

# -ghash

```
Gouint32uint64
```

```
import "github.com/gogf/gf/v2/encoding/ghash"
```

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<https://pkg.go.dev/github.com/gogf/gf/v2/encoding/ghash>

```
goos: darwin
goarch: amd64
pkg: github.com/gogf/gf/v2/encoding/ghash
cpu: Intel(R) Core(TM) i7-9750H CPU @ 2.60GHz
Benchmark_BKDR
Benchmark_BKDR-12          39315165      26.88 ns/op
Benchmark_BKDR64
Benchmark_BKDR64-12        62891215      22.61 ns/op
Benchmark_SDBM
Benchmark_SDBM-12          49689925      25.40 ns/op
Benchmark_SDBM64
Benchmark_SDBM64-12        48860472      24.38 ns/op
Benchmark_RS
Benchmark_RS-12            39463418      25.52 ns/op
Benchmark_RS64
Benchmark_RS64-12          53318370      19.45 ns/op
Benchmark_JS
Benchmark_JS-12            53751033      23.20 ns/op
Benchmark_JS64
Benchmark_JS64-12          62440287      19.25 ns/op
Benchmark_PJW
Benchmark_PJW-12            42439626      27.85 ns/op
Benchmark_PJW64
Benchmark_PJW64-12          37491696      33.28 ns/op
Benchmark_ELF
Benchmark_ELF-12            38034584      31.74 ns/op
Benchmark_ELF64
Benchmark_ELF64-12          44047201      27.58 ns/op
Benchmark_DJB
Benchmark_DJB-12            46994352      22.60 ns/op
Benchmark_DJB64
Benchmark_DJB64-12          61980186      19.19 ns/op
Benchmark_AP
Benchmark_AP-12              29544234      40.58 ns/op
Benchmark_AP64
Benchmark_AP64-12            28123783      42.48 ns/op
```

```
uint64
```

```

package main

import (
    "encoding/binary"
    "fmt"
    "math"

    "github.com/gogf/gf/v2/encoding/ghash"
)

func main() {
    var (
        m     = make(map[uint64]struct{})
        b     = make([]byte, 8)
        ok   bool
        hash uint64
    )
    for i := uint64(0); i < math.MaxUint64; i++ {
        binary.LittleEndian.PutUint64(b, i)
        hash = ghash.PJW64(b)
        if _, ok = m[hash]; ok {
            fmt.Println("repeated found:", i)
            break
        }
        m[hash] = struct{}{}
    }
}

```

AP64	8388640	
BKDR64	33536	
DJB64	8448	
ELF64	4096	
JS64	734	
PJW64	2	
RS64	-	32G Memory OOM
SDBM64	-	32G Memory OOM