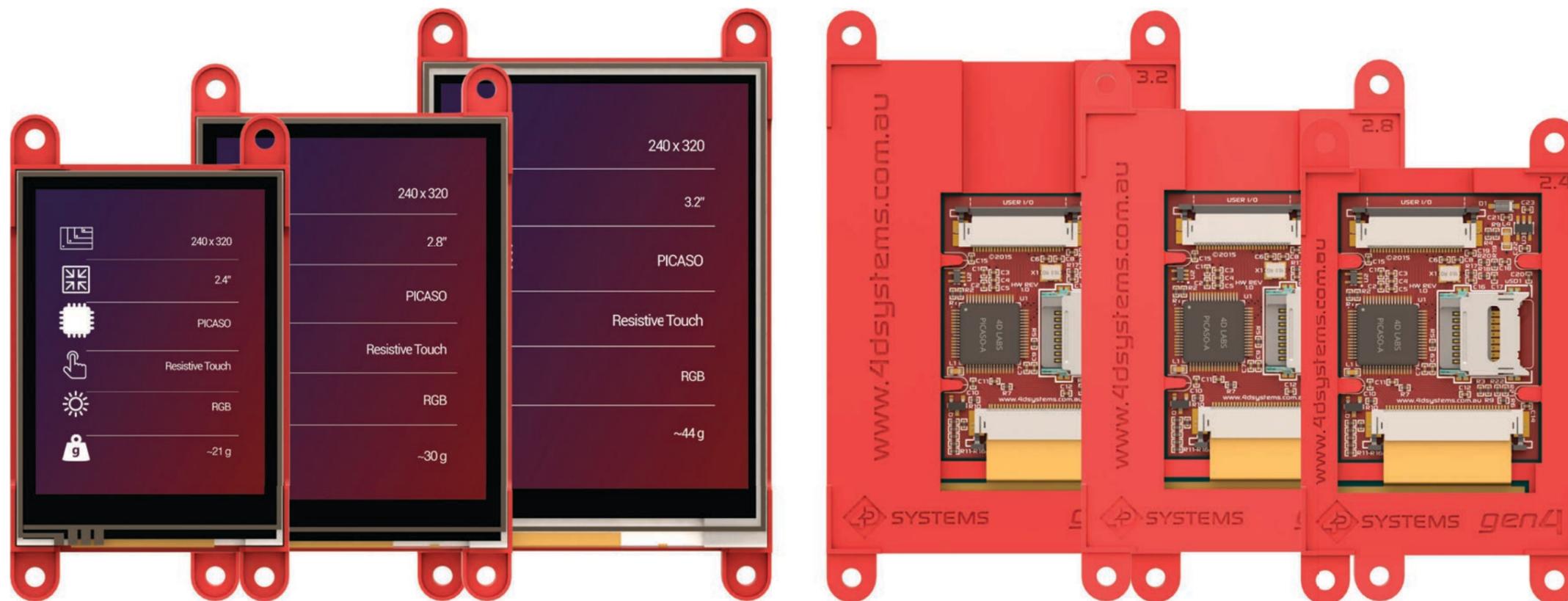


# gen4 Picaso Series

## Intelligent Display Modules with Embedded Picaso Processor

Distributed by:



The gen4 Picaso displays are part of the latest gen4 series of HMI display modules designed and manufactured by 4D Systems.

The gen4 series was designed specifically for ease of integration and use, with careful consideration for space requirements and functionality.

The Picaso series of modules are available in 2.4", 2.8" or 3.2" full colour, 240x320 resolution TFT LCD display with resistive touch. They are powered by the well-known 4D Systems' Picaso Graphics Processor, offering an array of functionality and options for any Designer/Integrator/User.

	gen4-uLCD-24PT	gen4-uLCD-28PT	gen4-uLCD-32PT
Viewing Area	48.96 x 36.72 mm	57.6 x 43.2 mm	64.8 x 48.6 mm
Module Width	44.8 mm	52.1 mm	57.1 mm
Module Height	78.4 mm	87.3 mm	95.7 mm
Module Depth	7.2 mm	7.3 mm	7.5 mm



**gen4-uLCD-24/28/32PT**

- ▶ gen4 Display Module
- ▶ gen4 Interface Board
- ▶ 5-way female-to-female Ribbon Cable with male-to-male adaptor
- ▶ Welcome Leaflet



**SK-gen4-24/28/32PT**

- ▶ gen4 Display Module
- ▶ gen4 Interface Board
- ▶ gen4 Programming Adaptor
- ▶ 4GB microSD Card
- ▶ 30-way 150mm FFC Cable
- ▶ 5-way female-to-female Ribbon Cable with male-to-male adaptor
- ▶ Welcome Leaflet

### Features

- ▶ Intelligent LCD-TFT display module powered by the Picaso Processor.
- ▶ 14KB of Flash memory for User Application Code and Data.
- ▶ 14KB of SRAM for user variables, or 14KB shared user code and program variables.
- ▶ 2 x Asynchronous hardware serial ports (COM0, COM1), TTL interface, with 300 to 600K baud.
- ▶ 1 x I2C interface (Master).
- ▶ 8 x 16 bit timers with 1 millisecond resolution.
- ▶ 13 x General Purpose I/O pins. Supports fast 8-bit parallel data transfer through Upper 8 bits.
- ▶ 30pin FPC connection, for all signals, power, communications, GPIO and programming.
- ▶ On-board latch type micro-SD memory card connector for multimedia storage and data logging purposes.
- ▶ DOS compatible file access (FAT16 format) as well as low level access to card memory.
- ▶ Dedicated PWM Audio pin driven by WAV files from micro-SD card, and for sound generation, for an external amplifier.
- ▶ Built in extensive 4DGL graphics and system library functions.
- ▶ Display full colour images, animations, icons and video clips.
- ▶ Supports all available Windows fonts.
- ▶ 4.0V to 5.5V range operation (single supply).
- ▶ 4x mounting tabs with 3.2mm holes for mechanical mounting using M3 screws.
- ▶ RoHS and REACH compliant.
- ▶ CE Compliant – please ask for CE declarations from our Support Team.



## 2.8" Diablo16 Intelligent Display Modules



▶ Resistive Touch  
▶ Non-Touch

▶ Capacitive Touch with Cover Glass  
▶ Non-Touch with Cover Glass

Starter kits

### Product Specifications

Resolution	240 x 320 Pixels		Display Viewing Area	57.60 x 43.20 mm
Brightness (Typical)	D	~175 cd/m <sup>2</sup>	Lithium Charger	No
	D-CLB	170 cd/m <sup>2</sup>	8 Bit Parallel Transfer	Yes
	DT	~140 cd/m <sup>2</sup>	Supply Voltage (VCC) (TYP)	5.0V DC
Supply Current (ICC) (TYP)	D / D-CLB ~155mA ** DT ~165mA **		Flash	6 banks of 32KB
Controller	DIABLO16		RAM	32KB SRAM
Colours	RGB 65K		I2C	3 channels available
Processor Capability	1220K Pixels / second		GPIO	16 x GPIO
Frame Rate	9.3 FPS		SPI	3 channels available
Touch	D: Non-Touch D-CLB: Non-Touch w/ Cover Lens Bezel DT: Resistive Touch		IDE	4D Workshop4 IDE
Storage Temperature	-30°C to +80°C		Serial Speed	300 to 2187500 baud
Operating Ambient Temperature	-20°C to 70°C		Serial Interface(s)	1 x dedicated and 3 x configurable
SD Card Slot	YES		Additional Features	SPI Flash, CRC, Pin Counter, Quadrature Input, Pulse Out ** PWM Out Functions, Dallas 1-wire Support, Neopixel Support **

\* Not all configurable I/O features for use at the same time. Please refer to the relevant Datasheet.

\*\* Current at 5V dependant on display usage, colours displayed, SD card usage and brand, and processor calculations.

### AVAILABLE IN:

gen4-uLCD-28D	2.8", Intelligent non-touch Display Module with embedded DIABLO16 processor, gen4-IB Adaptor and 30 way FFC Cable
gen4-uLCD-28D-CLB	2.8", Intelligent non-touch Display Module featuring a Cover Lens Bezel and embedded DIABLO16 processor, gen4-IB Adaptor and 30 way FFC Cable
gen4-uLCD-28DT	2.8", Intelligent resistive-touch Display Module with embedded DIABLO16 processor, gen4-IB Adaptor and 30 way FFC Cable

### Starter Kits for gen4-uLCD-28D Series Display Modules

SK-gen4-28D	Starter Kit for gen4-uLCD-28D with uSD-4GB, gen4-IB, gen4-PA, 150mm FFC Cable and 5-way cable
SK-gen4-28D-CLB	Starter Kit for gen4-uLCD-28D-CLB with uSD-4GB, gen4-IB, gen4-PA, 150mm FFC Cable and 5-way cable
SK-gen4-28DT	Starter Kit for gen4-uLCD-28DT with uSD-4GB, gen4-IB, gen4-PA, 150mm FFC Cable and 5-way cable

## 2.8" HMI Modules for Arduino



▶ Resistive Touch  
▶ Non-Touch

▶ Capacitive Touch with Cover Glass  
▶ Non-Touch with Cover Glass

Starter kits

### AVAILABLE IN:

gen4-uLCD-28D-AR	Includes gen4-uLCD-28D, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-28DT-AR	Includes gen4-uLCD-28DT, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-28D-CLB-AR	Includes gen4-uLCD-28D-CLB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor

## 2.8" HMI Modules for Raspberry Pi



▶ Resistive Touch  
▶ Non-Touch

▶ Capacitive Touch with Cover Glass  
▶ Non-Touch with Cover Glass

Starter kits

### AVAILABLE IN:

gen4-uLCD-28D-PI	Includes gen4-uLCD-28D, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-28DT-PI	Includes gen4-uLCD-28DT, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-28D-CLB-PI	Includes gen4-uLCD-28D-CLB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor

### 3.2" Diablo16 Intelligent Display Modules



▶ Resistive Touch  
▶ Non-Touch

▶ Capacitive Touch with Cover Glass  
▶ Non-Touch with Cover Glass

Starter kits

#### Product Specifications

Resolution	240 x 320 Pixels		SD Card Slot	YES
Brightness (Typical)	D	~200cd/m2	Display Viewing Area	64.80 x 48.60 mm
	D-CLB	~194 cd/m2	Lithium Charger	No
	DT	~160 cd/m2	8 Bit Parallel Transfer	Yes
	DCT CLB	~190 cd/m2	Supply Voltage (VCC) (TYP)	5.0V DC
Supply Current (ICC) (TYP)	D / D-CLB / DT	~165mA **	Flash	6 banks of 32KB
	DCT-CLB	~170mA **	RAM	32KB SRAM
Controller	DIABLO16		I2C	3 channels available
Colours	RGB 65K		GPIO	16 x GPIO
Processor Capability	1220K Pixels / second		SPI	3 channels available
Frame Rate	9.3 FPS		IDE	4D Workshop4 IDE
Touch	D : Non-Touch		Serial Speed	300 to 2187500 baud
	D-CLB : Non-Touch w/ Cover Lens Bezel		Serial Interface(s)	1 x dedicated and 3 x configurable
Storage Temperature	-30°C to +80°C		Additional Features	SPI Flash, CRC, Pin Counter, Quadrature Input, Pulse Out ** PWM Out Functions, Dallas 1-wire Support, Neopixel Support **
Operating Ambient Temperature	-20°C to 70°C			

\* Not all configurable I/O features for use at the same time. Please refer to the relevant Datasheet.

\*\* Current at 5V dependant on display usage, colours displayed, SD card usage and brand, and processor calculations.

#### AVAILABLE IN:

gen4-uLCD-32D	3.2", Intelligent non-touch Display Module with embedded DIABLO16 processor with gen4-IB Adaptor and 30 way FFC Cable
gen4-uLCD-32DT	3.2", Intelligent resistive-touch Display Module with embedded DIABLO16 processor with gen4-IB Adaptor and 30 way FFC Cable
gen4-uLCD-32D-CLB	3.2", Intelligent non-touch Display Module with Cover Lens Bezel and embedded DIABLO16 processor with gen4-IB Adaptor and 30 way FFC Cable
gen4-uLCD-32DCT-CLB	3.2", Intelligent capacitive-touch Display Module with Cover Lens Bezel and embedded DIABLO16 processor with gen4-IB Adaptor and 30 way FFC Cable

#### Starter Kits for gen4-uLCD-32D Series Display Modules

SK-gen4-uLCD-32D	Starter Kit for gen4-uLCD-32D with uSD-4GB, gen4-IB, gen4-PA, 150mm FFC Cable and 5-way cable with the gen4-uLCD-32D Display Module
SK-gen4-uLCD-32DT	Starter Kit for gen4-uLCD-32DT with uSD-4GB, gen4-IB, gen4-PA, 150mm FFC Cable and 5-way cable with the gen4-uLCD-32DT Display Module
SK-gen4-uLCD-32D-CLB	Starter Kit for gen4-uLCD-32D-CLB with uSD-4GB, gen4-IB, gen4-PA, 150mm FFC Cable and 5-way cable with the gen4-uLCD-32D-CLB Display Module
SK-gen4-uLCD-32DCT-CLB	Starter Kit for gen4-uLCD-32DCT-CLB with uSD-4GB, gen4-IB, gen4-PA, 150mm FFC Cable and 5-way cable

### 3.2" HMI Modules for Arduino



▶ Resistive Touch  
▶ Non-Touch

▶ Capacitive Touch with Cover Glass  
▶ Non-Touch with Cover Glass

Starter kits

#### AVAILABLE IN:

gen4-uLCD-32D-AR	Includes gen4-uLCD-32D, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-32DT-AR	Includes gen4-uLCD-32DT, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-32D-CLB-AR	Includes gen4-uLCD-32D-CLB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-32DCT-CLB-AR	Includes gen4-uLCD-32DCT-CLB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor

### 3.2" HMI Modules for Raspberry Pi



▶ Resistive Touch  
▶ Non-Touch

▶ Capacitive Touch with Cover Glass  
▶ Non-Touch with Cover Glass

Starter kits

#### AVAILABLE IN:

gen4-uLCD-32D-PI	Includes gen4-uLCD-32D, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-32DT-PI	Includes gen4-uLCD-32DT, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-32D-CLB-PI	Includes gen4-uLCD-32D-CLB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-32DCT-CLB-PI	Includes gen4-uLCD-32DCT-CLB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor

## 3.5" Diablo16 Intelligent Display Modules



▶ Resistive Touch  
▶ Non-Touch

▶ Capacitive Touch with Cover Glass  
▶ Non-Touch with Cover Glass

Starter kits

### Product Specifications

Resolution	320 x 480 Pixels		SD Card Slot	YES
Brightness (Typical)	D	~228cd/m2	Display Viewing Area	73.44 x 48.96 mm
	D-CLB	~221 cd/m2	Lithium Charger	No
	DT	~182 cd/m2	8 Bit Parallel Transfer	Yes
	DCT CLB	~216 cd/m2	Supply Voltage (VCC) (TYP)	5.0V DC
Supply Current (ICC) (TYP)	D / D-CLB / DCT-CLB	~175mA **	Flash	6 banks of 32KB
	DT	~180mA **	RAM	32KB SRAM
Controller	DIABLO16		I2C	3 x Channels
Colours	RGB 65K		GPIO	16 x GPIO
Processor Capability	1220K Pixels / second		SPI	3 channels available
Frame Rate	7.9 FPS		IDE	4D Workshop4 IDE
Touch	D : Non-Touch		Serial Speed	300 to 2187500 baud
	D-CLB : Non-Touch w/ Cover Lens Bezel		Serial Interface(s)	1 x dedicated and 3 x configurable
	DT : Resistive Touch		Additional Features	SPI Flash, CRC, Pin Counter, Quadrature Input, Pulse Out **
	DCT-CLB : Capacitive w/ Cover Lens Bezel			PWM Out Functions, Dallas 1-wire Support, Neopixel Support **
Storage Temperature	-30°C to +80°C			
Operating Ambient Temperature	-20°C to 70°C			

\* Not all configurable I/O features for use at the same time. Please refer to the relevant Datasheet.

\*\* Current at 5V dependant on display usage, colours displayed, SD card usage and brand, and processor calculations.

### AVAILABLE IN:

gen4-uLCD-35D	3.5", Intelligent non-touch Display Module with embedded DIABLO16 processor with gen4-IB Adaptor and 30 way FFC Cable
gen4-uLCD-35DT	3.5", Intelligent resistive-touch Display Module with embedded DIABLO16 processor with a gen4-IB Adaptor and 30 way FFC Cable
gen4-uLCD-35D-CLB	3.5", Intelligent non-touch Display Module with a Cover Lens Bezel and embedded DIABLO16 processor with gen4-IB Adaptor and 30 way FFC Cable
gen4-uLCD-35DCT-CLB	3.5", Intelligent capacitive-touch Display Module with a Cover Lens Bezel and embedded DIABLO16 processor with gen4-IB Adaptor and 30 way FFC Cable

### Starter Kits for gen4-uLCD-35D Series Display Modules

SK-gen4-uLCD-35D	Starter Kit for gen4-uLCD-35D with uSD-4GB, gen4-IB, gen4-PA, 150mm FFC Cable and 5-way cable
SK-gen4-uLCD-35DT	Starter Kit for gen4-uLCD-35DT with uSD-4GB, gen4-IB, gen4-PA, 150mm FFC Cable and 5-way cable with the gen4-uLCD-35DT Display Module
SK-gen4-uLCD-35D-CLB	Starter Kit for gen4-uLCD-35D-CLB with uSD-4GB, gen4-IB, gen4-PA, 150mm FFC Cable and 5-way cable
SK-gen4-uLCD-35DCT-CLB	Starter Kit for gen4-uLCD-35DCT-CLB with uSD-4GB, gen4-IB, gen4-PA, 150mm FFC Cable, 5-way cable with the gen4-uLCD-35DCT-CLB Display Module

## 3.5" HMI Modules for Arduino



▶ Resistive Touch  
▶ Non-Touch

▶ Capacitive Touch with Cover Glass  
▶ Non-Touch with Cover Glass

Starter kits

### AVAILABLE IN:

gen4-uLCD-35D-AR	Includes gen4-uLCD-35D-CLB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-35DT-AR	Includes gen4-uLCD-35DT, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-35D-CLB-AR	Includes gen4-uLCD-35D-CLB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-35DCT-CLB-AR	Includes gen4-uLCD-35DCT-CLB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor

## 3.5" HMI Modules for Raspberry Pi



▶ Resistive Touch  
▶ Non-Touch

▶ Capacitive Touch with Cover Glass  
▶ Non-Touch with Cover Glass

Starter kits

### AVAILABLE IN:

gen4-uLCD-35D-PI	Includes gen4-uLCD-35D, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-35DT-PI	Includes gen4-uLCD-35DT, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-35D-CLB-PI	Includes gen4-uLCD-35D-CLB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-35DCT-CLB-PI	Includes gen4-uLCD-35DCT-CLB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor

### 4.3" Diablo16 Intelligent Display Modules



- ▶ Resistive Touch
- ▶ Non-Touch
- ▶ Capacitive Touch with Cover Glass
- ▶ Non-Touch with Cover Glass

Product Specifications					
Resolution	480 x 272 Pixels		Display Viewing Area	95.04 x 53.86 mm	
Brightness (Typical)	D	~500 cd/m2	Supply Current (ICC) (TYP)	D / D-CLB / DT	~310 mA **
	D-CLB	~485 cd/m2		DCT-CLB	~315 mA **
	DT	~400 cd/m2		D-SB/ D-CLB-SB / DT-SB	~530 mA **
	DCT-CLB	~475 cd/m2		DCT-CLB-SB	~540 mA **
	SB Version - D	~1020 cd/m2		Supply Voltage	5.0V DC
	SB Version - D-CLB	~930 cd/m2	Storage Temperature	-30°C to +80°C	
	SB Version - DT	~825 cd/m2	Operating Ambient Temperature	-20°C to +70°C	
	SB Version - DCT-CLB	~880 cd/m2	Lithium Charger	No	
Touch	D : Non-Touch D-CLB : Non-Touch w/ Cover Lens Bezel DT : Resistive Touch DCT-CLB : Capacitive touch w/ Cover Lens Bezel		8 Bit Parallel Transfer	Yes	
	D-SB : Non-Touch, Super Bright Display D-CLB-SB : Non-Touch w/ Cover Lens Bezel, Super Bright Display DT-SB : Resistive Touch, Super Bright Display DCT-CLB-SB : Capacitive touch w/ Cover Lens Bezel, Super Bright Display		Flash	6 banks of 32KB	
			RAM	32KB of SRAM	
			I2C	3 x Channels	
			GPIO	16 x GPIO	
			SPI	3 channels available	
			IDE	4D Workshop4 IDE	
			Serial Speed	300 to 2187500 baud	
Colours	RGB 65K		Serial Interface(s)	1 x dedicated and 3 x configurable	
Processor Capability	1220K Pixels / second		Additional Features	SPI Flash, CRC, Pin Counter, Quadrature Input, Pulse Out **	
Frame Rate	9.3 FPS			PWM Out Functions, Dallas 1-wire Support, Neopixel Support **	
SD Card Slot	YES				

\* Not all configurable I/O features for use at the same time. Please refer to the relevant Datasheet.  
 \*\* Current at 5V dependant on display usage, colours displayed, SD card usage and brand, and processor calculations.

#### AVAILABLE IN:

gen4-uLCD-43D	4.3", slim Intelligent Display Module with embedded DIABLO16 processor and gen4-IB
gen4-uLCD-43D-CLB	4.3", slim Intelligent Display Module with embedded DIABLO16 processor with non-touch Cover Lens Bezel and gen4-IB
gen4-uLCD-43DT	4.3", slim Intelligent Display Module with embedded DIABLO16 processor and Resistive Touch panel and gen4-IB
gen4-uLCD-43DCT-CLB	4.3", slim Intelligent Display Module with embedded DIABLO16 processor and Capacitive Touch Cover Lens Bezel and gen4-IB
gen4-uLCD-43D-SB	4.3", super bright, slim Intelligent Display Module with embedded DIABLO16 processor and gen4-IB
gen4-uLCD-43D-CLB-SB	4.3", super bright, slim Intelligent Display Module with embedded DIABLO16 processor with non-touch Cover Lens Bezel and gen4-IB
gen4-uLCD-43DT-SB	4.3", super bright, slim Intelligent Display Module with embedded DIABLO16 processor and Resistive Touch panel and gen4-IB
gen4-uLCD-43DCT-CLB-SB	4.3", super bright, slim Intelligent Display Module with embedded DIABLO16 processor and Capacitive Touch Cover Lens Bezel and gen4-IB

### 4.3" HMI Modules for Arduino



- ▶ Resistive Touch
- ▶ Non-Touch
- ▶ Capacitive Touch with Cover Glass
- ▶ Non-Touch with Cover Glass
- Starter kits

#### AVAILABLE IN:

gen4-uLCD-43D-AR	Includes gen4-uLCD-43D, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-43DT-AR	Includes gen4-uLCD-43DT, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-43D-CLB-AR	Includes gen4-uLCD-43D-CLB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-43DCT-CLB-AR	Includes gen4-uLCD-43DCT-CLB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-43D-SB-AR	Includes gen4-uLCD-43D-SB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-43DT-SB-AR	Includes gen4-uLCD-43DT-SB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-43D-CLB-SB-AR	Includes gen4-uLCD-43D-CLB-SB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-43DCT-CLB-SB-AR	Includes gen4-uLCD-43DCT-CLB-SB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor

### 4.3" HMI Modules for Raspberry Pi



- ▶ Resistive Touch
- ▶ Non-Touch
- ▶ Capacitive Touch with Cover Glass
- ▶ Non-Touch with Cover Glass
- Starter kits

#### AVAILABLE IN:

gen4-uLCD-43D-PI	Includes gen4-uLCD-43D, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-43DT-PI	Includes gen4-uLCD-43DT, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-43D-CLB-PI	Includes gen4-uLCD-43D-CLB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-43DCT-CLB-PI	Includes gen4-uLCD-43DCT-CLB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-43D-SB-PI	Includes gen4-uLCD-43D-SB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-43DT-SB-PI	Includes gen4-uLCD-43DT-SB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-43D-CLB-SB-PI	Includes gen4-uLCD-43D-CLB-SB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-43DCT-CLB-SB-PI	Includes gen4-uLCD-43DCT-CLB-SB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor

## 5.0" Diablo16 Intelligent Display Modules



▶ Resistive Touch  
▶ Non-Touch

▶ Capacitive Touch with Cover Glass  
▶ Non-Touch with Cover Glass

Product Specifications					
Resolution	800 x 480 Pixels		Display Viewing Area	108 x 64.80 mm	
Brightness (Typical)	D	~500 cd/m2	Supply Current (ICC) (TYP)	D / D-CLB / DT	~440 mA **
	D-CLB	~485 cd/m2		DCT-CLB	~445 mA **
	DT	~400 cd/m2		D-SB/ D-CLB-SB / DT-SB	~600 mA **
	DCT-CLB	~475 cd/m2		DCT-CLB-SB	~610 mA **
	SB Version - D	~820 cd/m2		Supply Voltage	5.0V DC
	SB Version - D-CLB	~735 cd/m2	Storage Temperature	-30°C to +80°C	
	SB Version - DT	~650 cd/m2	Operating Ambient Temperature	-20°C to +70°C	
	SB Version - DCT-CLB	~705 cd/m2	Lithium Charger	No	
Touch	D : Non-Touch D-CLB : Non-Touch w/ Cover Lens Bezel DT : Resistive Touch DCT-CLB : Capacitive touch w/ Cover Lens Bezel		8 Bit Parallel Transfer	Yes	
	D-SB : Non-Touch, Super Bright Display D-CLB-SB : Non-Touch w/ Cover Lens Bezel, Super Bright Display DT-SB : Resistive Touch, Super Bright Display DCT-CLB-SB : Capacitive touch w/ Cover Lens Bezel, Super Bright Display		Flash	6 banks of 32KB	
	Colours	RGB 65K	RAM	32KB of SRAM	
	Processor Capability	1220K Pixels / second	I2C	3 x Channels	
	Frame Rate	3.1 FPS	GPIO	16 x GPIO	
	SD Card Slot	YES	SPI	3 channels available	
			IDE	4D Workshop4 IDE	
			Serial Speed	300 to 2187500 baud	
		Serial Interface(s)	1 x dedicated and 3 x configurable		
		Additional Features	SPI Flash, CRC, Pin Counter, Quadrature Input, Pulse Out ** PWM Out Functions, Dallas 1-wire Support, Neopixel Support **		

\* Not all configurable I/O features for use at the same time. Please refer to the relevant Datasheet.

\*\* Current at 5V dependant on display usage, colours displayed, SD card usage and brand, and processor calculations.

### AVAILABLE IN:

gen4-uLCD-50D	5.0", Intelligent Display Module with embedded DIABLO16 processor and gen4-IB
gen4-uLCD-50D-CLB	5.0", Intelligent Display Module with embedded DIABLO16 processor with non-touch Cover Lens Bezel and gen4-IB
gen4-uLCD-50DT	5.0", Intelligent Display Module with embedded DIABLO16 processor and Resistive Touch panel and gen4-IB
gen4-uLCD-50DCT-CLB	5.0", Intelligent Display Module with embedded DIABLO16 processor and Capacitive Touch Cover Lens Bezel and gen4-IB
gen4-uLCD-50D-SB	5.0", super bright, Intelligent Display Module with embedded DIABLO16 processor and gen4-IB
gen4-uLCD-50D-CLB-SB	5.0", super bright, Intelligent Display Module with embedded DIABLO16 processor with non-touch Cover Lens Bezel and gen4-IB
gen4-uLCD-50DT-SB	5.0", super bright, Intelligent Display Module with embedded DIABLO16 processor and Resistive Touch panel and gen4-IB
gen4-uLCD-50DCT-CLB-SB	5.0", super bright, Intelligent Display Module with embedded DIABLO16 processor and Capacitive Touch Cover Lens Bezel and gen4-IB

## 5.0" HMI Modules for Arduino



▶ Resistive Touch  
▶ Non-Touch

▶ Capacitive Touch with Cover Glass  
▶ Non-Touch with Cover Glass

Starter kits

### AVAILABLE IN:

gen4-uLCD-50D-AR	Includes gen4-uLCD-50D, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-50DT-AR	Includes gen4-uLCD-50DT, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-50D-CLB-AR	Includes gen4-uLCD-50D-CLB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-50DCT-CLB-AR	Includes gen4-uLCD-50DCT-CLB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-50D-SB-AR	Includes gen4-uLCD-50D-SB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-50DT-SB-AR	Includes gen4-uLCD-50DT-SB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-50D-CLB-SB-AR	Includes gen4-uLCD-50D-CLB-SB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-50DCT-CLB-SB-AR	Includes gen4-uLCD-50DCT-CLB-SB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor

## 5.0" HMI Modules for Raspberry Pi



▶ Resistive Touch  
▶ Non-Touch

▶ Capacitive Touch with Cover Glass  
▶ Non-Touch with Cover Glass

Starter kits

### AVAILABLE IN:

gen4-uLCD-50D-PI	Includes gen4-uLCD-50D, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-50DT-PI	Includes gen4-uLCD-50DT, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-50D-CLB-PI	Includes gen4-uLCD-50D-CLB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-50DCT-CLB-PI	Includes gen4-uLCD-50DCT-CLB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-50D-SB-PI	Includes gen4-uLCD-50D-SB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-50DT-SB-PI	Includes gen4-uLCD-50DT-SB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-50D-CLB-SB-PI	Includes gen4-uLCD-50D-CLB-SB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-50DCT-CLB-SB-PI	Includes gen4-uLCD-50DCT-CLB-SB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor

## 7.0" Diablo16 Intelligent Display Modules



▶ Resistive Touch  
▶ Non-Touch

▶ Capacitive Touch with Cover Glass  
▶ Non-Touch with Cover Glass

### Product Specifications

Resolution	800 x 480 Pixels		D / D-CLB	~815 mA **
Brightness (Typical)	D	~500 cd/m2	DT	~820 mA **
	D-CLB	~485 cd/m2	DCT-CLB	~825 mA **
	DT	~400 cd/m2	D -SB/ D-CLB-SB	~950mA **
	DCT-CLB	~475 cd/m2	DT-SB	~960 mA **
	SB Version - D	~844 cd/m2	DCT-CLB-SB	~965 mA **
	SB Version - D-CLB	~782 cd/m2	Supply Voltage	5.0V DC
	SB Version - DT	~679 cd/m2	Storage Temperature	-30°C to +80°C
SB Version - DCT-CLB	~758 cd/m2	Operating Ambient Temperature	-20°C to +70°C	
Touch	D : Non-Touch		Lithium Charger	No
	D-CLB : Non-Touch w/ Cover Lens Bezel		8 Bit Parallel Transfer	Yes
	DT : Resistive Touch		Flash	6 banks of 32KB
	DCT-CLB : Capacitive touch w/ Cover Lens Bezel		RAM	32KB of SRAM
	D-SB : Non-Touch, Super Bright Display		I2C	3 x Channels
	D-CLB-SB : Non-Touch w/ Cover Lens Bezel, Super Bright Display		GPIO	16 x GPIO
	DT-SB : Resistive Touch, Super Bright Display		SPI	3 channels available
DCT-CLB-SB : Capacitive touch w/ Cover Lens Bezel, Super Bright Display		IDE	4D Workshop4 IDE	
Colours	RGB 65K		Serial Speed	300 to 2187500 baud
Processor Capability	1220K Pixels / second		Serial Interface(s)	1 x dedicated and 3 x configurable
Frame Rate	3.1 FPS		Additional Features	SPI Flash, CRC, Pin Counter, Quadrature Input, Pulse Out **
SD Card Slot	YES			PWM Out Functions, Dallas 1-wire Support, Neopixel Support **
Display Viewing Area	153.84 x 85.63mm			

\* Not all configurable I/O features for use at the same time. Please refer to the relevant Datasheet.

\*\* Current at 5V dependant on display usage, colours displayed, SD card usage and brand, and processor calculations.

### AVAILABLE IN:

gen4-uLCD-70D	7.0", Intelligent Display Module with embedded DIABLO16 processor and gen4-IB
gen4-uLCD-70D-CLB	7.0", Intelligent Display Module with embedded DIABLO16 processor with non-touch Cover Lens Bezel and gen4-IB
gen4-uLCD-70DT	7.0", Intelligent Display Module with embedded DIABLO16 processor and Resistive Touch panel and gen4-IB
gen4-uLCD-70DCT-CLB	7.0", Intelligent Display Module with embedded DIABLO16 processor and Capacitive Touch Cover Lens Bezel and gen4-IB
gen4-uLCD-70D-SB	7.0", super bright, Intelligent Display Module with embedded DIABLO16 processor and gen4-IB
gen4-uLCD-70D-CLB-SB	7.0", super bright, Intelligent Display Module with embedded DIABLO16 processor with non-touch Cover Lens Bezel and gen4-IB
gen4-uLCD-70DT-SB	7.0", super bright, Intelligent Display Module with embedded DIABLO16 processor and Resistive Touch panel and gen4-IB
gen4-uLCD-70DCT-CLB-SB	7.0", super bright, intelligent Display Module with embedded DIABLO16 processor and Capacitive Touch Cover Lens Bezel and gen4-IB

## 7.0" HMI Modules for Arduino



▶ Resistive Touch  
▶ Non-Touch

▶ Capacitive Touch with Cover Glass  
▶ Non-Touch with Cover Glass

Starter kits

### AVAILABLE IN:

gen4-uLCD-70D-AR	Includes gen4-uLCD-70D, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-70DT-AR	Includes gen4-uLCD-70DT, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-70D-CLB-AR	Includes gen4-uLCD-70D-CLB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-70DCT-CLB-AR	Includes gen4-uLCD-70DCT-CLB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-70D-SB-AR	Includes gen4-uLCD-70D-SB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-70DT-SB-AR	Includes gen4-uLCD-70DT-SB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-70D-CLB-SB-AR	Includes gen4-uLCD-70D-CLB-SB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-70DCT-CLB-SB-AR	Includes gen4-uLCD-70DCT-SB, 4D Arduino Adaptor Shield-II, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor

## 7.0" HMI Modules for Raspberry Pi



▶ Resistive Touch  
▶ Non-Touch

▶ Capacitive Touch with Cover Glass  
▶ Non-Touch with Cover Glass

Starter kits

### AVAILABLE IN:

gen4-uLCD-70D-PI	Includes gen4-uLCD-70D, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-70DT-PI	Includes gen4-uLCD-70DT, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-70D-CLB-PI	Includes gen4-uLCD-70D-CLB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-70DCT-CLB-PI	Includes gen4-uLCD-70DCT-CLB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-70D-SB-PI	Includes gen4-uLCD-70D-SB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-70DT-SB-PI	Includes gen4-uLCD-70DT-SB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-70D-CLB-SB-PI	Includes gen4-uLCD-70D-CLB-SB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor
gen4-uLCD-70DCT-CLB-SB-PI	Includes gen4-uLCD-70DCT-SB, 4D Serial Pi Adaptor, gen4-IB, 150 mm FFC Cable, 5-way female-to-female ribbon cable with male-to-male adaptor

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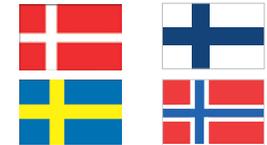
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