C.E.C.

SUPERLINK
D/A CONVERTER

DA SL

CEC Super Link connection the original digital transmission way.
The DA SL has been designed as the ultimate D/A converter
to bring out the full performance of Super Link Connection.

Designed for all CEC Transports and any CD Players with Super Link Connection.
They will be reborn by it's use.

■ "SUPERLINK" Digital Signal Transmission System

SUPERLINK is a proprietary digital signal transmission system that transports music signals and synchronization(clock) signals with separate cables.

The SPDIF(Sony Philips Digital Inter Face) and AES/EBU(Audio Engineering Society/European Broadcasting Union) systems, commonly used in coaxial digital outputs and optical outputs, transmit both the music and clock signals through the same cable, and thus are prone to jitter effects caused by the signals interfering with each other.

SUPERLINK system transmits these signals separately with multiple cables, requiring no encoding/decoding process for data transmission. It minimizes deterioration of the music signal during transmission by using the clock signals from the D/A converter's master clock generator to achieve complete synchronization.

■ Front panel

WCK input, SUPERLINK via D-SUB and digital filter set for PULSE

■ Rear panel

■Four separate SUPERLINK transmission paths

Each transmission path delivers/receives the following signals.

MCK(Master Clock): The CD transport receives the master clock signal from the D/A converter through this line, and functions as a slave to the DA converter, enabling completely synchronized transportation of audio data.

BCK(Bit Clock): Sends bitclock signals, required for digital data bit identification(e.g. sampling frequency) or signal readout, from the CD transport to the D/A converter.

LRCK(L/R Clock): Sends left/right identification clock signals from the CD transport to the D/A converter.

DATA: Sends audio data from the CD transport to the D/A converter.

■SUPERLINK connection

Two SUPERLINK connections: Four BNC terminals for TL0 3.0, TL1N, TL2N and TL3N, and D-SUB-9 for TL2 and TL51 series. All CEC CD Transports and Players with one of those terminals are available with the SUPERLINK ultra low jitter transmission system.

■ Word clock input

44.1kHz word clock input is regenerated to 16.9344MHz for the SUPERLINK master clock. Perfect SUPERLINK connection is performed with a high precision clock generator connected.

■ SPDIF(Coaxial) input (optional function)

SUPERLINK BNC-BCK input is also used for SPDIF coaxial input. High resolution signal upsampled by TL2N is acceptable.

■ ESS Technology DAC chip

Digital-to-analog conversion is performed by the ESS Hyper stream DAC chip 32bit ES9028PRO from the flagship SABRE PRO series. Extra wide dynamic range (NDR) and ultra low total harmonic distortion plus noise (THD+N) result in reproducing music with unbelievable breath and depth of sound stage.

■ Analog output

Both conventional type RCA and balanced type XLR connections are available. We recommend the balanced connection to make DA SL balanced circuit superiority perform at its fullest.

■Specifications

Master clock output	BNC (MCK): 16.9344MHz
	D-SUB-9 (9): 16.9344MHz
Word clock input	BNC: 44.1kHz (to be regenarated for SUPERLINK MCK)
Superlink input	BNC x 3 (BCK, LRCK, DATA): 44.1kHz
	D-SUB-9 (2:BCK, 4:LRCK, 6:DATA): 44.1kHz
SPDIF(Coaxial) input	BNC x 1 (at SUPERLINK BCK terminal): PCM 24bit/32～192kHz
DAC chip	ESS ES9028PRO
Digital filter	switchable between FLAT and PULSE
Analog output	Balanced XLR (2pin: hot) x 1: 4Vrms
	Unbalanced RCA x 1: 2Vrms
Frequency response	20Hz to 20kHz/±0dB (at CD playback with FLAT filter)
S/N ratio	105dB, 1kHz/0dB
Crosstalk	105dB, 1kHz/0dB
THD	0.003%, 1KHz/0dB

Power supply	AC120V/230V, 50/60Hz specified on rear panel
Power consumption	10W
Dimensions	approx. 435 (W) x 335 (D) x 103 (H)mm (incl. terminals)
Weight	approx. 8.2kg
Accessories	AC power cord, 4 BNC cables, BNC/RCA adapter,
	remote control unit RU-219 and Owner's manual
Color	Silver and Black
Origin	Japan
EAN code	Siver 49 92287 10240 8, Black 49 92287 10241 5

■Compatible CD transport and player per connection

BNC x 4	TL0 3.0, TL1N, TL2N, TL3N
D-SUB-9	TL2XMKII, TL51, TL51Z, TL51ZMKII, TL51X, TL51XZ, TL51XR

>Design and specifications are subject to change without notice.

⚠ Safety Precaution	Be sure to operate this product properly once you have thoroughly read the owner's manual.

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