



RTX



TEAMENGAGE™ DYNAMIC

PORTABLE TEAM INTERCOM SOLUTION WITH
SELF-ESTABLISHING AND SELF-HEALING NETWORK

PRODUCT SHEET

RTX TeamEngage™ Dynamic is a novel team intercom solution which allows you to realize products for industries where reliable communication and freedom to move around, despite location and environment, is paramount.

Version no. 002

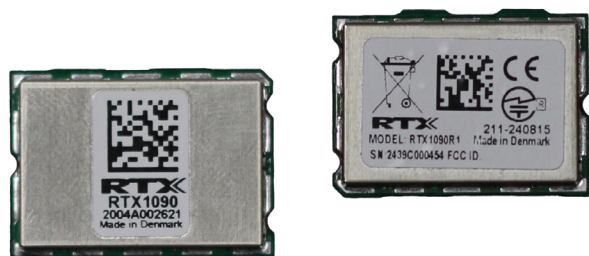
EFFECTIVE COMMUNICATION WITHOUT BOUNDARIES

On mission critical assignments, you are only as safe or as effective, as the communication link with the rest of your teammates and can make the difference between keeping safe and being in danger.

TeamEngage Dynamic provides intelligent self-configuring portable networks that gives the team their own communication groups, exactly as and when needed. Members of a team can split up and rejoin the groups ad hoc as they move in and out of radio range of each group. This means, all team members can communicate easily and freely with other members of their own group at the same time.

With TeamEngage Dynamic, networks configure themselves automatically with no human intervention needed. The solution has multiple security features and prioritization configurations that allows setting the criteria for the formation of communication groups.

TeamEngage Dynamic solution is enabled on both the standard RTX1090 module and the RTX1090R1 variant. The RTX1090R1 module is a variant with an extended temperature and vibration range. This makes it ideal for solutions used in outdoor and harsh environments.



TWO MODES OF OPERATION

TeamEngage Dynamic solution supports two modes of operation: Autonomous and Prioritized.

AUTONOMOUS MODE

In Autonomous mode, members can move away from the team and form new groups autonomously. The system will automatically create a new group if at least two users are out of range of any larger groups. But will at any given time try to form the largest possible group or merge a full team.

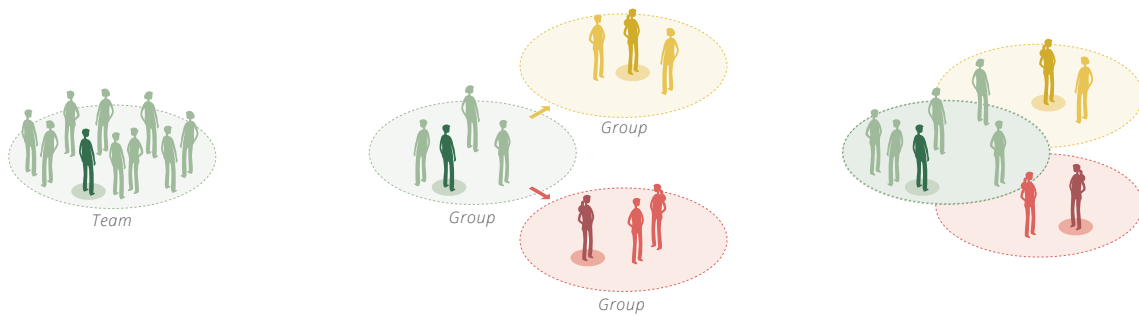


Illustration 1: Autonomous group behavior

PRIORITIZED MODE

In Prioritized mode, users can be given priority to form specific groups with other similar prioritized users. In this mode, members of a specific group can be within range of a larger group without favoring this, as in autonomous mode. A user will only join another group if the connection to all other similar prioritized users is lost.

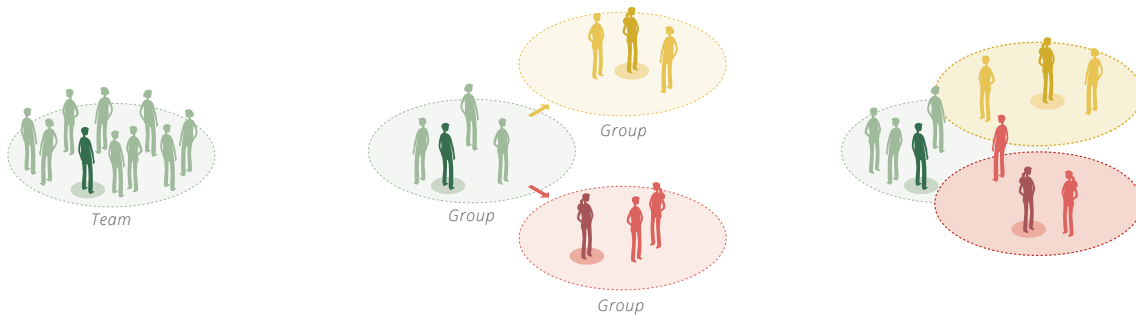


Illustration 2: Prioritized group behavior

KEY FEATURES

Independent of mode, the TeamEngage Dynamic solution offers the following key features.

ALARM

For an extra layer of security, the TeamEngage solution adds an alarm feature that can notify all members of a team in case of an emergency.

If an alarm is triggered by a user, it will automatically be propagated through users getting within range of each other, independent of user memberships.

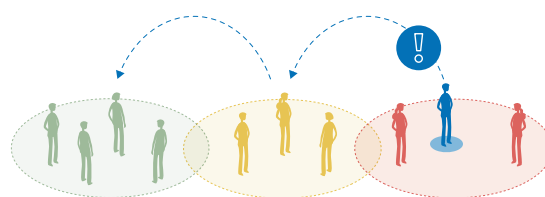


Illustration 3: Alarm propagation between groups

DUAL SLOT DIVERSITY

To maximize the link quality between TeamEngage Dynamic units, dual slot diversity is deployed.

Dual slot diversity supports transferring of the same data on two different channels, and by choosing two channels away from each other in the spectrum, increases the stability of the solution. Besides dual slot diversity deployment, the solution takes advantage of antenna diversity offered in all RTX solutions.

RADIO EQUALIZER

For improved operation in harsh reflective environments, the TeamEngage solution optionally features a patented radio equalizer.

A diversity receiver technology specifically designed to reduce sensitivity to multipath radio reflections, thus improving signal robustness.

For more information on TeamEngage intercom solutions, please refer to our TeamEngage family brochure.

TECHNICAL SPECIFICATIONS

SUPPORTED RADIO COMPLIANCE	SPECIFICATIONS
EU, US, JAPAN STANDARDS PER DEFAULT	Please refer to the datasheet on RTX1090/RTX1090R1 DECT communication module
FEATURES	SPECIFICATIONS
RADIO	1.9GHz DECT with radio bandpass filtering for enhanced resilience. Regions supported but not limited to EU, US, Japan
OPERATION RANGE	Indoor: 20-50 meters Outdoor: Up to 300+ meters <i>Range depends on actual product design and environment</i>
OPERATION TIME	Average power consumption of RTX1090 module in TeamEngage Dynamic operation: ~80mA
STD DIGITAL INPUT/OUTPUT (MODULE)	16bit, 16kHz sample rate
AUDIO CODEC	Default wideband audio. Full duplex audio communication with codec latency down to 15ms
AUDIO FREQUENCY RANGE	50-7000Hz (default codec)
ACTIVE NOISE CANCELLATION (ANC)	Optional
ECHO CANCELLATION	Optional
QoS	Antenna diversity (dual antennas) Radio equalizer Dual slot diversity
LATENCY	Latency <25ms (no lip sync issues)
INITIAL SYNCHRONIZATION	Audio open within ~ 10s after power-up
ORDERING DETAILS	DESCRIPTION
TEAMENGAGE™ DYNAMIC PRODUCT SOLUTION	Contact RTX for more details at sales@rtx.dk