

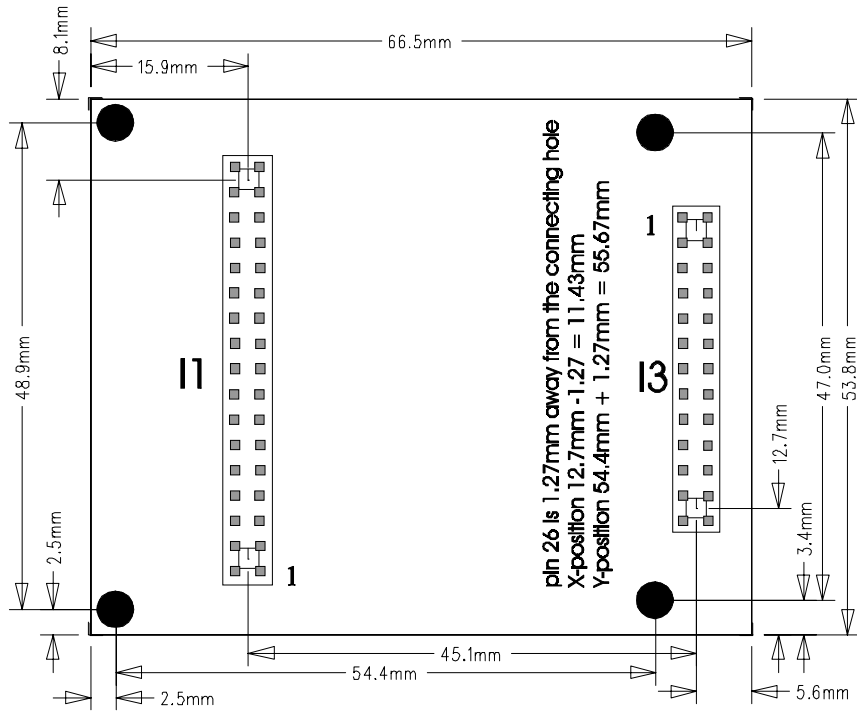
GSI Lumonics

SENDER CARD INTERFACE MANUAL

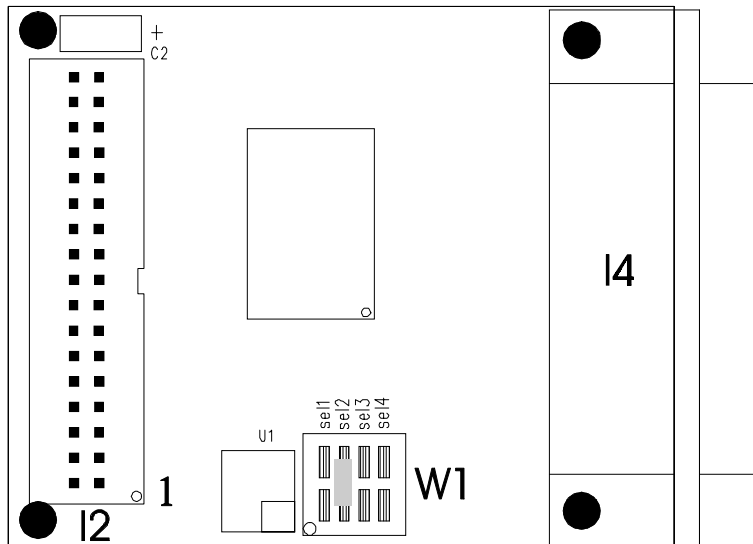
**60 Fordham Road
Wilmington, MA 01887**

GSLI P/N: E40-21513
REVISION: 2

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

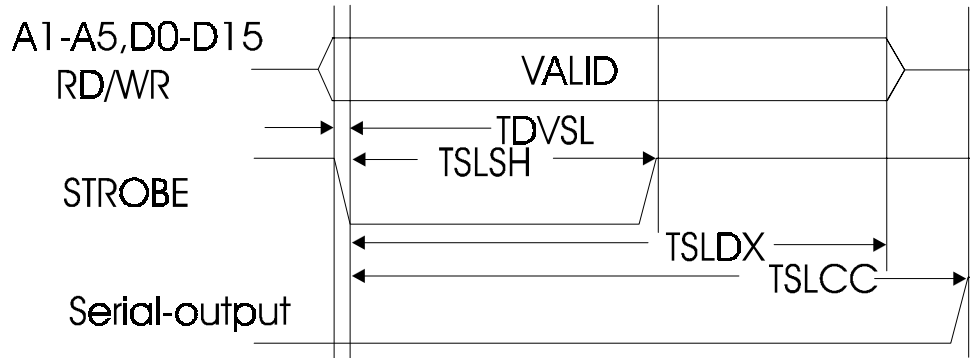


Connectors on the top, as used for the stand alone version .



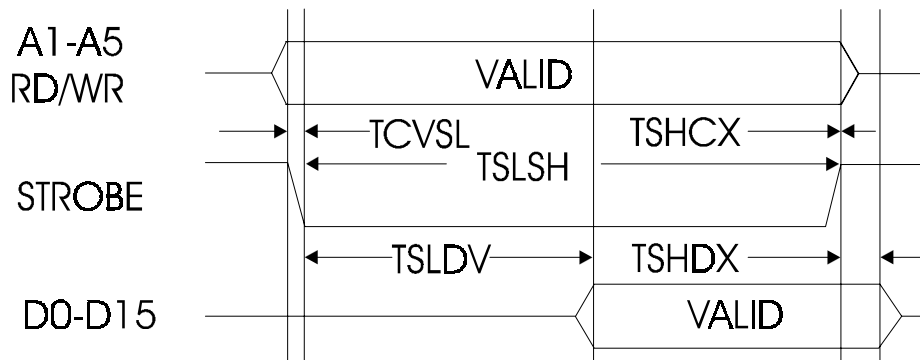
Write Cycle

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	μ S



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.

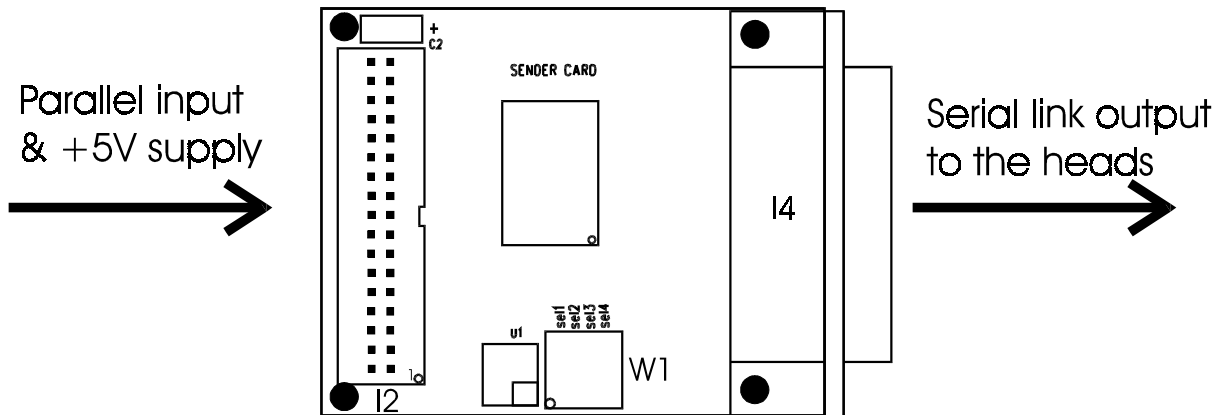
I1 is the connector on the bottom side of the sender card (female type 0.1 inch pitch)

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)

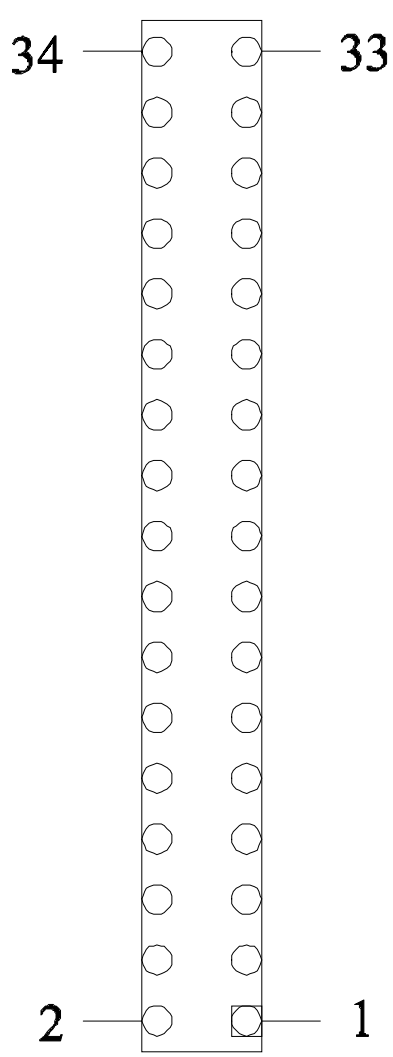
I4 is the connector on the top side of the sender a 25 pol D-Sub female connector that connects directly to the serial link cable .

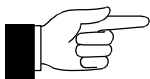


Digital input connector

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 style="text-align: center;">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

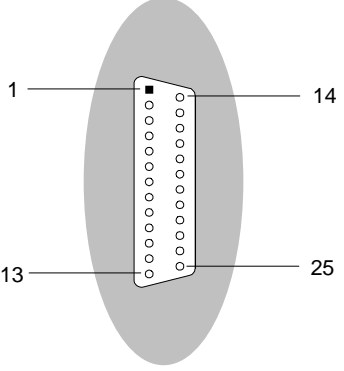


PIN assignment shown for reference only.

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 Scan Head</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

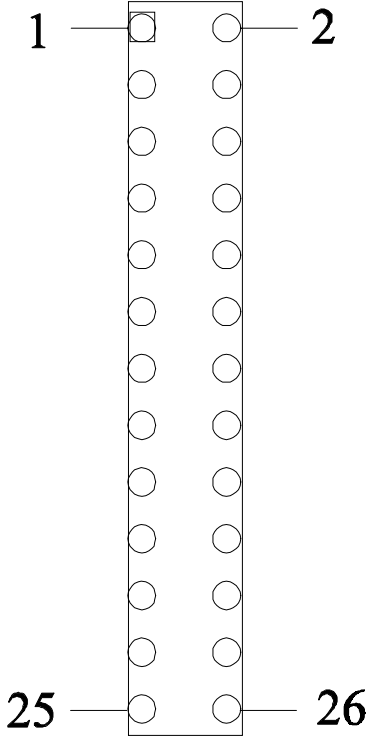


PIN assignment shown for reference only.

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