



# MEC1641

## Embedded Controller



### Features:

- ARC-625D system controller
- 144 TFBGA package
- Embedded flash
- 288KB Flash
- 16KB SRAM
- 2K bytes EEPROM

## Device Overview

### Summary

The MEC1641 is the mixed signal base component of a multi-device advanced I/O controller. A high-performance 32-bit ARC 625D embedded microcontroller with a 288 Kilobyte Embedded Flash Subsystem, 16 Kilobytes of SRAM, 1 Kilobyte EEPROM emulation, and a 2 Kilobyte EEPROM are incorporated.

The product communicates with the system host using the Intel® Low Pin Count bus. The MEC1641 is the Embedded Controller Base Component of a split-architecture Advanced I/O Controller system that uses BC-Link™ communication protocol to access a single BC bus companion component. MEC1641 is directly powered by two separate suspend supply planes (VBAT and VTR) and senses a third runtime power plane (VCC) to provide “instant on” and system power management functions.

## Parametrics

Name	Value
Keyboard Scan Matrix	N
UART	Y
Host Interface	LPC
Code Storage	Embedded Flash
Operating Temperature	0° C to +70° C
Low Power Timers	2
Fan Tachometer Inputs	1
Max Operating Frequency	20 Mhz
Data RAM	16KB SRAM
Breathing/ Blinking LED	3
GPIO	108
PWM	2
Package	144 TFBGA
VBAT-Powered, Power Control Interface	Y
LED	3
Analog to Digital Converter	16 ch
SMBus Ports	6
BC Link	3
Flash/Code RAM	288KB Flash
EEPROM	2000
PECI	3
System Controller	32-bit
ACPI Interfaces	4
Counter/Timers	4

## Additional Features

- ARC-625D system controller
- 144 TFBGA package
- Embedded flash
- 288KB Flash
- 16KB SRAM
- 2K bytes EEPROM
- 108 GPIO Pins
- 6 SMBus ports
- 16 analog to digital converter channels
- 3 LED
- 2 low-power timers
- 6 external diodes, 1 internal diode (temperature monitoring)
- 2 PWM
- 1 Fan Tachometer Input
- MCU Serial Debug Port
- Two pin serial debug port with 16C550A register interface
- Flexible Flash programming interface
- Port 80 BIOS Debug Port
- Gang Programmer interface
- JTAG interface

## Family parts

MEC1641-PZV

MEC1641-PZV-ASP00

MEC1641-PZV-ASP00-TR

MEC1641-PZV-BP200

MEC1641-PZV-BP200-TR

MEC1641-PZV-BP201

MEC1641-PZV-BP201-TR

MEC1641-PZV-CEL00

MEC1641-PZV-CEL00-TR

MEC1641-PZV-CRB00

MEC1641-PZV-CRB00-TR

MEC1641-PZV-JAY00

MEC1641-PZV-JAY00-TR

MEC1641-PZV-JAY01

MEC1641-PZV-JAY01-TR

MEC1641-PZV-JEF00

MEC1641-PZV-JEF00-TR

MEC1641-PZV-JEF01

MEC1641-PZV-JEF01-TR

MEC1641-PZV-JNC00

MEC1641-PZV-JNC00-TR  
MEC1641-PZV-JNC01  
MEC1641-PZV-JNC01-TR  
MEC1641-PZV-LVS00  
MEC1641-PZV-LVS00-TR  
MEC1641-PZV-MDL00  
MEC1641-PZV-MDL00-TR  
MEC1641-PZV-MDL01  
MEC1641-PZV-MDL01-TR  
MEC1641-PZV-PBC00  
MEC1641-PZV-PBC00-TR  
MEC1641-PZV-PBC01  
MEC1641-PZV-PBC01-TR  
MEC1641-PZV-TR