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EMBEDDED TECHNOLOGIES

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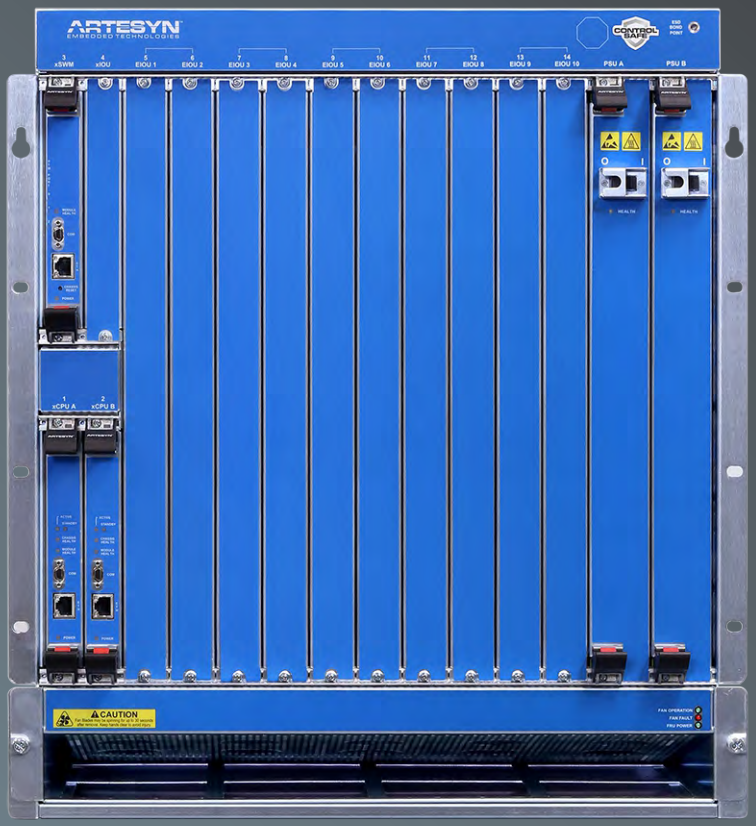

SIL4 Certification Demo seen at InnoTrans Exhibition Berlin Sep.2016

Arrow Signs Definitive Agreement to Acquire the Technical and Electronics Media Portfolio of UBM

including EE Times, EDN, ESM, Embedded, EBN, TechONline, and Datasheets.com (For $23.5M as per CRN)

CENTENNIAL, Colo.--(BUSINESS WIRE)--June 03, 2016--Arrow Electronics, Inc. (NYSE:ARW) announced today that it has signed a definitive agreement to acquire the global internet media portfolio focused on technology and electronic design from UBM, including EE Times, EDN, ESM, Embedded, EBN, TechONline, and Datasheets.com.

Arrow is a global leader in technology design, manufacturing support, and supply-chain services. Last year, Arrow acquired the United Technical Publishing arm of Hearst Media. With this agreement with UBM, Arrow strengthens its position as a foremost thought leader and trusted advisor in IoT and technology design trends.

"Arrow has always been the trusted advisor for companies going from design to production on their most important projects. Our investments in global internet media, focused on technology design, are helping both technical and non-technical companies integrate electronics into their products and applications," said Matt Anderson, chief digital officer of Arrow Electronics. "Our internet media is guiding innovation forward by making technical decision making easier for designers, R&D groups, and engineers. This is a step forward in our digital transformation, positioning Arrow as the preeminent, unbiased technology internet media, design, and eCommerce option for companies, from those on Indiegogo all the way to Fortune 500 global leaders."

Arrow Electronics (www.arrow.com) is a global provider of products, services and solutions to industrial and commercial users of electronic components and enterprise computing solutions. Arrow serves as a supply channel partner for more than 100,000 original equipment manufacturers, contract manufacturers and commercial customers through a global network of more than 460 locations serving over 85 countries.

Avnet Agrees to Sell Technology Solutions BU to Tech Data for $2.6B

Company will accelerate strategy to bring world-class design chain and supply chain services to high-growth customer markets

PHOENIX – Avnet, Inc. (NYSE: AVT) Sep 19, 2016--, a leading global technology distributor, today announced that it has entered into an agreement to sell its Technology Solutions operating group to Tech Data Corporation in a stock and cash transaction valued at approximately $2.6 billion. Under the terms of the agreement, Avnet will receive $2.4 billion in cash and 2.8 million shares of Tech Data common stock, currently valued at approximately $200 million.

The sale of this business provides both Avnet and Tech Data with immediate opportunities to focus on core strategies and scale their respective businesses, ultimately delivering greater profitability to their shareholders.

"We believe the acquisition of Technology Solutions by Tech Data is the best decision for our employees, customers, suppliers and shareholders. This transaction presents us with the best strategic path for Avnet's future success and profitability, and puts Technology Solutions in position to achieve breakthrough business results with Tech Data," said William Amelio, chief executive officer of Avnet. "Moving forward, Avnet will focus its resources and investments on becoming a leader in design chain and supply chain services not only for our current customers and suppliers, but also for new markets. We will drive targeted investments in embedded solutions, Internet of Things (IOT) and critical digital platforms. By investing in these high growth areas, we can expand the breadth of our portfolio and attract new customers worldwide who depend on us to deliver world-class solutions."

Avnet's Technology Solutions operating group is a global IT solutions distributor serving customers and suppliers in more than 80 countries. It provides next generation solutions, marketing, training, resources and services that span the cloud to the data center and encompass the entire IT lifecycle. They work with value-added resellers to make it easier and more affordable to enter and excel in high-growth technology and vertical markets locally and globally.

"This transformative transaction will position us as a premier global IT distributor with the most diverse end-to-end solutions from the data center to the living room," said Bob Dutkowsky, chief executive officer of Tech Data. "Tech Data has competed with and admired Avnet Technology Solutions for many years. We're thrilled to start this journey together and are confident that our customers, vendor partners, employees, and shareholders will appreciate and benefit from the value that we will bring to the market.

EDITOR NOTE - What a Small World!

I have been an Executive in Distribution (Electronics Components, Embedded Computing and IT) for over 20 years, the last 10 years as a Regional Managing Director Arrow Electronics Europe till 2000. In 2001, I started an activity of Consultancy Business Development/Marketing Worldwide and worked for Avnet EMEA as External Director Strategic Marketing (accelerating Design-wins for the Top 20 Semiconductor Franchises). My main activity today (at e2mos) is Business Discovery and bringing the Vendors face-to-face with the Decision Makers at their Next Customers. Vendors are still struggling to increase their presence in the market, the Customer Database QUALITY is a major issue for years.

Daniel Dierickx

CEO & co-Founder at e2mos, and acting Chief Editor

ADLINK Launches cPCI-6940 6U CompactPCI® Processor Blade with Intel® Xeon® Processor D-1500 and AMD Radeon™ E8860 Embedded GPU

ADLINK's cPCI-6940 premiere 6U processor blade offers a 16-core CPU and enhanced graphics computing for military and aerospace applications

San Jose, CA – September 28, 2016 – ADLINK Technology, Inc., a leading global provider of cloud-based services, intelligent gateways, and embedded building blocks for edge devices that enable the Industrial Internet of Things (IoT), introduces the cPCI-6940 processor blade featuring the Intel® Xeon® processor D-1500 and AMD Radeon™ E8860 embedded GPU. The cPCI-6940 6U CompactPCI processor blade offers up to 16-core computing power and high-performance graphics in a robust design. With an extended operating temperature range of -45°C to 85°C and 16GB of DDR4 soldered memory, the cPCI-6940 is ideal for the rugged environments encountered by military field vehicles and naval or aerospace carriers.

Featuring the Intel® Xeon® processor D-1500, the latest server-grade CPU from Intel, and up to 48GB DDR4-2133 ECC memory (16GB memory down plus 32GB SODIMM), the cPCI-6940 achieves high performance for compute-intensive applications including aerospace data acquisition and remote vehicle control systems. Designed to satisfy low power, high-density requirements, the Intel® Xeon® processor D-1500 has a TDP of 35 to 45 watts and gives the cPCI-6940 a 1.5x performance increase over its predecessor, the cPCI-6930 (8-core Intel® Xeon® processor E5-2448L). Server class computing capabilities include hardware virtualization and Intel® AES-NI for secure transmission in the field.

Graphics on the cPCI-6940 are supported by the AMD Radeon E8860 GPU, the first embedded GPU based on the ground breaking Graphics Core Next (GCN) architecture for enhanced processing power and efficiency. A 625MHz graphics engine, 2GB GDDR5 frame buffer, and PCIe Gen3 interface give the Radeon E8860 double the 3D graphics performance of its predecessor, the E6760. The E8860 GPU enables four independent displays at 4K resolution and supports DirectX 11.1, Open CL 1.2, and Open GL 4.2.

"The cPCI-6940 processor blade is designed specifically for military and aerospace customers who have highly robust system requirements. No other processor blade on the market combines Intel® Xeon® processor D-1500 technology with the AMD Radeon™ E8860 GPU," says Yong Luo, general manager of ADLINK's embedded computing product segment. "This solution brings advanced processing intelligence to the edge for mobile military applications, and the superior 3D graphics performance and parallel processing of the GPU makes the cPCI-6940 an excellent choice for graphics-intensive systems such as avionics. The cPCI-6940's anti-shock and vibration design ensures operability under extreme conditions."

Ruggedized design provides enhanced portability and security for ADLINK's newest processor blade. In addition to an extended operating temperature range, the cPCI-6940 features soldered CPU, GPU, and memory, as well as a 3.5 Grms vibration tolerance and conduction-cooled compatibility. The Radeon E8860 GPU provides outstanding performance with a 10 percent increase over the cPCI-6350BL with competitive graphics capabilities. Increased performance-per-watt over previous ADLINK CompactPCI blades makes the cPCI-6940 an excellent choice for applications with restricted power consumption. Additional features include remote management by Intelligent Platform Management Interface (IPMI) v1.5 and Trusted Platform Module (TPM 2.0) support.

The cPCI-6940 is available in single/dual-slot (4/8 HP) width form factor versions and offers flexible connectivity and storage options. Faceplate IO includes 1x RJ-45 serial port, 1x DisplayPort, 1x VGA, 2x GbE, and 2x USB 3.0 ports. Dual slot versions support dual integrated 10G SFP+ KR ports, while two additional 10GBASE-T ports can be configured through XMC expansion. Two DVI-D ports are routed to rear I/O. Expansion options include one PCIe x16 to J4 and one PCIe x4 to J5. Storage is provided by up to two 2.5" onboard SATA drives and four SATA ports routed to the backplane.

For more information on the ADLINK cPCI-6940 and our other CompactPCI products, please visit http://www.adlinktech.com/

ADLINK TECHNOLOGY INC.

Thin Mini-ITX Based PC System Design Guide

All In One, Tiny PC

December 2012 -- Revision 1.2

Purpose / Scope

This document outlines possible solutions to creating a system utilizing a Thin Mini-ITX motherboard, as specified in the Mini-ITX Addendum To The microATX Motherboard Interface Specification Version 1.2. It will focus on the electrical, mechanical and thermal interfaces between a Sandy Bridge/Ivy Bridge or Cedar Trail based Thin Mini- ITX motherboard, and its enclosure and peripherals.

Compliance with the guidance outlined in this document enables chassis and Thin Mini-ITX motherboards that can be interchangeably used between systems. This increases the system design options using a building block approach, while mitigating the need for custom solutions.

Revision 1.2 of this document Design Guide includes changes that are intended to improve the interoperability and system integration experience based on the thin mini ITX motherboard standard. When designing a chassis based on this revision of the design guide, a chassis manufacturer should take into consideration whether to accommodate motherboards in production prior to this document revision. Motherboard designs based on revision 1.0 of this document are generally expected to be compatible with Chassis designs based on later revisions, however issues could include cable length mismatch due to tightening of the connector placement zones in revision 1.1. Refer to the Channel AIO (Thin Mini-ITX Form Factor) – Compatibility Matrix for Revision 1.0 based motherboards.

Overview

Thin Mini-ITX motherboards evolve the standard Mini-ITX form factor in to even smaller system
designs. They are especially useful in segments that place a premium on small, slim chassis.
Typical usages of such chassis are:

- All In One (AIO) PCs
- Stackable home theater PC to be size compatible with the standard width of AV components such as DVD players and receivers
- VESA mountable Thin PC
- Digital signage PC (Built inside or behind a TV or other display)

In this design guide, particular attention is given to slim, sub-4 liter Tiny PCs, and All One Pcs.

Complete guide (67 pages) download: Click Here

5 Real-Time, Ethernet-Based Fieldbuses Compared- White Paper

WHICH STANDARD STANDS APART?

Executive Summary

Ethernet-based technologies have long been game changers. When first introduced, Ethernet innovated local area networks, and by extension broadband networks. Now key components of the Ethernet ecosystem are being used to innovate industrial fieldbus networks. Typically, industrial automation and machine controls relied on proprietary networks to connect machine controllers to remote components. Now new protocols have emerged that capitalize on the Ethernet standard to deliver breakthrough price and performance.

Machine builders that adopt the right real-time Ethernet fieldbus standard will enjoy a marked competitive advantage in both price and performance when compared to any other fieldbus.

The challenge for these equipment manufacturers is that there are so many different Ethernet fieldbus standards competing to be the most valuable and viable. In a crowded market, it's hard to know which standard to select. Adopting the wrong standard means unnecessary cost and sacrificing competitive advantage due to slower performance.

This paper examines five different important protocols that have emerged as contenders to offer the best price/performance open standard for real-time Ethernet fieldbuses. In alphabetical order, the standards being compared are EtherCAT, EtherNet/IP, Ethernet Powerlink, PROFINET IRT, and SERCOS III. There are other technologies that leverage Ethernet as well, but their components are not sufficiently published, downloadable or promulgated in the open source community to be considered standard and open. This paper does not address these proprietary technologies, including Mitsubishi's CC Link Field and Yaskawa's Mechatrolink III.

ORGANIZATION	RESPONSE TIME (for 100 axles)	JITTER	DATA RATE
Ethernet/IP CIPSync ODVA	1ms	<1ms	100Mbit/s
Ethernet Powerlink EPSG	<1ms	<1ms	100Mbit/s
PROFINET-IRT PNO	<1ms	<1ms	100Mbit/s
SERCOS-III IGS	<0.5ms	<0.1ms	100Mbit/s
EtherCAT ETG	0.1ms	<0.1ms	100Mbit/s

One of the five real-time Ethernet fieldbus standards has achieved a tipping point of acceptance. Cutting through all the marketing clutter, it becomes clear that EtherCAT offers both superior performance and market acceptance. Its performance is an order of magnitude better than Ethernet IP and Powerlink. And while PROFINET IRT and SERCOS III offer nearly equivalent performance characteristics, EtherCAT offers a more "open" solution at far lower cost than both PROFINET IRT and SERCOS III. From a technology and price/performance standpoint, EtherCAT is far superior. And the market agrees. EtherCAT has been adopted by10 times more servo drive and IO suppliers than any of other standard.

Any machine builder that is considering the adoption of a real-time fieldbus technology should choose EtherCAT to deliver the best price/performance and the best long-term value. This white paper offers the evidence for this recommendation by providing a description of distinguishing features of each standard, comparing the performance and price/performance, and by tabulating market adoption rates.

	EtherCAT	Ethernet/IP	Powerlink	PROFINET IRT	SERCOS
PERFORMANCE	5	1	1	1	3
PRICE/PERFORMANCE	5	1	1	1	2
MARKET ACCEPTED	5	1	1	1	1

Complete White Paper of 22 pages from KINGSTAR CLICK HERE or request your copy by e-mail to mgt@e2mos.com

More about KINGSTAR http://kingstar.com/

Artesyn Expands ControlSafe™ SIL4 COTS Rail Computing Platform to Address More Train Control and Rail Signaling Applications

Berlin, Germany. [20 September, 2016] — At the InnoTrans exhibition, Artesyn Embedded Technologies unveiled the ControlSafe™ Expansion Box Platform a COTS computing system designed to be certified to SIL4, which can substantially accelerate time-to-market for the deployment of new and upgrades to train control and rail signaling systems. The platform, an extension of the company's ControlSafe Platform, with a larger chassis to house larger I/O modules, can either be configured as a dual-redundant safety system like the ControlSafe Platform or deployed as an I/O expansion subsystem.

Linsey Miller, marketing vice president, Artesyn Embedded Technologies, said: "By leveraging the same technologies and safety architecture as our original ControlSafe Platform, but with more capacity, the new ControlSafe Expansion Box Platform will significantly enhance the growing Artesyn ControlSafe product portfolio. The shared safety architecture makes it easy to transfer applications between the two and deploy a common platform for a wide range of rail signaling and train control applications. For example, one of our customers is using the ControlSafe Expansion Box Platform for a computer-based interlocking application in large and busy train stations where increased I/O capacity was needed. Artesyn's expertise in safety systems for rail - as shown by the recent SIL4 certification of our ControlSafe Platform - means that customers can avoid the potentially high costs and risks associated with this system development and certification process and can use a COTS product."

Artesyn demonstrated the ControlSafe product portfolio – including both the ControlSafe Expansion Box Platform and the ControlSafe Platform variants – at the InnoTrans exhibition (Hall 6.1, booth 226) in Berlin, Germany between September 20th and 23th, 2016.

Artesyn's ControlSafe product portfolio is designed to meet all the functional safety, reliability and availability requirements mandated by rail standards and specifications. It implements an innovative data lock-step architecture and hardware-based voting mechanism that supports high performance modern processors, and is modular, scalable and designed to seamlessly accommodate additional I/O interfaces as well as upgraded processors that will be required throughout the product life cycle.

In addition, the ControlSafe Expansion Box Platform and ControlSafe Platform allow application developers to migrate existing application software with minimal modifications. Deployable in both wayside and carborne applications, Artesyn's ControlSafe platforms are designed to support a broad range of I/O modules such as CAN, Ethernet, Ethernet Ring, UART, digital, analog and GPS/Wireless. Artesyn can also develop specific I/O solutions to meet unique application requirements.

MORE: Click Here

Silicon Labs Acquires Leading RTOS Company Micrium

Developers Gain Complete Embedded Solution for the IoT Combining RTOS with Multiprotocol Silicon, Tools and Software Stacks

AUSTIN, Texas – Oct. 3, 2016 – Silicon Labs (NASDAQ: SLAB) today announced the acquisition of Micrium, a leading supplier of real-time operating system (RTOS) software for the Internet of Things (IoT). This strategic acquisition helps simplify IoT design for all developers by combining a leading, commercial-grade embedded RTOS with Silicon Labs' IoT expertise and solutions. Micrium's RTOS and software tools will continue to be available to all silicon partners worldwide, giving customers a wide range of options, even when using non-Silicon Labs hardware. Micrium will continue to fully support existing as well as new customers.

Founded in 1999, Micrium has consistently held a leadership position in embedded software components. The company's flagship µC/OS RTOS family is recognized for reliability, performance, dependability, impeccable source code and extensive documentation.

"With an installed base of millions of devices, Micrium's RTOS software has established itself as one of the most reliable and trusted platforms over the last 10 years," said Jean-Michel Orsat, Chief Technology Officer, ICT Standards and Connectivity Solutions at Somfy. "Micrium has been a rock-solid RTOS solution partner for Somfy, and we look forward to using Micrium's RTOS software family for years to come, delivering the reliability and performance we need for our IoT applications."

Micrium's widely deployed RTOS software has been ported to more than 50 microcontroller architectures and has a global footprint with more than 250,000 downloads across all embedded vertical markets, with solutions certified to meet safety-critical standards for medical electronics, avionics, communications, consumer electronics and industrial control.

"By combining forces with Silicon Labs, the Micrium team will drive advances in embedded connectivity for the IoT while giving customers a flexible choice of hardware platforms, wireless stacks and development tools based on the industry's foremost embedded RTOS," said Jean J. Labrosse, Founder, CEO and President of Micrium. "We will continue to provide our customers with an exceptional level of support, which is a Micrium hallmark."

The combination of Micrium's RTOS and Silicon Labs' multiprotocol SoCs, wireless modules, wireless stacks and Simplicity Studio™ development tools gives customers a faster, easier on-ramp from connected devices to the cloud with end-to-end solutions for embedded IoT design.

"IoT products are increasingly defined by software. Explosive growth of memory/processor capabilities in low-end embedded products is driving a greater need for RTOS software in connected device applications," said Daniel Cooley, Senior Vice President and General Manager of Silicon Labs' IoT products. "The acquisition of Micrium means that connected device makers will have easier access to a proven embedded RTOS geared toward multiprotocol silicon, software and solutions from Silicon Labs."

About Micrium
Micrium is a global RTOS leader for microprocessor, microcontroller and DSP-based devices. µC/OS is the leading commercial RTOS for embedded systems and features a wide array of connectivity options. Micrium Spectrum is a pre-integrated end-to-end portfolio of embedded software, protocol stacks and cloud services to facilitate development of the IoT from device to the cloud. Micrium's RTOS kernel and software components are recognized for unparalleled reliability, performance, dependability, impeccable source code and extensive documentation. www.micrium.com

Silicon Labs
Silicon Labs (NASDAQ: SLAB) is a leading provider of silicon, software and system solutions for the Internet of Things, Internet infrastructure, industrial automation, consumer and automotive markets. www.silabs.com

Daniel Dierickx
CEO & co-Founder
at e2mos
Acting Chief Editor

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The rise of the public safety network

A Knowledge Network Article by Huawei
Previuosly published by Total Telecom 05-Sep-2016

The ever increasing threat to public safety from terrorist attack, natural disaster, crime, and disease is driving governments to examine the use of cutting-edge information and communications technologies as they seek to establish advanced public safety telecom systems.

Currently, dedicated public safety networks adopt the narrow-band digital trunking technology, which is outdated uses low bandwidth and offers poor mobility. Narrow-band digital trunking can no longer meet the increasing needs of multi-media services on public safety networks and instead, LTE broadband trunking, offering high bandwidth and all IP-based operation, is becoming the mainstream in the market. It is the era of LTE-based public safety networks.

Operators are playing an increasingly important role in deploying public safety networks, developing more new services, and working with vertical industries to leverage the capacity advantage of LTE networks.

3GPP specifications pave the way for operators to deploy public safety networks.
Most public safety networks are deployed according to regional public safety standards, such as TETRA and P25. In recent years, 3GPP has been working with LMR (Land mobile radio) industry organizations, such as APCO (P25), ETST (TETRA), and TCCA, to develop public safety standards, ensuring 3GPP specifications are more applicable and making LTE networks more suitable to public safety communication. The Group Communications System Enabler for LTE (GCSE_LTE) defines how to achieve trunking communication on LTE networks, whilst Proximity Services (ProSE) define the communication mode for terminals disconnected from the network. Mission Critical Push-To-Talk (MCPTT) defines the one-push critical task function. These standards ensure that LTE networks are technically suitable for public safety communication.

Public safety network: the next blue ocean for operators
For governments, there are many advantages of leveraging operator networks to deploy public safety networks. Operator networks are cost-effective, and offer good coverage and capacity, allowing integrated and unified scheduling of professional voice, data, and HD video services on one terminal and one network. LTE technology ensures that public safety networks can achieve long term evolution. For operators, public safety networks will offer the opportunity to develop new services and expand business boundaries, at the same time making public safety networks more reliable and offering a better network experience for individual consumers.

The trend is clear, more governments are going to authorize operators to deploy national public safety networks, which in term will generate new revenue streams for the companies. In U.K., ESMCP has offered 2 billion pounds to EE for the deployment of LTE-based public safety networks to support police, fire, medical, and other public safety services. The network is planned to be put into trial commercial use by the end of 2016 and commercial use by H1 2017. In Korea, SKT has received USD $2 billion of funding from the government to deploy a national LTE public safety networks, which is expected to be commercially launched in 2017. PTS, a Swedish regulator, has announced that no dedicated spectrum will be allocated to public safety networks and suggests that public safety services should be supported by public LTE networks.

LTE-based public safety network: a mature industry chain
As LTE-based public safety communication and LTE trunking communication generates more attention globally, the LTE-based public safety industry is gaining momentum. There are more than 300 models of anti-surge, anti-moisture, and anti-theft LTE terminals in the market, with annual sales volumes in the millions and is growing rapidly. The diversity of LTE terminals satisfies the needs of customers in various industries.

There is a growing need for IT devices, such as LTE anti-surge, anti-moisture, and anti-theft smartphones, shoulder microphones, vehicle mounted stations, video surveillance devices, ECVs, drones, and detecting robots. A number of trunking server providers offer professional scheduling platforms and app. development services to different industries and business scenarios, meeting the need of public safety service customization.

Network encryption and information resistance technologies are also developing, often encompassing data encryption and related protection technologies, to prevent user information from being stolen or tampered and creating a safe network environment for users. As public safety develops and improves, the industry chain will involve more industries, such as smart transportation, air and water transportation, oil and drilling industries, logistics, security, and tourism.

Huawei, a leading global ICT provider has launched the LTE Integrated Trunked Radio Access (LiTRA) solution to help operators deploy secure, efficient, and professional LTE-based public safety networks. LiTRA can enable large bandwidth and low latency of LTE networks to provide professional multi-media trunking services such as video calls, video surveillance, file transfer, and coordinated geographic information systems, all offering an excellent experience compared with traditional trunking networks. More importantly, LiTRA is fully based on operators' live LTE networks, significantly reducing network deployment and maintenance costs and providing better network coverage and roaming services. LiTRA is compatible with smart LTE terminals, opening up the industry chain to provide more professional and efficient trunking communications services.

Huawei is willing to open up networks for interconnection with other PTT platforms and terminals and join hands with industry partners to help operators deploy LTE-based public safety networks. **Source:** Click Here