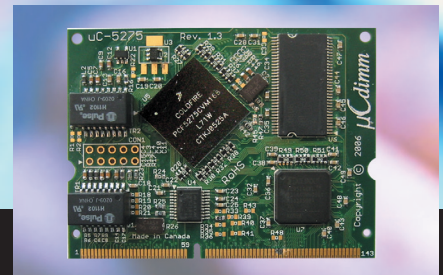


controls - communication - networking - media

uC5275



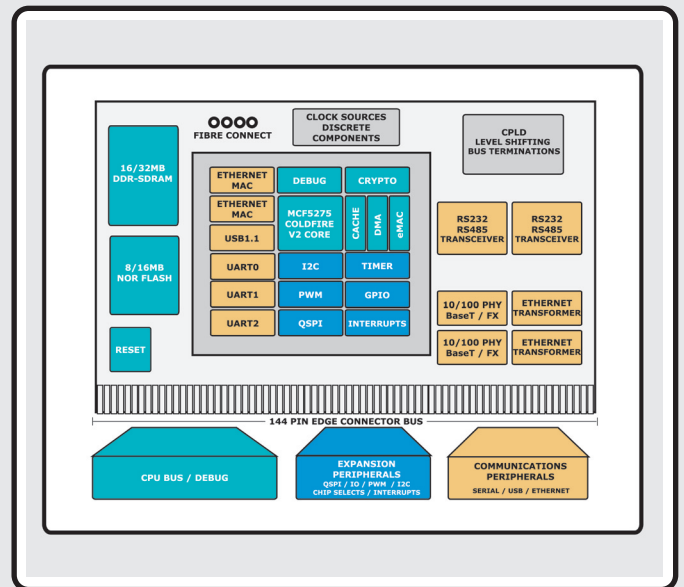
Microprocessor Module



Arcturus modules **empower** hundreds-of-thousands of **embedded** applications world-wide ranging from smart network and control devices to advanced presentation centre equipment.

The uC5275 is a second generation embedded microprocessor module ideal for networked control and communication applications. The device is available in a standard 144pin soDIMM edge connector format to allow **fast integration into products**. The module is based on the advanced Freescale® ColdFire® MCF5275 32-Bit RISC microprocessor. The product includes all required system memory and physical terminations to enable most applications without the need for external circuitry. The uC5275 features Dual Fast Ethernet, USB Device, RS232 and RS485 serial communications systems as well as standard peripheral device connectivity using I2C, QSPI or data/address logic.

The **development kit** includes a royalty-free uClinux™ 2.4 and 2.6 embedded software BSP, complete with source code, GNU tools, kernel and broad collection of applications and drivers. Development board, power supply, software CD and reference manual are also included.



Arcturus



empower embedded.

Arcturus Networks Inc.
701 Evans Ave - Suite 300 Toronto, ON M9C 1A3
Tel: 416.621.0125 Fax: 416.621.0190
sales@ArcturusNetworks.com
www.ArcturusNetworks.com

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- EASILY INTEGRATED
- FULL FEATURED
- COMPLETE uCLINUX BSP WITH SOURCE
- REDUCED TIME-TO-MARKET AND RISK
- AVAILABLE OFF-THE-SHELF

features

- 144 pin easy-to-integrate module form-factor
- Compact business card size
- 166 MHz ColdFire RISC Core
- 16 MByte of DDR-SDRAM
- 8/16 MByte NOR Flash
- 16Kbyte configurable cache
- 64Kbyte dual ported SRAM
- eMAC DSP functionality
- Two 10/100 Ethernet MACs
- Two 10/100 Ethernet PHYs and Transformers
- Fibre Compatible PHYs
- PoE Ready
- Two multiprotocol serial UARTs
 - TTL, RS232, RS485
- QSPI with three chip selects
- I²C bus controller
- PWM
- dedicated GPI/O
- Hardware Cryptography Accelerator
- Four 32-bit timers
- Four 16-bit timer channels
- Four periodic interrupt timers
- SW watchdog timer
- BDM for debug

software

Tools and OS

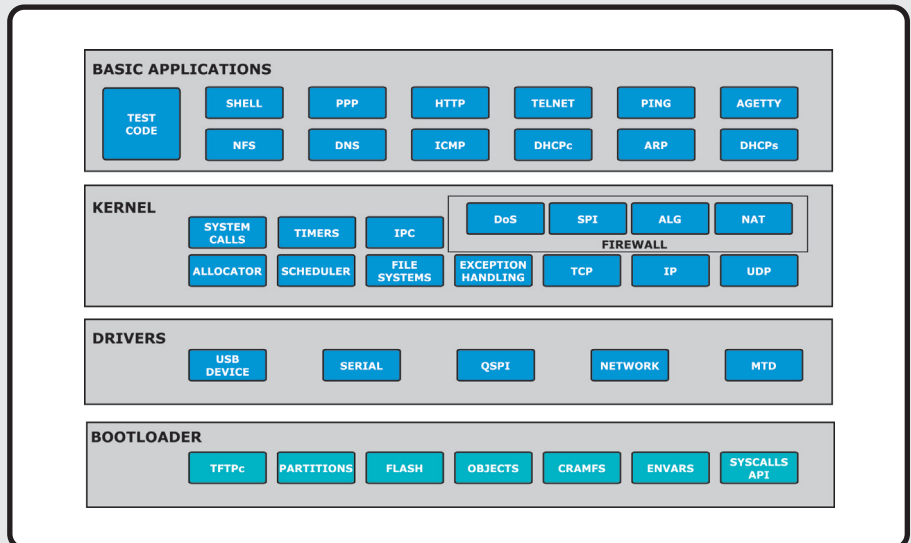
- uClinux 2.4.21 and 2.6.19
- uClibc
- GNU Tools (GCC / GDB)
- BDM for GDB
- GDB server

Applications & Utils

- Shell
- Telnet server
- webserver
- Networking Apps
- Test programs

Bootloader

- uCbootloader 1.8.x
- support for objects and envars
- kernel API and CLI
- TFTP server
- Partitioning / CRAMFS

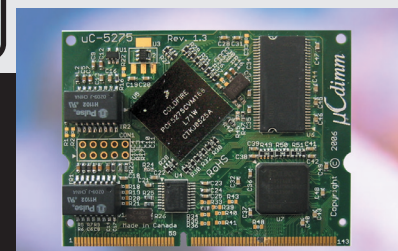


operation

MODE	VALUE	MODE	VALUE
Test Module		OS Idle with ETH:	
Voltage:		Duress (ICMP flood):	
Reset:		Erase Flash:	
Idling:		Write Flash:	
Idling with ETH:			

development kit

- uC5275 Module
 - UC
- Host Board
- Software CD
- Cable kit
- Power Supply
- Reference Manuals
- Schematic
- Installation Support



Module Bus

Pin	Signal	I/O	Description	Pin	Signal	I/O	Description
1	ETXD1+	O	Ethernet Pos. Transmitted Data	2	ETXD2+	O	Pos. Transmitted Data
3	ETXD1-	O	Ethernet Neg. Transmitted Data	4	ETXD2-	O	Neg. Transmitted Data
5	ERXD1+	I	Ethernet Pos. Received Data	6	ERXD2+	I	Pos. Received Data / DSL
7	ERXD1-	I	Ethernet Neg. Received Data	8	ERXD2-	I	Neg. Received Data / DSL
9	VDD	P	VDD	10	GND	P	Ground
11	R_TXD0	O	UART Transmitted Data (RS Level)	12	R_TXD1	O	UART Transmitted Data (RS Level)
13	TXD0	I/O	UART Transmitted Data (TTL Level)	14	TXD1	O	UART Transmitted Data (TTL Level)
15	R_RTS0	O	UART Request To Send (RS Level)	16	R_RTS1		UART Request To Send (RS Level)
17	R_RXD0	I	UART Receive Data (RS Level)	18	R_RXD1		UART Receive Data (RS Level)
19	#RTS0	I	UART Request To Send (TTL Level)	20	#RTS1		UART Request To Send (TTL Level)
21	RXD0	I	UART Receive Data (TTL Level)	22	RXD1	I	UART Receive Data (TTL Level)
23	R_CTS0	I	UART Clear To Send (RS Level)	24	R_CTS1	I	UART Clear To Send (RS Level)
25	#CTS0		UART Clear To Send (TTL Level)	26	#CTS1		UART Clear To Send (TTL Level)
27	GND	P	Ground	28	GND	P	Ground
29	E1_LINK	O	Ethernet Link LED	30	E2_LINK	O	Ethernet Link LED
31	E1_DATA	O	Ethernet Data LED	32	E2_DATA	O	Ethernet Data LED
33	RSM0		UART Mode Select (RS232/485..)	34	RSM1		UART Mode Select (RS232/485..)
35	I2C_SDA	I/O	I2C Serial	36	I2C_SCL		I2C Serial
37	VDD	P	VDD	38	GND	P	Ground
39	PUARTH0	I	GPIO / UART2 RTS / PWM0	40	PUARTH1	O	GPIO / UART2 CTS / PWM1
41	PUARTH2	I	GPIO / UART2TXD	42	PUARTH3	I	GPIO / UART2RXD
43	QSPI_DO	O	SPI Data Out	44	QSPI_CS1	O	SPI Chip Select
45	QSPI_DI	I	SPI Data In	46	QSPI_CS2	O	SPI Chip Select
47	QSPI_CS0	O	SPI Chip Select	48	QSPI_CS3	O	SPI Chip Select
49	QSPI_CL	O	SPI Clock	50	E1SD		Ethernet PHY Fibre
51	TDI		Factory Use	52	TDO		Factory Use
53	PUSBL0		GPIO / USB_TXEN	54	PUSBL1		GPIO / USB_TP
55	PUSBL2		GPIO / USB_TN	56	PUSBL3		GPIO / USB_SUSP
57	PUSBL4		GPIO / USB_RXD	58	PUSBL5		GPIO / USB_RP
59	PUSBL6		GPIO / USB_RN	60	PUSBL7		GPIO / CLK
61	TCK		Factory Use	62	TMS		Factory Use
63	PTIMERL0	O	GPIO / Timer / PWM0	64	PTIMERL1	O	GPIO / Timer
65	PTIMERL2	O	GPIO / Timer / PWM1	66	PTIMERL3	O	GPIO / Timer
67	PTIMERH0	O	GPIO / Timer / PWM2	68	PTIMERH1	O	GPIO / Timer
69	PTIMERH2	O	GPIO / UART2 CTS / PWM3	70	PTIMERH3	O	GPIO / UART2 RTS
71	#CS5		Chip Select	72	#CS6		Chip Select
73	#CS7		Chip Select	74	RSM		Simultaneous UART Mode Select
75	#RSTOUT	O	CPU Reset Signal Output	76	CLK_OUT	O	Processor Clock Output
77	#IRQ3	I/O	Interrupt	78	#IRQ4	I/O	Interrupt
79	#IRQ5	I	Interrupt	80	#IRQ6	I	Interrupt
81	#CS1	O	MCU Chip Select	82	#CS2	O	MCU Chip Select
83	#CS3	O	MCU Chip Select	84	#CS4	O	MCU Chip Select
85	CPLDM1	I	CPLD Mode Select	86	CPLDM2	I	CPLD Mode Select
87	TSIZ0		Memory Bus Transfer Size	88	TSIZ1		Memory Bus Transfer Size
89	VDD	P	VDD	90	GND	P	Ground
91	#TIP		Memory Bus Transfer In Progress	92	#TS		Memory Bus Transfer Start
93	R / #W	O	Write Enable	94	#TEA		Memory Bus Transfer Error Acknowledge
95	#BS2	O	MCU Byte-enable 0	96	#BS3	O	MCU Byte-enable 1
97	#OE	O	Output Enable	98	#MR	I	Master Reset
99	VDD	P	VDD	100	GND	P	Ground
101	A0	O	Address BUS	102	A1	O	Address BUS
103	A2	O	Address BUS	104	A3	O	Address BUS
105	A4	O	Address BUS	106	A5	O	Address BUS
107	A6	O	Address BUS	108	A7	O	Address BUS
109	A8	O	Address BUS	110	A9	O	Address BUS
111	A10	O	Address BUS	112	A11	O	Address BUS
113	A12	O	Address BUS	114	A13	O	Address BUS
115	A14	O	Address BUS	116	A15	O	Address BUS
117	A16	O	Address BUS	118	A17	O	Address BUS
119	A18	O	Address BUS	120	A19	O	Address BUS
121	A20	O	Address BUS	122	A21	O	Address BUS
123	A22	O	Address BUS	124	A23	O	Address BUS
125	VDD	P	VDD	126	GND	P	Ground
127	D16	I/O	Data BUS	128	D17	I/O	Data BUS
129	D18	I/O	Data BUS	130	D19	I/O	Data BUS
131	D20	I/O	Data BUS	132	D21	I/O	Data BUS
133	D22	I/O	Data BUS	134	D23	I/O	Data BUS
135	D24	I/O	Data BUS	136	D25	I/O	Data BUS
137	D26	I/O	Data BUS	138	D27	I/O	Data BUS
139	D28	I/O	Data BUS	140	D29	I/O	Data BUS
141	D30	I/O	Data BUS	142	D31	I/O	Data BUS
143	VDD	P	VDD	144	GND	P	Ground

