mandelbrot_iteration
max_iter
m
n

clk	
reset	
done_in	
	Zr_next
Cr	
	Zi_next
Ci	
	iterations_out
Zr_previous	
	done_out
Zi_previous	
R	
iterations_in	

mandelbrot_iteration

max_iter
m
n

clk
reset
done_in
Cr
Ci
Zr_previous
Zi_previous
R
iterations_in

Zr_next
Zi_next
iterations_out
done_out

Nouvelle valeur

constante

mandelbrot_iteration		mandelbrot_iteration		mandelbrot_iteration

```
                    mandelbrot_iteration                          mandelbrot_iteration                          mandelbrot_iteration
      ┌────────────────────────────────────┐    ┌────────────────────────────────────┐    ┌────────────────────────────────────┐
      │ max_iter                           │    │ max_iter                           │    │ max_iter                           │
      │ m                                  │    │ m                                  │    │ m                                  │
      │ n                                  │    │ n                                  │    │ n                                  │
      ├────────────────────────────────────┤    ├────────────────────────────────────┤    ├────────────────────────────────────┤
      │ clk                                │    │ clk                                │    │ clk                                │
      │ reset                              │    │ reset                              │    │ reset                              │
   0 →│ done_in              done_out      │───→│ done_in              done_out      │───→│ done_in              done_out      │
      │ Cr                                 │    │ Cr                                 │    │ Cr                                 │
      │ Ci                                 │    │ Ci                                 │    │ Ci                                 │
   0 →│ Zr_previous           Zr_next      │───→│ Zr_previous           Zr_next      │───→│ Zr_previous           Zr_next      │
   0 →│ Zi_previous           Zi_next      │───→│ Zi_previous           Zi_next      │───→│ Zi_previous           Zi_next      │
      │ R                                  │    │ R                                  │    │ R                                  │
   0 →│ iterations_in      iterations_out  │───→│ iterations_in      iterations_out  │───→│ iterations_in      iterations_out  │
      └────────────────────────────────────┘    └────────────────────────────────────┘    └────────────────────────────────────┘
```

Nouvelle valeur → C_r, C_i

constante → R

etc...

IDLE

WAIT_FOR_NEXT

run = '1'

next_value <= '1';

loop_start <= '1';

LOOP_INIT

run = '0'

run = '1'

WRITE_MEMORY

RUNNING

loop_done = '1'