

simocoXd
CONNECTIONS THAT COUNT



**PROFESSIONAL
DIGITAL MOBILE RADIO**





// Simoco Xd

Connections count, and with a history of 90 years radio engineering excellence, Simoco combines innovation in 2 way radio design with extensive experience of delivering radio systems that connect people when it matters.

Simoco Xd brings together the benefits of open-standard Digital Mobile Radio, highly connected base stations and feature packed portables & mobiles. Building on the success of the innovative, all IP, architecture that was at the heart of the Xfin range of radio systems and the flexibility that was created in Xmode mobiles and portables to bring you cost effective, reliable digital voice communications with crystal clear audio, increased capacity and increased battery life.



// Why Simoco Xd?

Simoco has a successful history of innovation in analog and digital radio networks from the simplicity of the all-IP radio backbone in Xfin to the flexibility of Xmode portables and mobiles. Our products have been tested under the harshest operational conditions and offer a wealth of benefits, including:

-  **Reliable and resilient** – with resilience built-in to the base stations, and strong portables and mobiles, Simoco Xd provides a robust platform for always-available communications.
-  **Open marketplace** – Simoco's truly interoperable digital products protect the purchaser by supporting a mixture of manufacturers equipment through open interfaces.
-  **Integrated communications** – extending the radio communications system to talk with local or worldwide telephony is embedded across the radio system to give natural calls beyond the reach of radio.
-  **Natural conversations** – with full-duplex speech it's possible to get the message across more clearly and succinctly. Simoco Xd provides full-duplex speech for conversations from radio to radio and from radio to PABX or dispatcher.
-  **Safeguarding employees** – Simoco Xd protects your workforce with GPS-based tracking, lone-worker protection and integrated intelligent man-down, alerting you in the critical early moments of an incident.
-  **Ease of deployment** – uses ubiquitous IP technology for base station backbone connectivity, a flexible mobile radio and highly integrated portable for simple set-up of advanced features.
-  **Expandability** – open interfaces are available for dispatch and other applications, plus multiple digital inputs and outputs are available on portables, mobiles and base stations allowing for the creation of a system tailored to specific needs.

BENEFITS OF DIGITAL

Simoco Xd builds on our previous generations of radio systems adding the benefits of the digital air interface provided by the DMR standard:

-  **Increased call capacity** – DMR uses 2-slot TDMA (Time Division Multiple Access) to double the number of calls supported on each radio channel, giving you twice the calling capacity as an analog system in available spectrum, without the need for combining.
-  **Clearer audio** – DMR provides clear speech right to the boundaries of reception even in environments with high background noise.
-  **Lower power consumption** – DMR terminals only transmit for half of the time, which gives an increased battery life of about 40% over FDMA and analog technologies, providing significant power savings and longer work shifts.
-  **Integrated data applications** – DMR brings greater capacity for messaging and data applications, enabling alerting, tracking, telemetry, monitoring and many more applications natively within the radio system.

OPEN STANDARDS BASED

Simoco Xd utilizes the DMR (Digital Mobile Radio) standard, which was created to bring digital benefits to business- and mission-critical communications systems. DMR is an open standard developed by ETSI with ongoing improvement managed by the DMR Association. The Association has a number of member manufacturers each producing a full suite of equipment that ensures security of supply for customers.

Simoco are working hard to ensure that our DMR implementation makes full use of the DMR standard and where necessary seeking improvements to the standard. We will always be clear with our customers so that they understand the benefits and limits of interoperability and standardization.

// End-to-End Systems

Simoco Xd provides integrated digital voice and data communications for the needs of commercial, industrial and public organizations. With mobile, portable, infrastructure, dispatcher and accessories, Simoco Xd is a complete deployable package, which scales from simple push-to-talk radio to a highly integrated wide-area voice and data network.

-  Digital conventional and trunked radio systems in a single hardware platform
-  Designed to DMR Tier II (Conventional) and DMR Tier III (Trunking) standards
-  Integrated telephony and applications with support for 3rd Party Application interfacing
-  Open interfaces and clear interoperability
-  Integral options for migration from analog to digital



1. Simoco Xd Digital Portable



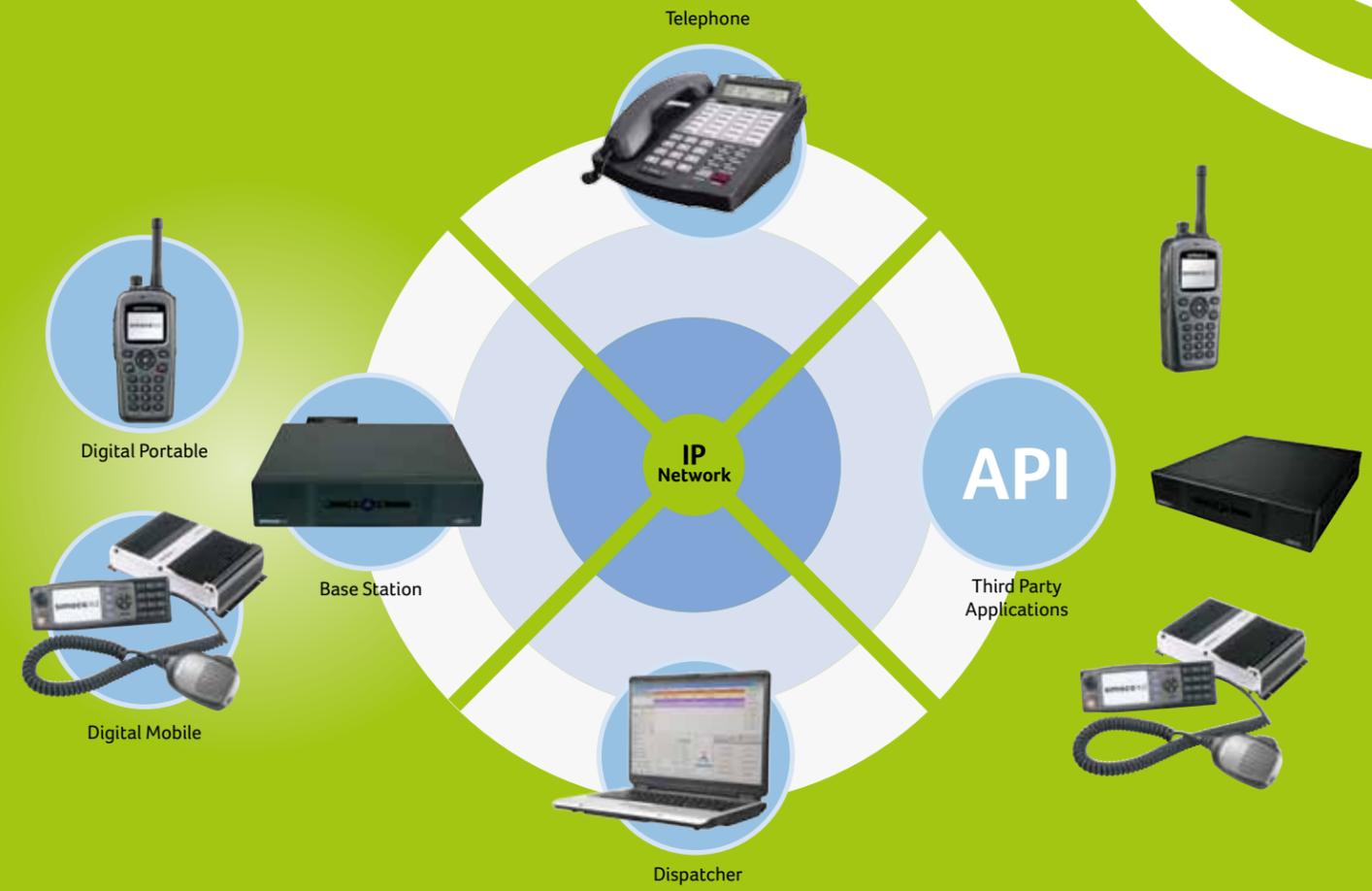
2. Simoco Xd Digital Mobile



3. Simoco Xd Digital Base Station

1. The Simoco Xd **Digital Portable** is available in two variants to support different users and includes options for internal GPS, man-down and Bluetooth. These intuitive handheld radios in a robust chassis are designed to put digital features into the hands of the mobile workforce.
2. The Simoco Xd **Digital Mobile** brings the same intuitive interface to the vehicle and packages this for a range of flexible installations.
3. The third hardware element is the intelligent **Digital Base Station**, with integrated intelligence for control and interfacing to applications and telephony.

// Whole Suite



-  Infrastructure units and applications connected together with a standard IP network
-  All equipment supports Tier II (Conventional) and Tier III (Trunking)
-  Interface available for third-party applications
-  SIP/VoIP telephone connectivity
-  IP Connected dispatcher terminal for everyday communication needs and enabling messaging applications from the desktop

// Supporting Operational Needs

INTEGRATED TELEPHONY

Simoco Xd can operate as part of a wider communication system. Telephony is integrated to the extent that users will not notice what kind of call they are making, simply calling from a contact list will make the necessary connection, whether mobile to mobile, mobile to PABX or mobile to dispatch.

At the infrastructure telephony integrates with other SIP-based systems, from small PABXs to larger exchanges. In the portables and mobiles telephone access is configured alongside other elements of the system and is transparent to the user. From the simple case of a programmable button being used to initiate a call to a specific telephone number to the more complex ability of being able to call certain ranges of telephone numbers, this facility is tightly integrated in all radio elements.

THIRD PARTY APPLICATIONS

Simoco are working to provide standards-based interfaces for application providers to gain access to a wide range of features within the radio system. This enables specialists in a variety of fields to tailor radio communications to specific applications and integrates the communications system within the operational processes of the customer organization.

FULL DUPLEX CALLING

Full duplex calls allow both parties in a conversation to speak naturally as they would on a telephone call, which improves communication between the parties on the call.

- When radio users are communicating with dispatch operators or telephones, the system still supports 2 calls per radio channel/base-station as no extra radio resource is used.
- When multi-site radio-to-radio calls are made each end of the call uses the same amount of radio resource as for a simplex (push-to-talk) call.
- Full duplex calls allow conversations between individual radio users and telephones to be carried out naturally, without the need for the phone user to adopt a specific

LOW-RISK MIGRATION OPTIONS

For generations Simoco have been migrating customers to new technologies. This experience is employed to help you make the most of DMR whilst supporting the radio features you have been using in analog.

All elements of the system work in both analog and digital modes supporting mixed fleets for steady migration with minimum disruption to users.

DISPATCHER

The Simoco Xd dispatcher (SDD) enables instant communication from desktop PC to radio. A simple and inexpensive approach to radio communications that puts control operators easily in contact with radio users.

The SDD is an evolution of the widely deployed range of Simoco Radio consoles, bringing full integration with messaging and new voice features to make complete use of the Digital radio platform and giving a wide range of benefits:

- Instant messaging** – Instant text messaging and status alerting are tightly integrated parts of the Simoco Xd system, keeping workforces in touch by instructing and informing.
- Easy to use** – The radio system is presented to the dispatch operator through a clear and intuitive windows user interface.
- Instant access** – The main ‘home’ screen allows the user to make and receive calls and keep track of recent and in-progress tasks.
- Simple installation** – All that is required is a standard desktop PC and a simple (non-multicast) network connection to the radio system, so it need not be within the coverage of the radio system (no antenna is required).
- Radio system health monitoring** – Tight integration between the dispatcher and the radio system gives the dispatch operator access to information about the health of the radio system, allowing problems to be highlighted quickly.

TURN-KEY SYSTEMS

More than just core equipment, Simoco supply complete turn-key systems for many projects, supporting dealers and customers with widely varying expertise in radio.

- Choose the support you require.
- Choose the equipment you want pre-integrated, including RF combining, power-backup systems, rack cabinets, IP networking, RF cabling & antennas or more to suit your project.
- Choose how you want portables and mobiles, from specialist pre-configuration to in-vehicle installation or the tools required for your programming in the field.
- From complete systems in a crate to piece parts pre-configured and tested.
- More specialist services include confined-space, tunnels and other challenging areas of radio coverage.
- Additional options are available for the support of your system, including regular maintenance and remote monitoring.



“Connections that Count”



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