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Simoco is committed to service and innovation with a proud 90 year history. Our state of the art product development facilities, extensive P25 product range and our experience in emergency service applications including police, fire, ambulance and other emergency organisations make Simoco an expert partner in public safety communications.

For additional information on this and other Simoco products visit our website:

www.simoco.com.au   www.teamsimoco.com   www.simocoamericas.com

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SB2025NT
P25 Simulcast / Voting Base Station

Enabling Solutions in Simulcast Technologies
Auto Set-Up and Synchronisation
Remote Management
Lowest Lifecycle Costs

Spectrum efficient solutions for wide area coverage…

SIMOCO P25 SOLUTIONS – POWERED BY DALMAN SIMULCAST

SB2025NT Base Station
Compact P25 Simulcast / Voting Base Station

Simoco is committed to service and innovation with a proud 90 year history. Our state of the art product development facilities, extensive P25 product range and our experience in emergency service applications including police, fire, ambulance and other emergency organisations make Simoco an expert partner in public safety communications.

The SB2025NT Simulcast Base Station offers market leading P25 performance in a robust, reliable yet compact 2U form.

Designed and built to exceed industry standards and all international specifications it is available in the widest range of frequency bands.

Architecture

Simoco simulcast over IP solutions leverage the inherent consistency and clarity of definition of digital signals to simplify simulcast synchronisation to an automatic 'processor controlled function'. This means that Simoco Solar 25 is fundamentally easier to manage and support and can be deployed over the enterprise IP network.

Component Based Design
A component based system, incorporating optional traffic manager and network interface modules. Each SB2025NT unit accommodates a GPS receiver to provide the timing source throughout the network, and up to one Traffic Manager Module and two Network Interface modules, making the system extremely compact, flexible and cost effective. Units can then be located throughout the network and configured to the specific requirements of each customer solution.

Processor-controlled synchronisation, Auto Set-Up and Remote Management mean Solar 25 is fundamentally easier to deploy and manage. With its compact, component based design, we're confident that Solar 25 offers the lowest lifecycle costs.

Network Interface Module
Network Interfaces are DFSI compliant with dispatch consoles and applications such as AVL systems and voice recorders.

Traffic Manager Module
The Traffic Manager module provides the synchronisation and supervisory functions through the network and can be duplicated to provide distributed resilience of these essential functions.

Simoco Solar simulcast over IP solutions leverage over 25 years of dedicated simulcast engineering, research and development in the Dalman Labs and are innovatively engineered to realise the advantages of digital technology in tangible business and cost benefits.

Integrated Voting
Receiver selection or receiver voting is conducted in the digital domain within the Traffic Manager. In the noise free digital IP environment no further signal evaluation is necessary which means that the IP data packets contain both the received audio and signal quality information together, greatly reducing voter rise time.
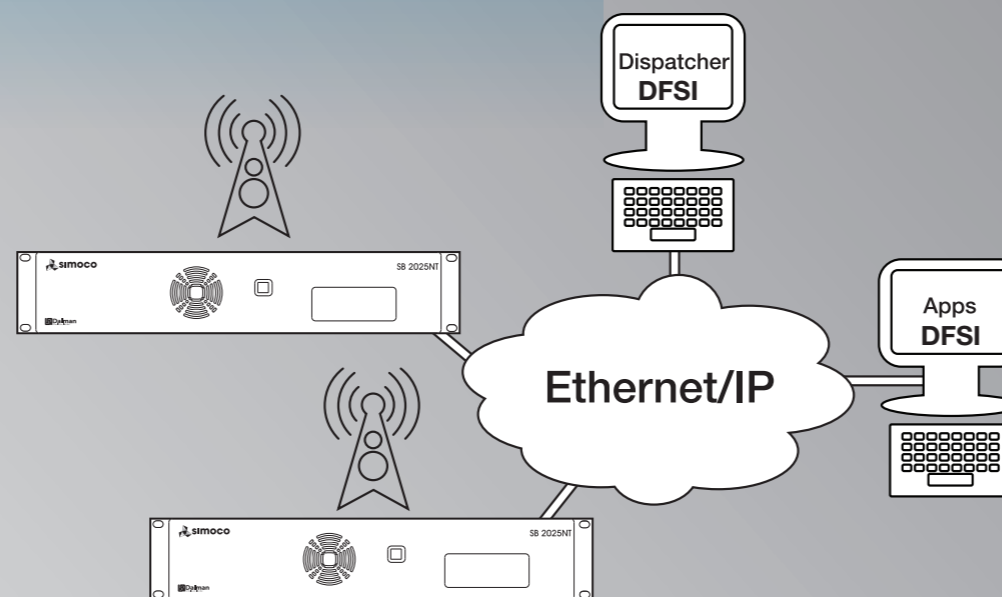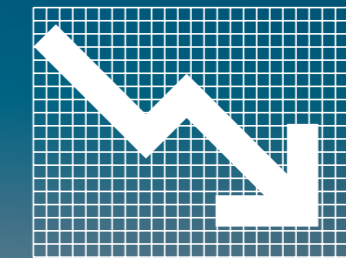
Building on the plug and play principles of analogue Solar 25 simulcast systems, SB2025NT integrated simulcast and voting controller offers enhanced resilience and full remote management of base station network, while interfacing in a cost effective, compact component based P25 system.

With a cost advantage that extends the benefits of simulcast to dealers and customers previously excluded by the cost and complexity of the technology. With Dalman Solar 25 inside, P25 simulcast solutions are brought within YOUR reach.

SB2025NT Overview

- Simulcast technology synchronises duplicated channels in a wide area network to avoid interface between adjacent radio sites.
- Solar 25 digital VoIP signals are better defined and more consistent than their analogue counterparts, enabling the synchronisation task to be 'processor controlled'.
- SB2025NT incorporates an RSSI voter which can operate in talk through mode with simulcast transmit.
- Revolutionary, economic deployment and support; enabling automatic set up and remote management to replace specialist knowledge, costly test equipment, and on-site maintenance – dramatically reducing lifecycle costs.

SB2025NT Simulcast / Voting Base Station Specifications

1. General	
Antenna Connections	Rx,Tx both N type female
Modulation	Analogue - Direct FM two point method / Digital - C4FM
Channel Spacing	Analogue - Programmable 25/12.5 kHz / Digital - 12.5kHz
Channels	255 DFSI selectable
Supply Voltage	13.8 +/- 20% or optional AC mains input
Operating Temperature	- 30 to +60°C (-22° to 140°F)
Frequency	135-160 MHz, 148-174 MHz, 850-870 MHz (Tx) / 805-825 MHz (Rx)
Physical Size	2RU Height x 19" rack mount
2. Transmitter	
Power Output	100W
Frequency Stability	1.5PPM
Symbol Deviation	1.8kHz
Modulation Fidelity	Less than 3%
3. Receiver	
Sensitivity	Better than - 117dBm for 12dB SINAD, typ -120dBm. P25 - Better than - 117dBm for 5% BER
Audio Bandwidth	300Hz to 3000Hz (+1,-3dB)
Intermodulation Immunity	Better than 82dB blocking better than 100dB at +/- 1MHz point
Distortion	Less than 2% @ 60% deviation

4. APCO P25
- Mixed mode repeat - analogue and digital. NAC can be unchanged or defined
- Transparent P25 repeat - passes encrypted voice transparently
- DFSI interface option for IP connected dispatch console
- Remote diagnostics
- Front panel status indicators

5. Options
- Simulcast ready SB2025N Base Station
- Redundancy (duplicate base station required)
- 4-wire analogue dispatch console interface (via central NI)
- SNMP traps