



Luminary Micro - RDK-IDM-L35 - Intelligent Display Reference Design Kit

Product Overview:

The Luminary Micro Stellaris® 3.5-inch Landscape Intelligent Display Reference Design Kit (RDK-IDM-L35) offers a complete, open-tool graphical touch-screen user interface design solution for control, automation, and instrumentation applications. Based on the feature-rich Stellaris LM3S1958 microcontroller, the new intelligent display module featured in the kit (MDL-IDM-L35) combines a complete 3.5-inch QVGA landscape-oriented touch-screen user interface with several serial, digital, and analog connectivity options for easy implementation as a Human Machine Interface (HMI) touch display panel in an embedded control device. Software development for the RDK-IDM-L35 is simplified by using Luminary Micro's comprehensive StellarisWare® Peripheral Library and Graphics Library in conjunction with ARM development tools from ARM tools partners.



Kit Contents:

The reference design ships with everything needed to quickly evaluate and easily customize the intelligent display module for your specific application, including

- Stellaris® Intelligent QVGA 3.5" Touch Panel Module (MDL-IDM-L35) with metal standoffs
- USB to TTL serial cable to simultaneously power the board and connect to the LM3S1958 Stellaris microcontroller via UART0
- JTAG debug adapter for 10-pin fine-pitch connection to a standard 20-pin connector
- Quickstart Guide, User's Manual, Software Reference Manual, Board Data Sheet, source code, BOM, schematics, and Gerber files on CD

Key Features:

The RDK-IDM ships with the software-customizable MDL-IDM-L35 module. The MDL-IDM-L35 features the following:

- Bright QVGA LCD touch-screen display
 - 3.5" QVGA 320 x 240 pixels
 - 262K colors
 - White LED backlight
 - Resistive touch panel
- Serial connectivity options
 - RS232 serial port with RS232 signal levels
 - UART serial port with TTL signal levels
- High performance and memory
 - Built around a Stellaris LM3S1958 microcontroller
 - 32-bit ARM® Cortex™-M3 core
 - 256 KB Main Flash memory, 64 KB SRAM
 - microSD slot (typically 1-2 GB storage)
- Flexible power supply options
 - 5 V power supply with DC regulator that generates 3.3 V for powering the board
- Easy to customize - full source code and design files including:
 - Schematics and BOM
 - Gerber files
 - Example applications included
- Develop using development tools from Keil, IAR, Code Sourcery, Code Red Technologies, and GCC
 - Supported by Luminary Micro Graphics Library
 - Supported by Stellaris Peripheral Driver Library

Ordering Information:

Products:

Part Number	Manufacturer	Farnell P/N	Newark P/N
RDK-IDM-L35	Luminary Micro	1673912	45P3936

Associated Products:

Part Number	Manufacturer	Description	Farnell P/N	Newark P/N
MDL-IDM-L35	Luminary Micro	Intelligent Display Module 3.5" Landscape	1673911	45P3743
LM3S1958	Luminary Micro	Microcontroller	1712262	45P3555

Similar Products:

Part Number	Manufacturer	Description	Support Device	Farnell P/N	Newark P/N
RDK-IDM	Luminary Micro	2.8" display with PoE open-tooled Reference Design Kit	LM3S6918	1566975	45P3935
RDK-IDM-SBC	Luminary Micro	3.5" landscape display Single Board Computer Reference Design Kit	LM3S9B92	1712296	06R2345

Document List:

Datasheets:

Part Number	Description	Size
RDK-IDM-L35	3.5-inch Landscape Intelligent Display Module RDK	434KB
LM3S1958	Microcontroller	5.64MB

Application Notes:

File Name	Size
Programming the On-Chip Flash Memory in a Stellaris Microcontroller	94.6KB
ADC Over Sampling Techniques	188KB
Upgrading to Luminary Micro's Stellaris Microcontrollers from Microchip's PIC Microcontrollers	123KB
Migrating to the New Members of the Stellaris® Family of Microcontrollers	205KB
Using Schematic Part Libraries and PCB Footprint Libraries for Stellaris® Microcontrollers	190KB
Optimizing Code Performance and Size for Stellaris Microcontrollers	173KB
Using the IEC 60730 Standard for Safe and Reliable Operation of Stellaris® Microcontrollers	86.5KB

Hardware & Software:

File Name	Size
RDK-IDML35 Board package	1MB
RDK-IDM-L35 Kit CD	60.5MB
RDK-IDM-L35 Firmware Development Package	10.5MB

Others Resources:

File Name	Size
IDM-L35 RDK Product Brief	266KB
Intelligent Display Module (IDM-L35) with 3.5" Landscape Display RDK User's Manual	745KB
IDM-L35 RDK Quick Start	521KB
RDK-IDML35 board package	1MB