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### Understanding [Embedded - CPLDs \(Complex Programmable Logic Devices\)](#)

Embedded - CPLDs, or Complex Programmable Logic Devices, are highly versatile digital logic devices used in electronic systems. These programmable components are designed to perform complex logical operations and can be customized for specific applications. Unlike fixed-function ICs, CPLDs offer the flexibility to reprogram their configuration, making them an ideal choice for various embedded systems. They consist of a set of logic gates and programmable interconnects, allowing designers to implement complex logic circuits without needing custom hardware.

### Applications of Embedded - CPLDs

#### Details

|                                 |                                                                                                                                 |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Product Status                  | Active                                                                                                                          |
| Programmable Type               | In System Programmable                                                                                                          |
| Delay Time tpd(1) Max           | 7 ns                                                                                                                            |
| Voltage Supply - Internal       | 2.5V, 3.3V                                                                                                                      |
| Number of Logic Elements/Blocks | 2210                                                                                                                            |
| Number of Macrocells            | 1700                                                                                                                            |
| Number of Gates                 | -                                                                                                                               |
| Number of I/O                   | 204                                                                                                                             |
| Operating Temperature           | 0°C ~ 85°C (TJ)                                                                                                                 |
| Mounting Type                   | Surface Mount                                                                                                                   |
| Package / Case                  | 256-BGA                                                                                                                         |
| Supplier Device Package         | 256-FBGA (17x17)                                                                                                                |
| Purchase URL                    | <a href="https://www.e-xfl.com/product-detail/intel/epm2210f256c4">https://www.e-xfl.com/product-detail/intel/epm2210f256c4</a> |

# 6. Reference and Ordering Information

MII51006-1.6

## Software

MAX® II devices are supported by the Altera® Quartus® II design software with new, optional MAX+PLUS® II look and feel, which provides HDL and schematic design entry, compilation and logic synthesis, full simulation and advanced timing analysis, and device programming. Refer to the Design Software Selector Guide for more details about the Quartus II software features.

The Quartus II software supports the Windows XP/2000/NT, Sun Solaris, Linux Red Hat v8.0, and HP-UX operating systems. It also supports seamless integration with industry-leading EDA tools through the NativeLink interface.

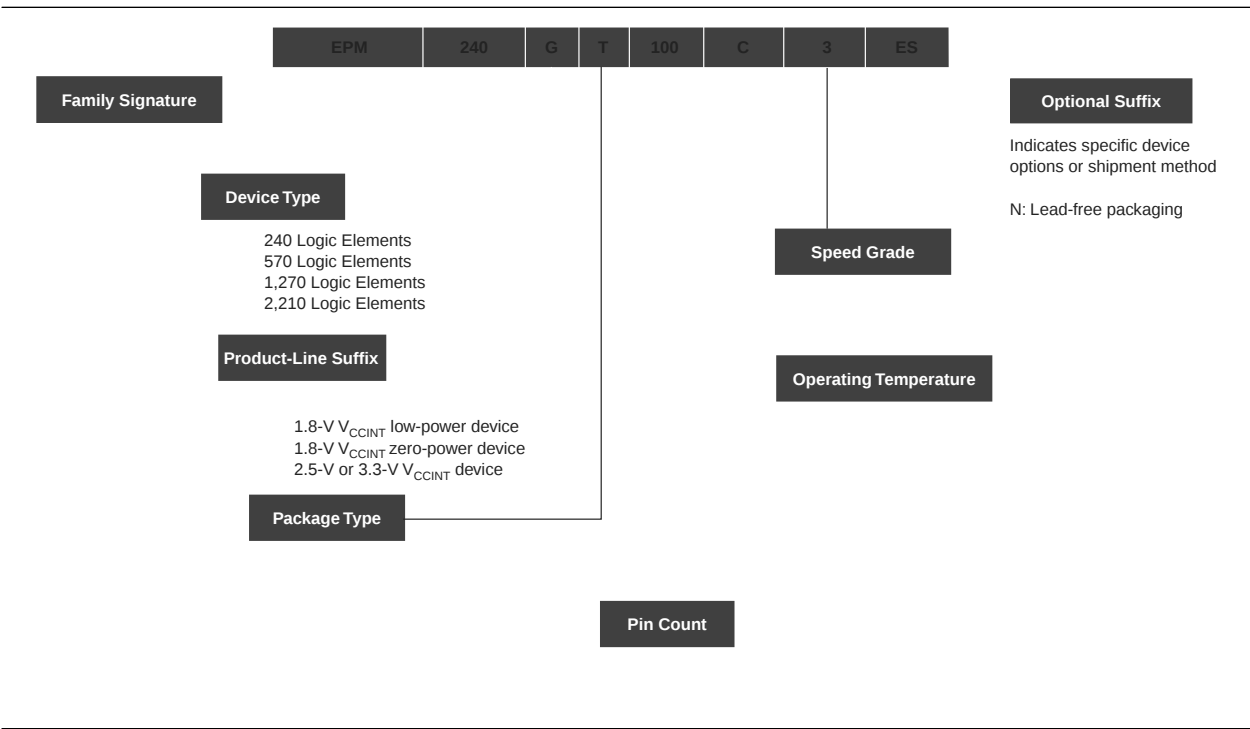
## Device Pin-Outs

Printed device pin-outs for MAX II devices are available on the Altera website ([www.altera.com](http://www.altera.com)).

## Ordering Information

Figure 6–1 describes the ordering codes for MAX II devices. For more information about a specific package, refer to the *Package Information* chapter in the *MAX II Device Handbook*.

Figure 6–1. MAX II Device Packaging Ordering Information



## Referenced Documents

This chapter references the following document:

- *Package Information* chapter in the *MAX II Device Handbook*

## Document Revision History

Table 6–1 shows the revision history for this chapter.

**Table 6–1.** Document Revision History

| Date and Revision             | Changes Made                                                     | Summary of Changes                         |
|-------------------------------|------------------------------------------------------------------|--------------------------------------------|
| August 2009,<br>version 1.6   | ■ Updated Figure 6–1.                                            | Added information for speed grade –8       |
| October 2008,<br>version 1.5  | ■ Updated New Document Format.                                   | —                                          |
| December 2007,<br>version 1.4 | ■ Added “Referenced Documents” section.<br>■ Updated Figure 6–1. | Updated document with MAX IIZ information. |
| December 2006,<br>version 1.3 | ■ Added document revision history.                               | —                                          |
| October 2006,<br>version 1.2  | ■ Updated Figure 6-1.                                            | —                                          |
| June 2005,<br>version 1.1     | ■ Removed Dual Marking section.                                  | —                                          |