

FEATURES

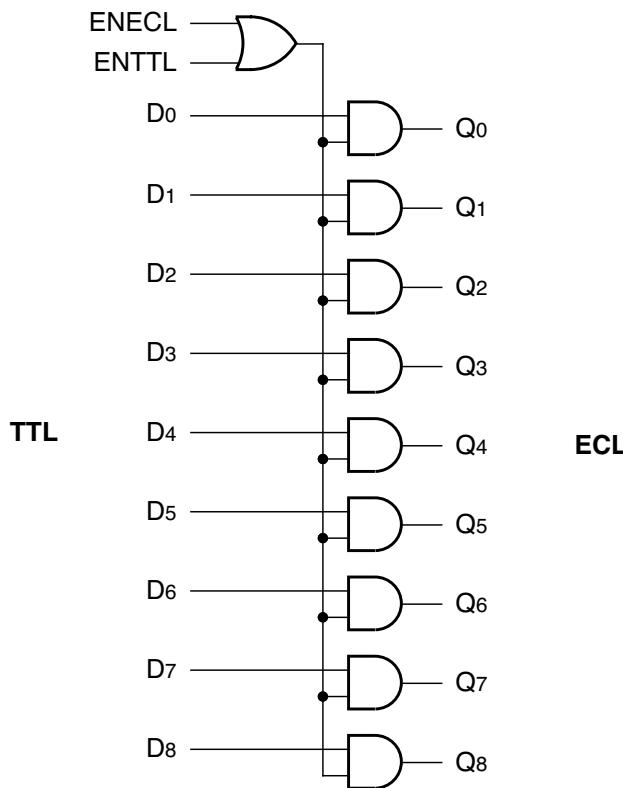
- 9-bit ideal for byte-parity applications
- Flow-through configuration
- Extra TTL and ECL power/ground pins to minimize switching noise
- ECL and TTL enable inputs
- Dual supply
- 3.5ns max. D to Q
- PNP TTL inputs for low loading
- Choice of ECL compatibility: MECL 10KH (10Hxxx) or 100K (100Hxxx)
- Fully compatible with MC10H/100H600
- Available in 28-pin PLCC package

DESCRIPTION

The SY10/100H600 are 9-bit, dual supply TTL-to-ECL translators. Devices in the Micrel 9-bit translator series utilize the 28-lead PLCC for optimal power pinning, signal flow-through and electrical performance.

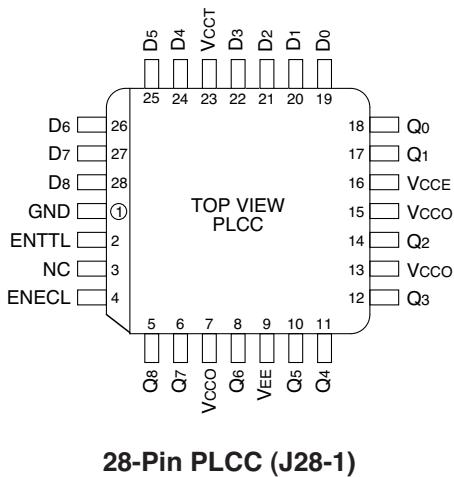
The H600 features both ECL and TTL logic enable controls for maximum flexibility.

The 10H version is compatible with MECL 10KH ECL logic levels. The 100H version is compatible with 100K levels.

BLOCK DIAGRAM

PIN NAMES

Pin	Function
GND	TTL Ground (0V)
VCCE	ECL Vcc (0V)
VCCO	ECL Vcc (0V) — Outputs
VCCT	TTL Supply (+5.0V)
VEE	ECL Supply (-5.2/-4.5V)
D0-D8	Data Inputs (TTL)
Q0-Q8	Data Outputs (ECL)
ENECL	Enable Control (ECL)
ENTTL	Enable Control (TTL)

PACKAGE/ORDERING INFORMATION

Ordering Information⁽¹⁾

Part Number	Package Type	Operating Range	Package Marking	Lead Finish
SY10H600JC	J28-1	Commercial	SY10H600JC	Sn-Pb
SY10H600JCTR ⁽²⁾	J28-1	Commercial	SY10H600JC	Sn-Pb
SY100H600JC	J28-1	Commercial	SY100H600JC	Sn-Pb
SY100H600JCTR ⁽²⁾	J28-1	Commercial	SY100H600JC	Sn-Pb
SY10H600JZ ⁽³⁾	J28-1	Commercial	SY10H600JZ with Pb-Free bar-line indicator	Matte-Sn
SY10H600JZTR ^(2, 3)	J28-1	Commercial	SY10H600JZ with Pb-Free bar-line indicator	Matte-Sn
SY100H600JZ ⁽³⁾	J28-1	Commercial	SY100H600JZ with Pb-Free bar-line indicator	Matte-Sn
SY100H600JZTR ^(2, 3)	J28-1	Commercial	SY100H600JZ with Pb-Free bar-line indicator	Matte-Sn

Notes:

1. Contact factory for die availability. Dice are guaranteed at $T_A = 25^\circ\text{C}$, DC Electricals only.
2. Tape and Reel.
3. Pb-Free package is recommended for new designs.

TRUTH TABLE

ENECL	ENTTL	D	Q
H	X	H	H
H	X	L	L
X	H	H	H
X	H	L	L
L	L	X	L

DC ELECTRICAL CHARACTERISTICS

VCCT = 5.0V ± 10%; VEE = -4.75V to -5.5V (10H Version); VEE = -4.2V to -5.5V (100H Version)

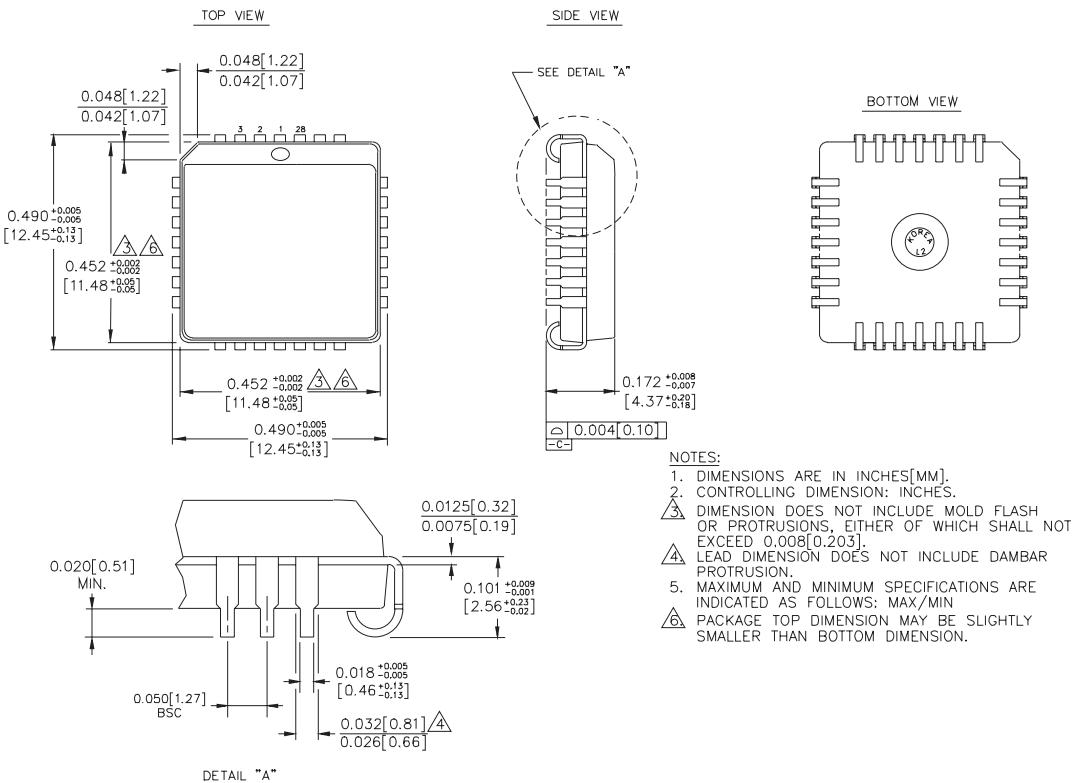
Symbol	Parameter	TA = 0°C		TA = +25°C		TA = +85°C		Unit	Condition
		Min.	Max.	Min.	Max.	Min.	Max.		
I _{EE}	Power Supply Current, ECL 10H 100H	—	125 122	—	125 123	—	125 132	mA	—
I _{CCH} I _{CL}	Power Supply Current, TTL	—	48 50	—	48 50	—	48 50	mA	—

AC ELECTRICAL CHARACTERISTICS

VCCT = 5.0V ± 10%; VEE = -4.75V to -5.5V (10H Version); VEE = -4.2V to -5.5V (100H Version)

Symbol	Parameter	TA = 0°C		TA = +25°C		TA = +85°C		Unit	Condition
		Min.	Max.	Min.	Max.	Min.	Max.		
t _{PD}	Propagation Delay to Output D ENECL/ENTTL	1.4 1.8	3.0 3.7	1.5 1.9	3.2 3.9	1.7 2.0	3.5 4.1	ns	50Ω to -2.0V
t _r t _f	Output Rise/Fall Time 20% to 80%, 80% to 20%	0.5	1.5	0.5	1.5	0.5	1.5	ns	50Ω to -2.0V

28-PIN PLCC (J28-1)



Rev. 03

MICREL, INC. 2180 FORTUNE DRIVE SAN JOSE, CA 95131 USA

TEL + 1 (408) 944-0800 FAX + 1 (408) 474-1000 WEB <http://www.micrel.com>

The information furnished by Micrel in this data sheet is believed to be accurate and reliable. However, no responsibility is assumed by Micrel for its use. Micrel reserves the right to change circuitry and specifications at any time without notification to the customer.

Micrel Products are not designed or authorized for use as components in life support appliances, devices or systems where malfunction of a product can reasonably be expected to result in personal injury. Life support devices or systems are devices or systems that (a) are intended for surgical implant into the body or (b) support or sustain life, and whose failure to perform can be reasonably expected to result in a significant injury to the user. A Purchaser's use or sale of Micrel Products for use in life support appliances, devices or systems is at Purchaser's own risk and Purchaser agrees to fully indemnify Micrel for any damages resulting from such use or sale.

© 2006 Micrel, Incorporated.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Microchip:

[SY100H600JZ](#) [SY100H600JZ-TR](#)