Datasheet
FUJITSU RFID and Sensor Solution RFID Integrated Label Slim – 2Kbit

Long-range, high-memory, ATA Spec 2000-compliant RFID tag enables efficient new work processes for maintenance, inspection, asset management & more

Fujitsu's RFID Integrated Label Slim has a small profile and long range – a combination that lets you automate more of your work processes. This passive UHF RFID label meets multiple aviation industry standards and provides more than 6 meters (20 feet) of read range. It packs 2 Kilobits of memory into a 100mm by 27mm (4 inch by 1 inch) label that is only about 0.35mm thick that you can encode on demand. Plus, it meets SAE AS5678, ATA SPEC 2000 Chapter 9 and other industry standards. That combination of range, size, readability and interoperability makes the RFID Integrated Label Slim ideal for long-range reading that saves time and labor for many aviation work processes.

Other labels meet industry standards, but do they meet your work requirements? Fujitsu worked closely with customers throughout the aviation supply chain to engineer the RFID Integrated Label Slim to support the industry's specific maintenance, inspection, identification and documentation requirements. With the RFID Integrated Label Slim, you can:

- Track and validate asset locations without having to physically handle each asset
- Meet nameplate marking requirements
- Provide lifetime, automated identification for parts, supplies, tooling, equipment and other items
- Automatically update ERP, maintenance, inspection and asset management systems in real time
- Conduct complete inventories in hours instead of days
- Automatically receive notification of missing items and other exceptions

More range means more value

The extremely long read range allows mechanics, inspectors and other workers to get information about items without having to get close to items. Reliable long-range reading also supports many time- and money-saving automated processes in the supply chain, such as shipment verification, shipment tracking, automated receiving, inventory management, work-in-process (WIP) tracking and automated picking and put-away.

More memory means more options

With up to 2 Kilobits of memory available to users, the RFID Integrated Label Slim can encode much more than a serialized ID. It can encode birth records, configuration information, maintenance and inspection history records, and much more. With rich data available about parts, components and other assets available by remote reading, you can develop next-generation inspection and MRO processes. The RFID Integrated Label Slim is available in rolls for use with the Fujitsu RFID label printing solution so you can encode variable data or whatever else you want in the label on demand, and include text or bar code on the label surface. The solution includes Fujitsu Label Design and Encoding Management Pro software for creating standard and high-memory RFID labels, and an RFID label printer/encoder.

Less label means more tag-able assets

Because the label is narrow and flexible you can use it on a wide range of assets, including many that have traditionally been hard to tag because of their size and shape. The RFID Integrated Label Slim is less than 0.35mm thick and flexible so it can be applied to a variety of non-metal objects regardless of their surface profile. The label material is made from highly durable, flame-retardant plastic, meets SAE AS5678 testing requirements, and is suitable for lifetime identification of flyable parts.

Technical details

Specification	
Memory Size	EPC Bank: 448 bits User Memory: 2,048 bits (Blockperm Lock)
Dimensions (RFID tag only)	100 x 27mm
Weight	<2g
Read Range	>6m
Thickness	0.335 mm
Operating Temperature	-40°C to 85°C
Installation Areas	Interior – Anywhere inside the pressurized portion of the aircraft
Air interface protocol	GS1 EPC global Class 1 Generation 2, ISO/IEC 18000-6C,
Standards	SAE AS5678, ATA SPEC 2000 Chapter 9, ROHS 2011/65/EU,
Frequency	860 - 960 MHz (Worldwide)
Memory Availability	Dual Memory

Product name	Part number
RFID Integrated Label Slim – 2Kbit	AIT-T2BPE7

Recommended RFID Label Printer	Zebra ZT410 300 dpi (ZT41043-T0100A0Z)
Recommended RFID Ribbon	Zebra ribbon5095, ribbon5100

*1 ATA SPEC 2000 Chapter9 : ATA SPEC 2000 is a document that stipulates the standards established by the ATA (Air Transport Association) regarding such matters as the procedures for exchanging and processing information relating to the materials used in aircraft components and their reliability. Chapter 9 specifies comprehensive standards relating to the barcodes, 2D codes and RFID tags that can be attached to components.

*2 SAE AS5678 : AS5678 is a standard issued by the SAE (Society of Automotive Engineers) defining environmental specifications and test methods for passive RFID tags used in aviation applications. SAE has categorized and defined environmental specifications for RFID tag use, for the three environmental categories of "Interior," "Exterior" and "Power Plant".

*3 GS1 EPCglobal Class1 Generation2 : EPCglobal is a non-profit organization established by GS1 (formerly known as EAN International), which promotes the international standardization of barcodes, and GS1 US™ (formerly the Uniform Code Council, Inc.). Class1 Generation2 is a transmission standard instituted by EPCglobal, for data transmission between reader/writers and UHF-RFID tags.

*4 ISO/IEC 18000-63 ISO/IEC 18000-63 defines the air interface for RFID devices operating in the 860 MHz to 960 MHz Industrial, Scientific, and Medical (ISM) band used in item management applications.

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