PRODUCT DATASHEET

iID® Read Write Interfaces

iID®POCKETwork

Mobile HF-RFID read/write device and data collector with HID option

iID® POCKETwork is one of the newest innovation in *microsensys* mobile RFID concept. This reader is very useful for mobile data acquisition, asset management and maintenance documentation in administration, industry and logistics.

The device supports a wide field of different HF standards and chip solutions including TELID® sensor functionality for mobile data capturing together with notebooks, tablet PCs and smart phones. It can be used as stand-alone data capture unit or input device as well.

microsensys offers an attractive component platform for RFID solutions – from special transponder to optimized software tools.

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This data sheet is subject to change.
contact microsensys for latest information   POCKETwork 010.

RFID Technology: closed coupling RFID system iID®3000
Standards: based on ISO 15693, ISO 14443, ISO18000-3
Chip Solutions: LEGIC®, I-CODE®, Tag-it®, my-D®, iID®M, EM chip types, iID®G, iID®K, TELID®200, TELID®300, Mifare ultralight

RFID Air Interface: 13.56MHz RFID   standard type don't support anticollision
Operating Distance: 0 ... 50mm   depending on transponder type and metal environment
Reader Antenna: K3 or P07   **Field Direction:** on top, front direction

HOST Interface: Bluetooth class 2 (HID / SPP) and   USB 2.0
Bluetooth Profile: BT 2.0+EDR compliant, HID, SPP, connecting in server or client mode, distance up to 20m
Communication Modes: DOC / SPC / MPC
USB Connectors: USB micro
Software Interface : iID® driver engine (Windows (x86/x64), Windows Mobile 6.0, CE.net 6.0)
iID® Java API (Android OS)
Device Configuration: iID® interface configuration tool (x86/x64)
Supported Commands: see actual API documentation iID® driver engine

Device Basics: iID® reader operation system   downloadable
Operation Modes: SLEEP, ACTIVE, SCAN   HOST or button controlled
Power Consumption: SLEEP typ.5µA, ACTIVE typ.40mA, SCAN max. 200mA
Standard Features: Display, Data Capture Memory, RTC, Human Input Device
Memory: 16kByte EEPROM for configuration, 2MByte Flash for capture data
RTC: crystal stabilized RTC, set up over HOST
Display: OLED 96 x 64 matrix display
Buttons: SCAN, F1(power ON/OFF), F2
Buzzer: integrated, variable frequency
Battery: Li-Polymer accumulator   3.7V, 470mAh, microsensys type
Operation Time: up to 2000h sleep mode, up to 5000 RFID data captures (on time: 1s)
up to 400 Bluetooth connections (on time: 1min)
Charging: micro USB connector, recharge time approx. 4h
Battery Life Time: up to 3 years, max. 700 recharge cycles

Device Size: small POCKET case, 86 x 54 x 10 mm³
Casing Material: plastic casing
Operation Temperature: -20°C ... +60°C   **Storage Temperature:** -25°C ... +65°C
          Battery Loading Temperature: 0 … +45°C
Emissions: examine for EN 300330
Protection Class: IP 54

Type :	72.62.720	72.62.525	72.72.720*	*) on request, for miniature tags
OP system / Options:	iID-3000 / HID	LEGIC / HID	iID-3000 / HID	
Standards:	ISO15693,14443	ISO15693,14443	ISO15693 optimized	
Antenna:	P07	P07	K3 (HF stump antenna)	
Communication Distance:	up to 50	up to 30	up to 3	mm

PRODUCT DATASHEET

iID® Read Write Interfaces

M30 RFID HEAD

INDUSTRY HF RFID read/write unit

The integrated industry reader is designed for high speed transponder applications and can used under harsh industrial environments. This device is available with different HOST interfaces as USB or RS232TTL or RS232 standard*. A comfortable set of software functions supported over *microsensys* iID driver engine and the polling mode makes this reader very flexible for customer solutions.

microsensys offers an attractive component platform for RFID solutions – from transponder over smart readers to practical software tools

RFIDSystem:	HF iID®2000/3000	
Standards:		based on ISO 15693, ISO 14443, ISO 18000-3
Chip Solutions:		I-CODE®, Tag-it®, my-D®, iID®M, EM chip types,
		iID®G, iID®L, TELID®200/300, Mifare®ultralight/Classic, iID®K
		on inquiry: mic3®, NFC, my-D®-S
Basics:	closed coupling read / write unit	
		iID® reader operation system
RFID Air Interface:	13.56 MHz RFID	
Operating Distance:	0 ... 50 mm	depending on transponder type and metal environment
Reader Antenna:		printed antenna, P26
Field Direction:		closed coupling P26 antenna in front direction
Communication Rate:		ISO 15693: 26.4 kbps
		ISO14443: 106 kbps
HOST Interface:	USB or RS232TTL	
Connector:		USB or Sub-D9 (cable 1.5 m)
Power Supply:		+5V +/-5%, stabilized, low noise over USB or Sub-D9
Power Consumption:		typ. 30mA (idle mode)
		typ. 230mA (active mode)
Software Interface :		iID® 3000PRO interface protocol
Supported Commands:		see actual API documentation of microsensys iID® driver engine
Options:	PC-Adapter for RS232TTL device	
Device Size:	D30 mm (M30x1.5), L 68 mm	
Casing Material:	plastic	
Mounting:	mountable with 2 nuts	please note metal environments
Operation Temperature:	-15°C ... +70°C	others on request
Storage Temperature:		-25°C ... +85°C
Emissions:	examine for EN 300330	
Protection Class:	IP 65	without connector

Type:	**78.99.700.00**	**78.96.700.00**
Air Interface:	ISO 15693/14443	ISO 15693/14443
HOST Interface:	USB	RS232TTL
Power Supply:	5V+/-15%	5V+/-5%

PRODUCT DATASHEET

TELID® RFID Sensors

TELID® 281.3Da *preliminary*

intelligent 3D acceleration sensor transponder

- wireless passive RFID acceleration sensor
- 3D vibration measurement 0…6400 Hz, up to ±16g,
  including integrated FFT and rotation speed sensor
- mid size hard TAG, mountable on metal objects
- contactless data communication based on ISO15693

RFID Sensor TELID® devices are an integral part of microsensys iID® system solution. These devices are very useful for intelligent wireless sensors applications in industrial solutions, for condition monitoring and in maintenance processes. TELIDs are operating optimal with microsensys standard RFID reader

Connecting Technology:	RFID system iID®2000	wireless closed coupling passive HF sensor
Chip Type:	TELID®200 with integrated micro controller	
Carrier Frequency:	13.56 MHz	based on ISO 15693
Communication Distance:	0 ... 20 mm	depending on reader antenna and environmental conditions
Integrated Microcontroller:	ARM Cortex	ultra low power
Architecture / Clock Frequency:	32 bit / 32 MHz	
Operating System:	TELID®281advanced	last review, upgradeable
Functionality:	wireless communication, intelligent measurement, transient analysing, Fast Fourier Transformation	
Internal Memory:	EEPROM read write type endurance >100.000 cycles, data retention > 10 years	
Static Memory:	16 kbit	parameters, calibration data and UID
Free Memory:	14 kbit	free for customer data
Acceleration Data Memory:	RAM max. 512 samples for one axis	
	max. 512 samples per axis in 3D mode	
Acceleration Sensor:	MEMS sensor, 3D	
Recording Range:	0 g ... ±16 g	adjustable max. range: 2 g, 4 g, 8 g or 16 g
Resolution:	10 bit, 12 bit or 14 bit	depending on settings
Clock Accuracy:	2 %	
	Transient Measurement:	x-, y-, z- axis
Sample Rate / Bandwidth:	400 Hz … 6.4 kHz / max. 2840 Hz	adjustable, -3 dB, sinus
Noise Performance:	20 mg	at max. bandwidth
	FFT Spectral Measurement:	x-, y-, z- axis
Spectral Resolution:	Sample Rate divided by 10	adjustable
Acceleration Accuracy:	± 0.05 g	for low frequency range
Radial / Tangential Acceleration:	x-, y- axis	optional, only type .252/253
Sample Rate / Bandwidth:	max. 6.4 kHz / max. 2840 Hz	adjustable, -3 dB, sinus
Noise Performance:	20 mg	at max. bandwidth
Rotation Speed Sensor:	HALL sensor	
Range:	0 … 2000 rpm	
Accuracy:	10 %	
Temperature Sensor:	SEMICONDUCTOR sensor	
Working Range:	-40°C ... 85°C	Storage Range: -40°C ... 125°C
Resolution:	1°K	
Measure Modes:	ON-LINE MEASUREMENT	transient, spectral, scalar
Basic Functions:	read UID, programming of sampling parameters and object data memory	
Parameters:	frequency range, filter limits, sample rate, measurement range	
		calibration data (optional)
Battery:	no battery	
Working Temperature:	-25°C ... +85°C	
Storage Temperature:	-35°C ... +105°C	recommended 25°C
Mechanicals:		
Dimensions:	D15 mm, thickness max. 6.0 mm	half lens form
Packaging:	D14special package	on metal type
Marking:	laser printed product type on top	optional unique ID-No

Weight: <1 g

Certifications:
  Protection Class: IP 67

Mounting Instructions: on metal possible see Application Note

Appropriate Communication Devices:

  RFID Reader: M30 or M18 iID®HEAD reader   with RS232TTL or USB for industrial application
  Customized iID®contactless reader modules   with RS232TTL or I²C
  iID®POCKETwork   with USB or Bluetooth

  NFC Reader Devices: Android Smart Phones   please ask microsensys technical support
  Industrial Handheld Computers   please ask microsensys technical support

  Software: special TELID application or evaluation software for Windows and Android mobile devices

Product Code:	12.281.250	12.281. 251*	12.281. 252	12.281. 253*	*on inquiry
Type	3Da	3Da-FFT	3Da-FFT-TR	3Da-FFT-TR-N	
Application	generally	horizontal shafts	shafts	shafts	
Vibration Transient	0 … 0.625/2.5	0 … 0.625/2.5	0 … 0.625/2.5	0 … 0.32/1.28	s
Vibration Spectrum	-	0 … 800	0 … 800	0 … 800	Hz
Radial Acceleration	-	-	0 … 8	0 … 8	g
Tangential Acceler.	-	-	0 … +/- 8	0 … +/-8	g
Rotation Speed	-	including position	100 … 2000	0 … 10000	rpm

TELID® 382.3D   *formerly 322.3D*

RFID acceleration logger, event or time triggered

- semi-passive RFID sensor logger device, high memory
- battery powered, long life time
- contactless data communication ISO 14443, passive
- acceleration measurement range 3D, 0…+/-8g, 200Hz
- non flexible hard TAG, package Q54S

RFID Sensor TELID® devices are an integral part of *microsensys* iID® system solution. These devices are very useful for wireless sensor applications in industry, especially for quality check in automotive industry, for vibration measurements in maintenance processes and in transport and logistics. TELIDs are operating optimal with microsensys standard RFID reader.

RFID Technology:	RFID system TELID®300, based on ISO 14443B (18000-3)	
Chip Type:	iID-L	closed coupling HF sensor solution
Carrier Frequency:	13.56 MHz	Communication Rate:106 kbps
Communication Distance:	0 ... 2 cm	depending on reader antenna and environmental conditions
Data Memory:	EEPROM	read write type endurance >100.000 cycles, data retention > 10 years
Data Memory:	approx. 1 Mbit	
Recording Capacity:	SIMPLE MODE:	approx. 6000 events
	ADVANCED MODE:	max. 123 events, including 3D wave recording, 170 samples per wave and axis
Acceleration Sensor:	MEMS sensor, 3D (x, y, z-axis)	
Range:	0 ... ±8 g	programmable range: ±2 g, ±4 g or ±8 g
Limit Range:	30 mg ... max.	programmable in steps of 1 mg
Frequency Range:	0 … 200 Hz	programmable bandwidth
Sample Rate:	12.5 Hz, 25 Hz, 50 Hz, 100 Hz, 200, 400 Hz	programmable
Sensitivity:	0.5 mg/√Hz	theoretical
Event Triggered Recording:	date and time in SIMPLE / additional 3D wave in ADVANCED MODE	
Event Types:	LIMIT or FREE FALL detection	programmable
Repetition Time:	approx. 10ms, 1s, 10s or 60s (1 s preferred setting)	programmable
Time Triggered Recording:	date, time and 3D wave	
Record Interval:	1 min … 1439 min	interval between two events, programmable
Clock:	quartz RTC	time synchronization while device programming
Accuracy:	+/-20ppm @25°C	resolution 1 s
Operating Mode:	ACTIVE or SLEEP	optional: password protected ACTIVE mode
Measure Modes:	STOP FULL	
Recording Mode:	SIMPLE or ADVANCED or TIME TRIGGERED	
Basic Functions:	programming of sensor parameters, read parameters, read data memory, get current acceleration, read UID	
Parameters:	start time, sample rate, measurement range, bandwidth, shock limit	
Primary Battery:	LiMnO₂, 68 mAh	
Life Time:	up to 2 years	depending on using conditions
Working Temperature:	-25°C ... +80°C	
Storage Temperature:	-30°C ... +85°C	recommended 25°C
Dimensions:	54 x 40 mm², thickness max. 4.5 mm	
Packaging:	Q54S	case PA66 GF6 blue, encapsulation epoxy black
Marking:	laser printed	product type on top, optional unique ID-No
Mounting Instruction:	glue, power strip or plastic screws	for data communication don't use on metal
Appropriate RFID Reader:	iID PEN or POCKET reader	with RS232TTL or USB or Bluetooth,
	iID DESKTOP reader	with RS232TTL or USB
	M30-HEAD reader	with RS232TTL, RS485 or USB for industrial application
Software:	TELID programming and reading software for Windows PC	

Product Code:	**14.382.709.10**	**14.382.709.00***	**14.322.719.01**	*) in development
Type :	TELID382.3D LT	TELID382.3D	TELID382.3D TT	
Event Types / Mode:	only LIMIT	all	only TIME TRIGGERED	
Wave Recording:	yes / no*	yes	yes	