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Daniels completes Acceptance Test with Public Safety Agency in Taiwan for two major contracts worth \$2.7 Million

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PRESIDENT'S DESK

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Daniels Electronics Ltd., has successfully passed Acceptance Testing of radio systems being provided to the Taiwanese Civil Defence Command Center (CDCC). Combined with systems being provided to the Taiwanese National Fire Agency (NFA), this represents a total of \$2.7 Million in new international business for Daniels Electronics for the supply of Daniels latest generation of firmware based digital public safety radio technology.

These orders for Daniels MT-4E P25 Digital Radio Repeaters, the company's latest generation of firmware based digital radio technology, will be used by both agencies to expand the country's nationwide emergency communications warning and response network. The Taiwan Civil Defence Command Center is responsible for using the national civil defence alerting system to warn Taiwanese citizens in the event of national emergencies ensuring the safety of property and life. Similarly, The National Fire Agency has national responsibility for fire fighting, ambulance services and emergency response in the event of a natural disaster. The need for a comprehensive nationwide radio network to coordinate response efforts was well understood and critically important with the increasing number of severe typhoons that Taiwan experiences annually.



Daniels Electronics is providing these radios through its local system integration and engineering partner Harbinger Technology Corp. who will oversee the system design, installation and life cycle maintenance. The entire network is expected to be fully operational by the end of 2012. Harbinger Technology's team of engineers have been working with the Taiwan Civil Defence Command Center and the National Fire Agency over the past 3 years to determine the agencies' immediate requirements as well as a long term communications evolution plan. The objective of both systems is to provide siren alerting as well as encrypted digital communications for first responders on the beaches and other points at risk in the event of a natural disaster such as a typhoon, earthquake, tsunami or flood.

Once the requirements were understood it was clear to the Managing Director of Harbinger Technology Corporation, Alan Teoh, that Daniels Electronics was an essential part of the design of the radio network. "We have worked with Daniels Electronics for over a decade on a variety of

projects in Taiwan and we have always found their products to be of the highest quality, a proven reliable design and a product that is easy to install. We also needed Daniels to work closely with us in coming up with a custom solution to meet the advanced requirements of our customers for digital encrypted communications" said Mr Teoh. "For such a critical application as the backbone of this national emergency response radio network we knew that Daniels products would meet the requirements of the CDCC and NFA and ensure years of trouble free operation in all conditions."

"These new orders reaffirm Daniels leadership position and well respected reputation for providing reliable high performance digital radios that meet the advanced digital communications needs of public safety agencies." says Robert Small, President and Chief Operating Officer of Daniels Electronics. "The ability of a mid size Canadian company to compete internationally shows we have the right people and the right products for continued success in the growing market of public safety and digital radio communications."



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Product News

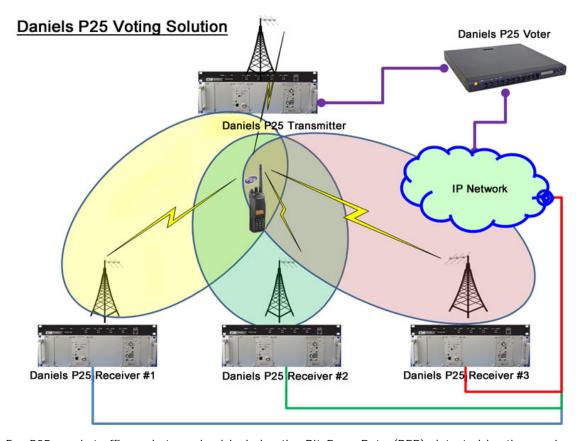
Daniels Introduces P25 Digital Voting at APCO 2011

Daniels Electronics is pleased to introduce its new P25 digital voting system. Based on the versatile MT-4E radio platform, the Daniels digital P25 voter now offers an enhanced level of functionality for conventional P25 applications.



For extended or improved coverage, multiple receivers can be installed on the same frequency. When the Subscriber Unit transmits, many (and possibly all) of the receivers may hear the transmission depending on the location of the Subscriber Unit. The voter will then determine and select the "best" received signal from all the signals received. The best signal is then rebroadcast from the base station transmitter allowing improved talk-back capability between mobiles in the field. Each local receiver's received signal is back-hauled to the voter and transmitter base station via IP links (Microwave or wired).

As shown in the diagram below for a 3 site voted system with a single transmitter, each receiver receives the signal from the Subscriber Unit. These signals are then evaluated and compared, and the best possible representation of the signal received is passed to the Daniels P25 voter.



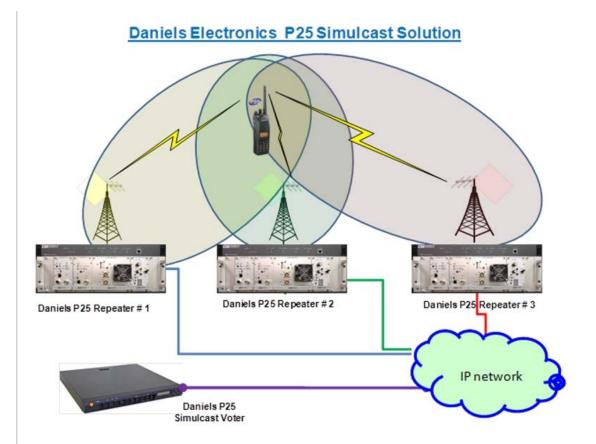
For P25, each traffic packet received includes the Bit Error Rate (BER) detected by the receiver which is used by the voter to determine the relative quality of packets between the multiple streams received. This process is performed continuously as the quality of the received RF signal varies at each of the different receivers. An analog voice signal has no error detection; therefore the only measure of quality is the received signal strength indication (RSSI). The Daniels Voter has a "good quality threshold" which defines the analog signal quality level above which no switching will be done to reduce unnecessary switching of channels.

The Daniels Voting System is based on the versatile and proven MT-4E conventional radio system. P25 Voting requires no changes to existing MT-4E radios and is supported in all the P25 frequency bands (VHF, UHF, T-Band, 700 and 800 MHz). As shown in the diagram above, each Receiver site consists of a Daniels Receiver subrack along with the Daniels Voter. An industrial PC then receives all the voted received signals and sends the result to the transmitter site. The Industrial PC also provides the programming and System Monitoring statistics. To learn more please refer to our website http://www.danelec.com/applications/other/digital_voting.asp or contact Daniels at sales@danelec.com.

P25 Simulcast

At IWCE 2012 in Las Vegas (Feb 22) Daniels Electronics will be introducing its new P25 Simulcast solution. Building on the P25 Voter announced at APCO (see above) the P25 Simulcast solution allows a single P25 signal to be simultaneously broadcast using two or more geographically separated radio transmitters. For each transmission in the simulcast system, the Simulcast Controller sends the same signal with a timing offset with respect to a 1 Hz synchronization reference to each transmitter via an IP network.

Each Simulcast transmitter is configured with an additional timing offset that may then be applied to the transmitted signal, allowing tuning of the system by geographically shifting areas where the signals are destructively reinforcing. A network time protocol (NTP) from a GPS or an Internet connection is required for proper simulcast operation.



P25 Trunking

The Daniels P25 Trunked Radio System is configured with one channel per subrack as shown below left and two 1U industrial servers performing the function of the redundant trunking controller. A Universal Interface Card (UIC) in each shelf provides the IP communication path between the radios and the trunking controllers. Daniels offers its P25 Trunked Radio System in three main configurations:

- 1. **7' Rack for Fixed Installations -** For permanent fixed site applications such as a small town police force or a power plant, the Daniels P25 Trunked Radio System can be mounted in a standard 19" 7' equipment rack as shown below, left.
- 2. Transportable Cases For temporary deployment by firefighting agencies, police departments involved in search and rescue or security details setting up temporary communications to protect dignitaries, the Daniels P25 Trunked Radio System can be packaged in a transportable case for easy deployment. Cases, such as the one shown below, center will accommodate the RF racks, the industrial servers, power supplies, power amplifiers, combiners and duplexers and other cases can be filled with preconfigured handhelds. This is very similar to our existing conventional P25 briefcase repeater but offers increased traffic capacity.
- 3. 3' Outdoor Pole Mount for Cell Site Infill For permanent small channel fixed site applications such as highways, or urban dead zones, the Daniels P25 Trunked Radio System can be mounted in a standard 19" 3' outdoor pole mount equipment rack as shown below, right.

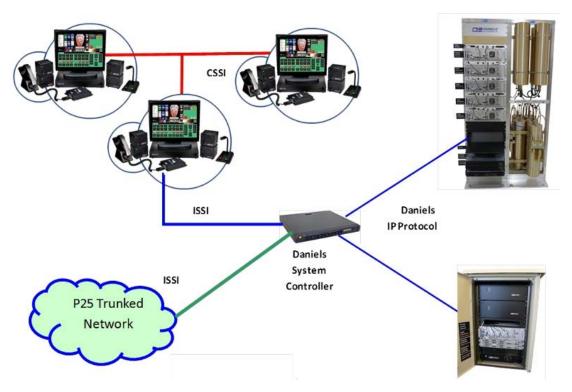






Daniels P25 Multi-site Trunking with ISSI

At IWCE 2012 in Las Vegas (Feb 22) Daniels Electronics will be introducing its new P25 Multi-site trunked solution supporting the Inter Sub System Interface (ISSI). Building on our existing Standalone P25 trunked system, the multi-site capability now enables Daniels to build small multi-site networks for Public Safety agencies or provide an open ISSI interface for end of the network and dead zone infill for large agency and state wide networks. Daniels is offering a solution that is complementary, for end of the network applications (our long established niche in the market) and small capacity infill where the Daniels advantage of low power, small size, low weight and rugged operation offer an advantage to use Daniels for these niche remote and difficult applications.



The Daniels P25 Trunked Radio System now supports the Inter Sub-System Interface (ISSI) offering interconnectivity to other P25 trunked equipment:

- ISSI to the Console subsystem
- ISSI connectivity between Daniels Trunked Radio Sites
- ISSI connectivity to another vendor's Radio Frequency Sub System (RFSS) for end of the network connectivity or dead zone infill

Compliance Assessment Program (CAP) and SDoCs

Daniels Electronics has posted test results and Supplier's Declaration of Compliance (SDoCs) documents to the US Department of Homeland Security Responder's Knowledge Base. The following units now have their Self Declaration of Conformance (SDoC) published to the DHS website URL:

https://www.rkb.us/search.cfm?query=&action=5&typeid=5

- MT-4E TX 700 MHz
- MT-4E RX 700 MHz
- MT-4E TX 800 MHz
- MT-4E TX 800 MHz
- MT-4E TX UHF
- MT-4E RX UHF

The Publication of the SDoCs (Supplier's Declaration of Conformance) for Daniels MT-4E P25 radios encompasses base station, repeater and transportable repeater configurations for the UHF, 700 and 800 MHz bands with VHF and P25 trunking to follow shortly. These declarations provide emergency response agencies with confirmation that the Daniels P25 infrastructure equipment has been tested in accordance with the Telecommunications Industry Association (TIA) P25 standards.

New Frequency Band - 900 MHz

Daniels Electronics has completed FCC and IC compliance and begun commercial shipments of its

new 900 MHz MT-4E radio operating in the frequency band 896 – 960 MHz. The 900 MHz MT-4E radio is a high performance, low current FM radio capable of P25 digital (for linking) or analog operation in 12.5 kHz channels as well as 900 MHz paging applications. P25 operation is supported via a purchasable P25 firmware option. The 900 MHz MT-4E modules provide:

- Software Programmable
- 3 Watts output power (100% duty cycle)
- USB plug for programming and firmware upgrades
- Purchasable firmware upgrade from analog to P25 digital now or in the future
- Used for Repeater, Base Station or Paging applications

For full details visit the Daniels website: http://www.danelec.com/products/rfmodules/



RoHS Compliance – Restriction of Harmful Substances

Daniels Electronics is now shipping its first product that complies with RoHS - a European Union Directive that stands for Restriction of Harmful Substances. Directive 2002/95/EC was adopted in 2003 and became law in Europe in 2006 with the goal of restricting the use of six hazardous materials in the manufacture of electronic equipment:

- lead
- mercury
- cadmium
- · hexavalent chromium
- polybrominated biphenyls
- polybrominated diphenyl ether

While no such equivalent law exists in North America, Daniels has chosen to be ahead of our industry by removing these substances from our products and ensuring we continue to be environmentally friendly and recyclable.

Our first product is the A-PNL-SCARB-01 System Control and Alarm Relay Board. Other products will follow as Daniels converts its entire product line to RoHS compliancy. There are no functional or performance specification changes to our RoHS compliant products. The part numbers remain the same and the modules are backwards compatible. All RoHS compliant products will carry the Daniels RoHS logo shown above to the right. The key change in our products with the elimination of the above hazardous materials has been a move to lead free soldering. This uses a different solder compound that requires a higher soldering temperature.

To learn more refer to the explanatory note on the Daniels webpage http://www.danelec.com/library/english/technotes.asp

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Corporate News

Newsletter Feedback

If you wish to unsubscribe from our newsletter, please email the editor@danelec.com.

Comments on desired

Year End Sale - Black ET-3 Cases

Daniels has reviewed its inventory and found items that we are offering a one time end of year inventory sale on:

 The Daniels Black ET-3 case is a rugged, pressurized, waterproof, aluminum 19" transportable case accommodating one subrack. It features spring retracted handles, smooth





enhancements or additions are welcome and can be forwarded to the editor@danelec.com. latches, a pressure-relief valve and a desiccant. Any standard 19" Daniels Electronics subrack can be mounted inside. In addition to the space for a 3U high subrack, the transportable has a 2U space free for optional modules. The lid has a steel plate to magnetically mount an antenna.



 Current list price for the ET-3-03-05 is \$3,025 US. Special promotional price is \$1,500 US. Act now as quantities are limited.

ISO Recertification

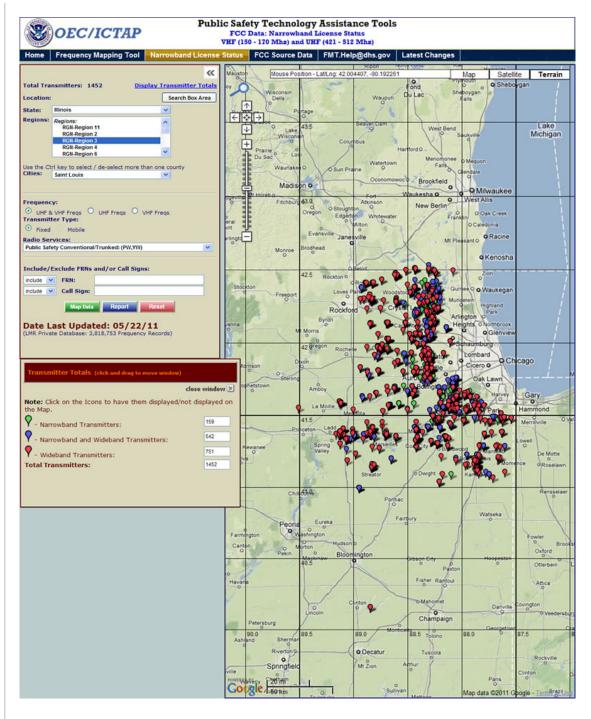
Daniels Electronics is pleased to announce that it has been recertified in its compliance with the quality management system ISO 9001:2008 effective October 2011.



FCC Narrowbanding Mandate - Jan 1, 2013

According to the FCC frequency database there are 140,000 sites still operating in wideband ahead of the narrowbanding deadline of January 1, 2013. The following map illustrates a representative region providing a view of these sites

http://publicsafetytools.info/start_nb_status.php



If you are looking for replacement equipment to meet the January 1, 2013 narrowbanding mandate, then Daniels has a family of FCC registered VHF and UHF base stations and repeaters that support wideband, narrowband and cross-band operation.

http://www.danelec.com/products/rfmodules/transmitters.asp

Our repeaters are available in either analog, P25 or mixed mode operation and can be configured for any output power level. Our products are available on a variety of state contracts including WSCA and GSA. If you would like to learn more about our products or receive a quotation for a replacement system please contact the sales department sales@danelec.com

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New Product Literature

Daniels has an extensive library of marketing and technical literature available on our website:

http://www.danelec.com/library/english/

The following new documents are now available on the website:

Document	Image	URL
Transportable Planning Guide	CAST NAME OF THE PARTY OF THE P	http://www.danelec.com/pdfs/MKT 117 Transportable Repeater Guide V3.0.pdf
2012 Product Catalog	PRODUCT CATALOGUE	http://www.danelec.com/pdfs/Daniels 2012 Product Catalog Jan 2012.pdf
2012 Trunked Brochure	PES TRUNKED RADIO SYSTEM PER TRUNKED RADIO SYSTEM	http://www.danelec.com/pdfs/Trunked Brochure Jan 2012.pdf
Voting Brochure	FOT Right & Emerge Variety With Congress Statistical Parties With Congress Statistics With Congress Statistics	http://www.danelec.com/pdfs/Daniels_P25_Voting_Brochure.pdf

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Upcoming Events

Daniels in conjunction with its regional sales representatives and authorized dealers will be participating at the upcoming industry events in 2012:

Dates	Logo	Tradeshow	Location	Web
February 22 - 23	IWĈE	IWCE	Las Vegas, Nevada	http://iwceexpo.com/iwce2012/public/enter.aspx
February 29 - March 01	APCO	APCO Western States	Anchorage, Alaska	http://www.apconena.com /2012WesternRegionalConference.html
March 27 - 29	CMA Critical Messaging Association	Critical Messaging Convention	Austin, Texas	http://www.criticalmessagingassociation.org /conferences.asp
April 16 - 21	FD\$C	Fire Department Instructors Conference	Indianapolis, Indiana	http://www.fdic.com/index.html

May 20 - 23	UTC UNITED TELECOM COUNCIL	UTC Telecom	Orlando, Florida	http://www.utctelecom2012.utc.org/
May 30 - 31	(CANSEC	CANSEC	Ottawa, Ontario	https://www.defenceandsecurity.ca /index.php?action=cansec2011.exhibitors
July 07 - 13		NATIA	Austin, Texas	http://www.natia.org/i4a/pages/index.cfm?pageid=1
August 19 - 22	APCO International teaders in Public Safety Communications*	APCO International	Minneapolis	http://www.apco2012.org/
November 05 - 08		APCO Canada	Winnipeg, Manitoba	http://www.apco.ca/conferences_e.html

See Daniels P25 ISSI Multi-site Trunked Radio System at IWCE

Daniels Electronics invites you to visit us at IWCE in Las Vegas on Feb 22-23. We will be exhibiting in booth # 9009. At IWCE 2012 we will be introducing:

- P25 Multi-site trunked solution supporting the Inter Sub System Interface (ISSI)
- P25 Simulcast solution



Free Exhibit Pass to IWCE

Daniels is offering a free pass to the exhibits at IWCE. To access the pass register online at the following IWCE URL: http://iwceexpo.com/iwce2012/Public/Content.aspx?ID=1020387&sortMenu=101000 then enter in Customer Code V5. This will provide a free pass into the exhibits. (\$75 value)

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			Antennas and Accessories Amplifiers/Repeaters Project 25 Equipment Batteries and Accessories Dispatch Equipment/	AVL/GPS/GIS/Mapping Coaxial Connectors Networks & Systems Mobile Data/Mobile Computing	Satellite Fiber Optics/Telephone Systems TETRA Unified Communications

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Product Support and Service

MT-4E Firmware Upgrades

Daniels Electronics Ltd is pleased to announce that a new release of MT-4E RX/TX firmware is available for download from our website:

http://www.danelec.com/support/service/softwaredownloads.aspx



To improve the reliability and robust nature of our product we are releasing firmware with internal on-board diagnostic and maintenance functionalities. The MT-4E product, with the implementation of this firmware, will monitor, correct and internally record critical aspects of the radio through enhanced error detection between interconnected subassemblies. The benefits of the new firmware are significant. Daniels is recommending the user implement the firmware upgrades at their next optimal preventative service interval.

Daniels Electronics Ltd is pleased to offer the firmware and programming tools free of charge for download from the Daniels Electronics Ltd website. Please contact Sales@danelec.com if you have any questions.

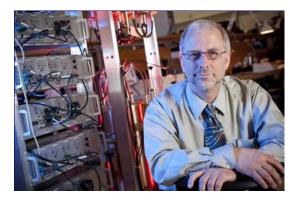
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President's Desk

Another year has passed too quickly. On reflection on 2011, Daniels has had a great year. We appreciate your business and the pleasure of working with you to meet your communication needs. Looking ahead to 2012 and the looming Narrowbanding deadline we are increasing our production capacity to meet your needs and support you in meeting this deadline.

With IWCE just a few weeks ahead and the start of another busy year of tradeshows and travel we are excited about the major new product enhancements we will be introducing and our ability to assist you in building more comprehensive P25 networks. Please stop by our booths and see what is new.

Lastly, our business is becoming global in nature as we expand in Asia and offer European compliant products. 2012 will be an exciting year and we wish you all the best for the coming year.



KINDON.

Robert Small, President & COO