

Prima LT Specifications

ANALOG AUDIO SPECIFICATIONS

Connector Type: 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 II
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 II and Layer III
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: <-90 dB
L/R phase difference: <0.5°

COMPRESSION ALGORITHMS:

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

DIGITAL AUDIO SPECIFICATIONS

Connector type: DB9, female
Optional XLR adapter available
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: 1 or 2
Bit rates:
Layer II: 24, 32, 40, 48, 56, 64, 80, 96, 112, 128,
144, 160, 192, 224, 256, 320 and 384 kb/s
Layer III: 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
Level indicators: Normal and Clip LEDs
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

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. 14.4 lbs. (6.6 Kg)



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Announcing the Prima^{LT}

Another *breakthrough* codec from MUSICAM USA



Prima LT is the newest addition to our line of superb digital audio codecs. It is stereo, bi-directional, and comes with MUSICAM-enhanced MPEG Layer 2, MPEG Layer 3 and G.722 algorithms for maximum compatibility. Prima LT accepts one digital interface module for direct connection to ISDN, V.35, X.21 or RS422.

Highest Audio Quality

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

Easiest to Use

- ▶ "One Touch" auto dialing
- ▶ Simple, intuitive menu navigation
- ▶ Connects to any MPEG or G.722 codec
- ▶ No fan, for dead quiet operation
- ▶ Software upgrades via Internet
- ▶ Removable rack mounts for desktop operation



Prima LT gives you unmatched performance at an unbeatably low price!

The Prima LT digital audio codec offers the same superb audio specifications as MUSICAM USA's CDQPrima™ line of codecs. With MUSICAM®-enhanced MPEG Layer 2, MPEG Layer 3, and G.722, Prima LT gives you ISDN connectivity at bit rates ranging from 56 to 128 kb/s. Bit rates from 24 to 384 kb/s are supported with other digital transmission facilities. Unlike other audio codecs, the microprocessor-controlled Prima LT is equipped with powerful programming functions. Using Prima Logic Language, you can program your Prima LT to perform functions such as Automatic Call Configuration and Automatic Algorithm Detection.

The Prima LT uses plug-in modules to allow you to connect directly to ISDN or to any digital transmission system with available V.35, X.21 or RS422A interfaces. Prima LT's broadcast mode allows you to send two independent audio channels to two locations, or send the same monaural program to two locations simultaneously.

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
- ▶ Available AES/EBU or S/PDIF digital audio I/O with high quality automatic rate adapters
- ▶ Storage for 256 Speed Dial and Quick Configuration entries—each Speed Dial entry contains all encoder and decoder configuration information and up to two ISDN phone numbers; Prima LT 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
- ▶ CCS Inverse Multiplexing and H.221 BONDING protocols are standard; Prima LT 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 to different countries
- ▶ Ancillary data includes far end remote control, RS232 data and 12 virtual control lines
- ▶ Virtual actions can execute a sequence of commands on any connected Prima LT 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 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 through the remote control port
- ▶ All functions can be password protected with a unique multi-level security system
- ▶ Prima LT gives you "contribution quality," with MPEG Layer 2 and MPEG Layer 3 coding at the highest possible bit rates. Prima LT's Dual Channel Send mode lets you send two separate mono programs on separate ISDN "B" channels.



Prima LT is easy to use:

- ▶ Extra-large keypad with single-button status keys and keypad beeper
- ▶ Extra large backlit LCD display with adjustable contrast
- ▶ Eight LED status indicators for connect state, framed state, bit errors and audio levels
- ▶ 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)
- ▶ Dead quiet—there's no fan needed in the Prima LT

Prima LT is modular for flexible interface requirements:

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

Prima LT is based on international Standards:

- ▶ ISO/MPEG-1 and 2 Layer 2 at 16, 24, 32 and 48 kHz sampling rates, 24 to 384 kb/s
- ▶ ISO/MPEG-1 and 2 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
- ▶ Optional AES/EBU and S/PDIF with 32, 44.1 and 48 kHz sampling with auto-rate converters

Prima LT is intelligent:

- ▶ 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 gives you these additional outstanding features:

- ▶ Convertible desktop or 19" rack mounting
- ▶ Asynchronous RS232 ancillary data
- ▶ 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