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# Pluto 6

**Dual Video gaming control system,** perfectly suited for dual screen video or spin reel machines.

#### Pluto 6

Pluto 6 is part of the internationally successful Pluto range from Heber. It is a high performance embedded control system with dual video capability and flexible memory options. It can drive up to 8 reels and features a wide range of standard options that allow you to control your application, from reel based machines, casino and gaming machines, as well as video gaming machines.

#### **Video capability**

Heber's Calypso 32 can be added to Pluto 6 if video performance is desired. Calypso 32 is an accelerated video graphics controller, which allows fast-moving 2D graphics and provides 32MB of video memory. Pluto 6 can also be combined with up to two Calypso 32 boards for dual video performance. This powerful combination enables advance graphics, video and special effects to be produced. Using a Calypso 32 with Pluto 6 means you can be more creative for your customers.

#### **Sophisticated security**

Safety against game piracy is imperative. Pluto 6 uses two-stage customer-specific security giving superior protection to your gaming application. A security chip and security software ensure that once your application is developed it is well and truly safeguarded.





#### **Add-on boards**

At Heber we recognise the importance of flexibility. That is why we offer a choice of optional add-on boards that can be connected to Pluto 6 to provide extra functionality and flexibility. These allow you to customise and connect your Pluto 6 to other gaming machine peripherals.

## **Key features**

Compact Flash game storage

Single or dual video outputs with Calypso 32

Multi-channel audio with stereo outputs

Multi-level software security

256 Lamp and 256 LED Multiplexing expandable to 512 Lamps/LEDs

Controls up to 8 reels

#### Ideal for...

Single or dual video embedded gaming systems

Spin reel gaming systems

Hybrid spin reel/video gaming systems

### The Heber advantage

When you buy a Pluto 6 from Heber you benefit from:

- 25 years gaming industry experience
- 14 years Pluto design heritage
- Compliance with worldwide gaming standards Free customer support
- Our team of dedicated specialist engineers
- · Total product dependability

#### Pluto 6 Technical specifications

#### **Processor**

Freescale<sup>™</sup> Coldfire<sup>®</sup> MCF5206e running at 40MHz

#### **Program Memory**

1off Compact Flash card

#### **Battery Backed RAM**

256KB including:

• 90 Day hold-up time

#### **System Memory**

2MB of DRAM

#### Audio

Stereo codec output with software multi-channel mixing

5W + 5W Audio amplifier with software volume control

#### **Real Time Clock**

Real time clock fitted as standard

#### **Serial Communication Ports**

Up to 6 UARTS

UART's routed under software control to the following:

4off RS232 ports including:

 BACTA compliant dataport 1off 5V TTL level UART 1off RS485 2off ccTALK

1off I<sup>2</sup>C

#### Parallel I/O

64off Open drain outputs 32off Inputs with +5V pull ups 6off TTL Lines

#### **LAMP/LED Multiplexer**

256 Lamps, 12V 1.2W +48V supply including:

- LAMP short and present detect
- Eight level individual dimming capability

256 LED's, 32 seven segment displays including:

· Eight level individual dimming capability

#### **Switches**

16off DIL switches 1off Push button switch

#### Security

Removable customer specific security device +12V Current sensed meter supply 4off Power off switch monitors 1off BACTA standard percentage key connector 1off BACTA standard stake key connector

# **Actel**

# freescale





#### **Expansion Capabilities**

3off Memory bus expansion which includes: Video add on capability with Calypso 32 1off LED/lamp multiplex expansion 1off EEPROM socket

#### **Power Supply**

- +5V DC unregulated (+-5%)
- +12V DC unregulated (+-5%)
- -12V DC unregulated (+-5%)
- +48V DC when using multiplexed lamps

#### **Dimensions**

282mm x 206mm (11.1" x 8.1")

#### **Video Capabilities**

Single video output when fitted with one Calypso 32 video add-on card

Dual video outputs when fitted with two Calypso 32 video add-on cards

#### Calypso 32 Features **Graphics Processor**

Fujitsu Cremson with the following:

- Maximum resolution 1024 x 768
- Maximum color depth 16bpp
- Up to 4 Layer of image overlay
- Accelerated 2D drawing
- Accelerated 3D drawing
- · Anti-aliasing
- · Alpha blending

#### **Graphics Memory**

32MB of SDRAM memory, 64bit bus running at 100MHz

#### Related datasheets

Calypso 32 Datasheet 80-20242

Pluto 6 Development Kit Datasheet 80-20244

Datasheet 80-20231-1 04/08

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