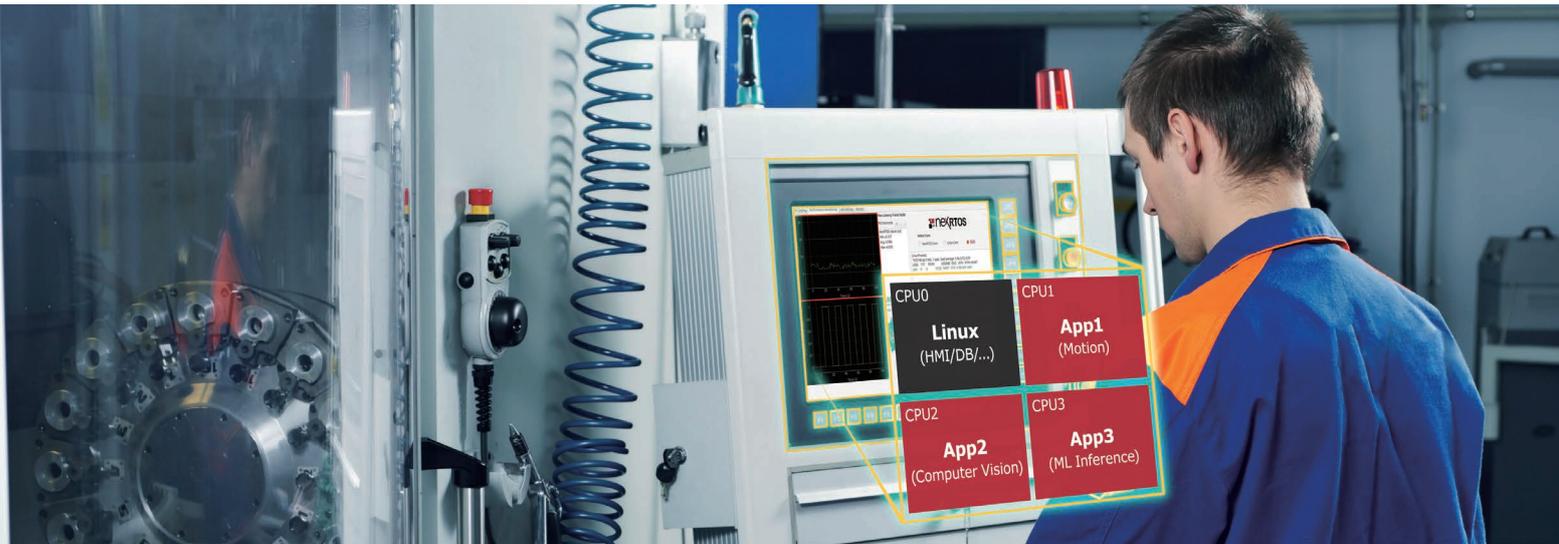


# The $\mu$ Sec & multi CPU-isolated Real-time OS Solution



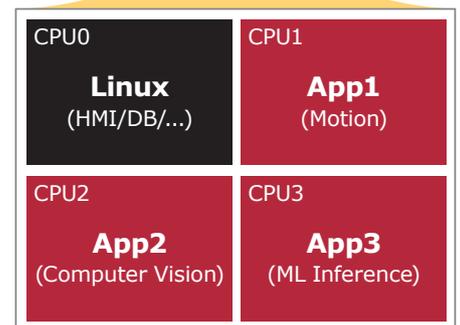
The NexRTOS is a x86 and Linux-based Real-time OS that enables the real-time capabilities for complex machinery that performs the high-precise motion control, computer vision and critical application in micro second, such as CNC, Robotics Controller, Injection Machine, Packing Machine and so on.

The independent ISR(/IST) performs guaranteed response-time for application by exclusive CPU core and isolated system resource. The CPU cores and LAN ports can be configured intuitively then monitor the signal latency and time-jitter in the integrated NexRTOS Utility.

The IGH EtherCAT sample projects can accelerate the development of EtherCAT-based servo drives/motors and distributed I/O for OEM partners and machine/equipment builders.



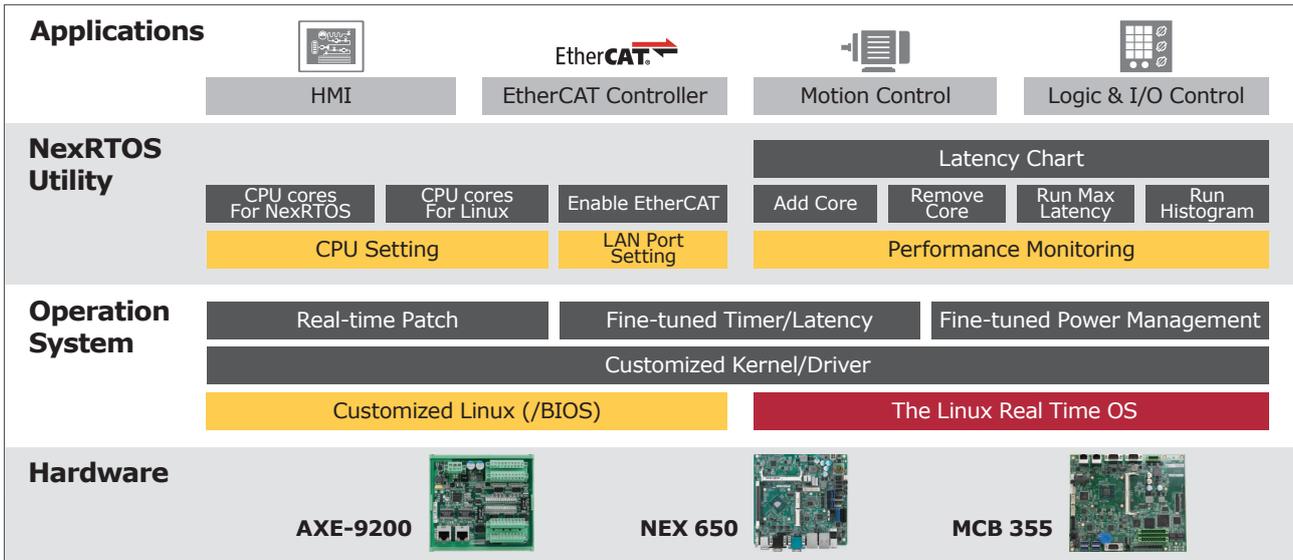
### Intel CPU Cores



## Features/Advantage

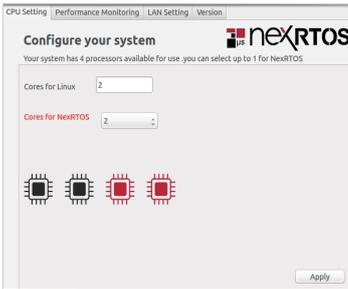
- ◆ **Guaranteed Control Response – Time Critical Response**
  - Timer periods 1 ms
  - Jitter cyclic < 40  $\mu$ s
  - IST latencies < 30  $\mu$ s
  - Latency in 30  $\mu$ s
- ◆ **Exclusive CPU Cores & Resources – CPU Isolation**
  - Linux kernel and desktop on CPU Core 0
  - Individual Tasks on Independent Cores
- ◆ **Sample Projects for Machinery Applications – IGH EtherCAT Sample code**
  - HMI application
  - Motor & I/O application
  - EtherCAT master application

## Software Building Blocks



## Function & UI

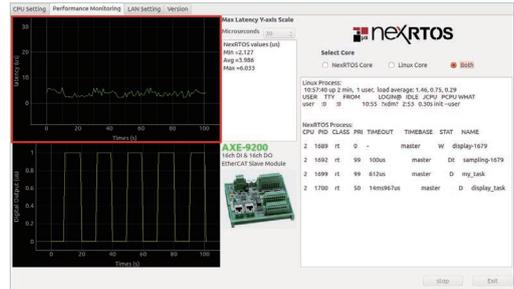
### 1. Configure CPU Cores



### 2. Configure LAN port



### 3. Verify the Latency of CPU Cores



## Specification



HW SPEC	AXE-9200	NEX 650	MCB 355
CPU Support	-	Mini-ITX Form Factor with Onboard Intel® Celeron® Processor J1900 Product Family	Intel® Celeron® processor, Bay Trail J1900
Key Features	<ul style="list-style-type: none"> <li>- 16ch Digital Input and 16ch Digital Output EtherCAT Slave Module</li> <li>- High-performance EtherCAT communication</li> <li>- Support bipolar (sinking and sourcing) input</li> <li>- Configuration free</li> </ul>	<ul style="list-style-type: none"> <li>- Supports dual channel DDR3 1333MHz, 2 x SO-DIMM, up to 8GB system memory</li> <li>- 3 x COM (RS-232/422/485), 2 x COM (RS-232); 1 x HDMI, 1 x D-Sub, 1 x Dual channel 24-bit LVDS; 4 x USB 3.0, 6 x USB 2.0, 2 x SATA2; Gigabit LAN: 2 x Realtek LAN</li> </ul>	<ul style="list-style-type: none"> <li>- 2 x I210 LAN port for EtherCAT communication</li> <li>- Encoder, D/I, D/O, MPG support</li> <li>- 2x Mechatrolink III support</li> </ul>
Power Requirement	DC input range: DC 24V ±10% with over-voltage and reversed-voltage protection	12~24 V DC-in power support	DC 24V input
Ordering Information	AXE-9200 (P/N: 10J40920000X0)	NEX 650 (P/N: 10G00065001X1)	MCB355 (P/N: 6879MB350000F)