

The IET8900 is a small form factor Ethernet access module. The module will allow almost any embedded system to connect to a 10Base-T Ethernet network. While this module was designed to accommodate the needs for test systems and DIY projects it is also very well adapted for small volume production runs where Ethernet connectivity is an option for the end user.

The IP Dragon connects to your embedded system via a 30-pin connector that holds the microprocessor bus signals needed to interface it to your system.

The device used on this module is the popular Cirrus Logic CS8900. This device is highly suited for small embedded systems due to its built in 4K byte RAM buffer. This RAM can buffer an incoming datagram at the same time that you are writing output data that should be sent later on.

On the board you will also find the normal interface components such as the transformer, two indicator LED's and of course the RJ-45 connector. On rev. B boards and upwards the stand-alone transformer and the LED's has been implemented into the connector, thus reducing board complexity and increasing reliability. The board is equipped with a precision 20MHz crystal for Ethernet timing.

Pin no	Name		Name	Pin no
1	NC		RDY	30
2	D15		D11	29
3	D14		D10	28
4	D13		D9	27
5	D12		D8	26
6	VCC		INT	25
7	A3		D7	24
8	A2		D6	23
9	A1		D5	22
10	A0		D4	21
11	RESET		D3	20
12	AEN*		D2	19
13	IOR*		D1	18
14	IOW*		D0	17
15	GND		GND	16

Table 1 : Module Pin-out

The Ethernet controller CS8900A is capable of operating with both 8 bit data bus and 16 bit data bus. We have recognized this in our design and designed the module with a three pin jumper making it a breeze to select either bus width.

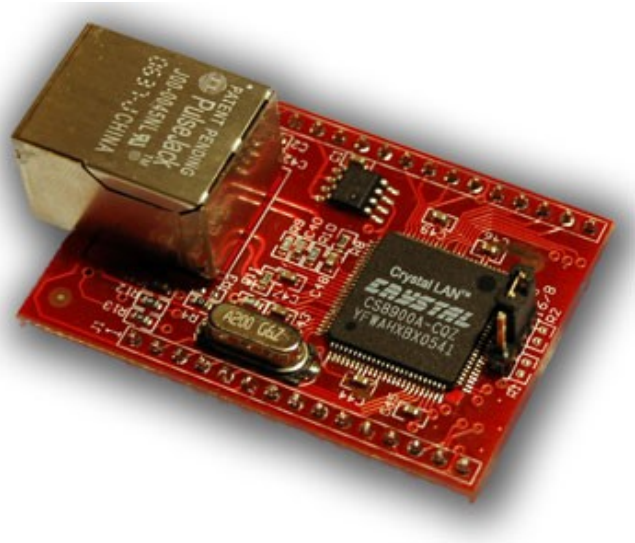


Image 1 : IP Dragon

If your intention is to buy the IP Dragon in volume we are prepared and can deliver the IP Dragon with a fixed bus width configured from the factory. Just contact us and let us know what you need.

Before starting to work with the device we recommend that you download the latest documentation from Cirrus Logic website and familiarize yourself with the controller.

On the companion disc we have provided a lot of examples on how to get started with the device. Should you have any problems you can always log in to our support forum and discuss your issues.

**Technical Data:**

Parameter	Min	Typ	Max
VCC 5 volt version (V)	4.75	5.0	5.25
VCC 3.3 Volt Version (V)	3.135	3.3	3.465
Power Dissipation (@5V)	-	-	55mA
Power Dissipation (@3.3V)	-	-	45mA
Read Access Time (nS)	145	-	-
Read Buffer Speed (MHz)	-	-	5.88
Write Access Time (nS)	130	-	-
Write Buffer Speed (MHz)	-	-	6.06

For more details on parametric data please consult the datasheet of the CS8900A.

Measurements (mm): 50 x 34

Connector 1: RJ45 with built in magnetics

Connector 2: 2 Row headers (30-pins)

Ethernet Controller: Cirrus Logic CS8900A

**Ordering Information:**

IET8905, 5 Volt IP Avenger

IET8903, 3.3 Volt Avenger

