Mpbs OMpbs

The PLI-400 headend from the Pro Line series is an all-in-one solution that is highly advanced and versatile, designed to meet the changing needs of the broadcasting industry. With the capability to receive up to 128 x SPTS / 16 x MPTS IPTV signals, the device can convert them into 16 DVB-T/C RF output channels while providing 1x Gbit IPTV simultaneously streaming for distributing FTA TV and Radio programs.

The PLI-400 is equipped with a powerful CPU (Quad core @ 1.8GHz / 2GB RAM), responsible for controlling the device using Linux OS while providing a friendly and incredibly fast user interface. It can be remotely or locally controlled via Ethernet, adding to the device's ease of use.

The compact 1U rack size of the PLI-400, combined with its advanced features, ensures that the device consumes the minimal rack space while it has the ability to accept dual "hot-pluggable" power supplies, adding an extra level of reliability and redundancy to ensure the device remains operational even in case of a power supply failure.

The PLI-400 can host an IPTV middleware (Fleex Embedded) without the need for any external server, enabling users to control all TV monitors in an installation, including LG, Samsung, Philips, and custom STBs, while offering a wide range of features such as Live TV, Live Radio, Info channels, Cast, Weather, Alarm, EPG, and many more.

Overall, the PLI-400 headend is an innovative and powerful device that provides advanced features and flexibility to deliver high-quality TV distribution. It's a great choice for cable TV companies, IPTV providers, hotels, hospitals, and other similar installations.



**PLI-400** 

IP 128SPTS (UDP/RTP) to 16 x DVB-T/C





| IP Streaming (IN)           |   |
|-----------------------------|---|
| Optional                    | Requires extra license                        |
| IP TS In                    | Yes   |
| Protocol                    | UDP / RTP (Multicast/Unicast)                 |
| Speed                       | 1 Gbit (800 Mbps)                             |
| Туре                        | 128 x SPTS or 16 x MPTS                       |
| IGMP snooping               | Yes, v2 and v3                                |
| Transport Stream Processing |   |
| Pool technology support     | Yes   |
| Services                    | User selection by service names or Service ID |
| Automatic regeneration      | PAT, CAT, SDT, PMTs, EITs tables              |
| NIT                         | Pass-through, custom, automatic               |
| Custom NIT/SDT creation     | Yes   |
| PCR                         | Re-stamping                                   |
| PCR correction              | Yes   |
| LCN support                 | Yes   |
| PID filtering               | Yes   |
| EPG information             | Yes over RF and IP                            |
| RF Output                   |   |
| Туре                        | 16 x DVB-T or 16 x DVB-C RF channels          |
|                             | 2 groups of 8 adjacent channels in DVB-T      |
|                             | 8 groups of 2 adjacent channels in DVB-C      |
| Output Frequencies          | 110900 MHz (10 KHz step)                      |
| Output Level                | 90dBµV  |
| Connector                   | 75Ω - F, female                               |
| Output Attenuator           | 030dB   |
| DVB-T (OUT)                 |   |
| Bandwidth                   | 5, 6, 7, 8 MHz                                |
| Mode                        | 2K, 8K  |
| Constellation               | QPSK, 16QAM, 64QAM                            |
| Guard interval              | 1/4, 1/8, 1/16, 1/32                          |
| Code rate                   | 1/2, 2/3, 3/4, 5/6, 7/8                       |
| MER                         | More than 42dB @ Full Band                    |
| DVB-C (OUT)                 |   |
| Constellation               | 16QAM, 32QAM, 64QAM, 128QAM, 256QAM           |
| Symbol rate                 | 2.5-8.4 Ms/s                                  |
| Channel step                | 310MHz  |
| MER                         | More than 40dB @ Full Band                    |
|                             |   |

| IP Streaming (OUT)       |   |
|--------------------------|---|
| IP TS Out                | Yes   |
| Protocol                 | UDP / RTP (Multicast/Unicast)               |
| Speed                    | 1 Gbit (800 Mbps in IP only mode)           |
| Туре                     | 128 x SPTS or 16 x MPTS                     |
| SDP/SAP Support          | Yes   |
| Programming Interface    |   |
| Operating system         | Linux OS                                    |
| Ethernet webserver       | Yes, embedded webserver                     |
| Speed                    | 100/1000 Mbps                               |
| Connector                | RJ45  |
| Browser compatibility    | Chrome, Firefox, Safari, Opera, Edge et al. |
| EAN-13                   |   |
| Code                     | 5213009761918                               |
| General                  |   |
| Power supply             | 115230 VAC                                  |
| Frequency range          | 4763Hz                                      |
| Number of power supplies | Up to two(2)                                |
| Hot-swap technology      | Yes   |
| Power supply consumption | ~40VA                                       |
| Operating temperature    | 0 °C to 40 °C                               |
| Storage temperature      | -10 °C to +70 °C                            |
| Humidity                 | Up to 90%                                   |
| Dimensions               | 480 x 295 x 43.5mm                          |
| Mounting                 | 1U rack                                     |
| Weight                   | 3.75 Kg                                     |

### **PLA-002**

External power supply for Pro Line series









The PLA-002 power supply is a highly reliable and efficient device that provides uninterrupted power supply to Pro Line headend series. Despite its compact size, the PLA-002 delivers impressive power output, ensuring that even the most demanding broadcasting operations run smoothly.

Designed with safety in mind, the PLA-002 is equipped with advanced protection features that safeguard against overloading, overheating, and short-circuiting. This ensures that the device remains operational, even in the event of unexpected power surges or failures.

In addition to its impressive technical capabilities, the PLA-002 is also incredibly easy to install and maintain, making it a popular choice among broadcasting professionals.

| Input power           |   |
|-----------------------|---|
| Voltage range         | 110240VAC   |
| Frequency range       | 50/60Hz   |
| Leakage current       | < 0.25mA @ 240VAC   |
| Output power          |   |
| Voltage               | 12VDC   |
| Current               | 6.7A max.   |
| Ripple & Noise        | 120mVp-p  |
| Protection            |   |
| Overload              | 115-160% rated output power   |
| Over-voltage          | 12.6-16.2V  |
| Туре                  | Shut-Down, Re-power on to recover   |
| EAN-13                |   |
| Code                  | 5213009761932   |
| General               |   |
| Vibration             | B :10 ~ 500Hz, G 10min./1cycle, period for 60min. lank 2 each along X, Y, Z axes                                      |
|                       | ST:10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes  |
| Safety standards      | IEC62368-1, IEC60335-1, Dekra BS EN/EN60335-1,BS EN/EN62368-1, UL62368-1, TUV BS EN/EN62368-1, EAC TP TC 004 approved |
| Operating temperature | 0 °C to 60 °C   |
| Storage temperature   | -10 °C to +70 °C  |
| Humidity              | Up to 90%   |
| Dimensions            | 162 x 70 x 41mm   |
| Mounting              | Pro Line series   |
| Weight                | 0.35 Kg   |





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