

## TI High-Performance PALs

Device	Speed Designator		Package Commercial / Military	Data I/O Family / Pinout
	Commercial	Military		
PAL16L8	NA	A/A-2	NA/ J, W, FK	9A/17
PAL16R4	NA	A/A-2	NA/ J, W, FK	9A/24
PAL16R6	NA	A/A-2	NA/ J, W, FK	9A/24
PAL16R8	NA	A/A-2	NA/ J, W, FK	9A/24
TIBPAL16L8	-5	-7	N, FN/ NA	AD/17
TIBPAL16R4	-5	-7	N, FN/ J, W, FK	AD/24
TIBPAL16R6	-5	-7	N, FN/ NA	AD/24
TIBPAL16R8	-5	-7	N, FN/ J, W, FK	AD/24
TIBPAL16L8	-7	-10	N, FN/ J, W, FK	0B/17
TIBPAL16R4	-7	-10	N, FN/ J, W, FK	0B/24
TIBPAL16R6	-7	-10	N, FN/ J, W, FK	0B/24
TIBPAL16R8	-7	-10	N, FN/ J, W, FK	0B/24
TIBPAL16L8	-10	-12	N, FN/ J, W, FK	A1/17
TIBPAL16R4	-10	-12	N, FN/ J, W, FK	A1/24
TIBPAL16R6	-10	-12	N, FN/ J, W, FK	A1/24
TIBPAL16R8	-10	-12	N, FN/ J, W, FK	A1/24
TIBPAL16L8	-15/-25	-20/-30	N, FN/ J, W, FK	9A/17
TIBPAL16R4	-15/-25	-20/-30	N, FN/ J, W, FK	9A/24
TIBPAL16R6	-15/-25	-15/-20/-30	N, FN/ J, W, FK	9A/24
TIBPAL16R8	-15/-25	-15/-20/-30	N, FN/ J, W, FK	9A/24
TIBPAL16L8 <b>1/</b>	NA	-15	NA/ J, W, FK	A1/17
TIBPAL16R4 <b>2/</b>	NA	-15	NA/ J, W, FK	A1/24

**1/** For date code **9903A** or later device programming, select from either **TI Military / 16L8-12** or **TI / 16L8-10** on Manufacturer/Device menu listing in your programming systems.

**2/** For date code **9616A** or later device programming, select from either **TI Military / 16R4-12** or **TI / 16R4-10** on Manufacturer/Device menu listing in your programming systems.

### TI High-Performance PALs

Device	Speed Designator		Package Commercial / Military	Data I/O Family / Pinout
	Commercial	Military		
TIBPAL20L8	-5	NA	NT, FN/ NA	AD/26
TIBPAL20R4	-5	NA	NT, FN/ NA	AD/27
TIBPAL20R6	-5	NA	NT, FN/ NA	AD/27
TIBPAL20R8	-5	-7	NT, FN/ JT, W, FK	AD/27
TIBPAL20L8	-7	-10	NT, FN/ JT, W, FK	0B/26
TIBPAL20R4	-7	-10	NT, FN/ JT, W, FK	0B/27
TIBPAL20R6	-7	-10	NT, FN/ JT, W, FK	0B/27
TIBPAL20R8	-7	-10	NT, FN/ JT, W, FK	0B/27
TIBPAL20L8	-10	NA	NT, FN/ NA	0B/26
TIBPAL20R4	-10	NA	NT, FN/ NA	0B/27
TIBPAL20R6	-10	NA	NT, FN/ NA	0B/27
TIBPAL20R8	-10	NA	NT, FN/ NA	0B/27
TIBPAL20L8	-15/-25	-20	NT, FN/ JT, W, FK	A1/26
TIBPAL20R4	-15/-25	-20	NT, FN/ JT, W, FK	A1/27
TIBPAL20R6	-15/-25	-20	NT, FN/ JT, W, FK	A1/27
TIBPAL20R8	-15/-25	-20	NT, FN/ JT, W, FK	A1/27
TIBPAL22V10	-7	NA	NT, FN/ NA	99/28
TIBPAL22V10	-10	NA	NT, FN/ NA	99/28
TIBPAL22V10	-15B	NA	NT, FN/ NA	99/28
TIBPAL22V10	NA	-20	NA/ JT, W, FK	99/28
TIBPAL22V10A	(-25)	(-30)	NT, FN/ JT, W, FK	99/28
TIBPAL22VP10	-20	-25	NT, FN/ JT, W, FK	99/28

### TI CMOS PALs

Device	Speed Designator		Package Commercial / Military	Data I/O Family / Pinout
	Commercial	Military		
TICPAL22V10Z(T)	-25	NA	JTL, NT, FN	42/29
TICPAL22V10Z(ZP)	-35	NA	JTL, NT, FN	42/28

## TI JAN PALs

Device	Military Package	Data I/O Family / Pinout
JM/50401BRA (PAL16L8A)	J	9A/17
JM/50402BRA (PAL16R8A)	J	9A/24
JM/50403BRA (PAL16R6A)	J	9A/24
JM/50404BRA (PAL16R4A)	J	9A/24
JM/50407BRA (PAL16L8A-2)	J	9A/17
JM/50408BRA (PAL16R8A-2)	J	9A/24
JM/50409BRA (PAL16R6A-2)	J	9A/24
JM/50410BRA (PAL16R4A-2)	J	9A/24
JM/50501BLA (TIBPAL20L8-20)	JT	A1/26
JM/50502BLA (TIBPAL20R8-20)	JT	A1/27
JM/50503BLA (TIBPAL20R6-20)	JT	A1/27
JM/50504BLA (TIBPAL20R4-20)	JT	A1/27
JM/50601BRA (TIBPAL16L8-20)	J	9A/17
JM/50602BRA (TIBPAL16R8-20)	J	9A/24
JM/50603BRA (TIBPAL16R6-20)	J	9A/24
JM/50604BRA (TIBPAL16R4-20)	J	9A/24
JM/50605BRA (TIBPAL16L8-30)	J	9A/17
JM/50606BRA (TIBPAL16R8-30)	J	9A/24
JM/50607BRA (TIBPAL16R6-30)	J	9A/24
JM/50608BRA (TIBPAL16R4-30)	J	9A/24

## Package Designator Description

N	=	20-Pin, 300 mil Plastic DIP
J	=	20-Pin, 300 mil Ceramic DIP
W	=	Ceramic Flat Pack
NT	=	24-Pin, 300 mil Plastic DIP
JT	=	24-Pin, 300 mil Ceramic DIP
FN	=	Plastic Leaded Chip Carrier
FK	=	Leadless Ceramic Chip Carrier
JTL	=	24-Pin, 300 mil Ceramic Windowed DIP

## IMPORTANT NOTICE

Texas Instruments Incorporated and its subsidiaries (TI) reserve the right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice. Customers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its hardware products to the specifications applicable at the time of sale in accordance with TI's standard warranty. Testing and other quality control techniques are used to the extent TI deems necessary to support this warranty. Except where mandated by government requirements, testing of all parameters of each product is not necessarily performed.

TI assumes no liability for applications assistance or customer product design. Customers are responsible for their products and applications using TI components. To minimize the risks associated with customer products and applications, customers should provide adequate design and operating safeguards.

TI does not warrant or represent that any license, either express or implied, is granted under any TI patent right, copyright, mask work right, or other TI intellectual property right relating to any combination, machine, or process in which TI products or services are used. Information published by TI regarding third-party products or services does not constitute a license from TI to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

Reproduction of information in TI data books or data sheets is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. Reproduction of this information with alteration is an unfair and deceptive business practice. TI is not responsible or liable for such altered documentation.

Resale of TI products or services with statements different from or beyond the parameters stated by TI for that product or service voids all express and any implied warranties for the associated TI product or service and is an unfair and deceptive business practice. TI is not responsible or liable for any such statements.

Following are URLs where you can obtain information on other Texas Instruments products and application solutions:

<b>Products</b>		<b>Applications</b>	
Amplifiers	<a href="http://amplifier.ti.com">amplifier.ti.com</a>	Audio	<a href="http://www.ti.com/audio">www.ti.com/audio</a>
Data Converters	<a href="http://dataconverter.ti.com">dataconverter.ti.com</a>	Automotive	<a href="http://www.ti.com/automotive">www.ti.com/automotive</a>
DSP	<a href="http://dsp.ti.com">dsp.ti.com</a>	Broadband	<a href="http://www.ti.com/broadband">www.ti.com/broadband</a>
Interface	<a href="http://interface.ti.com">interface.ti.com</a>	Digital Control	<a href="http://www.ti.com/digitalcontrol">www.ti.com/digitalcontrol</a>
Logic	<a href="http://logic.ti.com">logic.ti.com</a>	Military	<a href="http://www.ti.com/military">www.ti.com/military</a>
Power Mgmt	<a href="http://power.ti.com">power.ti.com</a>	Optical Networking	<a href="http://www.ti.com/opticalnetwork">www.ti.com/opticalnetwork</a>
Microcontrollers	<a href="http://microcontroller.ti.com">microcontroller.ti.com</a>	Security	<a href="http://www.ti.com/security">www.ti.com/security</a>
		Telephony	<a href="http://www.ti.com/telephony">www.ti.com/telephony</a>
		Video & Imaging	<a href="http://www.ti.com/video">www.ti.com/video</a>
		Wireless	<a href="http://www.ti.com/wireless">www.ti.com/wireless</a>

Mailing Address: Texas Instruments  
Post Office Box 655303 Dallas, Texas 75265

Copyright © 2005, Texas Instruments Incorporated