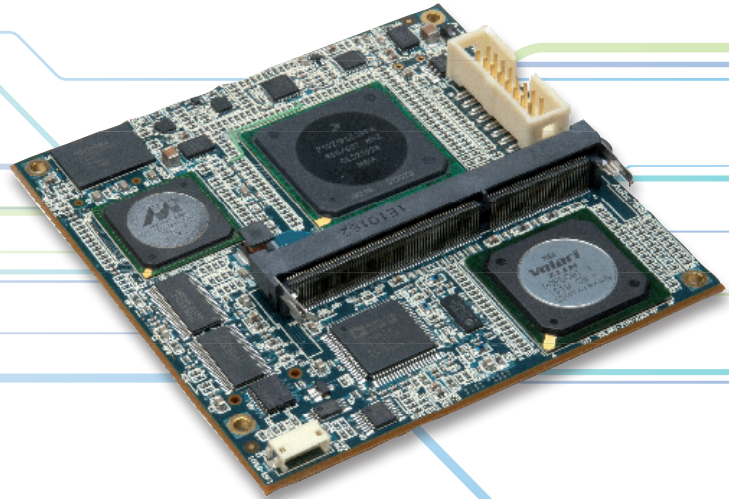


CPU-161-29

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



FEATURES

P2020 Processor – The CPU-161-29 is available with the dual core, 1.2GHz P2020 processor.

ECC Memory – The CPU-161-29 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 x 95 mm, the CPU-161-29 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.

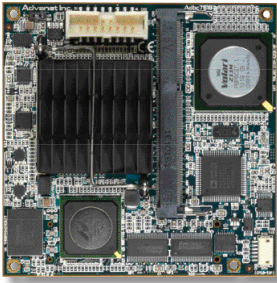
- Medical
- Transportation
- Defense
- Communication
- Industrial machinery

The CPU-161-29 is the latest product in Dynatem's COM Express module product line based on Freescale's QorIQ processor family. The CPU-161-29 is fitted with the dual core P2020 processor and has ECC support. The CPU-161-29 is a versatile product suited for several markets including medical, transportation, and communications.

The CPU-161-29 comes with extensive I/O by coupling the capabilities of the QorIQ 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 CPU-161-29 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.

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



System Architecture

PROCESSOR	<ul style="list-style-type: none"> • Freescale™ P2020 with dual 1.2GHz cores • L1 cache: 32kB for data and 32kB for instruction per core • L2 cache: 512kB
OPERATING ENVIRONMENT	<ul style="list-style-type: none"> • 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	QorIQ Enhanced Serial Peripheral Interface (eSPI)
SECURE DIGITAL	QorIQ Enhanced Secure Digital Host Controller (SD/MMC) (bootable)
PCI EXPRESS	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 6x GPI • 6x GPO
INTERRUPT	QorIQ Programmable interrupt controller (PIC)
IEEE1588	Connected to QorIQ processor: <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 1x Analog VGA • 2x LVDS (Data 4-pair, Clock 1-pair) • Z11m (XGI)
JTAG COP	Available as an option
PHYSICAL	<ul style="list-style-type: none"> • Compact Module (95mm x 95mm) • PICMG COM.0 R2.0 COM Express Module Base Specification • RoHS compliant
POWER	<ul style="list-style-type: none"> • 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; Optional -40°C to +85°C

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