

# CEIBO

*Development Tools of Choice*



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## Intel Microcontrollers supported by Ceibo

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### DS-51 - In-Circuit Emulator

| $\mu$ C | Probe | Header | Special adapter | fmax   | Voltage | Limitations  | Highlights |
|---------|-------|--------|-----------------|--------|---------|--------------|------------|
| 80C31   | P-C32 | 40-DIP | 44-PLCC, 44-QFP | 40 MHz | 5V      | Romless only | fmax       |
| 80C31   | P-C51 | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V      |              |            |
| 80C32   | P-C32 | 40-DIP | 44-PLCC, 44-QFP | 40 MHz | 5V      | Romless only | fmax       |
| 80C32   | P-C51 | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V      |              |            |
| 80C51   | P-C51 | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V      |              |            |
| 87C51   | P-C51 | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V      |              |            |
| 80C51FA | P-C51 | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V      |              |            |
| 83C51FA | P-C51 | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V      |              |            |
| 87C51FA | P-C51 | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V      |              |            |
| 83C51FB | P-C51 | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V      |              |            |
| 87C51FB | P-C51 | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V      |              |            |
| 83C51FC | P-C51 | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V      |              |            |
| 87C51FC | P-C51 | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V      |              |            |
| 80C51RA | P-C51 | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V      |              |            |
| 83C51RA | P-C51 | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V      |              |            |
| 87C51RA | P-C51 | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V      |              |            |
| 83C51RB | P-C51 | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V      |              |            |
| 87C51RB | P-C51 | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V      |              |            |

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|         |         |        |                 |        |        |  |  |
|---------|---------|--------|-----------------|--------|--------|--|--|
| 83C51RC | P-C51   | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V     |  |  |
| 87C51RC | P-C51   | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V     |  |  |
| 80C52   | P-C51   | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V     |  |  |
| 87C52   | P-C51   | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V     |  |  |
| 80L52   | P-C51LV | 40-DIP | 44-PLCC, 44-QFP | 16 MHz | 3.3-5V |  |  |
| 87L52   | P-C51LV | 40-DIP | 44-PLCC, 44-QFP | 16 MHz | 3.3-5V |  |  |
| 80C54   | P-C51   | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V     |  |  |
| 87C54   | P-C51   | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V     |  |  |
| 87L54   | P-C51LV | 40-DIP | 44-PLCC, 44-QFP | 16 MHz | 3.3-5V |  |  |
| 80C58   | P-C51   | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V     |  |  |
| 87C58   | P-C51   | 40-DIP | 44-PLCC, 44-QFP | 24 MHz | 5V     |  |  |
| 80L58   | P-C51LV | 40-DIP | 44-PLCC, 44-QFP | 16 MHz | 3.3-5V |  |  |
| 87L58   | P-C51LV | 40-DIP | 44-PLCC, 44-QFP | 16 MHz | 3.3-5V |  |  |

## EB-51 - Low Cost Emulator

| $\mu\text{C}$ | Header | Special adapter | fmax   | Voltage |
|---------------|--------|-----------------|--------|---------|
| 80C31         | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 80C32         | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 80C51         | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 87C51         | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 80C51FA       | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 83C51FA       | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 87C51FA       | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 80L51FA       | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 83L51FA       | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 87L51FA       | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 83C51FB       | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 87C51FB       | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 83L51FB       | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |

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|---------|--------|-----------------|--------|---------|
| 87L51FB | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 83C51FC | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 87C51FC | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 83L51FC | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 87L51FC | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 80C51RA | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 83C51RA | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 87C51RA | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 83C51RB | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 87C51RB | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 83C51RC | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 87C51RC | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 80C52   | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 87C52   | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 80L52   | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 87L52   | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 80C54   | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 87C54   | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 87L54   | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 80C58   | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 87C58   | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 80L58   | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 87L58   | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 87L54   | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 80C58   | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 87C58   | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 80L58   | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |
| 87L58   | 40-DIP | 44-PLCC, 44-QFP | 33 MHz | 3.3V/5V |

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## DS-186 - In-Circuit Emulator

| $\mu\text{C}$ | Probe   | Header  | Special adapter | Frequency | Voltage | Special Features  |
|---------------|---------|---------|-----------------|-----------|---------|-------------------|
| 8086/8        | A-86    | 40-DIP  |                 | 16MHz     | 5V      | Paradigm Software |
| 80C86/8       | A-86    | 40-DIP  |                 | 16MHz     | 5V      | Paradigm Software |
| 80186/8       | A-186   | 68-PLCC |                 | 20 MHz    | 5V      | Paradigm Software |
| 80C186/8      | A-186   | 68-PLCC |                 | 20 MHz    | 5V      | Paradigm Software |
| 80C186/8XL    | A-186   | 68-PLCC |                 | 20 MHz    | 5V      | Paradigm Software |
| 80C186/8EA    | A-186   | 68-PLCC |                 | 20 MHz    | 5V      | Paradigm Software |
| 80L186EA      | A-186   | 68-PLCC |                 | 20 MHz    | 5V      | Paradigm Software |
| 80C186/8EB    | A-186EB | 84-PLCC | 80-PQFP         | 20 MHz    | 5V      | Paradigm Software |
| 80C186/8EC    | A-186EC | 100-ROW | EIAJ, PQFP      | 25 MHz    | 5V      | Paradigm Software |

## DS-85 - In-Circuit Emulator

| $\mu\text{C}$ | Probe | Header | Frequency | Voltage | Limitations  |
|---------------|-------|--------|-----------|---------|--------------|
| 8085          | P-C85 | 40-DIP | 16MHz     | 5V      | DOS Software |

## DS-251 - In-Circuit Emulator

| $\mu\text{C}$  | Probe    | Header  | Special adapter | Frequency | Voltage |
|----------------|----------|---------|-----------------|-----------|---------|
| 80C251SA/B/Q   | P-C251TX | 44-PLCC | 40-DIP, 44-QFP  | 24MHz     | 5V      |
| 83C251SA/B/P/Q | P-C251TX | 44-PLCC | 40-DIP, 44-QFP  | 24MHz     | 5V      |
| 87C251SA/B/P/Q | P-C251TX | 44-PLCC | 40-DIP, 44-QFP  | 24MHz     | 5V      |
| 80C251TA/B/P/Q | P-C251TX | 44-PLCC | 40-DIP, 44-QFP  | 24MHz     | 5V      |
| 83C251TA/B/P/Q | P-C251TX | 44-PLCC | 40-DIP, 44-QFP  | 24MHz     | 5V      |

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## EB-C251 - Low Cost Emulator

| $\mu\text{C}$  | Daughter Board | Header  | Special adapter | Frequency | Voltage |
|----------------|----------------|---------|-----------------|-----------|---------|
| 80C251SA/B/Q   | B-C251Tx       | 44-PLCC | 40-DIP, 44-QFP  | 24MHz     | 5V      |
| 83C251SA/B/P/Q | B-C251Tx       | 44-PLCC | 40-DIP, 44-QFP  | 24MHz     | 5V      |
| 87C251SA/B/P/Q | B-C251Tx       | 44-PLCC | 40-DIP, 44-QFP  | 24MHz     | 5V      |
| 80C251TA/B/P/Q | B-C251Tx       | 44-PLCC | 40-DIP, 44-QFP  | 24MHz     | 5V      |
| 83C251TA/B/P/Q | B-C251Tx       | 44-PLCC | 40-DIP, 44-QFP  | 24MHz     | 5V      |

## MP-51 Programmer

| $\mu\text{C}$ | Package                 | Adapters                     |
|---------------|-------------------------|------------------------------|
| 87C51         | 40-DIP, 44-PLCC, 44-QFP | AD87C51D, AD87C51P, AD87C51Q |
| 87C51FA       | 40-DIP, 44-PLCC, 44-QFP | AD87C51D, AD87C51P, AD87C51Q |
| 87L51FA       | 40-DIP, 44-PLCC, 44-QFP | AD87C51D, AD87C51P, AD87C51Q |
| 87C51FB       | 40-DIP, 44-PLCC, 44-QFP | AD87C51D, AD87C51P, AD87C51Q |
| 87L51FB       | 40-DIP, 44-PLCC, 44-QFP | AD87C51D, AD87C51P, AD87C51Q |
| 87C51FC       | 40-DIP, 44-PLCC, 44-QFP | AD87C51D, AD87C51P, AD87C51Q |
| 87L51FC       | 40-DIP, 44-PLCC, 44-QFP | AD87C51D, AD87C51P, AD87C51Q |
| 87C51GB       | 68-PLCC                 | AD87C51GBP                   |
| 87C51RA       | 40-DIP, 44-PLCC, 44-QFP | AD87C51D, AD87C51P, AD87C51Q |
| 87C51RB       | 40-DIP, 44-PLCC, 44-QFP | AD87C51D, AD87C51P, AD87C51Q |
| 87C51RC       | 40-DIP, 44-PLCC, 44-QFP | AD87C51D, AD87C51P, AD87C51Q |
| 87C52         | 40-DIP, 44-PLCC, 44-QFP | AD87C51D, AD87C51P, AD87C51Q |
| 87L52         | 40-DIP, 44-PLCC, 44-QFP | AD87C51D, AD87C51P, AD87C51Q |
| 87C54         | 40-DIP, 44-PLCC, 44-QFP | AD87C51D, AD87C51P, AD87C51Q |
| 87L54         | 40-DIP, 44-PLCC, 44-QFP | AD87C51D, AD87C51P, AD87C51Q |
| 87C58         | 40-DIP, 44-PLCC, 44-QFP | AD87C51D, AD87C51P, AD87C51Q |
| 87L58         | 40-DIP, 44-PLCC, 44-QFP | AD87C51D, AD87C51P, AD87C51Q |

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|          |                 |                      |
|----------|-----------------|----------------------|
| 87C251SA | 40-DIP, 44-PLCC | AD87C251D, AD87C251P |
| 87C251SB | 40-DIP, 44-PLCC | AD87C251D, AD87C251P |
| 87C251SP | 40-DIP, 44-PLCC | AD87C251D, AD87C251P |
| 87C251SQ | 40-DIP, 44-PLCC | AD87C251D, AD87C251P |

## **Nomenclature:**

Probe: means the emulation module that carries on the particular microprocessor

Header: is the mechanical attachment to be plugged into a target socket instead of actual chip

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*June. 2001*

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