



SAAB

9AIR COMPACT C2

ANY NEED – ANY TASK

The 9AIR C4I concept: complete control for all weapons, sensors and communications.

It provides the situational awareness and communications that operators need to make the right choices, and to act on them swiftly and effectively.

The missions that air forces face today, and those that will come tomorrow, demand the ability to seamlessly implement different strategies. This can range from peacekeeping operations, air policing missions and border patrol to full combat and joint war scenarios.

The 9AIR C4I family is scalable and flexible, providing control for all missions, air forces and operations.

THE 9AIR C4I PRODUCT FAMILY

9AIR TOCCS

Tactical Operations Command & Control System

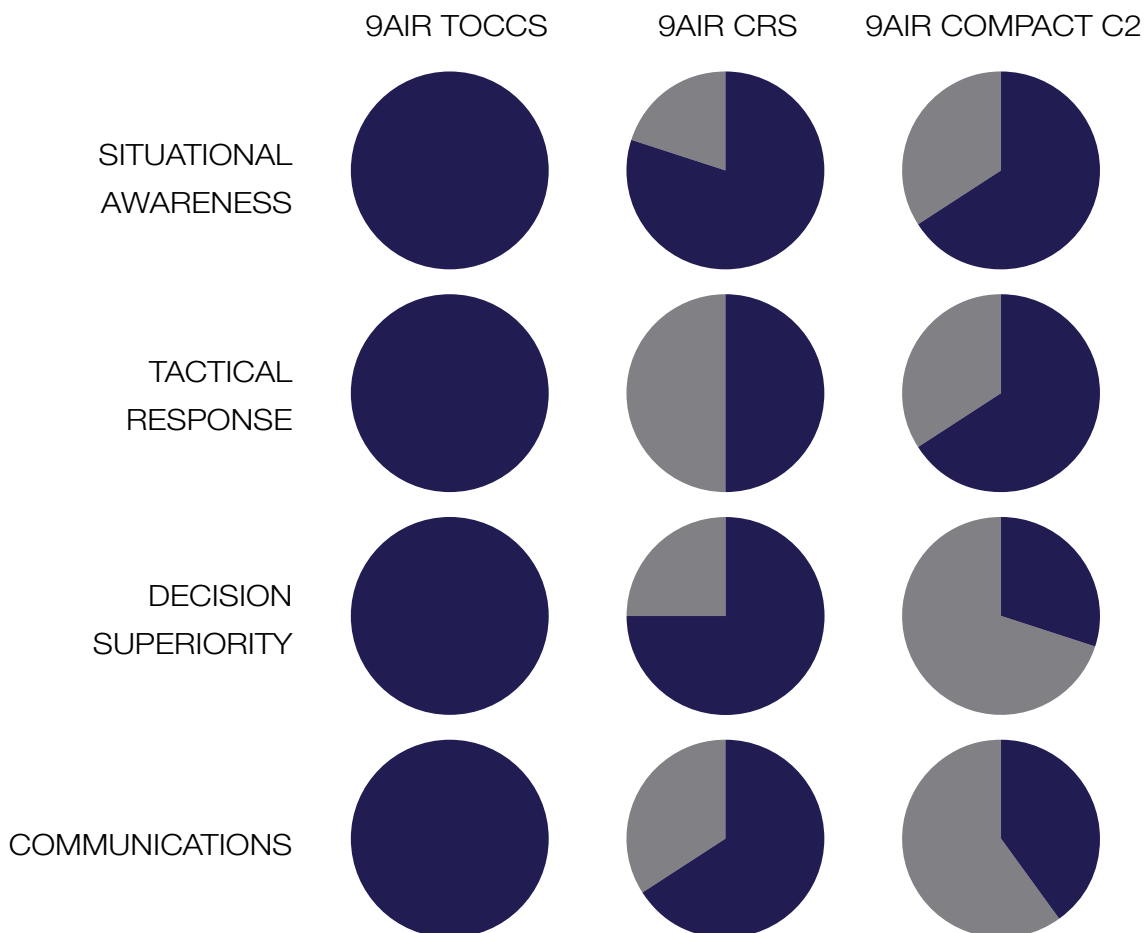
9AIR CRS

Control & Reporting System

9AIR Compact C2

Command & Control

ANTICIPATE TOMORROW ●●●●



STRAIGHTFORWARD LINK 16

The 9AIR Compact C2 is a swift, straightforward way to integrate a Link 16 Tactical Data Link into your operational capability.

With the 9AIR Compact C2, forces have the ability to meet any opposing force. They have the information it takes to assess dynamic and challenging situations, ensuring they always stay ahead of their adversaries.

The system does not require further Link 16 ground environment to be installed. It comes ready to operate, besides the MIDS terminal which is GFE, with low manning requirements and fast access.

The system delivers capability at any operational level, when and where required. It uses operationally-proven technology that can be deployed in a number of ways:

- ▶ Standalone system outside or within ordinary C2 infrastructures, but not connected to any other C2
- ▶ Integrated system together with existing C2 structure, gaining the benefits of Link 16 capability within national legacy C2 systems
- ▶ Deployed system delivering the full breath of command and control with tactical data links while operating outside of the normal environment



CONNECTED IN **COMBAT**

The 9AIR Compact C2 turns information into knowledge and knowledge into action.

The 9AIR Compact C2 was developed to provide maximum operational effect while remaining compact and easy to install. It gives all commanders access to the Link 16 Tactical Data Link, helping to keep them one step ahead in any situation. This enables flexible, effective operations and increases mission capability.

This off-the-shelf offer comprises two different predefined configurations to fit the needs of a broad customer base. These scale the capabilities of the system to suit a wide range of needs.

Each configuration provides unique software connectivity and interoperability. Its design means that it is quick and affordable to install and operate.

The operationally-proven 9AIR C4I family benefits from development, innovation and in-service experience spanning over 70 years.



SUPPORTING THE OPERATOR

In today's battlespace, assets are being manned by fewer and fewer operators. This creates a greater need for multi-tasking, and in turn a greater reliance on technology.

The 9AIR Compact C2 is designed with this tendency in mind. Its HMI supports the operator by ensuring that the right information is delivered at the right time and presented clearly and cohesively at each single workstation.

The system's features allow operators to handle multiple tasks by reducing manual workload and automating simple functions. It supports operator interoperability by using MIL-STD 2525 symbology.

KEY FEATURES:

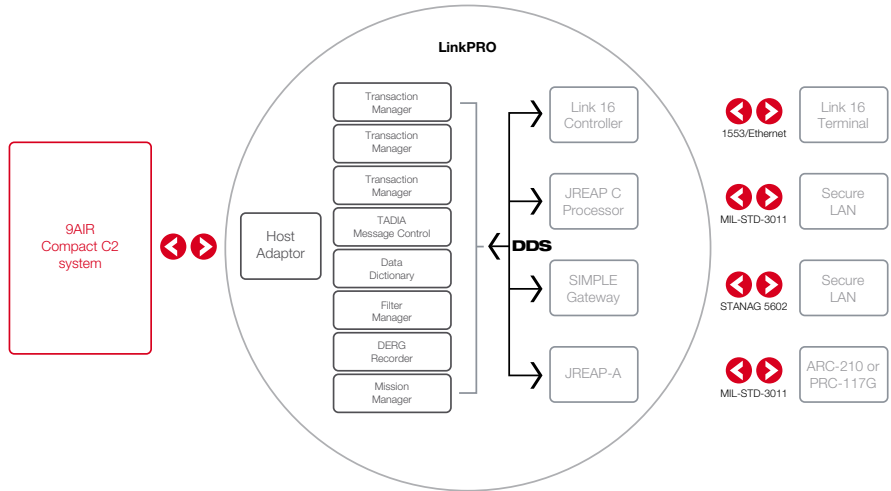
- Automatic control of weapons and sensors at various levels, reducing operator workload in critical conditions
- Anomaly detection by bringing unusual activity to the operator's attention, supporting normal operations and reducing human error in detection
- Ergonomic HMI based on thorough studies, testing and user experience, allowing operation to be as intuitive as possible



LINKPRO

The 9AIR Compact C2 uses LinkPRO, a suite of software components. It provides a custom configurable Data Link Processor (DLP) for implementing Tactical Data Links in advanced military communications platforms.

LinkPRO's state-of-the-art implementation leverages object-oriented design techniques. It provides connectivity and link level management for C2 and non-C2 tactical data systems and their host computers.



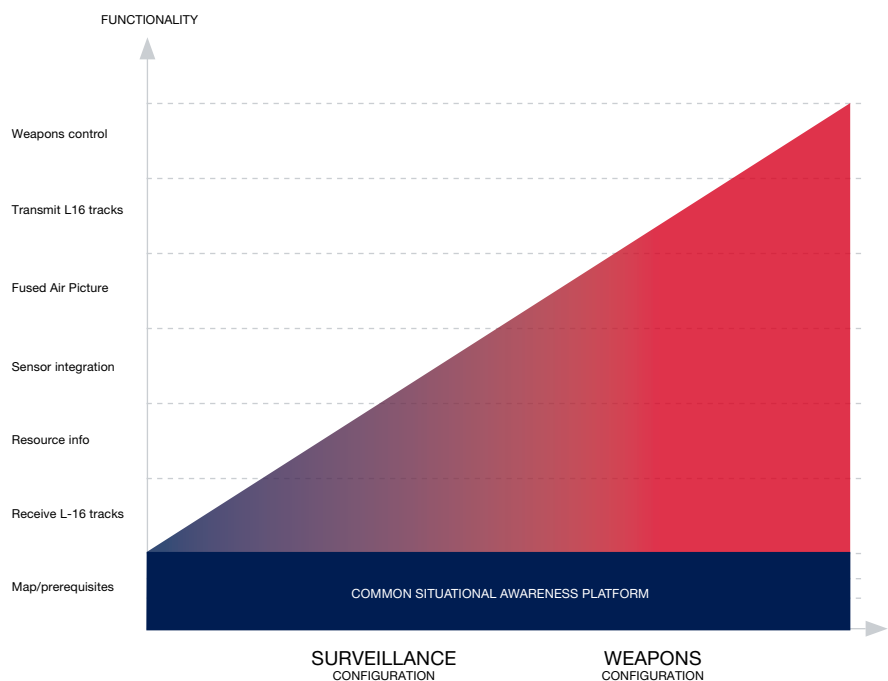
CONFIGURATIONS

The 9AIR Compact C2 provides information superiority to support greater situational awareness, wherever and whenever needed.

It does this by receiving the entire track data shared on the Link 16 network, including the location and identity of friendly, neutral and enemy forces. The information available on friendly forces in the Link 16 network comes from Precise Participant Location and Identification (PPLI) reports.

These offer insight into location, course and speed, in addition to other data such as fuel state, weapons load and other essential command and control information.

These different operational configurations provide a valuable add-on functionality designed to enhance overall situational awareness.



SURVEILLANCE

The 9AIR Compact C2 surveillance configuration combines sources to provide you with the most accurate correlated information.

The 9AIR Compact C2 surveillance configuration significantly improves information superiority by correlating received Link 16 Tactical Data Link information with sensor data from up to five external sources. These include primary radar stations, Identification Friend or Foe (IFF) and Civil Aviation Authority (CAA) feeds, which are used to create a fused operational air picture.

The generated air picture allows the operator and commander to track targets that are not seen on local sensors, but which are tracked within the tactical data link network. In this way the commander will get the best picture from multiple sources, with tracks from every sensor tied into the tactical Link 16 network, in addition to tracks from the high and/or low level coverage radar sensors of choice. This provides

a picture beyond the local sensor range, capable of extending for many hundreds of miles. The 9AIR Compact C2 surveillance configuration has the functionality to provide and manage the transmission of locally detected tracks to the Link 16 Tactical Data Link network, contributing to better and more profound situational awareness on the Link 16 network, as well as providing a Common Operating Picture (COP).

THE 9AIR COMPACT C2 SURVEILLANCE CONFIGURATION WILL PROVIDE YOU WITH THE BEST CORRELATED INFORMATION FROM SEVERAL DIFFERENT SOURCES, BRINGING TOGETHER THE TACTICAL DATA LINK NETWORK AND LOCALLY CONNECTED SENSORS TO CREATE A COMMON OPERATING PICTURE (COP).



Photo credit: Christian Lövgren

THE 9AIR COMPACT C2 WEAPONS CONFIGURATION PROVIDES A BIG IMPACT WITH A SMALL FOOTPRINT.

WEAPONS CONTROL

The 9AIR Compact C2 weapons control configuration uses electronic data messaging to keep control of the sky.

Once information superiority is obtained, commanders must be able to control their assets in the air. The weapons control configuration provides the means to control remote units to engage enemy forces. It allows air and ground-based air defence assets to be controlled using electronic data messages transmitted via the Tactical Data Link network – no voice communication is required.

The ability to hand over control of tracks and targets is vital when coordinating engagements within the Tactical Data Link network.

The weapons control configuration is small, fast and easily deployed, but retains all the functionality of a larger, stationary C2 system when it comes to handing over.

An intuitive Human Machine Interface (HMI) designed for best operational effectiveness makes creating missions and assigning tasks easy, providing the functionality necessary to handle all assets and mission types available at the touch of a button. The configuration consists of up to four operator consoles and will support any modern interoperable control method, with tools for vectoring a mission and sorting correlated targets and tracks.

DATA FUSION AND TRACK CORRELATION

The key to situational awareness is a single, coherent Recognised Air Picture.

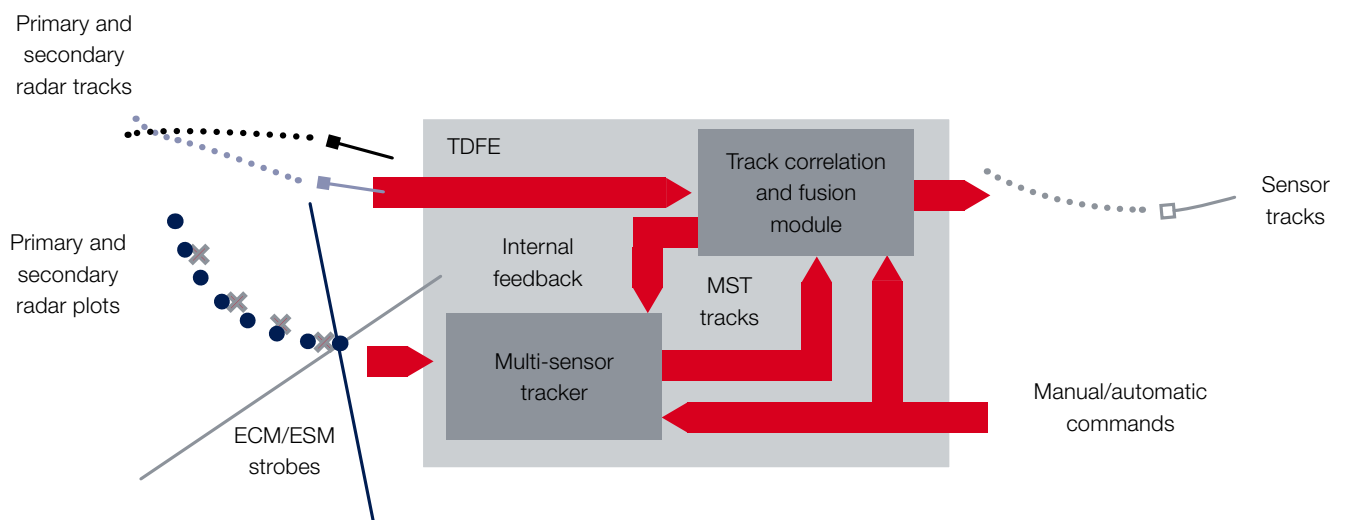
The 9AIR Compact C2 utilises all surveillance resources, merging sensor data and Tactical Data Link tracks with manual and platform data. This provides a complete, correlated situational picture.

The system creates a picture using the Track Data Fusion Engine (TDFE), a high-performance, network-enabled multi-target tracker and correlator. It generates the picture automatically from received data inputs, including ballistic missile tracking.

A clear interface enables the TDFE to accept and process asynchronous measurements from air, sea and land-based sensors including:

- Primary and secondary radars
- IFF
- Stobes
- Tracks
- Electronic Support Measure (ESM) sensors
- Electronic Counter Measure (ECM) sensors

The operator can interact with the pilot and can select different correlation processing modes, as well as inputting direct intervention and override commands.

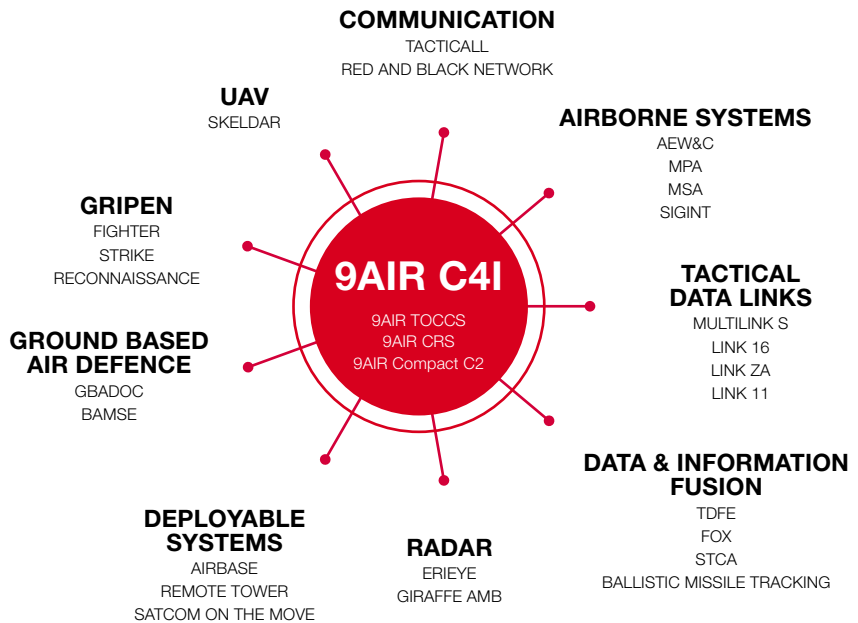


The TDFE is the result of more than 20 years' development of trackers and correlators. The system and its components are operational in a number of countries worldwide, with requirements ranging from 1 sensor and 100 tracks to more than 60 sensors and 10,000 tracks. In practice the upper number is unlimited.

The 9AIR Compact C2 in its basic configuration is designed to receive live feeds from up to five different sources.

OUR **AIR** OFFER

9AIR C4I is an integral part of Saab's air offer. Our capabilities cover all dimensions of the domain, including military subsystems, weapons and next-generation aircraft. We work with military and civil security organisations around the globe to provide commanders with the right information at the right time.



INVESTOR **GROUP**

Saab is a core part of Investor AB. The group features major corporations from sectors including finance, telecoms and pharmaceuticals. Our position in the group provides Saab with robust financial stability. It allows us to partner with a wide range of prestigious organisations to provide outstanding offset and Industrial Co-operation offers.



TECHNICAL DATA

CAPACITY

- 1-4 operators per site
- 1-5 live sensor feeds
- 10,000 simultaneous tracks in real time

SENSOR INTERFACES

- ASTERIX
- CD-2
- Thompson-TVT2
- TPS-43
- General 18-Bit
- TPS-75
- MPS1000
- ADS-B
- XML
- Giraffe AMB

COMMUNICATION

- L-16
- JREAP

OS/HARDWARE

- PC Intel architecture
- Linux OS
- Multilink-S

LAN TECHNOLOGY

- IPv4
- CISCO switches/routers
- VLAN

GIS FORMATS SUPPORTED

- ESRI ShapeFiles
- MapInfo TAB
- DGN

- ESRI ArcSDE
- TIFF
- GEOTIFF
- JPEG
- GIF
- PNG
- ERDAS Image
- ESRI GRID
- DTED

COTS SOFTWARE

- MySQL Database
- Jabber collaboration software
- MapServer
- Firefox web browser
- Java MMI

TRACK RECORD

Since its foundation, the 9AIR C4I family has entered operational service with customers and installations in over 30 countries around the world. With a programme

of continuous improvements and upgrades, new 9AIR Compact C2 customers benefit from over 70 years of experience, development and innovation.



9AIR C4I
> 30 COUNTRIES
> 70 YEARS EXPERIENCE



SAAB