

# Dialogic® D/120JCT-LS

## Voice, Speech and Fax Analog Media Processing Resources

The Dialogic D/120 JCT-LS is a standards-based board specifically designed to support Speech, IVR, Messaging and Fax applications as a twelve port analog board in a single PCI slot. It provides twelve analog telephone interface circuits for direct connection to analog loop start lines available for voice or a maximum of four lines can be used for fax.

### FEATURES AND BENEFITS

#### Supports continuous speech processing

When coupled with efficient drivers, off-loads critical real-time signal processing in speech-enabled applications to onboard DSPs.

Reduces system latency, increases recognition accuracy, and improves overall system response time for high-density speech solutions.

#### Supports up to four channels of DSP-based onboard fax

Supports an international Caller ID capability via on-hook audio path

### D/120 JCT-LS SPECIFICATIONS

#### HARDWARE

Number of ports	12
Maximum boards per system	8
CT Bus loads per board	1
Maximum CT Bus loads per system	20
Analog network interface	onboard loop start interface (12)
Resource sharing bus	CT Bus
Control microprocessor	Intel 80486 GXSF running at 32.768 MHz with 2 MB SDRAM
Digital signal processor	Freescale DSP56303 @ 100 MHz, with 128Kx24 private SRAM
Supported operating systems	Windows®; Linux.Details at <a href="http://www.dialogic.com/systemreleases">http://www.dialogic.com/systemreleases</a>
CSP	Yes
Signaling	Analog loop start

I/O ports	None
Form factor	PCI Express x1 lane configuration (or higher) 12.28 in. (31.2 cm) long 4.2 in. (10.67 cm) high

#### POWER REQUIREMENTS

##### PCI

+5 VDC	1.2 A typical, 1.4 A maximum
+12 VDC	235 mA typical, 285 mA maximum
-12 VDC	80 mA typical, 100 mA maximum

##### PCI Express

+3.3 VDC	1.12 A typical, 1.4 A maximum
+12 VDC	800 mA typical, 900 mA maximum

#### HOST INTERFACE

##### PCI

Bus compatibility	Complies with PCI-SIG Bus Specification, Rev. 2.2
Bus speed	33 MHz maximum
Bus mode	32-bit
Shared memory	32 KB to 64 KB page
I/O ports	None
Form factor	Universal slot (5 V or 3.3 V) PCI long card 12.28 in. (31.2 cm) long 4.2 in. (10.67 cm) high

##### PCI Express

Bus compatibility	Complies with PCI-SIG PCI Express Base Specification, Rev. 1.1
Bus speed	2.5 GHz maximum per direction
Bus mode	x1 lane configuration (x1 or higher compatible)
Shared memory	32 KB to 64 KB page

#### TELEPHONE INTERFACE

Trunk type	Loop start
Loop current range	20 mA to 60 mA, (Euro) 20 mA to 120 mA, polarity insensitive
Impedance	600 Ohms nominal
Ring detection	40 Vrms to 130 Vrms, 15.3 Hz to 68.0 Hz
Echo return loss	17 dB minimum (at country impedance)
Crosstalk coupling	>-75 dB
Connector	RJ-25, 6-port, 6-position
Frequency response	300 Hz to 3400 Hz ±3 dB

#### RELIABILITY

Estimated MTBF	Per Telcordia Method PCI:154,000 hours PCI Express:154,000 hours
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## SPRINGWARE/JCT SPECIFICATIONS

### FACSIMILE

Fax compatibility	ITU-T G3 compliant (T.4, T.30) ETSI NET/30 compliant
Data rate	14.4 kb/s (v.17) send 9.6 kb/s (v.29) receive
Variable speed selection	Automatic step-down to 12 kb/s, 9.6 kb/s, 7.2 kb/s, 4.8 kb/s, and lower
Transmit data modes	Modified Huffman (MH) Modified Read (MR)
Receive data modes	MH, MR
File data formats	Tagged Image File Format-Fax (TIFF-Fax) for transmit/receive MH and MR
Error correction	Detection, reporting, and correction of faulty scan lines
Image widths	8.5 in. (21.5 cm) 10.0 in. (25.5 cm) 11.9 in. (30.3 cm)
Image scaling	Automatic horizontal and vertical scaling between page sizes
Image resolution	Normal (203 pels/in. x 98 lines/in.) (203 pels/2.54 cm x 98 lines/2.54 cm) Fine (203 pels/in. x 196 lines/in.) (203 pels/2.54 cm x 196 lines/2.54 cm)
Fill minimization	Automatic fill bit insertion & stripping

### AUDIO SIGNAL

Receive range	-40 dBm to -7 dBm nominal, configurable by parameter**
Automatic gain control	Application can enable/disable Above -22 dBm results in full-scale recording, configurable by parameter**
Silence detection	-40 dBm nominal, software adjustable**
Transmit level (weighted average)	-9.5 dBm0 nominal, configurable by parameter**
Transmit volume control	40 dB adjustment range, with application-definable increments and legal limit cap

### DTMF TONE DETECTION

DTMF digits	0 to 9, *, #, A, B, C, D per Telecordia LSSGR Sec 6
Dynamic range	-38 dBm to -3 dBm per tone, configurable by parameter**
Minimum tone duration	40 ms, can be increased with software configuration
Interdigit timing	Detects like digits with a >40 ms interdigit delay Detects different digits with a 0 ms interdigit delay
Twist and frequency variation	Meets Telecordia LSSGR Sec 6 and EIA 464 requirements

Noise tolerance	Meets Telecordia LSSGR Sec 6 and EIA 464 requirements for Gaussian, impulse, and power line noise tolerance
Cut-through	Local echo cancellation permits 100% detection with a >4.5 dB return loss line
Talk-off	Detects less than 20 digits while monitoring Telecordia TR-TSY-000763 standard speech tapes (LSSGR requirements specify detecting no more than 470 total digits) Detects 0 digits while monitoring MITEL speech tape #CM 7291

### GLOBAL TONE DETECTION

Tone type	Programmable for single or dual
Maximum number of tones	Application-dependent
Frequency range	Programmable within 300 Hz to 3500 Hz
Maximum frequency deviation	Programmable in 5 Hz increments
Frequency resolution	± 5 Hz
Timing	Separation of dual- frequency tones is limited to 62.5 Hz at a signal-to-noise ratio of 20 dB
Dynamic range	Programmable cadence qualifier, in 10 ms increments Programmable, default set at -6 dBm0 to +3 dBm0 per tone

### GLOBAL TONE GENERATION

Tone type	Generate single or dual tones
Frequency range	Programmable within 200 Hz to 4000 Hz
Frequency resolution	1 Hz
Duration	10 ms increments
Amplitude	-43 dBm0 to -3 dBm0 per tone, programmable

### MF SIGNALING

MF digits	0 to 9, KP, ST, ST1, ST2, ST3 per Telecordia LSSGR Sec 6, TR-NWT-000506 and ITU-T Q.321
Transmit level	Complies with Telecordia LSSGR Sec 6, TR-NWT-000506
Signaling mechanism	Complies with Telecordia LSSGR Sec 6, TR-NWT-000506
Dynamic range for detection	-25 dBm0 to +3 dBm0 per tone
Acceptable twist	6 dB
Acceptable frequency variation	Less than ±1 Hz

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