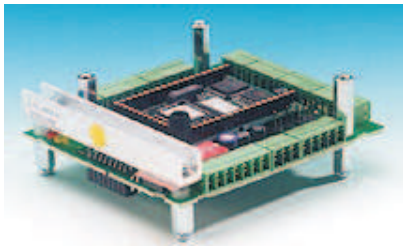
SERIES 2000 CONTROL MODULE

FEATURES

- **Best in Class Performance Through Patented HDX Technology**
- **RS232 Interface**
- **Multi Purpose I/Os**
- **Proven in Harsh Industrial Environments**
- **Easy to Install and Use**

APPLICATIONS

- **Access Control**
- **Vehicle Identification**
- **Container Tracking**
- **Asset Management**
- **Waste Management**



DESCRIPTION

The Texas Instruments' low-frequency (LF) reader provides all the functionality required to communicate with Texas Instruments 134.2 kHz LF transponders which are available in a variety of form factors.

The Series 2000 Control Module (CTL) is the interface between a TI-RFid™ Radio Frequency Module and a controlling host. The CTL controls the transmitting and receiving functions of an RFM module such as the RI-RFM-003B, RI-RFM-007B or RI-RFM-008B according to the commands from the host to send signals to and receive data from a TI-RFid™ LF transponder. It converts the received RF signals to the transponder's identification number, checks the validity and handles the conversion to the standard RS232 (RI-CTL-MB2A) or the RS422/485 (RI-CTL-MB6A) serial interface protocol.

The CTL in combination with an RFM module is well suited for usage in a broad range of applications including, but not limited to, access control, vehicle identification, container tracking, asset management and waste management applications

ABSOLUTE MAXIMUM RATINGS(1)

over operating free-air temperature range (unless otherwise noted)

	RI-CTL-MB2A	RI-CTL-MB6A	UNIT
Operating Temperature	0 to +70		°C
Storage Temperature	–40 to +85		°C

(1) Stresses beyond those listed under *Absolute Maximum Ratings* may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under *Recommended Operating Conditions* is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.

RECOMMENDED OPERATING CONDITIONS

over operating free-air temperature range (unless otherwise noted)

	RI-CTL-MB2A, RI-CTL-MB6A
Power Supply	7 to 25 Vdc, regulated

OPERATING CHARACTERISTICS

over operating free-air temperature range (unless otherwise noted)

PARAMETER	PART NUMBER	
	RI-CTL-MB2A	RI-CTL-MB6A
Memory	64 kbyte PROM for Code 1 kbit EEPROM for Configuration 32 kByte RAM for Data	
Data Storage (ID Codes)	909	
Communication Interface	RS232	RS422/485
System Architecture	Point-to-point	Point-to-multipoint
Communication Protocols	ASCII with Xon/Xoff handshake; TI-RFid™ Bus Protocol	
Communication Parameters	600 – 57600 Baud, 7/8 data bits, even/odd parity	
Input / Output	8 configurable digital I/O's, 2 open collector outputs	
Connector Type	Standard connector 'Combicon Type' from Phoenix Contact	
Operation with	Series 2000 Standard RFM (RI-RFM-104B) Series 2000 High Performance RFM (RI-RFM-007B) Series 2000 Remote Antenna RFM (RI-RFM-008B)	
Reference Documentation	11-06-21-037 Reference Guide Series 2000 Control Module RI-CTL-MB2A 11-06-21-056 Reference Guide Series 2000 Standard Reader RI-STU-MB2A/MB6A 11-06-21-042 (SCBU022) Reference Guide Series 2000 High Performance RFM RI-RFM-007B 11-06-21-047 (SCBU023) Reference Guide Series 2000 Remote Antenna RFM RI-RFM-008B	
Dimensions	93 mm × 82 mm × 33 mm ± 1.5mm	
Weight	approx. 90g	
Approval	CE	

PACKAGING INFORMATION

Orderable Device	Status [1]	Package Type	Package Drawing	Pins	Package Qty	Eco Plan [2]	Lead/Ball Finish	MSL Peak Temp [3]
RI-CTL-MB2A-03	OBSOLETE			1		TBD	Call TI	Call TI

[1] The marketing status values are defined as follows:
ACTIVE: Product device recommended for new designs.
LIFEBUY: TI has announced that the device will be discontinued, and a lifetime-buy period is in effect.
NRND: Not recommended for new designs. Device is in production to support existing customers, but TI does not recommend using this part in a new design.
PREVIEW: Device has been announced but is not in production. Samples may or may not be available.
OBSOLETE: TI has discontinued the production of the device.

[2] Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check http://www.ti.com/productcontent for the latest availability information and additional product content details.
TBD: The Pb-Free/Green conversion plan has not been defined.
Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.
Pb-Free (RoHS Exempt): This component has a RoHS exemption for either 1) lead-based flip-chip solder bumps used between the die and package, or 2) lead-based die adhesive used between the die and leadframe. The component is otherwise considered Pb-Free (RoHS compatible) as defined above.
Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

[3] MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

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Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265