NovTech came highly recommended to us by Arrow Electronics for an i.MX6-based solution. NovTech took our unique I/O interface requirements for a retail fuel dispenser, coupled this with their i.MX6 expertise, and in mere months we had a fully functional solution in hand. The boards arrived, 24VDC was applied, and we were up and running. Internally, a project of this size would have required at least a year for just a first prototype. NovTech did the equivalent effort delivering a production grade solution in less than five months.

Edward Payne
Principal Engineer, Gilbarco

NetLeap™
An Industry 4.0 Multi-Protocol Ethernet Ports Aggregator Platform

The platform is based on the NOVSOM® CVL, a Cyclone V SoC based SoM. The kit is delivered with the largest FPGA in this family, the 110K LE.

NovTech’s NetLeap™, an Industry 4.0 Multi-Protocol Ethernet Ports Aggregator Platform, allows the development and integration of many Ethernet protocols including PROFINET®, EtherCAT®, EtherNet/IP, Ethernet Powerlink, Modbus TCP, SERCOS III and more. Six 1G/100/10 Ethernet ports are present. Two are connected to the HPS (The ARM® Cortex-A9 core of the Cyclone V SoC) and four are connected to the FPGA fabric. With its six ports, the NetLeap™ allows different protocols to reside on the same platform and can be a protocol bridge, a switch, or a router. The kit comes with a templated project example that allows the board to boot to Linux and demonstrate Ethernet connectivity. This solution is pre-production ready.

FEATURES
• NOVSOM® CVL, a cyclone V SoC with 110K LE
• Six 1G/100/10 Ethernet ports (can be configured to any protocol)
• MAC address for each port
• UART port (for OS monitor)
• i2C port
• Temperature sensor
• RTC (Real Time Clock) with battery backup
• Embedded Security
• 15 HPS signals that can be configured as: HPS GPIO, FPGA I/O signals, CAN BUS, Additional I2C port, Additional UART, SPI
• Four FPGA signals that can be configured as: FPGA I/O signals, HPS signals, One global clock input

EMBEDDED SECURITY
NetLeap™ uses Infineon’s Optiga™ Trusted P (SLJ 52ACA150A1) to achieve the following security features:
• Protected storage of credentials and device configuration information
• Secure boot of the system
• Device authentication to the network
• Secure update of the device firmware and configuration
• Secure communication channel for data exchange over the network

PRE-PRODUCTION READY
The NetLeap™ can be taken into production once these steps are completed:
• Customize Linux to your needs
• Customize an enclosure for the solution
• Pass regulatory requirements
NovTech provides services that assist in achieving these tasks

Target Markets for NetLeap™ include:
• Industrial & Manufacturing
• Aerospace & Defense
• Agriculture
• Automotive
• Energy
• Transportation
• Utilities

Applications
• Industrial Ethernet Protocol Switch
• Industrial Ethernet Router
• Industrial Ethernet Protocol Bridge

Kit Includes:
• NOVSOM® CVL
• NetLeap™ base board
• SD card with Linux image and example code
• UART TTL to USB cable
• USB drive with manuals, documentation, quick start guide and Virtual Machine
• Power supply

Order Information
Arrow Part Number: NOYPEK_NLEAK at $439.00
For pre-production orders please contact NovTech at sales@novtech.com

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