COM Express Module with the Freescale[™] P2020 CPU

Adbc7519

- Dual 1.2GHz core processor
- COM Express compact module
- VxWorks or Linux environment
- eMMC Flash memory
- DDR-3 memory with ECC support
- RoHS compliancy



P2020 Processor – The Adbc7519 is available with the dual core, 1.2GHz P2020 processor.

ECC Memory – The Adbc7519 comes with DDR-3 memory which supports Error Code Correction (ECC) and increases reliability and accuracy in data receiving and transmitting.

Compact COM Express Form Factor – At $95 \times 95 \text{ mm}$, the Adbc7519 is ideal for small form factor designs which want to leverage the flexibility and performance possibilities of the COM Express form factor.

High Speed Interfaces – High speed interfaces include Gigabit Ethernet, USB 2.0, and PCIe.

- Medical
- Transportation
- Defense
- Communication
- Industrial machinery

The Adbc7519 is the latest product in Eurotech's COM Express module product line based on Freescale's QorlQ processor family. The Adbc7519 is fitted with the dual core P2020 processor and has ECC support. The Adbc7519 is a versatile product suited for several markets including medical, transportation, and communications.

The Adbc7519 comes with extensive I/O by coupling the capabilities of the QorlQ processor with our engineering expertise and focus on small footprint and high-end performance. These features include three Gigabit Ethernet ports, dual UARTS, and quad USB 2.0 ports. The Adbc7519 also allows for graphics and video plug-ins with VGA and LVDS features.

OEMs can choose from a Linux or VxWorks operating system, taking advantage of these development environments.

Eurotech offers a standard carrier board and services for those customers who wish to design their own.



System Architecture



PROCESSOR	 Freescale[™] P2020 with dual 1.2GHz cores
	• L1 cache: 32kB for data and 32kB for instruction per core
	• L2 cache: 512kB
OPERATING ENVIRONMENT	VxWorks
	• Linux
RAM MEMORY	2GB of 72-bit DDR3-800 SO-DIMM with ECC
FLASH MEMORY	2GB (bootable)
SERIAL EEPROM	I2C 2KB
NETWORK	3x 10/100/1000 BASE-T Ethernet interfaces
SPI	QorlQ Enhanced Serial Peripheral Interface (eSPI)
SECURE DIGITAL	QorlQ Enhanced Secure Digital Host Controller (SD/MMC)
	(bootable)
PCI EXPRESS	• 1x PCI Express interface (x1 lane)
	• 1x PCI Express interface (x2 lane)
	PCI Express Base Rev1.1
USB	4x USB 2.0 ports
UART	2x UART interfaces
I2C	4x I2C interface extended by I2C-HUB
GPIO	• 6x GPI
	• 6x GPO
INTERRUPT	QorlQ Programmable interrupt controller (PIC)
IEEE1588	Connected to QorlQ processor:
	• TMR_1588_CLK
	• TMR_GCLK
	• TMR_TRIG1,2
	• TMR_PP1,2
	• TMR_ALARM1,2
REAL TIME CLOCK	Equivalent to RTC-8564JE (backed up by VCC_RTC power)
DISPLAY	• 1x Analog VGA
	 2x LVDS (Data 4-pair, Clock 1-pair)
	• Z11m (XGI)
JTAG COP	Available as an option
PHYSICAL	Compact Module (95mm x 95mm)
	 PICMG COM.0 R2.0 COM Express Module Base Specification
	RoHS compliant
POWER	Power supply: 12.0V±5% SBY: 5V±5% (supplied from COM Express connector
	Consumption current: 12V: max 2.4A SBY: max 0.1A
TEMPERATURE	Operating: 0°C to +50°C
ORDERING INFORMATION	Coming soon

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North America sales.na@eurotech.com

Europe, Middle East and Africa sales.emea@eurotech.com

Latin America sales.la@eurotech.com

Asia Pacific sales.ap@eurotech.com ETH_Adbc7519_DS_02/2011

For your local contact please refer to: www.eurotech.com/contacts