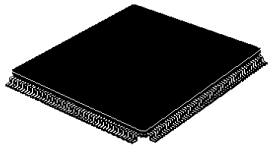
STE800P

10/100 BASE-TX/FX 8 PORT TRANSCEIVER

PRODUCT PREVIEW

1.0 DESCRIPTION

The STE800P is a high performance Octal Fast Ethernet physical layer interface for 10BASE-T and 100BASE-TX/ FX applications.
It was designed with advanced CMOS technology to provide a RMII/SMII for easy attachment to 10/100 Media Access Controllers (MAC) and a physical media interface for 100BASE-TX / FX of IEEE802.3u and 10BASE-T of IEEE802.3.
The STE800P supports both half-duplex and full-duplex operation, at 10 and 100 Mbps operation. Its operating mode can be set using auto-negotiation, parallel detection or manual control. It also allows for the support of auto-negotiation functions for speed and duplex detection.



PQFP208

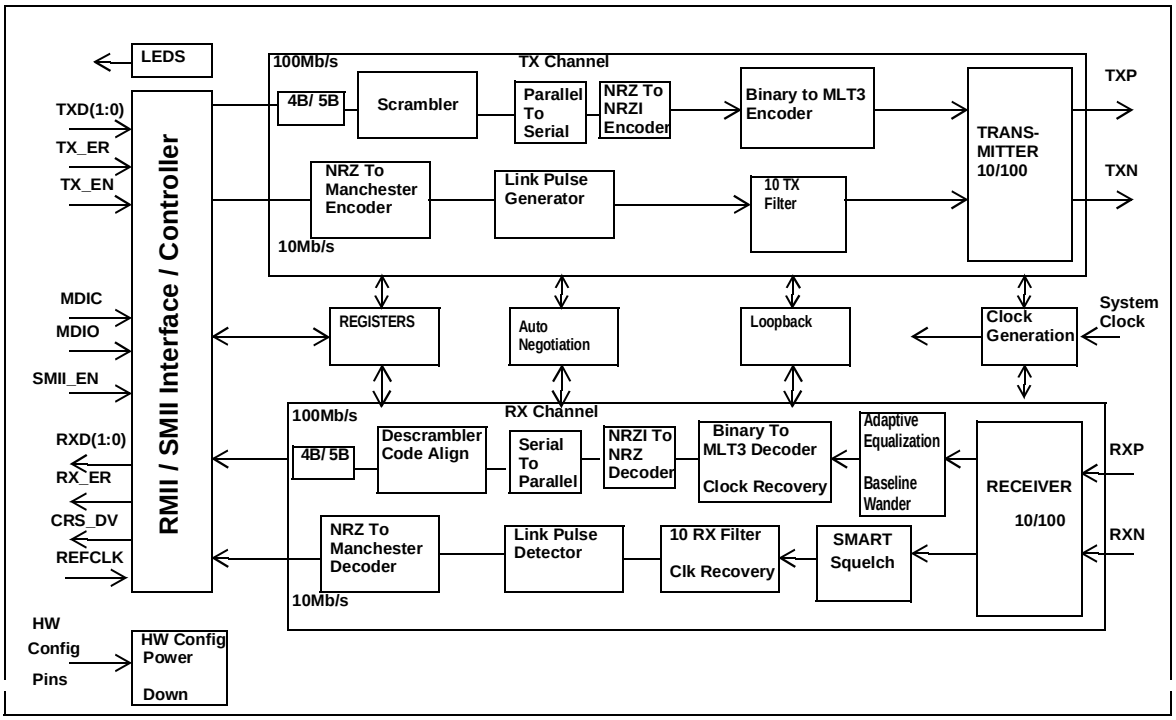
ORDERING NUMBER: STE800P

2.0 FEATURE

2.1 Industry standard

- IEEE802.3u 100BASE-TX/FX and IEEE802.3 10BASE-T compliant
- Support for IEEE802.3x flow control
- IEEE802.3u Auto-Negotiation support
- RMII/SMII interface
- Low power, single supply 3.3V CMOS
- Shared MII management interface up to 25 Mbps

Figure 1. BLOCK DIAGRAM FOR 1 PORT



2.2 Physical Layer

- Integrates the whole Physical layer functions for
  - 100BASE-TX full or half duplex Ethernet on CAT 5 twisted pair cable
  - 100BASE-FX full or half duplex transmission over fiber optic cabling
  - 10BASE-T full or half duplex Ethernet on CAT 3, 4 or 5 cable.
- Auto-negotiation(NWAY) function of full/half duplex operation for both 10 and 100 Mbps
- MLT-3 transceiver with DC restoration for Base-line wander compensation
- Transmit wave-shaper, receive filters, and adaptive equalizer
- Loop-back modes for diagnostic
- In Stream Cipher Scrambler/ De-scrambler
- 4B/5B, MLT3, NRZI and Manchester encoding/decoding
- 125 MHz clock generator and timing recovery
- Supports external transmit transformer with turn ratio 1.41 : 1
- Supports external receive transformer with turn ratio 1:1

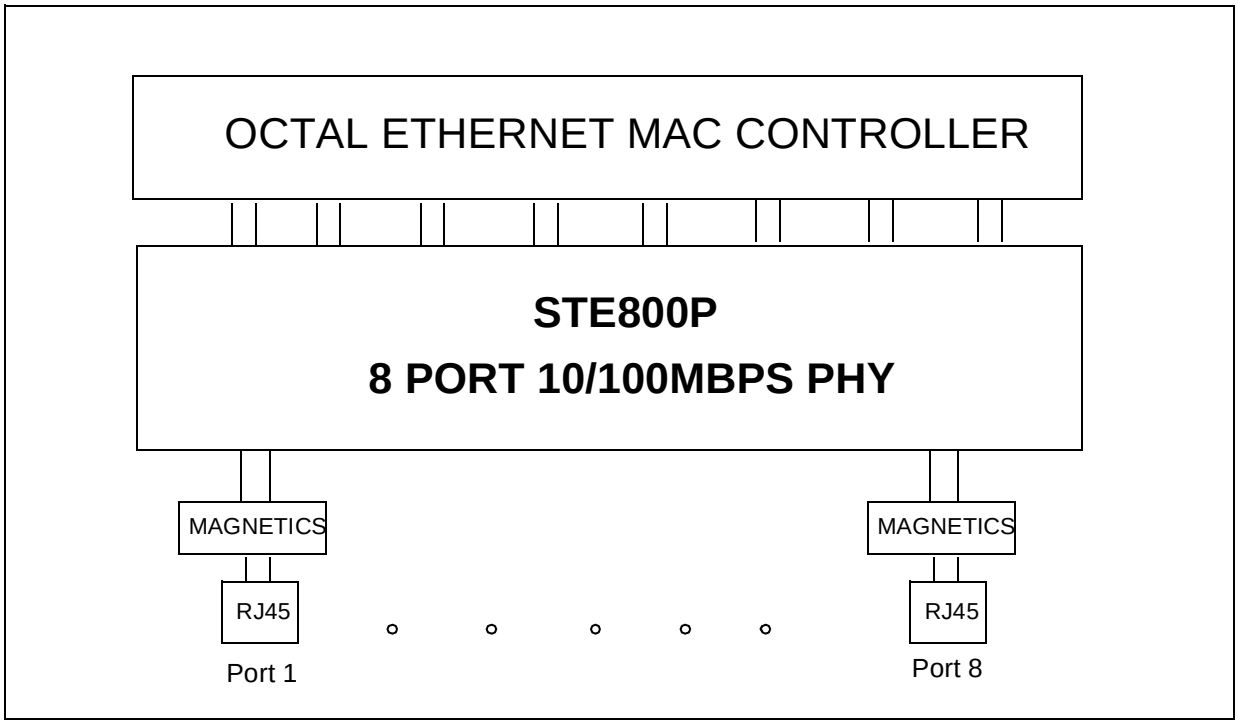
2.3 LED Display

- Serial LED status pins
- Programmable parallel LED pins

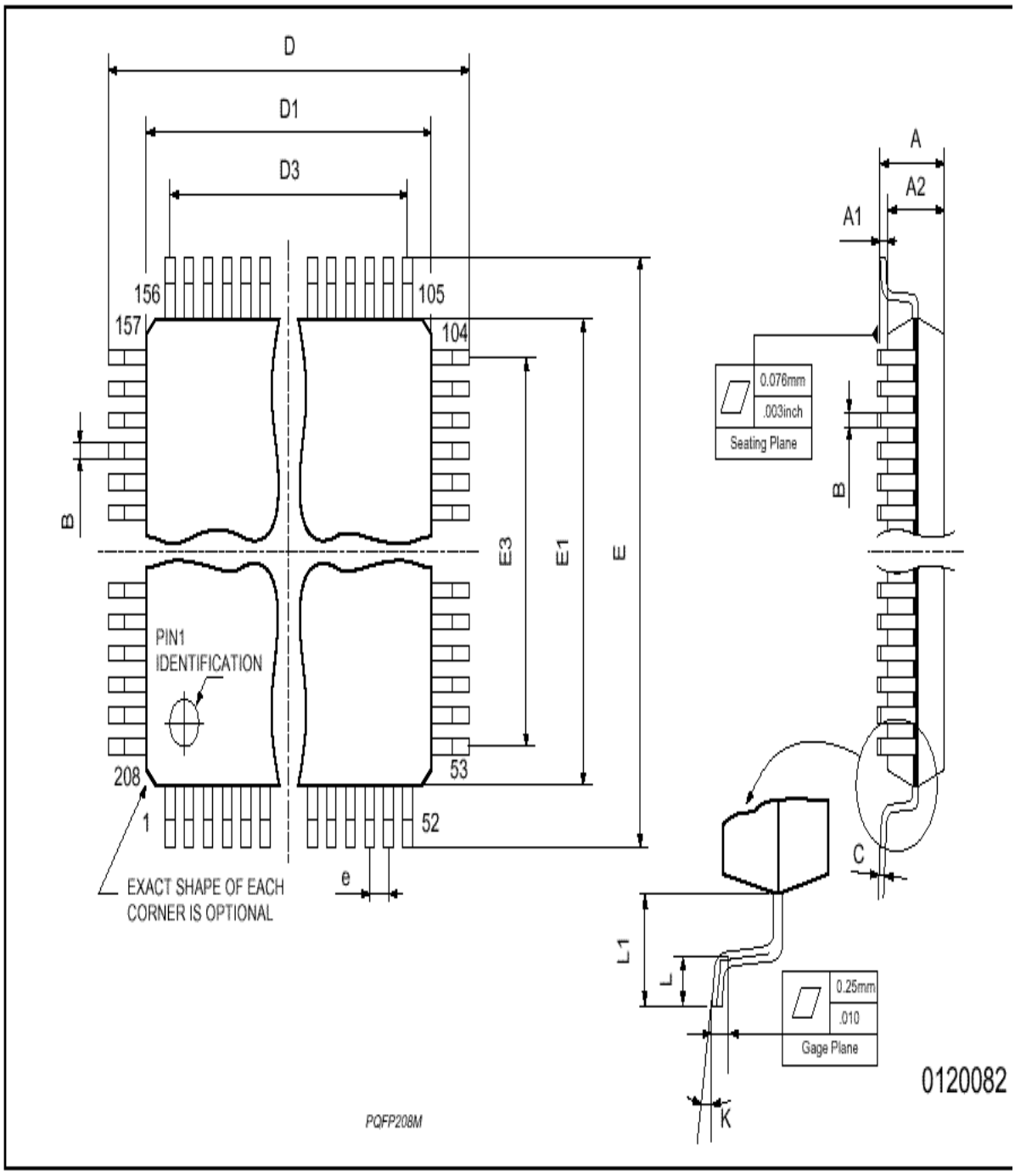
2.4 Miscellaneous

- Standard 208-pin PQFP package pinout

Figure 2. System Diagram of the STE800P Application



3.0 PACKAGE


D
D1
D3
156
105
157
104
B
E3
E1
E
PIN1
IDENTIFICATION
208
53
1
52
EXACT SHAPE OF EACH
CORNER IS OPTIONAL
e
A
A2
A1
0.076mm
.003inch
Seating Plane
B
C
L1
L
0.25mm
.010
Gage Plane
K
PQFP208M
0120082

PACKAGE TYPE: PQFP 208 / BODY 28X28X3.49mm

REF	Dimensions mm			Dimensions inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX
A			4.10			0.161
A1	0.25			0.010		
A2	3.40	3.20	3.60	0.134	0.126	0.142
B	0.17		0.27	0.007		0.011
C	0.09		0.20	0.003		0.008
D		30.60			1.205	
D1		28.00			1.102	
D3		25.50			1.004	
e		0.50			0.020	
E		30.60			1.205	
E1		28.00			1.102	
E3		25.50			1.004	
L	0.45	0.60	0.75	0.018	0.024	0.029
L1		1.30			0.51	
K	0 deg. (min), 3.5 deg. (typ.), 7 deg.(max)					