

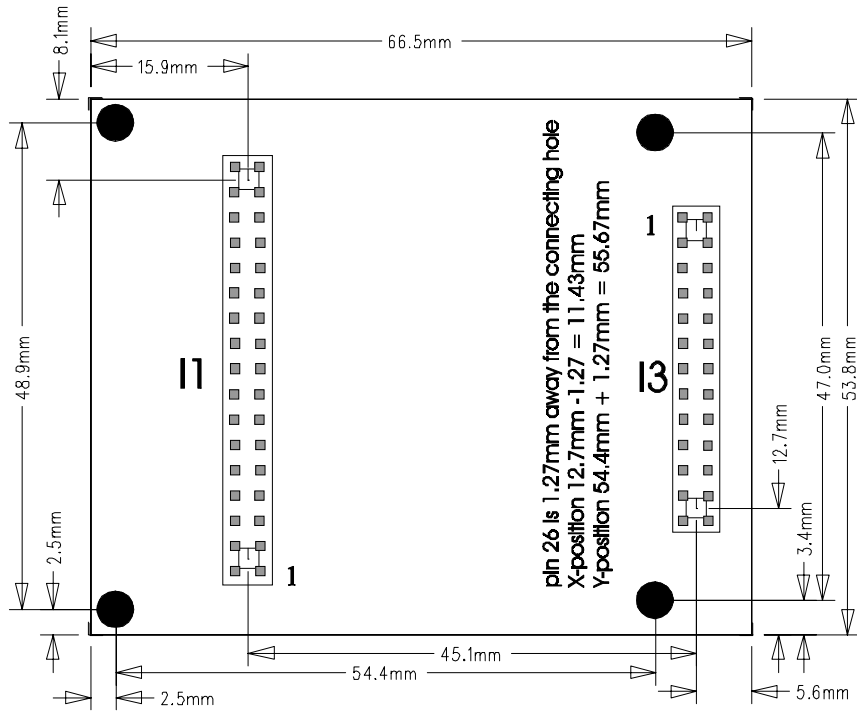
# ***GSI Lumonics***

## **SENDER CARD INTERFACE MANUAL**

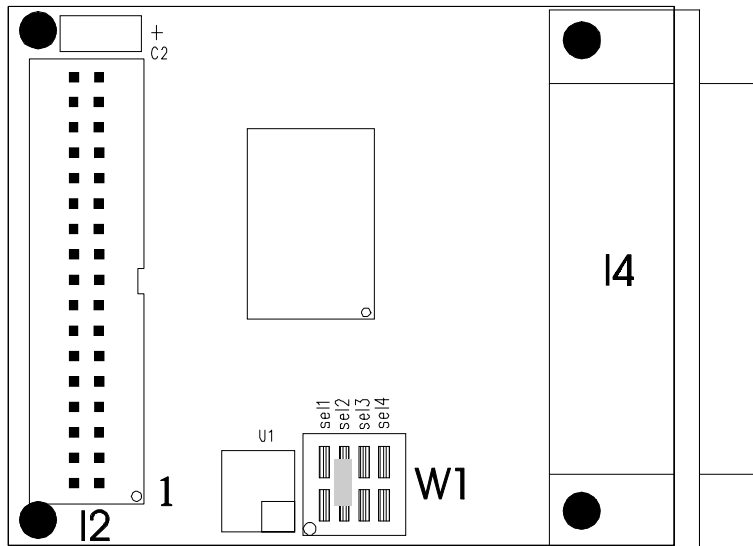
**60 Fordham Road  
Wilmington, MA 01887**

**GSLI P/N: E40-21513  
REVISION: 2**

Mechanic outline of the card from the top.  
Connectors shown are on far side.

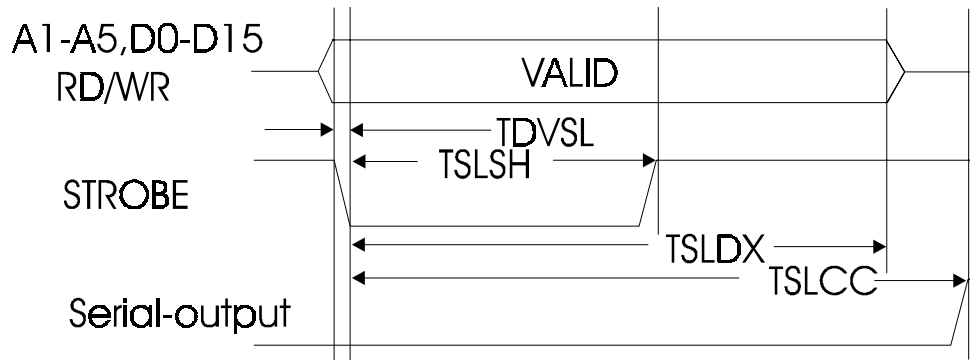


Connectors on the top, as used for the stand alone version .



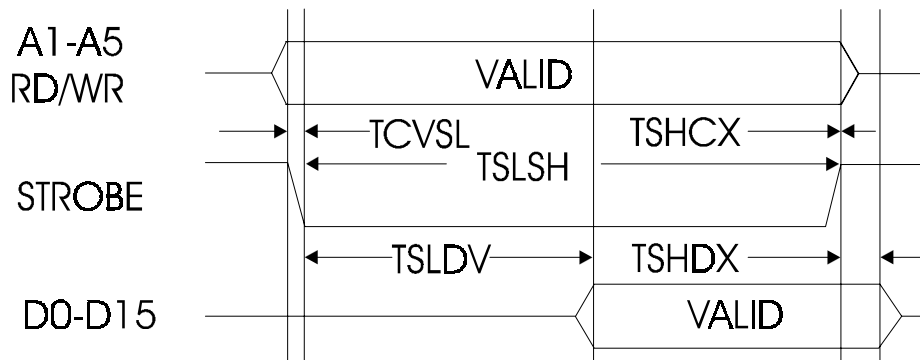
### Write Cycle

Description	Symbol	Min.	Typ.	Max.	Units
Data Setup	TDVSH	0	10	-	nS
Strobe	TSLSH	80	100	-	nS
Data Hold	TSHDX	TSLSH + 10	TSLSH + 30	-	nS
Serial output	TSLCC	0.4	10	20	μS



### Read Cycle

Description	Symbol	Min.	Typ.	Max.	Units
Control Setup	TCVSL	0	10	-	nS
Data Latency	TSLDV	35	-	50	nS
Strobe	TSLSH	80	100	-	nS
Control Hold	TSHCX	10	20	-	nS
DATA Hold	TSHDX	20	-	-	nS



Address selection list:

A5	A4	A3	A2	A1	description
0	1	0	0	0	Z- channel selection
0	1	0	0	1	Y- channel selection
0	1	0	1	0	X- channel selection
0	1	X	1	1	Status read-back
0	0	X	X	X	no operation

X = don't care

I1 & I2 are the input connections of the sender board.

They are parallel wired.

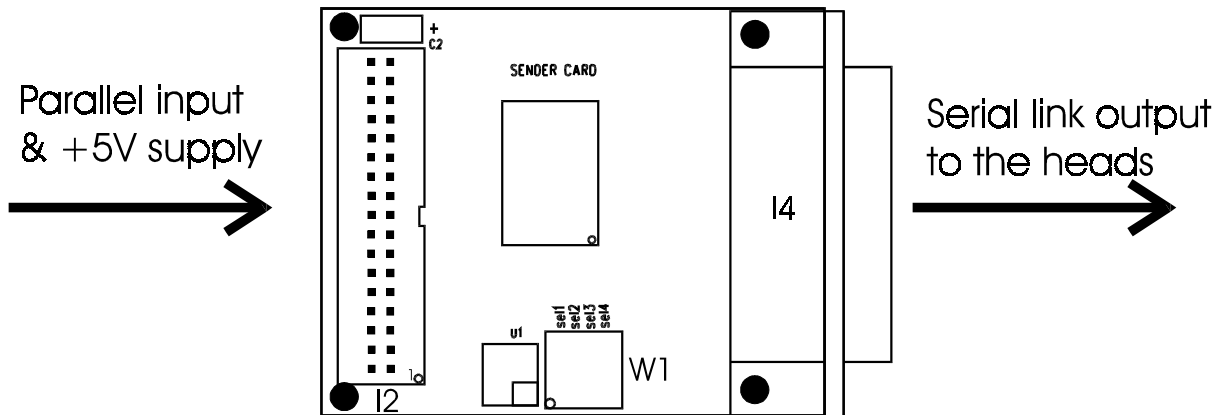
I1 is the connector on the bottom side of the sender card ( female type 0.1 inch pitch )

I2 is the connector on the top side a 34 pin ( 0.1 inch pitch ) male connector.

I3 & I4 are the output connections they are also parallel wired.

I3 is the connector on the bottom side of the sender ( female type 0.1 inch pitch )

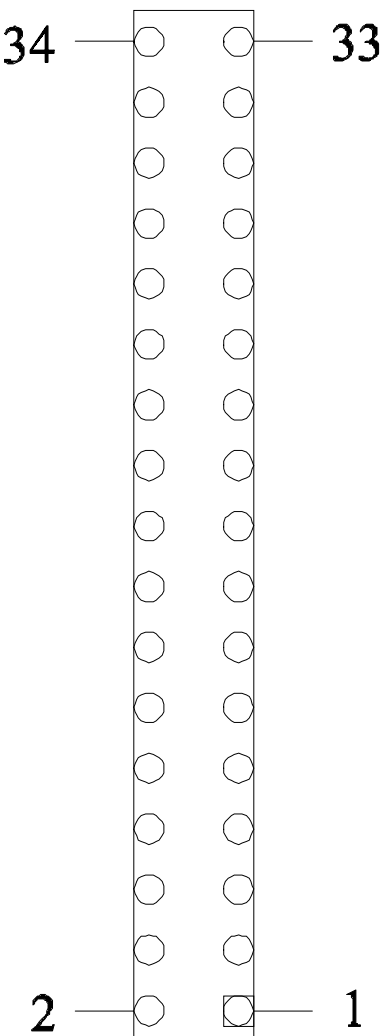
I4 is the connector on the top side of the sender a 25 pol D-Sub female connector that connects directly to the serial link cable .

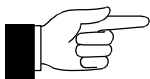


## Digital input connector

The stand alone Sender card uses a standard digital input interface .

There is a male connector ( **I2** ) on the top side of the board  
and a female connector ( **I1** ) in parallel on the bottom side of the board.

INTERFACE ( I1 & I2 )	PIN	ASSIGNMENT
 <p data-bbox="454 1417 722 1480">34 Pin header for digital input connector</p>	34	+5V input
	33	+5V input
	32	ground input
	31	ground input
	30	Sync output
	29	2 MHz output
	28	/Position acknowledge output
	27	NC
	26	NC
	25	RD/WR
	24	STROBE
	23	A5
	22	A4
	21	A3
	20	A2
	19	A1
	18	D15
	17	D14
	16	D13
	15	D12
	14	D11
	13	D10
	12	D9
	11	D8
	10	D7
	9	D6
	8	D5
	7	D4
	6	D3
	5	D2
	4	D1
	3	D0
	2	connect to ground
	1	connect to ground

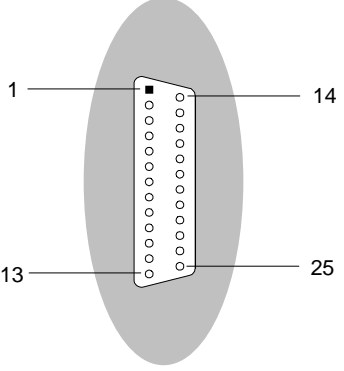


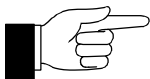
**PIN assignment shown for reference only.**

**NOTE**

## Serial Link Connector as D-SUB

The **stand alone Sender card** has a connector for the serial link to a General Scanning **XY Scan Head** or the **HPM Scan Heads**. This connector is mounted on the right side of the **Sender card ( I4 )** .

INTERFACE ( I4 )	PIN	ASSIGNMENT
 <p data-bbox="397 934 771 997">25 Pin D-Sub female connector for <b>Scan Head</b></p>	1	SENDCK -
	14	SENDCK +
	2	SYNC -
	15	SYNC +
	3	CHANNEL X -
	16	CHANNEL X +
	4	CHANNEL Y -
	17	CHANNEL Y +
	5	CHANNEL Z -
	18	CHANNEL Z +
	6	STATUS -
	19	STATUS +
	7	NC
	20	NC
	8	OPTION2 -
	21	OPTION2 +
	9	NC
	22	NC
	10	NC
	23	SHIELD GROUND
	11	SHIELD GROUND
	24	SHIELD GROUND
	12	NC
	25	NC
	13	NC

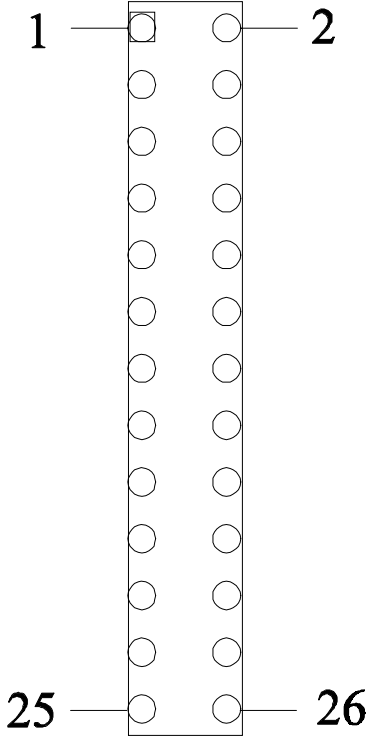


**PIN assignment shown for reference only.**

**NOTE**

## Serial Link Connector as female header

The **stand alone Sender card** has a connector for the serial link to a General Scanning done as a female header for a direct integration of the card into the customers application. (I3).

INTERFACE ( I 3 )	PIN	ASSIGNMENT
 <p data-bbox="418 1115 751 1171">25 Pin female header for serial link output connection</p>	1	SENDCK -
	2	SENDCK +
	3	SYNC -
	4	SYNC +
	5	CHANNEL X -
	6	CHANNEL X +
	7	CHANNEL Y -
	8	CHANNEL Y +
	9	CHANNEL Z -
	10	CHANNEL Z +
	11	STATUS -
	12	STATUS +
	13	NC
	14	NC
	15	OPTION2 -
	16	OPTION2 +
	17	NC
	18	NC
	19	NC
	20	SHIELD GROUND
	21	SHIELD GROUND
	22	SHIELD GROUND
	23	NC
	24	NC
	25	NC
	26	SHIELD GROUND



**PIN assignment shown for reference only.**

NOTE