



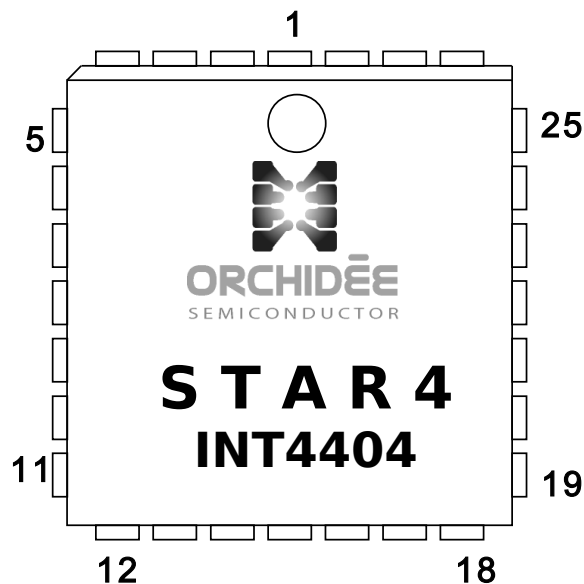
Orchidée Semiconductor 4-Port DASL Interface Transceiver

Features

- Pin-for-Pin replacement for industry-standard TP3404 (QDASL™) component
- Up to 2.0km (0.4mm) line interface performance
- MICROWIRE™ compatible serial bus interface
- Low Power dynamic operation
- Single 5V supply
- 28-pin PLCC (Green, Pb-free) package

Description

The Orchidée Semiconductor INT4404 is a fully featured replacement for the industry standard 4-port DASL™ interface layer-1 device. It supports loop lengths up to 2.0km over AWG26 cable and provides all signal conditioning, equalization and adaptive threshold adjustment to optimize line performance.



MICROWIRE™, DASL™ and QDASL™ are trademarks of National Semiconductor Corp.

ELECTRICAL CHARACTERISTICS

Absolute Maximum Ratings ($V_{SS} = 0V$, $T_J = 25^{\circ}C$)

Parameter	Symbol	Rated Values	Unit
Power Supply Voltage	V_{DD}	-0.3 to +7.0	V
Input Voltage	V_I	-0.3 to +7.0	
Output Voltage	V_O	-0.3 to VDD	
Input Current	I_I	-10 to +10	mA
Output Current per I/O	I_O	-10 to +10	
Storage Temperature	T_{STG}	-65 to +150	$^{\circ}C$

Recommended Operating Conditions ($V_{SS} = 0V$)

Parameter	Symbol	Rated Values	Unit
Power Supply Voltage	V_{DD}	+4.75 to +5.25	V
Junction Temperature	T_J	-40 to +100	$^{\circ}C$

DC Characteristics (Over Operating Range)

Parameter	Symbol	Conditions	Rated Values			Unit
			Min.	Typ.	Max.	
High Level Input Voltage	V_{IH}		2.0	-	V_{DD}	V
Low Level Input Voltage	V_{IL}		0.0	-	0.8	
High Level Output Voltage	V_{OH}	$I_{OH} = TBD$	2.4	-	-	
Low Level Output Voltage	V_{OL}	$I_{OL} = TBD$	-	-	0.4	
High Level Input Current	I_I	$V_{IH} = V_{DD}$	-	-	10	uA
Low Level Input Current	I_O	$V_{IL} = V_{SS}$	-10	-	-	
3-State Output Leakage Current	I_{OZH}		-10	-	10	
	I_{OZL}		-10	-	10	
Stand-by Current	I_{DDQ}	$V_{IH} = V_{DD}$, $V_{IL} = V_{SS}$		TBD		

Pin Descriptions

Pin	Signal	Type	Description
1	GNDA	Supply	Analog Ground
2	LI1	Analog	Line Interface
3	LO1	Analog	Line Interface
4	LO0	Analog	Line Interface
5	LI0	Analog	Line Interface
6	N.C.		
7	DI	Input	TDM D-channel data
8	DO	Output	TDM D-channel data
9	MCLK	Input	Master 4.096MHz clock input
10	BCLK	Input	Bit clock input for TDM bus
11	FS	Input	TDM Frame Sync signal
12	BI	Input	TDM B-channel data
13	BO	Output	TDM B-channel data
14	TSB	Output	TDM B-channel valid signal
15	GNDD	Supply	Digital Ground
16	VDDD	Supply	Digital Power, +5V
17	INTB	Output	Interrupt output
18	CSB	Input	MICROWIRE™ interface pin
19	CCLK	Input	MICROWIRE™ interface pin
20	CO	Output	MICROWIRE™ interface pin
21	CI	Input	MICROWIRE™ interface pin
22	N.C.		
23	N.C.		
24	LI3	Analog	Line Interface
25	LO3	Analog	Line Interface
26	LO2	Analog	Line Interface
27	LI2	Analog	Line Interface
28	VDDA	Supply	Analog Power, +5.0V

Contact Information

Company Headquarters:

Orchidée Semiconductor, Inc.
102 S. Tejon St., Suite 1100
Colorado Springs, CO 80903 USA
Telephone: +1 719-578-3320
<http://www.orchidée.com>

Sales Offices:

North America Region

Orchidée Semiconductor
P.O. Box 7593
San Jose, CA 95150-7593
Tel: 408 321 7600
Fax: 408 321 7601

Contact:

Asif Subedar
e-mail: asifs@norcalts.com

Central Europe

Orchidée Semiconductor
Ruhbronweg 11/1
D- 74385 Pleidelsheim
Germany
Tel: +49 7144 884550
Fax: +49 7144 884551

Contact:

Rainer Hake
e-mail: rhake@orchidee.com

Northern Europe/Scandinavia

Orchidée Semiconductor
Heleneborgsg 21
117 31 Stockholm
Sweden
Tel: +46 (0) 8 669 5650

Contact:

Lars Nilsson
e-mail: lars.nilsson@tele2.se