



Trion® FPGA Selector Guide

The Efinix® Trion® programmable platform, is available in many combinations of resources, interfaces, packages, operating temperatures, and speed grades. This selector guide summarizes Trion FPGAs by ordering code and resources to help you choose the right product for your application.

Figure 1 Trion Ordering Code Example

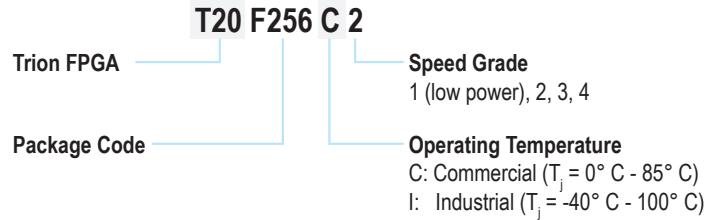


Table 1 Trion Ordering Codes (Part 1 of 2)

| FPGA | LEs | RAM (kbits) | Multipliers | Package | Pins | GPIO | PLLs | Oscillator | LVDS TX Pairs | LVDS RX Pairs | MIPI TX | MIPI RX | DDR | Temperature | Speed Grade | Ordering Code | | |
|------|--------|-------------|-------------|---------|------|------|-----------|------------|---------------|---------------|---------|---------|-----|-------------|-------------|---------------|-------------|-------------|
| T4 | 3,888 | 76.8 | 4 | FBGA | 49 | 33 | 1 | 1 | - | - | - | - | - | C | 2 | T4F49C2 | | |
| | | | | FBGA | 81 | 55 | 1 | 1 | - | - | - | - | - | - | C | 2 | T4F81C2 | |
| T8 | 7,384 | 122.88 | 8 | FBGA | 49 | 33 | 1 | 1 | - | - | - | - | - | C | 2 | T8F49C2 | | |
| | | | | FBGA | 81 | 55 | 1 | 1 | - | - | - | - | - | - | C | 2 | T8F81C2 | |
| | | | | LQFP | 144 | 97 | 5 | - | 6 | 6 | - | - | - | - | C | 3, 4 | T8Q144C3/4 | |
| I | 4 | T8Q144I4 | | | | | | | | | | | | | | | | |
| T13 | 12,828 | 727.04 | 24 | FBGA | 169 | 73 | 5 | - | 8 | 12 | 2 | 2 | - | C | 3, 4 | T13F169C3/4 | | |
| | | | | | I | 4 | T13F169I4 | | | | | | | | | | | |
| | | | | FBGA | 256 | 195 | 5 | - | 13 | 13 | - | - | - | - | C | 3, 4 | T13F256C3/4 | |
| | | | | | I | 4 | T13F256I4 | | | | | | | | | | | |
| T20 | 19,728 | 1,044.48 | 36 | FBGA | 169 | 73 | 5 | - | 8 | 12 | 2 | 2 | - | C | 3, 4 | T20F169C3/4 | | |
| | | | | | I | 4 | T20F169I4 | | | | | | | | | | | |
| | | | | FBGA | 256 | 195 | 5 | - | 13 | 13 | - | - | - | - | C | 3, 4 | T20F256C3/4 | |
| | | | | | I | 4 | T20F256I4 | | | | | | | | | | | |
| | | | | FBGA | 324 | 130 | 7 | - | 20 | 26 | 2 | 2 | x16 | - | C | 3, 4 | T20F324C3/4 | |
| | | | | | I | 4 | T20F324I4 | | | | | | | | | | | |
| | | | | FBGA | 400 | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) | - | C | 3, 4 | T20F400C3/4 |
| | | | | | I | 4 | T20F400I4 | | | | | | | | | | | |

1. Contact Efinix for the resource information for this package.

Table 1 Trion Ordering Codes (Part 2 of 2)

| FPGA | LEs | RAM (kbits) | Multipliers | Package | Pins | GPIO | PLLs | Oscillator | LVDS TX Pairs | LVDS RX Pairs | MIPI TX | MIPI RX | DDR | Temperature | Speed Grade | Ordering Code | | |
|------|---------|-------------|-------------|---------|------|------|------|------------|---------------|---------------|---------|---------|---------|-------------|-------------|---------------|--------------|-------------|
| T35 | 31,680 | 1,475 | 120 | FBGA | 324 | 130 | 7 | – | 20 | 26 | 2 | 2 | x16 | C | 3, 4 | T35F324C3/4 | | |
| | | | | | | | | | | | | | | | I | 4 | T35F324I4 | |
| | | | | FBGA | 400 | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) | | C | 3, 4 | T35F400C3/4 |
| | | | | | | | | | | | | | | | | I | 4 | T35F400I4 |
| T55 | 54,195 | 2,765 | 150 | FBGA | 324 | 130 | 7 | – | 20 | 26 | 2 | 2 | x16 | C | 3, 4 | T55F324C3/4 | | |
| | | | | | | | | | | | | | | | I | 4 | T55F324I4 | |
| | | | | FBGA | 484 | 256 | 8 | – | 40 | 40 | – | – | x16/x32 | | C | 3, 4 | T55F484C3/4 | |
| | | | | | | | | | | | | | | | | I | 4 | T55F484I4 |
| | | | | FBGA | 576 | 278 | 8 | – | 52 | 52 | 3 | 3 | x16/x32 | | C | 3, 4 | T55F576C3/4 | |
| | | | | | | | | | | | | | | | | I | 4 | T55F576I4 |
| T85 | 84,096 | 4,055 | 240 | FBGA | 324 | 130 | 7 | – | 20 | 26 | 2 | 2 | x16 | C | 3, 4 | T85F324C3/4 | | |
| | | | | | | | | | | | | | | | I | 4 | T85F324I4 | |
| | | | | FBGA | 484 | 256 | 8 | – | 40 | 40 | – | – | x16/x32 | | C | 3, 4 | T85F484C3/4 | |
| | | | | | | | | | | | | | | | | I | 4 | T85F484I4 |
| | | | | FBGA | 576 | 278 | 8 | – | 52 | 52 | 3 | 3 | x16/x32 | | C | 3, 4 | T85F576C3/4 | |
| | | | | | | | | | | | | | | | | I | 4 | T85F576I4 |
| T120 | 112,128 | 5,407 | 320 | FBGA | 324 | 130 | 7 | – | 20 | 26 | 2 | 2 | x16 | C | 3, 4 | T120F324C3/4 | | |
| | | | | | | | | | | | | | | | I | 4 | T120F324I4 | |
| | | | | FBGA | 484 | 256 | 8 | – | 40 | 40 | – | – | x16/x32 | | C | 3, 4 | T120F484C3/4 | |
| | | | | | | | | | | | | | | | | I | 4 | T120F484I4 |
| | | | | FBGA | 576 | 278 | 8 | – | 52 | 52 | 3 | 3 | x16/x32 | | C | 3, 4 | T120F576C3/4 | |
| | | | | | | | | | | | | | | | | I | 4 | T120F576I4 |

Table 2 Package Dimensions

| Package | Pitch | Dimensions (mm) |
|--------------|-------|-----------------|
| 49-ball FBGA | 0.4 | 3x3 |
| 81-ball FBGA | 0.5 | 5x5 |
| 144-pin LQFP | 0.5 | 20x20 |

| Package | Pitch | Dimensions (mm) |
|---------------|-------|-----------------|
| 169-ball FBGA | 0.65 | 9x9 |
| 324-ball FBGA | 0.65 | 12x12 |
| 576-ball FBGA | 0.65 | 16x16 |

| Package | Pitch | Dimensions (mm) |
|---------------|-------|-----------------|
| 256-ball FBGA | 0.8 | 13x13 |
| 400-ball FBGA | 0.8 | 16x16 |
| 484-ball FBGA | 0.8 | 18x18 |

