ASEK-35

Hardware Selection Guide

DESCRIPTION

Allegro provides specialized tools to support the evaluation and configuration of its sensor products. The ASEK-35 programmer serves as the primary evaluation interface, enabling essential communication between the sensor and the associated software.

This document provides an overview of the optional hardware modules available for the ASEK-35 programmer.

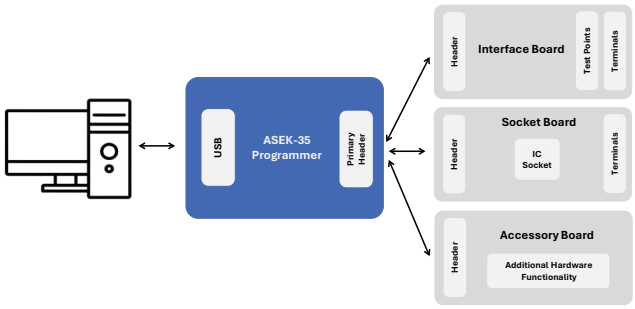
BOARD CATEGORIES

All interface boards, socket boards, and accessory boards can be directly connected to the ASEK-35 programmer.

- **Interface boards** serve as the universal hardware interfaces for all supported sensors, with each board offering unique capabilities.
- **Socket boards** are sensor-specific or package-specific boards. Each socket board includes a burn-in test socket, IC application components, test points, and header connectors.
- **Accessory boards** enable expansion of programmer hardware functionality. These boards are purpose-built for specific tasks, for example a calibration board designed to support high-accuracy calibration of all ASEK-35 ADC channels.

Sensor connection methods are:

- Via a wire harness connected to the interface board terminals, suitable for any supported sensor (see Table 1).
- By inserting the sensor IC into the test socket on the socket board.



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ASEK-35-INT-01

Single-Sensor Interface Board

The **ASEK-35-INT-01** is a **single-sensor** interface board that routes the required signals from the ASEK-35 to accessible test points, simplifying connectivity for development and evaluation. It provides clearly labeled access to ASEK-35 signals, enabling connection to external sensor PCBs, modules, or test and measurement equipment.

The board supports programming of any compatible current sensor connected to the J1 connector via a four-wire harness, including sensors integrated into customer hardware systems (i.e., in-system programming).

Supported part numbers are listed in **Table 1**.

Empty component footprints are provided for optional application circuitry, including V_{CC} decoupling, pullup resistors, and capacitive or resistive loads. The board also supports optional remote V_{CC} sensing.

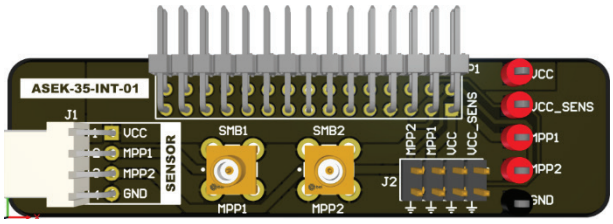

Figure 1: ASEK-35-INT-01

ASEK-35-INT-02

Multiplexing Interface Board

The **ASEK-35-INT-02** is a **four-device** multiplexing interface board that routes all required ASEK-35 signals to clearly labeled, accessible terminals. This significantly simplifies connectivity during system bring-up and evaluation.

It supports in-system programming of any compatible current sensor connected through a four-wire harness to the "SENSOR A–D" connectors. Supported part numbers and wiring configurations are listed in **Table 1.**

Empty component footprints are provided for optional application circuitry, pullup resistors, and capacitive or resistive loads. The V_{CC} decoupling capacitors are already assembled. The board also supports optional remote V_{CC} sensing via the AIN4 test point.

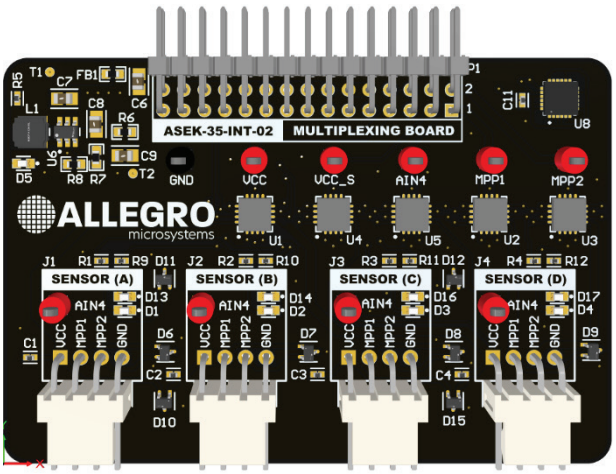

Figure 2: ASEK-35-INT-02

Table 1: Supported Part Numbers and Wiring Connection

Part Number	ASEK-35			
	VCC	MPP1	MPP2	GND
A1367	VCC	VOUT	–	GND
ACS37503	VCC	VOUT	PROG_EN	GND
ACS37504	VCC	VOUT	PROG_EN	GND
ACS37600	VCC	VREF	VOUT	GND
ACS37600K	VCC	VREF	VOUT	GND
ACS37601	VCC	VOUT	FAULT [1]	GND
ACS37610	VCC	VOUT	PROG	GND
ACS37610S	VCC	VOUT	PROG	GND
ACS37611	VCC	VOUT	PROG	GND

Part Number	ASEK-35			
	VCC	MPP1	MPP2	GND
ACS37614	VCC	VOUT	FAULT_A [1]	GND
ACS37630	VCC	PROG	VOUT	GND
ACS37632	VCC	VOUT	–	GND
ACS70310	VCC	VOUT	–	GND
ACS70310K	VCC	VOUT	–	GND
ACS70311/2	VCC	VOUT	PROG_EN	GND
CT455	VCC	TEST	VOUT [2]	GND
CT456	VCC	TEST	VOUT [2]	GND

[1] RPU2 pullup to VCC is needed.
[2] Minimize parasitic inductance of wiring.

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ASEK-35-INT-03

Universal PCB Prototype Interface Board

The **ASEK-35-INT-03** is a prototyping interface board that exposes **all P1-port signals** of the ASEK-35 to clearly labeled, easily accessible headers. Signals are organized into logical domains: analog, power, and digital. This streamlines rapid development, evaluation, and circuit experimentation.

The board includes a **28 column × 14 row** prototyping matrix with 100 mil pitch. Row **A** is preconnected to the V_{CC} supply rail, and row **B** is tied to **GND**. This enables quick assembly of test circuits.

Supported part numbers and wiring configurations are listed in **Table 1.**

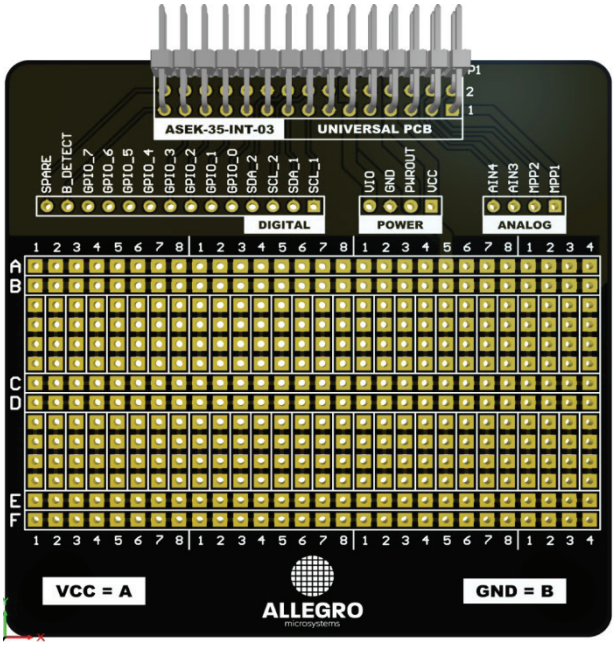

Figure 3: ASEK-35-INT-03

ASEK-35-ACC-CAL

Accessory Calibration Board

The **ASEK-35-ACC-CAL** accessory board is designed for high-accuracy calibration of all ASEK-35 analog-to-digital converter (ADC) and digital-to-analog converter (DAC) channels. It also enables a complete hardware self-test of the internal functional blocks of the programmer.

This calibration board is used for ASEK-35 end-of-line calibration and production testing at the assembly house, and it is the recommended accessory for customers who require **enhanced measurement accuracy** during two-point programming.

External laboratory equipment is not required. The onboard precision voltage references are individually characterized during ASEK-35-ACC-CAL manufacturing, and the measured values of the **2.048 V** and **4.096 V** references are stored in the onboard EEPROM.

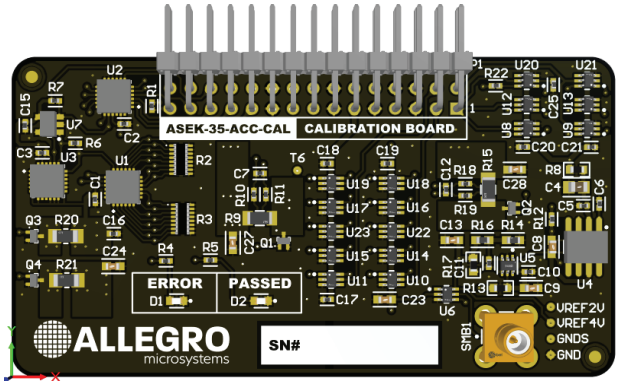

Figure 4: ASEK-35-ACC-CAL

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ASEK-35-SOC-KT01

Socket Board for Standard KT Pinout

The **ASEK-35-SOC-KT01** is a KT package (four-lead, single in-line package; SIP-4) socket board that routes all required sensor signals from the ASEK-35 to a burn-in test socket and clearly labeled test points and headers.

The board supports programming of field-current sensors using the standard KT pinout:

- PIN1 = VCC
- PIN2 = VOUT
- PIN3 (configurable/IC-specific)
- PIN4 = GND

The board provides organized access to all **IC signal pins**, enabling easy connection of test and measurement equipment. To allow the sensor to interface with customer-specific hardware, header **J1** provides a simple and direct connection path.

Each socket board integrates a burn-in test socket, application-level components, test points, and header connector. Jumper JP3 allows configuration of PIN3 with either a pullup or pulldown resistor.

Supported Part Numbers:

ACS37503, ACS37504, ACS37601, ACS70310, ACS70311, ACS70312, A1367

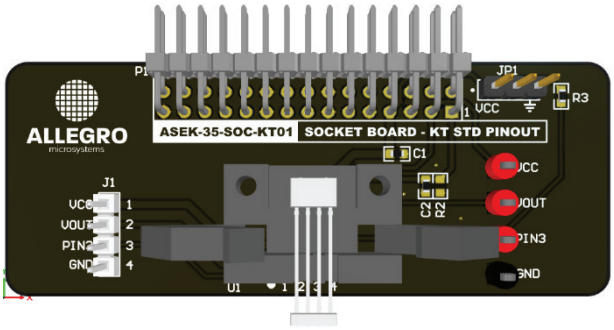

Figure 5: ASEK-35-SOC-KT01

ASEK-35-SOC-LU01

Socket Board for ACS3761x

The **ASEK-35-SOC-LU01** is an LU package (eight-lead, thin-shrink small-outline package; TSSOP-8) socket board that routes all required sensor signals from the ASEK-35 to a burn-in test socket and clearly labeled test points and headers.

The board provides organized access to all **IC signal pins**, enabling connection of test and measurement equipment.To allow the sensor to interface with customer-specific hardware, header **J1** provides a simple and direct connection path.

Each socket board integrates a burn-in test socket, application-level components, test points, and header connector.

Supported Part Numbers:

ACS37610, ACS37611

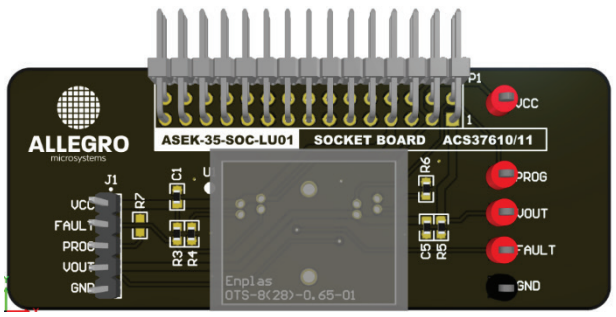

Figure 6: ASEK-35-SOC-LU01

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ASEK-35-SOC-LU03

Socket Board for CT45x

The **ASEK-35-SOC-LU03** is an LU package (TSSOP-8) socket board that routes all required sensor signals from the ASEK-35 to a burn-in test socket and clearly labeled test points and headers.

The board provides organized access to all **IC signal pins**, enabling connection of test and measurement equipment. To allow the sensor to interface with customer-specific hardware, header **J1** provides a simple and direct connection path.

Each socket board integrates a burn-in test socket, application-level components, test points, and header connector.

Supported Part Numbers:

CT455, CT456

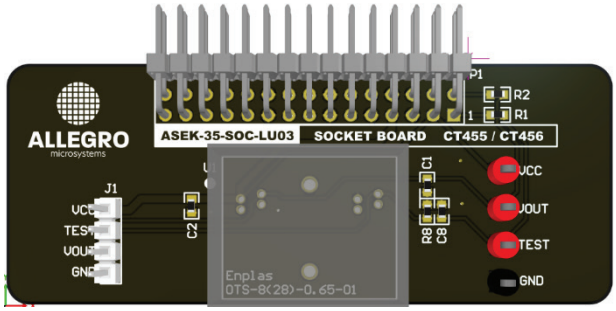

Figure 7: ASEK-35-SOC-LU03

ASEK-35-SOC-LU04

Socket Board for ACS37614

The **ASEK-35-SOC-LU04** is an LU package (TSSOP-8) socket board that routes all required sensor signals from the ASEK-35 to a burn-in test socket and clearly labeled test points and headers.

The board provides organized access to all **IC signal pins**, enabling connection of test and measurement equipment. To allow the sensor to interface with customer-specific hardware, header **J1** provides a simple and direct connection path.

Each socket board integrates a burn-in test socket, application-level components, test points, and header connector.

The **J2** header pin "**PROG_UART**" provides a UART interface for connection to, and communication with, additional ACS37614 current sensors.

Supported Part Numbers:

ACS37614

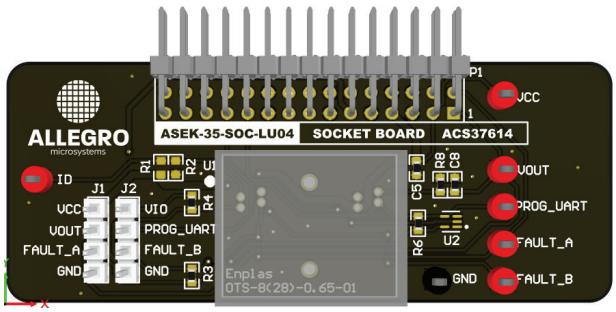

Figure 8 Figure 8: ASEK-35-SOC-LU04

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ASEK-35-SOC-OL01

Socket Board for ACS37630

The **ASEK-35-SOC-OL01** is an OL package (eight-lead, small-outline integrated circuit; SOIC-8) socket board that routes all required sensor signals from the ASEK-35 to a burn-in test socket and clearly labeled test points and headers.

The board provides organized access to all **IC signal pins**, enabling connection of test and measurement equipment. To allow the sensor to interface with customer-specific hardware, header **J1** provides a simple and direct connection path.

Each socket board integrates a burn-in test socket, application-level components, test points, and header connector.

Supported Part Numbers:

ACS37630

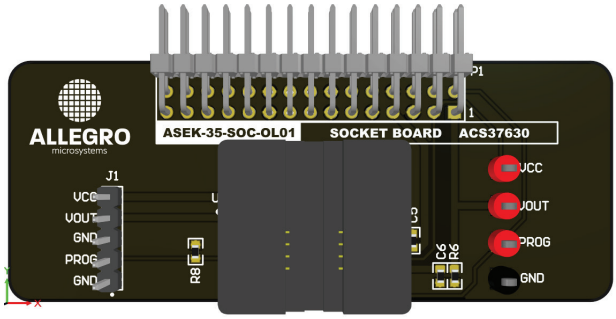

Figure 9: ASEK-35-SOC-OL01

ASEK-35-SOC-OK01

Socket Board for ACS37610S

The **ASEK-35-SOC-OK01** is an OK package (SIP-4) socket board that routes all required sensor signals from the ASEK-35 to a burn-in test socket and clearly labeled test points and headers.

The board provides organized access to all **IC signal pins**, enabling connection of test and measurement equipment. To allow the sensor to interface with customer-specific hardware, header **J1** provides a simple and direct connection path.

Each socket board integrates a burn-in test socket, application-level components, test points, and header connector. Jumper JP1 allows configuration of PIN2 with either a pullup or pulldown resistor.

Supported Part Numbers:

ACS37610S

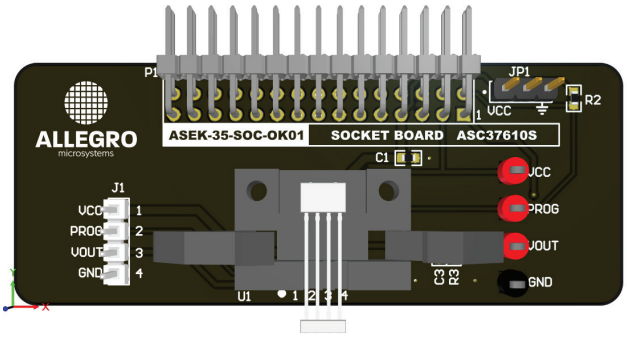

Figure 10: ASEK-35-SOC-OK01

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Revision History

Number	Date	Description
–	March 4, 2026	Initial release

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