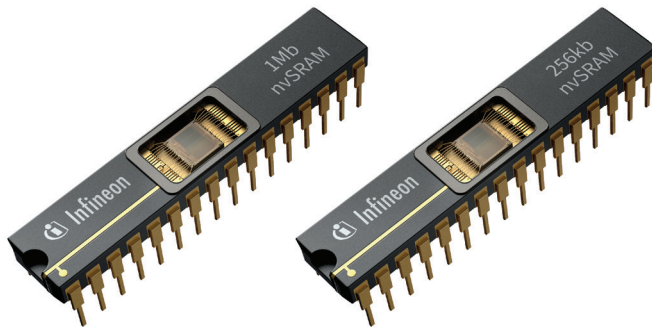


## Product brief

# HiRel non-volatile SRAMs

Infineon's HiRel memories perform in the most extreme environments

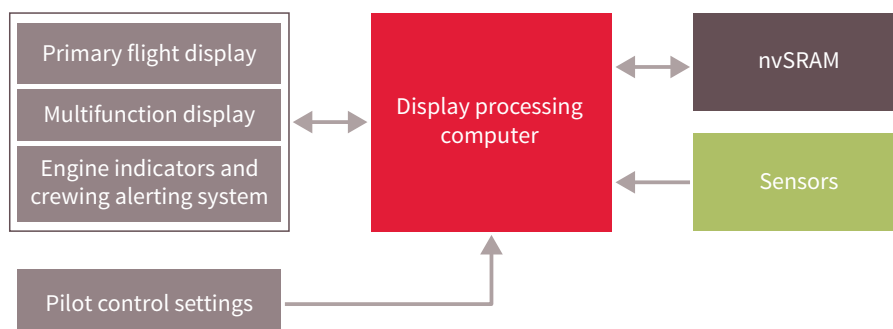


## Overview

Infineon's 256-kbit and 1-Mbit non-volatile SRAMs (nvSRAMs) combines Infineon's industry leading SRAM technology with best-in-class SONOS non-volatile technology. Under normal operations, nvSRAM behaves like a conventional asynchronous SRAM using standard signals and timing. On a power fail, nvSRAM automatically saves a copy of the SRAM data into non-volatile memory, where the data is protected for over 20 years. On subsequent power up, the content of the flash is automatically restored and loaded into the SRAM. The functionality provided by the nvSRAM is critical in multiple data-intensive applications that face the possibility of data loss in case of errors and power failures. The 256-kbit nvSRAM is organized as 32-kbit x8 and the 1-Mbit nvSRAM is organized as 128-kbit x8.

Our HiRel nvSRAMs are ideal for high-reliability customers requiring a reliable, non-volatile memory solution in a ceramic package. Well suited for defense applications such data acquisition and communication systems, avionics flight display applications, and industrial electronics applications which require higher temperature memory devices such as industrial furnaces or railroad systems. Wafer sales are supported for Systems in a Package (SiP) solutions.

## Electronic flight instrument application



## Key benefits

### Certified reliability

- > DLAM QML-Q
- > Custom upscreen
- > Obsolescence solutions
- > Die/wafer portfolio

### Product features

- > 256-kbit (32-kbit x8)
- > 1-Mbit (128-kbit x8)
- > Infinite endurance
- > 35 ns access time
- > 100 Year data retention
- > Military temperature grade
- > 32-pin Cerdip

### Key applications

- > Calibration data storage
- > Data logging
- > Battery backup

### Differentiated memory portfolio

- > Performance
- > Density
- > Reliability
- > Longevity

# HiRel non-volatile SRAMs

Infineon's HiRel memories perform in the most extreme environments

## Defense portfolio

Infineon's HiRel memory products portfolio consists of the world's most-reliable nonvolatile memory and offers a wide selection of NOR Flash, F-RAM, nvSRAM and SRAM memories that provide design options and flexibility while reducing system cost in applications such as radar, electronic warfare, avionics and defense systems.

## Key features

### 4-Mbit fast SRAM

- › 256-kbit density
- › 32-kbit x8 bus-width configuration
- › 35 ns access time
- › Infinite endurance
- › 100-Year data retention @ 85°C
- › Single 5 V or 3 V supply voltage support options
- › -55 to +125°C military temperature grade
- › 32-pin ceramic dual in-line package
- › QML-Q qualification
- › Wafer sales for Systems in a Package (SiP) solutions

### 16-Mbit fast SRAM

- › 1-Mbit density
- › 32-kbit x8 bus-width configuration
- › 35 ns access time
- › Infinite endurance
- › 100-Year data retention @ 85°C
- › Single 5 V or 3 V supply voltage support options
- › -55 to +125°C military temperature grade
- › 32-pin ceramic dual in-line package
- › QML-Q qualification
- › Wafer sales for Systems in a Package (SiP) solutions

## Technical support

### Infineon datasheet

[256 kb nvSRAM \(5V\)](#), [256 kb nvSRAM \(3V\)](#),  
[1 Mb nvSRAM \(5V\)](#), [1 Mb nvSRAM \(3V\)](#)

### DLAM datasheet

[5962-18211 256 kb nvSRAM](#),  
[5962-18212 1 Mb nvSRAM](#)

## Parts list

Density	Description	Infineon P/N DLAM P/N	Supply voltage [V]	Operating temperature [°C]	Qual level
256-kbit	Parallel non-volatile SRAM	5962-1821101QXC	+5	-55 to +125	QML-Q
	Parallel non-volatile SRAM	STK14C88C-5C35M	+5	-55 to +125	QML-Q
	Parallel non-volatile SRAM	STK14C88C-35C35M	+3	-55 to +125	
	256-kbit nvSRAM die	STK14C88C-1XWI	+3/+5	-55 to +125	
1-Mbit	Parallel non-volatile SRAM	5962-1821201QXC	+5	-55 to +125	QML-Q
	Parallel non-volatile SRAM	STK14CA8C-5C35M	+5	-55 to +125	QML-Q
	Parallel non-volatile SRAM	STK14CA8C-35C35M	+3	-55 to +125	
	1-Mbit nvSRAM die	STK14CA8C-1XWI	+3/+5	-55 to +125	

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