

## 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 Motorola MC10H/100H600
- Available in 28-pin PLCC package

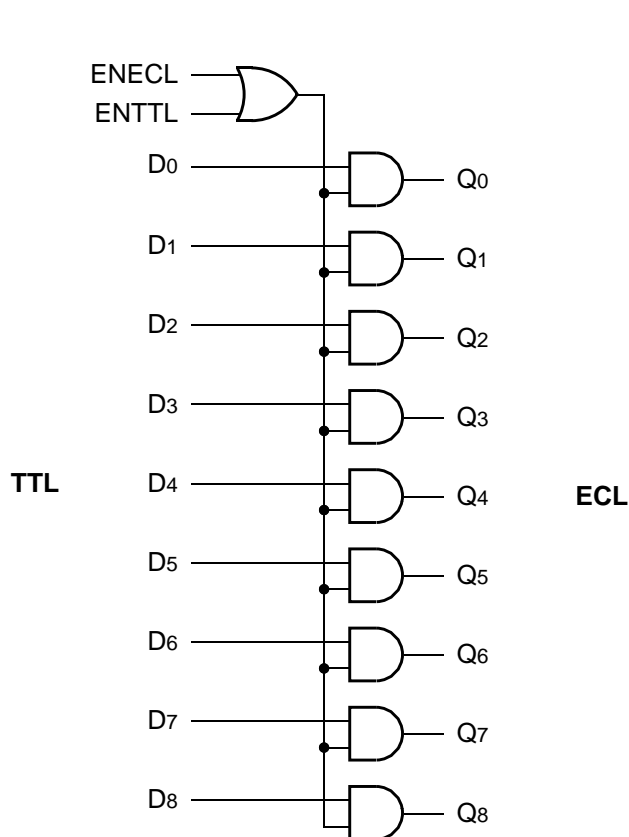
## DESCRIPTION

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

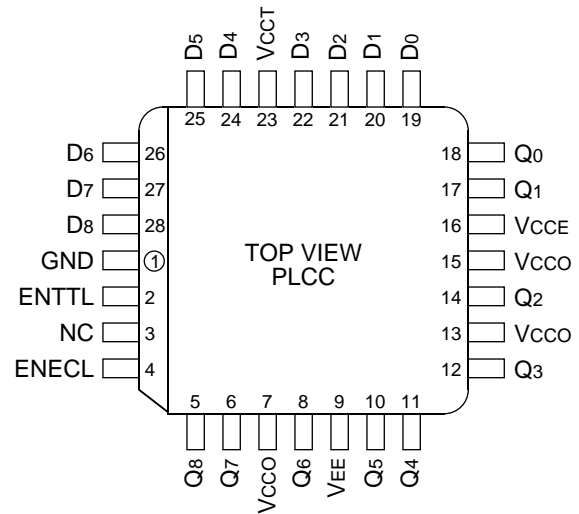
The H600 features both ECL and TTL logic enable controls for maximum flexibility.

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

## BLOCK DIAGRAM



## PIN CONFIGURATION



## 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)

**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**

V<sub>CC</sub>T = 5.0V ± 10%; V<sub>EE</sub> = -4.75V to -5.5V (10H Version); V<sub>EE</sub> = -4.2V to -5.5V (100H Version)

Symbol	Parameter	T <sub>A</sub> = 0°C		T <sub>A</sub> = +25°C		T <sub>A</sub> = +85°C		Unit	Condition	
		Min.	Max.	Min.	Max.	Min.	Max.			
I <sub>EE</sub>	Power Supply Current, ECL	10H	—	125	—	125	—	125	mA	—
		100H	—	122	—	123	—	132		
I <sub>CC</sub> H I <sub>CC</sub> L	Power Supply Current, TTL	—	48	—	48	—	48	50	mA	—
		—	50	—	50	—	50			

**AC ELECTRICAL CHARACTERISTICS**

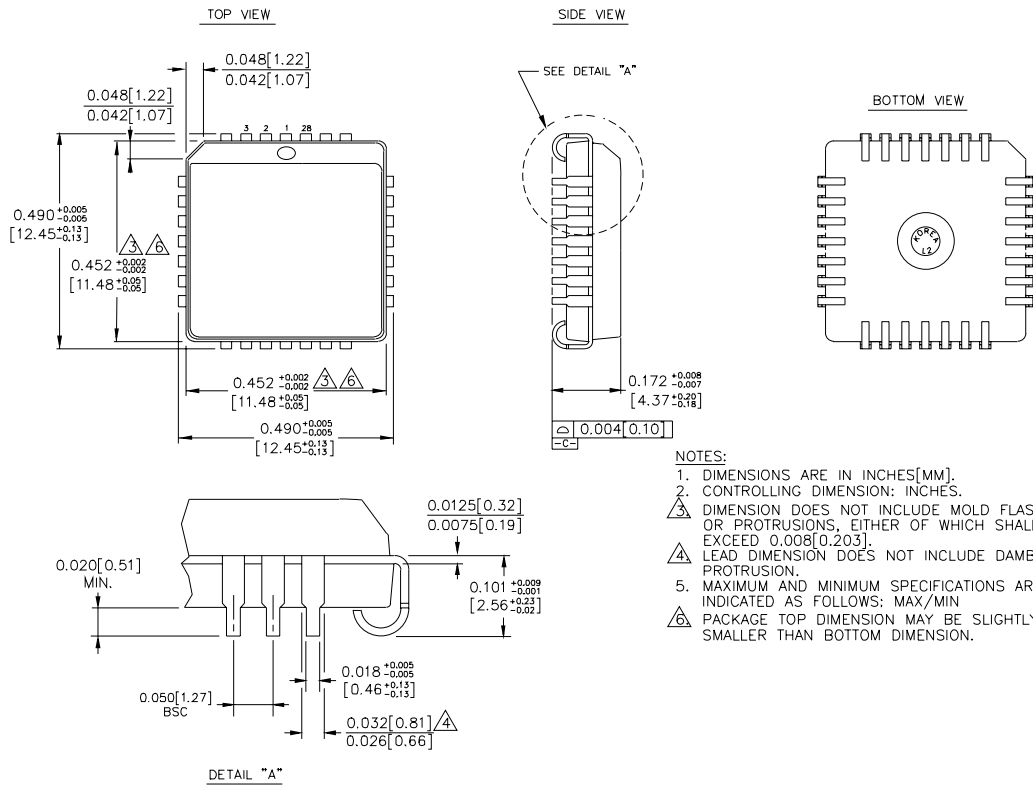
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Symbol	Parameter	T <sub>A</sub> = 0°C		T <sub>A</sub> = +25°C		T <sub>A</sub> = +85°C		Unit	Condition
		Min.	Max.	Min.	Max.	Min.	Max.		
t <sub>PLH</sub> t <sub>PHL</sub>	Propagation Delay to Output D ENECL/ENTTL	1.4 1.8	3.0 3.7	1.5 1.9	3.2 3.9	1.7 2.0	3.5 4.1	ns	50Ω to -2.0V
t <sub>r</sub> t <sub>f</sub>	Output Rise/Fall Time 20% to 80%, 80% to 20%	0.5	1.5	0.5	1.5	0.5	1.5		

**PRODUCT ORDERING CODE**

Ordering Code	Package Type	Operating Range
SY10H600JC	J28-1	Commercial
SY10H600JCTR	J28-1	Commercial
SY100H600JC	J28-1	Commercial
SY100H600JCTR	J28-1	Commercial

**28 LEAD PLCC (J28-1)**



- NOTES:**
1. DIMENSIONS ARE IN INCHES[MM].
  2. CONTROLLING DIMENSION: INCHES.
  3. DIMENSION DOES NOT INCLUDE MOLD FLASH OR PROTRUSIONS, EITHER OF WHICH SHALL NOT EXCEED 0.008[0.203].
  4. LEAD DIMENSION DOES NOT INCLUDE DAMBAR PROTRUSION.
  5. MAXIMUM AND MINIMUM SPECIFICATIONS ARE INDICATED AS FOLLOWS: MAX/MIN
  6. PACKAGE TOP DIMENSION MAY BE SLIGHTLY SMALLER THAN BOTTOM DIMENSION.

Rev. 03

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