DALLAS
SEMICONDUCTOR

DS9110
iButton Array

.125 DIA.   3.500   3.234   .250   1.250   .400   .070   .100   .230   2.900   .080   .080   E   inches

10.95mm MAX

iButton Array Features

- Packs up to 4 physically secure Crypto iButtons in a SIMM form factor board

- Onboard DS80C520 High-Speed Microcontroller with firmware to schedule iButtons

- Capable of multidropping up to 16 iButton Arrays using one host controller

The DS9110 iButton Array is a SIMM form factor board that facilitates the integration of DS1954 Crypotgraphic iButtons into a computer or related system product.

Onboard Microcontroller for Easy iButton Scheduling

The onboard DS80C520 High-Speed Microcontroller and embedded firmware are used to schedule tasks for iButtons installed within the DS9110 receptors. An attention (/ATTN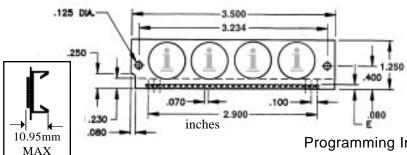) signal is also provided so that the DS9110 can alert a host controller when a task is complete. An Application Programming Interface (API) is available for easy communication with the embedded firmware

Massively Paralleled Public Key Cryptography

Four address lines are available to select one of sixteen SIMMs in a multidrop configuration. Therefore, up to 64 iButtons can process 1024 bit public key encryptions or decryptions in under 1 second.

Electrical Specifications

Crystal Frequency 22.1184 MHz
See 80C520 data sheet for detailed electrical specifications

Recommended Connectors

	Vendor	Model No.
Right	AMP	3-382488-0 Tin Plated
Vertical	AMP	643930-1

DS9110 Pin Out 30 Position

Pin No.	Name	Description
1	GND	GROUND
2	RX	Receive Data (to SIMM)
3	TX	Transmit Data (from SIMM)
4	/ATTN	Active low request for attention from Host Controller (multidrop)
5,6,7,8,9,10, 11,12,13,14	Reserved	Reserved for future use by Dallas Semiconductor
15,16	Vcc	+5.0v see DS80C520 Data Sheet
17,18,19,20,21, 22,23,24,25	Reserved	Reserved for future use by Dallas Semiconductor
26	ADDR0	ADDR0 - ADDR3 selects one of 16 positions
27	ADDR1	ADDR0 - ADDR3 selects one of 16 positions
28	ADDR2	ADDR0 - ADDR3 selects one of 16 positions
29	ADDR3	ADDR0 - ADDR3 selects one of 16 positions
30	GND	Ground