

## Prima LT Plus Specifications

### ANALOG AUDIO SPECIFICATIONS

Connector Type: 4 Gold plated Neutrik® 3-pin XLR  
Input: female  
Output: male  
A/D & D/A converters: 24 bit sigma-delta  
Sample frequencies: 16, 24, 32 and 48 kHz  
Input impedance: 600 Ohms or >25 kOhm, balanced  
Output impedance: 600 Ohms or <60 Ohms, balanced  
Clipping level: +12, +15 or +18 dBu, ± 1 dB  
Insertion gain: 0 dB ± 0.5 dB  
System frequency response, ±0.3 dB, ref. 1 kHz  
MUSICAM Layer 2  
20 to 7,500 Hz @16 kHz sampling  
20 to 11,250 Hz @24 kHz sampling  
System frequency response, ±0.15 dB, ref. 1 kHz  
MUSICAM Layer 2 and Layer 3  
20 to 14,500 Hz @32 kHz sampling  
20 to 20,000 Hz @48 kHz sampling  
Total harmonic distortion + noise: <0.005% @1 kHz  
Signal-to-noise ratio: >95 dB  
Crosstalk: <-85 dB  
L/R phase difference: <0.5°

### COMPRESSION ALGORITHMS:

CCS MUSICAM® Old  
CCS MUSICAM® New  
ISO/MPEG Layer 2 (MUSICAM®-enhanced)  
ISO/MPEG Layer 3  
ITU G.722

### DIGITAL AUDIO SPECIFICATIONS

Connector type: 3 Gold plated Neutrik® 3-pin XLR  
Interface type: AES/EBU or S/PDIF  
Digital audio sampling rates: 24.05, 32, 44.1 and 48 kHz  
Rate adaption: Automatic  
Lock range: ±200 ppm  
Internal or external synchronization

### DATA INTERFACE SPECIFICATIONS

Network interface types:  
ISDN BRI (2B+D), RS530, RS422, V.35, and X.21  
Number of ISDN B channels supported: 6  
Bit rates:  
Layer 2: 24, 32, 40, 48, 56, 64, 80, 96, 112, 128,  
144, 160, 192, 224, 256, 320 and 384 kb/s  
Layer 3: 56, 64, 112, 128, 192, 256 and 320 kb/s  
G.722: 56 and 64 kb/s

### AUXILIARY DATA CHANNEL

Type of connector: DB9, female  
Bit rates, Direct Mode:  
300, 1,200, 2,400, 9,600, and 38,400 bps  
Bit rates, Mux mode:  
300, 1,200, 2,400, 9,600, and 19,200 bps  
Mode: 8 data bits, 1 stop bit  
Handshake: None required

### ALARM INTERFACE

Type of connector: DB9, male  
Function: Summary alarm  
Type: Form C contacts

### CONTROL INTERFACES

Keypad: 24 key with cursor, dial, function and status keys  
VU Meters: 4 LED 20-segment average & peak reading  
Remote Control: All features controlled  
Electrical interfaces: RS232-C or RS485  
Connector: DB9, male  
Bit rates: 1,200, 2,400, 4,800, 9,600, and 38,400 bps  
Mode: 8 data bits, 1 stop bit, no parity  
Handshake: None or XON/XOFF  
Optional 4 Opto-Isolated Inputs/4 Relay Outputs or  
8 Opto-Isolated Inputs/8 Relay Outputs

### GENERAL

Environmental Conditions:  
Storage temperature: -40 to +70° C (-40 to +158° F)  
Operating temperature: 5 to +45° C (41 to +113° F)  
Relative humidity: 20 to 80%, non-condensing  
EMC: EN 50081-1, EN 50082-2  
Power requirements: 90 to 250 VAC, 47 to 65 Hz. <60 Watts  
Dimensions:  
Height: 2U (3.5", 8.89 cm)  
Width: Rack Mount 19" (48.26 cm)  
Width: Desk Mount 17.13" (43.48 cm)  
Depth: 12.2" (30.99 cm)  
Net weight: Approx. 15 lbs. (6.8 Kg)



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# PrimaLT Plus™



The new **Prima LT Plus** starts with all the features you love in our **Prima LT**—and then adds more! Four oversize VU meters, intelligent headphone monitoring, room for three ISDN or other digital interfaces, SMPTE Time Code, up to eight relay functions, two Ancillary Data channels, and the full feature set of Prima Program Logic Language. All in an easy to operate package.

#### Highest Audio Quality

- ▶ MUSICAM®-enhanced MPEG Layer 2
- ▶ MPEG Layer 3 and G.722
- ▶ 24-bit A/D and D/A converters
- ▶ Dynamic range better than 95 dB
- ▶ Ultra low distortion at less than 0.005%
- ▶ Data rates to 384 kb/s
- ▶ AES/EBU/SPDIF standard

#### Easiest to Use

- ▶ "One Touch" auto dialing
- ▶ Simple, intuitive menu navigation
- ▶ Connects to any MPEG or G.722 codec
- ▶ Easy "Quick Configurations"
- ▶ "Intelligent" headphone monitor system
- ▶ Software upgrades via Internet
- ▶ Removable rack mounts for desktop operation



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*Prima LT gives you unmatched capability  
in an easy-to-use package!*

The Prima LT Plus offers the same superb audio specifications as our CDQ Prima® line of codecs. With MUSICAM®-enhanced MPEG Layer 2, MPEG Layer 3, and G.722, Prima LT Plus gives you ISDN connectivity at bit rates ranging from 56 to 384 kb/s. Bit rates from 24 to 384 kb/s are supported with other digital transmission facilities. The micro-processor-controlled Prima LT Plus is equipped with powerful programming functions. Using Prima Logic Language, you can program your Prima LT Plus to perform functions such as **Automatic Call Configuration** and **Automatic Algorithm Detection**.

Prima LT Plus uses plug-in modules to allow you to connect directly to ISDN or to any digital transmission system with available V.35, X.21, RS530 or RS422A interfaces. Independent Mono mode allows you to send two independent mono audio programs to any combination of six locations.



### Other features include:

- ▶ 24-bit A/D and D/A converters and gold plated audio connectors insure superb audio specifications
- ▶ Fully compatible MUSICAM-enhanced MPEG Layer 2, MPEG Layer 3 and G.722 algorithms support bit rates from 24 through 384 kb/s and sampling rates from 16 to 48 kHz
- ▶ AES/EBU or S/PDIF digital audio I/O with high quality automatic rate adapters standard with three gold-plated Neutrik® XLR connectors (input, output & word clock)
- ▶ Four large peak-and-average-reading VU meters are visible from across the room
- ▶ Six LED "Connect Status" lamps keep you informed about lines in use
- ▶ "Intelligent" headphone monitor system lets you listen to any combination of Send Audio, Receive Audio, Mono or Stereo
- ▶ Bi-directional SMPTE Time Code available with optional internal module
- ▶ Up to 8 opto-isolated control inputs and 8 dry, floating relay outputs for remote command and control
- ▶ Storage for 256 Speed Dial and Quick Configuration entries—each Speed Dial entry contains all encoder and decoder configuration information and up to six ISDN phone numbers; Prima LT Plus comes pre-programmed for most connection configurations, including those used to connect to other manufacturers' products
- ▶ Storage for up to 20 ISDN terminal adapter configurations—each includes all TA settings, SPID and ID numbers for up to three installed terminal adapters
- ▶ CCS Inverse Multiplexing and H.221 BONDING protocols are standard; Prima LT Plus is fully Eureka DAB compatible
- ▶ Universal power supply—no need to change power supply frequency and voltages
- ▶ Universal terminal adapter—no need to change 'ROM' chips when taking your Prima LT Plus to different countries
- ▶ Two independent Ancillary Data channels, including far end remote control, RS232 data and 12 virtual control lines
- ▶ Virtual actions can execute a sequence of commands on any connected Prima LT, Prima LT Plus or CDQPrima
- ▶ Near- and far-end remote control using an attached terminal or PC with RS232 or RS485 support; RS485 remote control allows up to 30 Prima LT, Prima LT Plus or CDQPrima units to be controlled by the same PC
- ▶ An optional Windows® remote control program is available for easy point-and-click operation
- ▶ Software updates, available on our Internet Web Site, can be loaded directly into the Prima LT Plus through the remote control port
- ▶ All functions can be password protected with a unique multi-level security system



### Prima LT Plus is easy to use:

- ▶ Auto-recognition of the calling codec
- ▶ Extra-large peak-and-average-reading VU meters display Send and Receive levels simultaneously
- ▶ Extra-large keypad with single-button status keys and keypad beeper
- ▶ Extra-large backlit LCD display with adjustable contrast
- ▶ LED status indicators for connect state, framed state, bit errors, and headphone mode
- ▶ Two user-programmable function keys permit one-touch dialing and more
- ▶ 256 Speed Dial addresses configure the encoder and decoder and dial ISDN number(s)

### Prima LT Plus is modular for flexible interface requirements:

- ▶ Three slots support interchangeable network interface cards—choose from ISDN terminal adapters, V.35, X.21, RS530 and RS422 configurations
- ▶ Plug-in 24-bit A/D and D/A converters allow for upgrade to the latest technology

### Prima LT Plus is based on international Standards:

- ▶ ISO/MPEG-I and II Layer 2 at 16, 24, 32 and 48 kHz sampling rates, 24 to 384 kb/s
- ▶ ISO/MPEG-I and II Layer 3 at 24, 32 and 48 kHz sampling rates, 24 to 320 kb/s, FhG certified
- ▶ ITU G.722
- ▶ ITU J.52 Inverse Multiplexing up to 2x64 kb/s, H.221 BONDING
- ▶ ADR and DAB compliant
- ▶ AES/EBU and S/PDIF with 32, 44.1 and 48 kHz sampling with auto-rate converters

### Prima LT Plus is intelligent:

- ▶ Intelligent headphone monitor system lets you monitor all signals, Send/Receive, mono/stereo
- ▶ Built-in Prima Logic Language for automatic functions
- ▶ Event-to-action logic
- ▶ Full remote control capability
- ▶ Bit-error and out-of-frame detectors

### Prima LT Plus gives you these additional outstanding features:

- ▶ Optional SMPTE Time Code and eight remote command & control contacts
- ▶ Convertible desktop or 19" rack mounting
- ▶ Two asynchronous RS232 ancillary data channels
- ▶ Control and algorithm software upgrades through RS232
- ▶ Full remote computer control via RS232 or RS485
- ▶ Programmable summary alarm relay
- ▶ MC68020 Integrated Support Processor for Monitor and Control
- ▶ Scale Factor Protection, ACE and SCF-CRC of ADR and DAB standard