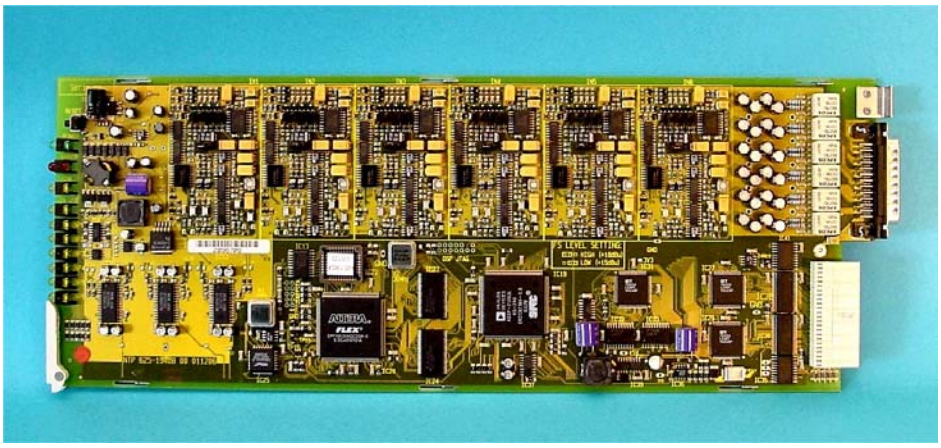
NTP TECHNOLOGY A/S

625 Digital Switching System
Microphone Card 625-190B



General Description.

The 625-190B Microphone input card is part of the 32-bit TDM Switching system type 625. The card is one of the latest developed cards in the 625 series equipped with 6 microphone inputs with very low-noise, integrated amplifiers. The input amplifiers are driven from a high (40V) supply voltage making the inputs tolerant to high common mode signals while maintaining the advantages of transformer less balanced inputs, such as low distortion and high overload level at low frequencies.

The input gain can be switched from 0 to 70dB in steps of 10dB. Additional gain and fine gain adjustments is performed by the on-board DSP. All inputs are capable of delivering a 48V phantom supply (switchable).

The A to D conversion is performed by high performance A/D converters which operate with 128 times over sampling, whereby anti-aliasing filters on the inputs are omitted.

Specifications:

Inputs (analogue to digital) :

Number of inputs on the card	6
Input sample frequency	48kHz (x 128)
Resolution	24-bits
Full scale reference level @ 0 dB gain	+15 or + 18dBu. Other levels at request.
Gain range	0 - 70dB in steps of 10 dB (performed by hardware)
Differential input impedance	> 10kOhm, electronic balanced
Common mode input impedance (no phantom supply)	> 200kOhm
Common mode input impedance (with phantom supply)	> 5kOhm
Common mode input voltage, max.	7V rms (20 V peak-peak)
Input Common Mode Rejection 15KHz:	> 60dB
Frequency response relative to 1KHz 20Hz to 20KHz	±0.15dB
Low cut filter responce	-3dB @ 20 / 40 Hz, 12 dB/octave
Noise related to input (@ 200 Ohm termination):	
@ 0 dB gain	-87dBu rms, Lin. 20Hz-20kHz
@ 40 dB gain	-123dBu rms, Lin. 20Hz-20kHz
@ 70 dB gain	-125dBu rms, Lin. 20Hz-20kHz
Linearity 1KHz :	
0 dBFS to B80 dBFS	±0.1dB
-80 dBFS to B100 dBFS	±0.3dB
-100dBFS to B120 dBFS	±2.0dB
Conversion related group delay	0.85msec
Harmonic distortion, including noise:	
At -1dBFS (+17dBu in, 0dB Gain) : 20Hz to 20 kHz	< Currently under test
At B20 dBFS (-2 dBu in): 20Hz to 20 KHz	< Currently under test
At B60 dBFS (-42 dBu in): 20Hz to 20 KHz	< Currently under test
Dynamic range: (-60 dB 1KHz measured w. bandpass filter)	>106 dB
Channel separation between any input at equal gain setting	> 100dB (20Hz to 15kHz)
Phantom supply	48V +/- 10%

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