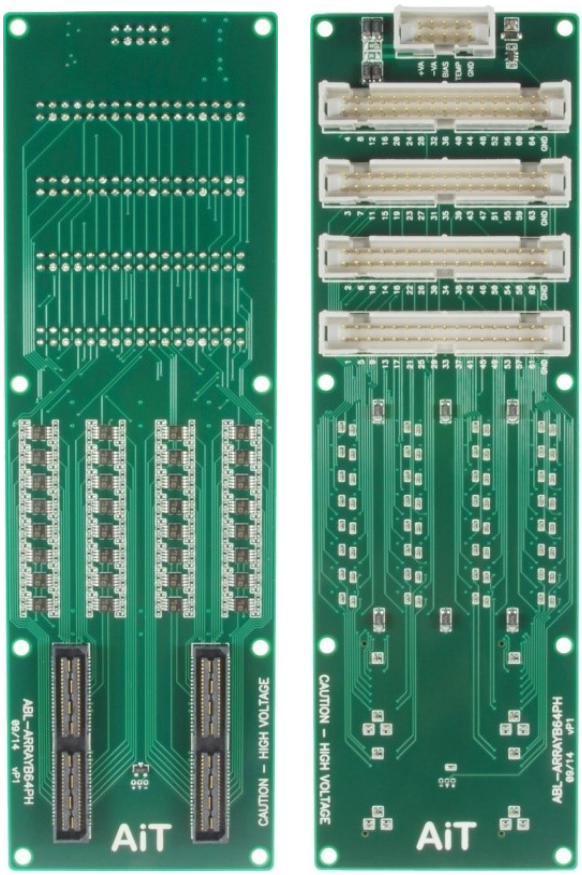
Features

- Supports the SensL ArrayC-60035-64P-PCB 8x8 array of 6mm SiPMs
- Wideband amplifier per SiPM, 64 total
- DC-coupled signal path
- Low power consumption
- Precision temperature sensor
- NOTE: Fast output signals are not used



Array Side | Connector Side

SiPM array not included

Specifications

SiPM Signal Amplifiers

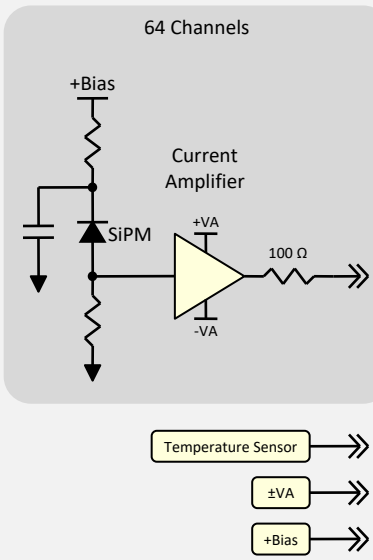
Channels	64
Type	Transimpedance
Gain	750Ω
Rise time	< 20ns
Output voltage	0 → -1V typical into 100Ω load
Output impedance	100Ω
Output current	50mA max.

Temperature Sensor

Output voltage	500mV + 10mV per °C
Output current	10mA
Output impedance	100Ω
Accuracy	±0.5°C

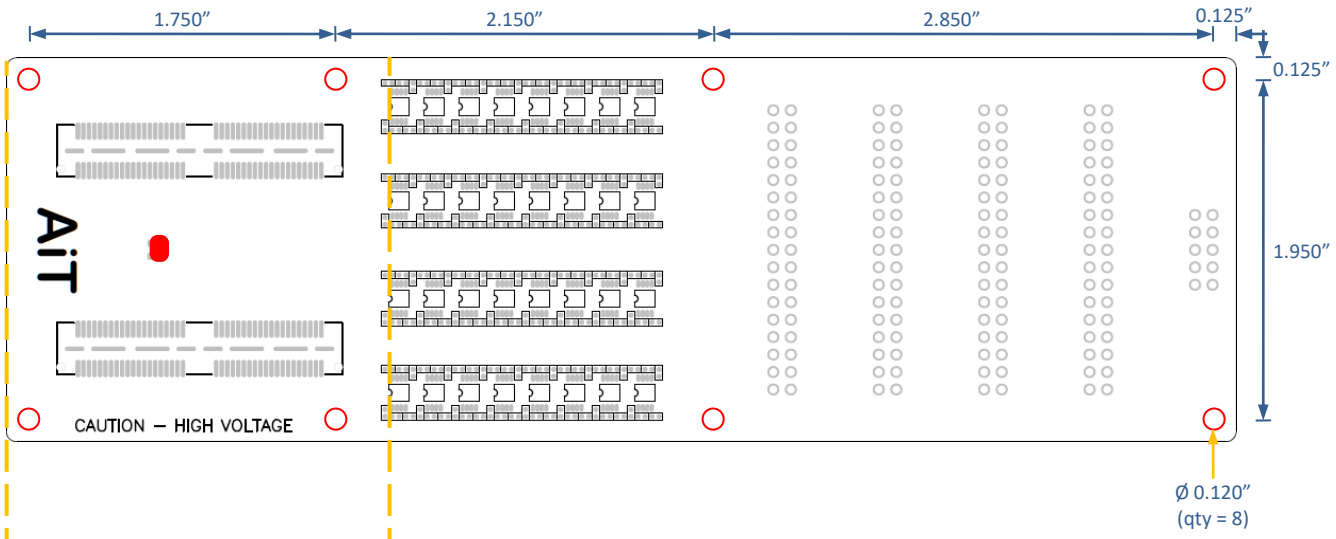
Bias Voltage	+27.6V typical (refer to manufacturer's data)
Over-voltage clamp	47V Zener diode
Amplifier Power (±VA)	±2.8V typical; ±5V maximum
Current	±110mA typical (Iq, no signal, no load)
Signal Connectors (quantity = 4)	34-pin, 2-row, 0.1" pitch vertical shrouded header
Power Connector	10-pin, 2-row, 0.1" pitch vertical shrouded header

64-Channel Base

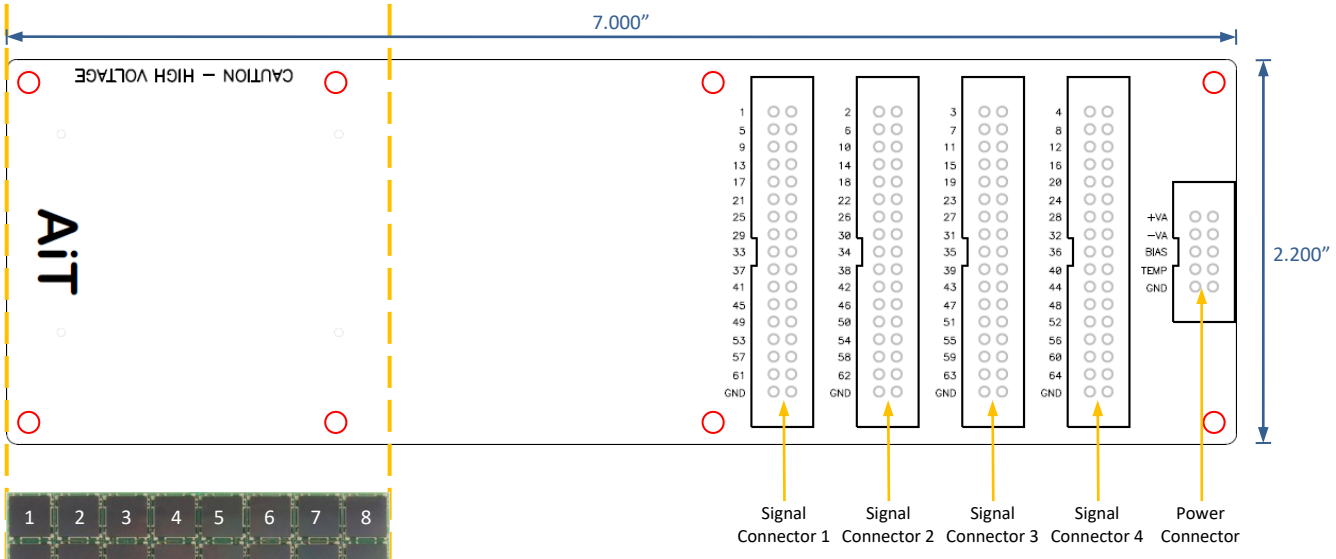


Mechanical

Array Side

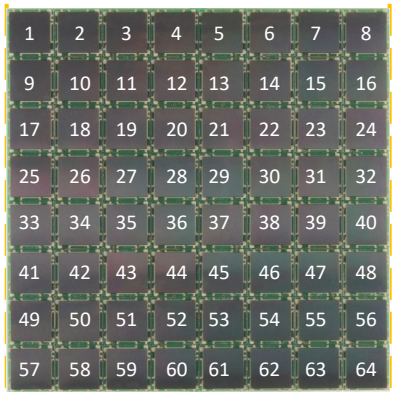


Connector Side



Channel Map

(Viewed from array side)

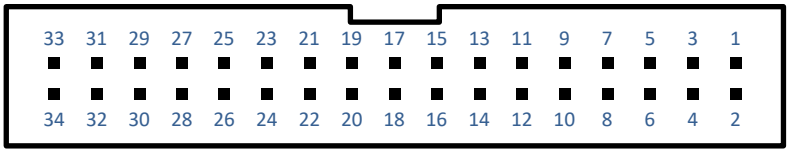


Location of temperature sensor

Measurement tolerance: ±0.020”

Connectors

Signal Connectors 1-4



Connector 1

Pin	SiPM	Pin	Fn
1	1	2	GND
3	5	4	GND
5	9	6	GND
7	13	8	GND
9	17	10	GND
11	21	12	GND
13	25	14	GND
15	29	16	GND
17	33	18	GND
19	37	20	GND
21	41	22	GND
23	45	24	GND
25	49	26	GND
27	53	28	GND
29	57	30	GND
31	61	32	GND
33	GND	34	GND

Connector 2

Pin	SiPM	Pin	Fn
1	2	2	GND
3	6	4	GND
5	10	6	GND
7	14	8	GND
9	18	10	GND
11	22	12	GND
13	26	14	GND
15	30	16	GND
17	34	18	GND
19	38	20	GND
21	42	22	GND
23	46	24	GND
25	50	26	GND
27	54	28	GND
29	58	30	GND
31	62	32	GND
33	GND	34	GND

Connector 3

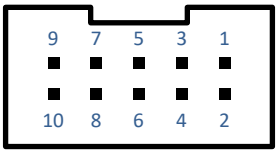
Pin	SiPM	Pin	Fn
1	3	2	GND
3	7	4	GND
5	11	6	GND
7	15	8	GND
9	19	10	GND
11	23	12	GND
13	27	14	GND
15	31	16	GND
17	35	18	GND
19	39	20	GND
21	43	22	GND
23	47	24	GND
25	51	26	GND
27	55	28	GND
29	59	30	GND
31	63	32	GND
33	GND	34	GND

Connector 4

Pin	SiPM	Pin	Fn
1	4	2	GND
3	8	4	GND
5	12	6	GND
7	16	8	GND
9	20	10	GND
11	24	12	GND
13	28	14	GND
15	32	16	GND
17	36	18	GND
19	40	20	GND
21	44	22	GND
23	48	24	GND
25	52	26	GND
27	56	28	GND
29	60	30	GND
31	64	32	GND
33	GND	34	GND

GND = Ground

Power Connector



Pin	Function	Pin	Function
1	+VA	2	GND
3	-VA	4	GND
5	Bias	6	GND
7	Temperature	8	GND
9	GND	10	GND

Safety Information

WARNING – High Voltage

- High voltage may be present during operation
- High voltage stored on capacitors may be present after power is removed
- Improper handling may result in personnel injury or equipment damage

This high-voltage device must be used only by personnel trained and qualified in safe handling, installation, and operation of high-voltage equipment.

CAUTION – Electrostatic Discharge (ESD) Sensitivity

The circuit board can be damaged by electrostatic discharge. Observe precautions for handling electrostatic sensitive devices. Handle only at static-safe workstations.

High-Gain Photodetectors

High-gain photodetectors such as silicon photomultipliers may conduct damaging currents if exposed to high optical signal levels while the bias voltage is applied, or if the bias voltage exceeds the recommended operating range. These devices must be operated only in low-light conditions, and only within the manufacturer's recommended bias voltage range.

Handling and Disassembly

This product may be provided with or without a protective enclosure. Disassembled enclosure components and circuit boards may contain sharp edges. Take appropriate safety precautions while assembling or disassembling the enclosure and handling disassembled components.

Indoor Use Only

Do not operate this product in a wet/damp environment. Do not operate in an explosive atmosphere.