

# SyCTRL High Performance Controller

## SyCTRL Decision board

- Altera Cyclone® III 105MHz FPGA
- Intel® PXA270 312 Mhz microprocessor
- Windows® CE 5.0
- 32 MB DRAM memory, 32 MB flash RAM
- 2.7" graphic color touch screen
- Interface with up to 3 SyCTRL slave boards



## Overview

The Decision board is the heart of the product line designed to embed all the standard processing functions.

Beyond a classical Microsoft Windows based microprocessor aimed to ensure the initial configuration and the online communication with an external computer via Ethernet, the Decision board embeds a robust and versatile FPGA which implements the secured processing.

The Decision board is designed to be hosted in any front slot of any Chassis and is able to manage any rear mounted slave module. It implements a fast interface to the Safety Loop module and is therefore in charge of the secured Safety Loop management.

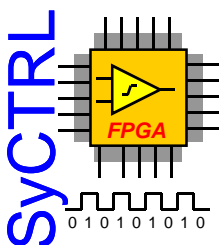
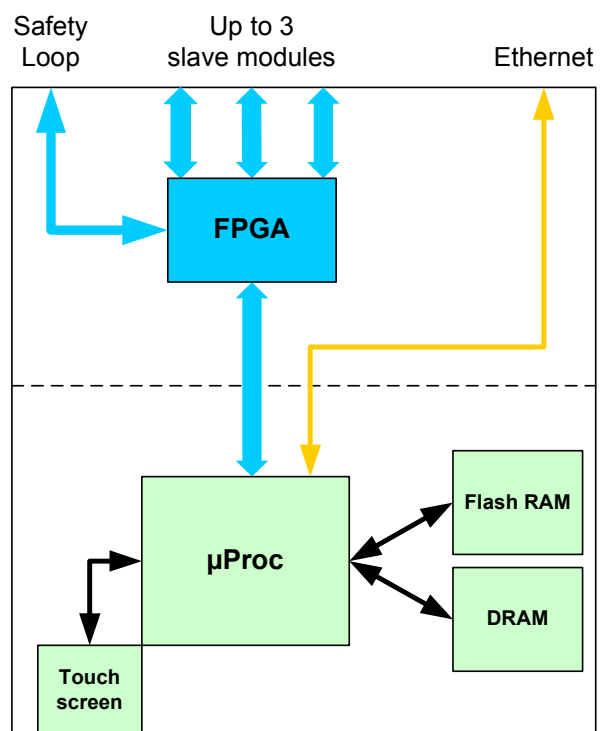
A remote PC can interface the Decision board via its ETH link but the Decision board can even run as is in standalone mode.

## Front panel display

With a large TFT touch-screen, the Decision board is able to display all the necessary graphic color information that let the user constantly informed of the behavior of the process.

## Integrated Built-In self test

The Decision board is fitted with its dedicated built-in self test which gives not only its own health status but also the one of its slave modules.



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## FPGA characteristics

FPGA Type	Altera Cyclone® III
Macro cells	up to 40 000
FPGA clock frequency	105 MHz

## CPU performance

CPU type	Intel® PXA270
CPU frequency	320 MHz
Operating system	Windows® CE 5.0
Flash RAM memory	32 MB
DRAM memory	32 MB

## Interface with slave boards

Serial link number	6
Serial link type	SPI
Serial link frequency	up to 10Mbit/s (each)
1 protect line (hardwired) for protection triggering	

## Interface with PC controller

Physical layer	10/100 Base-T ETH
Communication protocol	UDP

## Touch screen characteristics

Size	2.7"
Technology	Resistive
Resolution	240x320

## Power characteristics

Power consumption	2.5 W
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## Environmental

### Operating environment

Temperature	10 to 40 °C
Humidity	40 to 90% noncondensing
Pressure	800 to 1050 mbar

### Storage environment

Temperature	-10°C to 60 °C
Humidity	up to 85% noncondensing
Pressure	800 to 1050 mbar

## Mechanical

### Size

sc100	3HUx12HPx165mm (*)
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### Weight

sc100	190 g
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### Connector

sc100	1 x micro USB (maintenance)
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