

# Dialogic® D/41JCT-LS

*Voice, Speech and Fax Analog Media Processing Resources*

The Dialogic D/41JCT-LS supports voice, fax, and software-based speech recognition processing in a single uPCI or PCI Express slot, providing four analog telephone interface circuits for direct connection to analog loop start lines.

## FEATURES AND BENEFITS

### Supports Continuous Speech Processing (CSP)

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 international Caller ID capability via on-hook audio path.

## D/41JCT-LS SPECIFICATIONS

### HARDWARE

Number of ports	4
Maximum boards per system	8
CT Bus loads per board	1
Maximum CT Bus loads per system	20
Analog network interface	4 onboard loop start interface circuits
Resource sharing bus	CT Bus H.100
Control processor	80C186 @ 34.8 MHz
Digital signal processor	Freescale DSP56303 @ 100 MHz, with 128Kx24 private SRAM
Supported operating systems	Windows®: SR 6.0 SU 131 or higher.
CSP	Yes
Signaling	Analog loop start

### HOST INTERFACE

#### PCI and PCI Express

Bus compatibility	PCI, PCI Express
PCI Bus speed	33 MHz maximum
PCI Bus mode	Target mode operation only
Shared memory	32 KB page
I/O ports	None
Form factor	Universal PCI or PCI Express 12.3 in. (31.24 cm) long without edge retainer or 13.3 in. (33.78 cm) long with edge retainer 0.79 in. (2 cm) wide (total envelope) 3.87 in. (9.83 cm) high (excluding edge connector)

### POWER REQUIREMENTS

#### PCI

+5 VDC	750 mA maximum
+12 VDC	200 mA maximum
-12 VDC	100 mA maximum

#### PCI Express

+12 VDC	450 mA maximum
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### TELEPHONE INTERFACE

Trunk type	Loop start
Loop current range	20 mA to 120 mA
Impedance	600 Ohms nominal
Ring detection	15 Vrms minimum, 13 Hz to 68 Hz, (configurable by parameter**)
Echo return loss	Configurable by software parameter
Crosstalk coupling	Less than -70 dB at 1 kHz channel to channel
Connector	4 RJ-11 type
Receive signal/noise ratio	70 dB referenced to -15 dBm
Frequency response	200 Hz to 3400 Hz ±3 dB (transmit and receive)

### RELIABILITY

Estimated MTBF	Per Telcordia Method 1 PCI: 274,000 hours PCI Express: 230,000 hours
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## SPRINGWARE/JCT SPECIFICATIONS

### FACSIMILE

Fax compatibility	ITU-T G3 compliant (T.4, T.30) ETSI NET/30 compliant	Twist and frequency variation	Meets Telcordia LSSGR Sec 6 and EIA 464 requirements
Data rate	14,400 b/s (v.17) send 9600 b/s receive	Noise tolerance	Meets Telcordia LSSGR Sec 6 and EIA 464 requirements for Gaussian, impulse, and powerline noise tolerance
Variable speed selection	Automatic step-down to 12,000 b/s, 9600 b/s, 7200 b/s, 4800 b/s, and lower	Cut-through	Local echo cancellation permits 100% detection with a >4.5 dB return loss line
Transmit data modes	Modified Huffman (MH) Modified Read (MR)	Talk-off	Detects less than 20 digits while monitoring Telcordia 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
Receive data modes	MH MR		
File data formats	Tagged Image File Format-Fax (TIFF-F) 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. (25.4 cm) 11.9 in. (30.2 cm)		
Image scaling	Automatic horizontal and vertical scaling between page sizes		
Image resolution	Normal (203 pels/in. x 98 lines/in.; 203 pels/2.5 cm x 98 lines/2.5 cm) Fine (203 pels/in. x 196 lines/in.; 203 pels/2.5 cm x 196 lines/2.5 cm)		
Fill minimization	Automatic fill bit insertion & stripping		

### AUDIO SIGNAL

Receive range	-40 dBm to +2.5 dBm0 nominal, configurable by parameter**
Automatic gain control	Application can enable/disable Above -18 dBm0 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 Telcordia 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

### 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 Separation of dual- frequency tones is limited to 62.5 Hz at a signal-to-noise ratio of 20 dB
Timing	Programmable cadence qualifier, in 10 ms increments
Dynamic range	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 Telcordia LSSGR Sec 6, TR-NWT-000506 and ITU-T Q.321
Transmit level	Complies with Telcordia LSSGR Sec 6, TR-NWT- 000506
Signaling mechanism	Complies with Telcordia 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

**Dialogic**  
Application Partner  

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**Innovator**

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Solutions

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